

Protecting Wildlife Habitat through Land Use Planning

December 7, 2021, 1:00 pm

Hudson River Estuary Program Conservation and Land Use Webinar Series

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All right, well, Hello everyone my name is Nate Nardi Cyrus. I'm a conservation and land use specialist at the New York State

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DEC's Hudson River Estuary Program through a partnership with Cornell University, and welcome to the latest webinar in our monthly conservation and land use webinar series. Today

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our speakers will draw on two decades of socio-ecological research experience to discuss best practices for protecting wildlife and habitat through conservation development.

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They're going to share regional studies that demonstrate why such practices are needed, type and quality of existing protection mechanisms in the Northeast, factors associated with success or failure to implement conservation design principles, and critical areas for future research.

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But before we get started, let me quickly review a few important webinar details. You should be able to connect to the audio through your computer or phone, and you can find different audio options at the bottom of your screen by clicking that dot dot dot button that I have highlighted on the screen.

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If you're having difficulties with audio through your computer, I recommend calling in by phone or requesting a call back and you can again do that through that little icon. There.

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00:01:15.030 --> 00:01:19.439

We also put the call in number in the chat box for easy access.

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00:01:20.549 --> 00:01:32.814

If you're having other difficulties, make sure you direct your questions via the chat box in the bottom right hand corner of the screen. You should use the question and answer function to submit questions for the presenters.

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Also note that your phone lines have been muted. The webinar is being recorded and we're going to notify you when that recording is available and we'll provide that in a follow up email at the end of the webinar.

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00:01:44.724 --> 00:01:56.275

There's gonna be a three question survey that pops up and we really appreciate your response and welcome any feedback on our programs, this and others. Lastly, for those that are seeking municipal training credit,

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you're going to receive an automated email from Webex at the end of the webinar that's going to be certifying your attendance.

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00:02:03.480 --> 00:02:16.675

For those of you, who may be new to the series, the Hudson River Estuary Program is a unique program at the New York State Department of Environmental Conservation established to help people enjoy, protect, and revitalize the Hudson River and its Valley. Our program works throughout the 10 counties

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bordering the tidal Hudson River from upper New York harbor to the federal dam at Troy, to achieve many key benefits

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that include clean water, community resilience to climate change, the vital ecosystem and its fish, wildlife, and habitats, natural scenery of the valley, and opportunities for education, access, recreation

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and inspiration on the river. I encourage you all to read our newly released action agenda, which is on the DEC website for our program if you're interested in learning more about the work of our program.

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Within the program, our conservation and land use team works with municipalities and regional conservation partners to incorporate important habitats and natural areas into local use planning and decision making. Our program web site is a fantastic clearing house.

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Am I someone's saying they can't hear me, but some can. Within the program

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00:03:11.639 --> 00:03:21.745

our conservation and land use team works with municipalities and regional conservation partners to incorporate important habitats and natural areas into local land use planning and decision making.

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00:03:22.134 --> 00:03:36.865

So our program Web site is a great clearinghouse for guidance and resources on these topics. So, we're going to share a link to the website right now through the chat box, but do keep in mind that we will circulate the resources that we discussed today in that follow up email.

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00:03:38.245 --> 00:03:50.875

We're also very excited to share next month's webinar offering, "Plants and animals of conservation concern and introduction to New York state species designations." Dr Dan Rosenblatt of the New York State Department of Environmental Conservation

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and Nick Conrad of the New York Natural Heritage Program will introduce different designations for wildlife and plant species in New York State. How they relate to regulatory protections and how they're addressed in reviewing proposed projects.

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And we'll be posting the registration for that webinar. And the chat box now, so we encourage you to sign up for that.

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Okay, enough of me kind of bumbling through this beginning part of the presentation. I finally get to introduce our fantastic presenters. Dr. Michale

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Glennon is a wildlife ecologist and the science director of the Paul Smith Adirondack College Watershed Institute. Prior to Paul Smiths, she spent 15 years as the science director for the Adirondack program of the Wildlife Conservation Society.

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She's interested in effects of land use management on wildlife populations in the Adirondacks and is engaged in research, ranging from issues of residential development to recreation ecology, to climate change.

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00:04:45.805 --> 00:04:54.084

She also serves as a board member for the Adirondack Council, and the scientific advisor to Adirondack Wild and the Shugoshante Preserve and Reserve.

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00:04:54.714 --> 00:05:03.774

She has a BS and environmental and evolutionary biology from Dartmouth College and an MS and PhD and environmental and forest biology from SUNY ESF.

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00:05:05.004 --> 00:05:15.595

Dr Heidi Kretser is a conservation social scientist with the Wildlife Conservation Society's global conservation program. Heidi improves the conservation of wildlife and wild lands

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00:05:15.595 --> 00:05:23.694

by incorporating tools and perspectives from the social scientists into conservation practice. In addition to a role at the Wildlife Conservation Society,

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00:05:23.694 --> 00:05:33.415

Heidi also serves as an adjunct associate professor at Cornell University's Department of Natural Resources, and is affiliated with the Cornell Center for Conservation Social Sciences.

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00:05:33.654 --> 00:05:47.634

She completed her PhD in natural resource policy and management at Cornell University, and has a master's in environmental studies from the Yale School of Forestry. And with that, I'm going to pass that over to our presenters. I'm kind of seeing in the background that there's a lot of folks who can't hear.

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00:05:47.634 --> 00:05:59.274

So I'm going to work to help troubleshoot that, if Laura hasn't already, and with that, I'm going to pass the ball on over to our presenters.

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00:05:59.608 --> 00:06:04.168

Give me a quick second here. Right?

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00:06:05.519 --> 00:06:08.939

Michale, giving you control.

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00:06:18.869 --> 00:06:22.559

Hopefully that worked. It looks great from my end.

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00:06:30.538 --> 00:06:34.168

All right. Hey, I can't hear you right now. Okay.

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00:06:34.168 --> 00:06:46.798

Heidi Kretser: Hi, everybody, thank you, Nate for that great introduction. Thanks to everybody out there for attending the webinar today. It's really terrific to see so much interest in the topic.

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00:06:46.798 --> 00:06:58.288

Next slide. To up the entertainment value of the talk, we hope you'll find a piece of paper and a pencil to ID the species that you see, no binoculars required.

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00:06:58.288 --> 00:07:03.358

But this is a bird and our story is about birds, birds and other wildlife.

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But birds are great indicators of environmental condition next slide.

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00:07:08.249 --> 00:07:12.238

And we know we know this from

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00:07:12.238 --> 00:07:18.894

the Cornell Lab of Ornithology's work, that most populations of birds species in North America are in trouble,

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00:07:19.074 --> 00:07:29.033

we are witnessing a continental collapse of avifauna. Largely due to multiple and interacting threats that are driven by habitat loss, ag

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00:07:29.064 --> 00:07:31.283

intensification and urbanization.

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00:07:31.709 --> 00:07:39.959

So, what is to be done to turn this impending disaster around? One idea is more protected areas.

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00:07:39.959 --> 00:07:53.488

Next slide in the U. S. there are actually over 40,000 protected areas. Some 32% of land and water is protected in the U. S. with arguments it's much lower from a biological perspective. More like 13%.

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00:07:53.488 --> 00:08:04.379

At present more protected areas are likely politically unpalatable and they might not make much of a dent in the problem because next slide.

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00:08:04.379 --> 00:08:12.928

one reason for that is, at least historically protected areas disproportionately tend to protect rocks and ice.

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00:08:12.928 --> 00:08:19.139

Higher elevation vista and places of human enjoyment, rather than excellent wildlife habitat.

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00:08:19.139 --> 00:08:30.449

Next slide. Furthermore, we have serious competing interests on many protected lands, which call into question the actual utility of these spaces for wildlife protection.

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00:08:30.449 --> 00:08:40.139

Michale and I happen to have done quite a lot of work in the space of balancing recreation and conservation, but we'll save that topic for another day.

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00:08:40.344 --> 00:08:52.313

Next slide. The upshot of this is the scale of protected areas is far too small to address this colossal challenge of bird and other wildlife population declines.

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00:08:52.823 --> 00:08:59.573

The gray area of this land ownership chart shows that, over 60% of the land in the U. S. is private lands.

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00:08:59.879 --> 00:09:07.408

Given that large amount of land in private ownership we need to understand what is actually happening on private lands.

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Next slide,

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00:09:09.894 --> 00:09:10.793

unfortunately,

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00:09:10.793 --> 00:09:25.673

for wildlife what is happening is this: we are expected to have 17 million housing units within 50 kilometers of protected areas by 2030, and I can assure you that this will not be good for wildlife without serious changes to how we put these houses on the

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00:09:25.673 --> 00:09:25.854

landscape.

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00:09:28.553 --> 00:09:29.183

Next slide,

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00:09:30.594 --> 00:09:32.364

and this is where you come in,

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00:09:32.394 --> 00:09:32.874

at least,

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00:09:32.874 --> 00:09:35.543

as I imagine many of you sitting in the audience right now,

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00:09:35.543 --> 00:09:41.394

who work on these local land use issues. After all it is the town boards, planning boards,

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00:09:41.394 --> 00:09:42.443

county commissions,

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00:09:42.443 --> 00:09:43.583

tribal governance,

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00:09:43.943 --> 00:09:58.193

governments across the U. S and Canada who make decisions about private land that will impact the future of most wildlife in this country. In the U. S. alone that is over 15,000 entities making local decisions every month at the various planning meetings.

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00:09:58.193 --> 00:10:05.813

So, this talk is about the opportunities individuals making these decisions have to protect wildlife on private land.

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00:10:06.599 --> 00:10:17.068

Next slide and we are very thankful to the Hudson River Estuary Program for inviting us here today. And we hope that by the end of the talk, you will

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00:10:17.068 --> 00:10:28.048

understand how private lands impacts wildlife, how private land development impacts wildlife and what types of best management practices could minimize these impacts.

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00:10:28.048 --> 00:10:35.068

See some of the conservation value of existing protection mechanisms that are in the land use codes already.

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00:10:35.068 --> 00:10:49.918

Learn the factors that are associated with successful adoption of these protection mechanisms, and then think about some of the future opportunities. So, this is a joint talk because Michale, and I have been working for two decades

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00:10:49.918 --> 00:10:53.519

thinking about the impacts of residential development on wildlife.

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00:10:53.754 --> 00:11:05.844

So, we'll be switching back and forth during the presentation and at the end we will share our pie in the sky idea of how to make private lands a lasting centerpiece for wildlife conservation on this continent.

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00:11:06.323 --> 00:11:16.134

So, over to Michale, who will cover our science and the impacts of development on wildlife, and what we along with numerous collaborators, believe to be the best management practices on the ground.

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00:11:19.979 --> 00:11:24.658

Michale Glennon: Thanks, Heidi. So to the casual observer

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it might appear like everything is just fine with regard to wildlife in the context of residential development.

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And in fact, almost always, when we give one of these talks, inevitably, the comments or question will arise whereby somebody will say,

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00:11:42.509 --> 00:11:56.453

"You know, I have X, Y, and Z in my backyard. I see those animals every day. What could possibly be the problem? Everything seems to be absolutely fine." And my answer to that in part is that yes, we rightly so

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do form our opinions about wildlife communities based on the ones that we see, and we make assumptions based on how often we see them.

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00:12:03.538 --> 00:12:17.879

But what we see tends to be a relatively small representation of the overall biological diversity that's actually present in our landscape. And within the Adirondacks, for example, there are something like 286

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00:12:17.879 --> 00:12:32.303

terrestrial vertebrates, not to mention fish and plants and invertebrates, but just in the species that we are likely to see around us in our yards. There is a whole bunch of other stuff that I'm willing to bet a number of folks don't know, live in our ecosystem

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00:12:32.303 --> 00:12:46.974

and perhaps you've never seen them in New York. And that is largely guide the fact that the species that we do see often are the ones that are just really good at exploiting human environments. But there's a whole host of other biological diversity out there that we are concerned about.

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And so I want to take you through a little bit of a localized example of what Heidi was speaking about in the introduction. And to tell a story as well.

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And that is that back in about 2006.

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00:13:01.349 --> 00:13:06.719

04.05 or 06, somewhere around there when the largest, one of the largest certainly,

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00:13:06.719 --> 00:13:14.759

proposed developments in the Adirondack Park came in front of the Adirondack Park Agency. We got a call at our office. I was at WCS at that time

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00:13:14.759 --> 00:13:22.438

in the Adirondack program, and a reporter asked us, you know, what difference does it make if X development gets approved,

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00:13:22.438 --> 00:13:27.594

can't all with the wildlife, just go live on the state lands. It's the Adirondacks for God's sake.

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00:13:28.043 --> 00:13:39.683

And I was so bothered by that question in part, because it's a really good question and in part, because I thought if this reporter is asking the question, then lots of other people are probably asking the question as well.

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So, if you consider all of the biological diversity in the Adirondack Park,

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00:13:44.849 --> 00:13:52.198

as mentioned, what I know best is terrestrial vertebrates. We do really well on birds. We do not too shabby on mammals.

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00:13:52.198 --> 00:13:57.958

We can't possibly compete with the Hudson Valley on reptiles and amphibians, but it's a broad host of critters.

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00:13:57.958 --> 00:14:01.288

And they live in a variety of different types.

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00:14:01.703 --> 00:14:12.114

This is one example of a map of the habitat types of the Adirondacks. This happens to be a map that was created by the Nature Conservancy. Those are what are called the macro group designations.

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00:14:12.114 --> 00:14:25.403

You can actually break each of those down into further flavors, northeastern floodplain forest, conifer forest, for example, there's lots of different further divisions of each of those. But there's a broad diversity of habitat types in the Adirondack Park.

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00:14:25.734 --> 00:14:38.423

And what we did, my friend, Ray, and I was to try to answer the question of that reporter of does it matter where stuff is and can we protect everything on our forest reserve in the Adirondack Park?

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00:14:38.698 --> 00:14:43.589

So, what you see on this graphic is just each of those habitat types.

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00:14:43.589 --> 00:14:47.458

Divided into the proportion of them just within the park.

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00:14:47.458 --> 00:14:56.219

That's located either on protected or unprotected lands and on top of that, the little black dots are the proportion of the terrestrial vertebrate diversity

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00:14:56.219 --> 00:15:00.208

that would theoretically use those different types of landscapes.

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And so, the way that we defined protected for the purpose of this analysis was either forest preserve or private lands that had a conservation easement on them. We could argue about the relative truth of whether either of those is truly protected.

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00:15:14.453 --> 00:15:26.094

But for the purpose of what we're talking about today, both forest preserve and private lands with easements on them, at least are protected from the sorts of residential development that we're focusing on in this talk. The blue in contrast is

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00:15:26.369 --> 00:15:38.783

private lands that have no current conservation easement on them. And so, what we did in an incredibly simplistic analysis was just to take each of those habitat types, map them out in the park and show the proportion of them that was within each of these designations.

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00:15:39.083 --> 00:15:42.323

And if you look sort of, toward the left hand end of the graphic.

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00:15:42.568 --> 00:15:50.038

You can see that the stuff where there's a bunch of green or most of it is on protective lands is often as Heidi referenced,

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00:15:50.153 --> 00:16:03.234

it is that rock and ice kind of phenomenon: Alpine communities, cliff and talus communities, summit scrub. These are wonderful habitats, but it's a relatively small proportion of biological diversity that can really make a living in those places.

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00:16:03.563 --> 00:16:16.313

Contrast that with some really interesting and unique habitats that we only have in tiny little bits in the Adirondack park and they're pretty scattered things like central hardwood swamp communities, things like northeastern floodplain forest communities,

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00:16:16.649 --> 00:16:26.844

Central oak pine communities, some of this stuff we only have, or primarily have in the Champlain Valley, and almost all of it is on private lands, or at least a disproportionate amount of it is on private lands.

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00:16:27.173 --> 00:16:39.774

Similarly, we know that a large proportion of wildlife are associated with agricultural landscapes and with ruderal shrub and grassland landscapes. We don't have much to speak of that would count as a natural grassland in the Adirondacks.

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00:16:39.984 --> 00:16:51.293

And so if we want to maintain things like grassland birds, then we automatically have to think about the private land. So my answer and part back to that reporter at the time, was even in a place like the Adirondack Park

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00:16:51.293 --> 00:16:56.244

that has, I would argue some of the best conservation protections on the books anywhere on the planet,

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00:16:56.339 --> 00:17:10.824

we can't get it all done just by assuming everything can be on the Forest Preserve. This pattern is evident even in our park. It is also evident in other parts of the globe. We and others have repeated the same sort of analysis throughout the Northeast and on bigger scales.

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00:17:10.824 --> 00:17:18.324

And we just sort of see that in a lot of places. So we do, in fact, need to worry about the private lands, even in a place like the Adirondacks.

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So,

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00:17:20.094 --> 00:17:22.013
in part an answer to that question,

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00:17:22.013 --> 00:17:24.203
and to other questions that we were receiving again,

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00:17:24.203 --> 00:17:24.713
at the time,

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00:17:24.713 --> 00:17:30.203
when we had some controversial development proposals in front of the agency, we set out for the next
as

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Heidi said

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For two decades, going on two decades now,

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00:17:33.443 --> 00:17:37.344
to try to produce some science from our own environment

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00:17:37.618 --> 00:17:51.773
, from our backyards, that can help answer some of the questions that we were getting, and that others
were talking about in the context of in this case, a big controversial development. And what I'm going to
do in the next set of slides is to just go through fairly briefly

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00:17:51.953 --> 00:17:55.284
you know, what are the questions that we have asked and what's the answer

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00:17:55.528 --> 00:18:09.689
that we found if we were able to find an answer without too much detail on each of the individual
studies, but just to try to give you a flavor of what the science has told us after a long time of trying to
actually look at some of this in the Adirondacks and beyond.

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00:18:11.429 --> 00:18:19.409
So, the first question we looked at was how far do the effects of development of individual homes, and
we've also done this for roads,

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00:18:19.409 --> 00:18:33.804

permeate into the surrounding matrix? And so, in other words, how far away do you have to go from an individual house that's out in the middle of nowhere and exurban development to find essentially a biological community that looks the same as if

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00:18:33.804 --> 00:18:47.034

the house wasn't there. And what we have found with regard to birds in the Adirondacks, is that we can see measurable changes to bird communities, different characteristics of those communities up to 200 meters away from that house. And so, if you do your high school math.

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00:18:47.729 --> 00:18:57.898

That equates to an area of 30 acres. It isn't trivial. Others have repeated the same kind of analysis with many, many different texts and many, many different kinds of settings.

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00:18:57.898 --> 00:19:12.239

The main conclusion is that we can't assume that just because we haven't sort of removed the forest and been fully altered the landscape, that it would be the same as if the houses weren't there. Even if they are broadly spread out in sort of this, this large lot style of development.

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00:19:13.588 --> 00:19:22.138

The second question, and we've asked this one in several different studies really is, is which species are most strongly affected, who are the species that are sensitive

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00:19:22.374 --> 00:19:34.584

to development? And I'll talk about this again a little bit toward the end, but it is by and large specialized species. They have characteristics that make them sensitive to impacts on the landscape.

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00:19:34.733 --> 00:19:35.574

Oftentimes,

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00:19:35.574 --> 00:19:39.173

it is specialization on specific types of food resources,

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00:19:39.384 --> 00:19:45.743

specific types of habitats that just put them at a disadvantage against those sort of generalist species that are very,

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00:19:45.743 --> 00:19:53.243

very good at exploiting abroad diversity of habitat types and can tolerate a higher level of different types of disturbances on the landscape.

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00:19:55.163 --> 00:20:08.064

The next question is, how fast does this stuff happen? We had a wonderful opportunity to follow a couple of houses in the pre and post construction and look at bird and mammal and amphibian and plant communities before and after construction.

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00:20:08.304 --> 00:20:16.673

And we were able to see that these changes can occur very rapidly. We could detect measurable changes in bird, mammal and amphibian communities within one year

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00:20:16.888 --> 00:20:22.288

post construction, so the response on the on the part of wildlife is quite fast.

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00:20:23.489 --> 00:20:27.419

And then more broadly, this is where we've been more recently.

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00:20:27.419 --> 00:20:34.769

How do these effects translate in different ecosystem types? In part because when we began this work,

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00:20:34.769 --> 00:20:39.088

one of the sort of critiques that we were getting when we would talk about it was that

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00:20:39.088 --> 00:20:51.804

the information that we were able to bring to the table at the time, was all from work that had been done in the Rocky Mountain West, and we wanted to know whether or not that science had any relevance in our, you know, absolutely very different kind of landscape. In part because of that

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00:20:51.804 --> 00:21:02.153

and in part, because organizationally we had the opportunity to do so we have set out on a couple of different studies to do broad scale comparisons of our northeast, temperate

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00:21:02.429 --> 00:21:08.519

highly in tact system and compare it to a Western system. In our case, Essex County, New York to

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00:21:08.519 --> 00:21:23.304

Madison County, Montana to look at how the impacts of residential development sort of translate in the bird and mammal communities in these two really different biogeographical zones. And what we have found is that our Northeast temperate system

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00:21:23.608 --> 00:21:38.578

at least with regard to birds seems to be more sensitive. We see a higher response of birds in this landscape in the context of this style of development. It's possible that's because the Western system that we're comparing it to

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00:21:38.753 --> 00:21:52.013

has natural fragmentation sort of cooked in to the system and that patchiness may confer some degree of stability whereby creating residential development Adirondacks, building roads making a lawn in a place

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00:21:52.013 --> 00:21:55.703

like ours maybe is a, is a more profound change

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00:21:55.919 --> 00:22:03.358

to that system to begin with. Perhaps most interestingly or most importantly

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00:22:03.358 --> 00:22:17.544

and what we've been engaged in most recently is trying to understand what the mechanisms are that are creating this change in the first place. And what we have found is that it seems to be primarily about that habitat alteration that we create on the landscape

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00:22:17.903 --> 00:22:21.023

and generally at bigger scales. And that is sort of

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00:22:21.328 --> 00:22:28.888

a trend throughout ecological studies, as oftentimes what's happening at a bigger regional scales is often more

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00:22:28.943 --> 00:22:34.044

more a driver of change and than what happens at local scales. And we see that in this in this work as well,

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00:22:34.044 --> 00:22:44.034

but it's important to point out that we also have seen some influence and some interesting influence not just of the fact that we alter that natural structure of the habitat,

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00:22:44.183 --> 00:22:46.854

but that what we're doing at our houses - things,

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00:22:46.854 --> 00:22:48.864

like leaving the lights on it and things like,

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00:22:48.894 --> 00:22:49.314

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00:22:49.709 --> 00:23:02.068

creating noise disturbance also influences wildlife communities and that's what we've been looking at more recently. But I would say that if we had sort of a broader scale conclusion from this, most recent work, it is that.

160

00:23:02.068 --> 00:23:02.788

Probably,

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00:23:02.784 --> 00:23:17.513

it behooves us as sort of conservation practitioners on the landscape to try to influence the placement of houses and where they go on the landscape in the first place. We might be more successful in doing that then we might be in directing the activities of humans

162

00:23:17.729 --> 00:23:21.209

once they live there, which I would argue is a much harder thing to do.

163

00:23:22.854 --> 00:23:35.213

So, we have, as mentioned, sort of been doing this for a long time, you know, these are not all the papers that we put out there, but these are an example of many of the ones that the two of us and a 3rd, colleague of ours

164

00:23:35.364 --> 00:23:49.074

Sarah Reed who did much of the work with us in the Western context, have published and all of these are available to you, you know, wherever you get your scientific literature or from us, anytime that you want them. We have also tried to

165

00:23:49.439 --> 00:23:54.298

condense much of the sort of technical science into this sort of more

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00:23:55.013 --> 00:24:09.413

digestible forms in the form of the gray literature, and sort of guidelines, brochures, and documents those you can see over on the left side of the screen. Those, at this point don't have a home but we're working on trying to find a place for those.

167

00:24:09.413 --> 00:24:15.263

That is important because Heidi, and I, both have other day jobs now, but we really still are interested in all of this.

168

00:24:15.263 --> 00:24:25.824

And, in fact, what is not shown on this slide is the next six papers that we're trying to write that have to do with other data that we've already collected and we just need to find the time to be able to get it out there.

169

00:24:25.824 --> 00:24:33.233

That includes things like mammal data from the East and West, information on the acoustic environment and light disturbance, all of those things.

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00:24:34.044 --> 00:24:46.703

And so, if, you know, any funders who are particularly interested in this topic, like, to support any of that, if you yourself would like to make a donation to the two old ladies science communication fund, we would love to talk to you about that.

171

00:24:47.009 --> 00:24:50.098

But if I could condense

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00:24:50.124 --> 00:24:59.364

all of that science into sort of one slide, one message. This is it's kind of where we've landed with all of this and not just our work, with the work of others as well.

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00:24:59.753 --> 00:25:08.003

That is that, as we add houses to the landscape, even in this sort of very dispersed, large lot style that we have primarily focused on,

174

00:25:08.394 --> 00:25:12.023

we tend to see the same pattern, repeating itself over and over again.

175

00:25:12.384 --> 00:25:26.874

And if you use the example of birds, it is the replacement of certain kinds of species with other kinds of species, and unfortunately is often sort of a many losers and one or two winners kind of a scenario for birds. This is sort of more sensitive species

176

00:25:26.874 --> 00:25:41.693

losing out to the generalists, it's insectivores getting outcompeted by omnivore's, migrants particularly long distance migrants are more sensitive than resident birds. Forest obligates or forest interior obligates are more sensitive than generalists. Again,

177

00:25:41.693 --> 00:25:47.933

the reason why all of this is problematic is because the characteristics on the left side, there tend to be things that are associated with

178

00:25:48.179 --> 00:26:02.398

species that are more rare. We just don't have as many of them, being replaced by a smaller number of pretty common things. And if you want a 10 dollar word to describe that phenomenon, you could call it biotic homogenization. I'm sure that you all are familiar with

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00:26:02.398 --> 00:26:13.943

A sort of analog in our human environments of cultural homogenization, whereby the small independent bookstore loses out to the Barnes and Noble that comes to town.

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00:26:13.943 --> 00:26:22.824

The old forge hardware gets outcompeted by Home Depot or Lowe's. When they come to town, again, it is sort of the replacement of regionally unique

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00:26:23.729 --> 00:26:27.749

with kind of the everywhere phenomenon of

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00:26:27.749 --> 00:26:42.743

of geographic homogenization, so we know what to do in part with respect to conservation biology. There are some very basic concepts. Bigger is better. Round is better than long and linear.

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00:26:42.953 --> 00:26:49.854

A lot of this stuff has been around for a long time. These are some of our favorite books Principles of Conservation Biology and it's third, or at least

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00:26:50.124 --> 00:27:01.044

at least third, maybe fourth printing at this point. Land Mosaics, although it's the ugliest book I've ever seen, has some absolute gems of wonderful information within it and then on the right hand side there, there's some examples of books

185

00:27:01.044 --> 00:27:12.594

that have come out in more recent years as an attempt to sort of take some of those concepts and get them out there and put them into a language that makes more sense. But maybe books are not gonna get us all the way there.

186

00:27:13.223 --> 00:27:20.003

And maybe despite all this wonderful resources being available, it's still not happening. And so we also have tried

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00:27:20.308 --> 00:27:25.588

to identify the best management practices and what we have done in addition to some of those earlier

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00:27:25.614 --> 00:27:36.743

guidelines documents, which were generally focused on one or two smaller issues is make a bigger effort in recent years to sort of gather a team of folks together and try to pull together

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00:27:36.743 --> 00:27:46.763

what we think are the best management practices that have to do with conservation design and stewardship, and sort of get them more toward the direction of what they need to look like

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00:27:47.009 --> 00:27:56.993

within the local land use regulations. So a number of years ago, we brought together a team of folks primarily from the realm of ecological science and some social science

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00:27:57.594 --> 00:28:10.314

we got together at the mountain campus with Colorado State University, and we distilled the messages to the best of our ability and to sort of six broad themes. I want to just highlight that most of the folks on that list

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00:28:10.344 --> 00:28:14.243

and when we initially did this were practitioners within the U.S.

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00:28:14.398 --> 00:28:28.493

we have, since that time, reached out and added a couple of Canadian practitioners as well, including Caroline Daguét, and Jennifer Ray Pierce who are helping us to bring in the Canadian perspective on that, which is in part why this paper's not published yet, but it will be.

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00:28:28.523 --> 00:28:30.534

And I'm going to go through for you

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00:28:30.868 --> 00:28:36.328

some of the best management practices, in too short of a time, that we think are critical in this process.

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00:28:36.328 --> 00:28:41.699

So, the first theme is biological consultation and this is one that applies

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00:28:41.699 --> 00:28:42.324

of course,

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00:28:42.324 --> 00:28:43.884

on sort of all different scales,

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00:28:43.884 --> 00:28:52.973

but we can think about both a broad scale in terms of comprehensive planning or maybe an update of land use codes that's occurring at a big scale like a town or a city,

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00:28:52.973 --> 00:28:57.594

or even a county, contrasted with an individual project.

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00:28:57.689 --> 00:29:09.653

But in both cases, it's absolutely critical that there is consultation with a biological expert who knows what the resources are in the given area that is the focus of the project or the effort.

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00:29:10.163 --> 00:29:22.703

These are two images that are blatantly stolen from the Hudson River Estuary site and from Michael Klemens, because they illustrate the very kinds of people that should absolutely be involved in this process. The Estuary Program is a terrific example.

203

00:29:22.913 --> 00:29:36.473

Laura Heady is a terrific resource, and she's the kind of person that you would want to have involved in all of these efforts. Similarly, Michael Clemens, that's a picture from a slideshow of his, and he gave me years ago, but he's been instrumental in helping Heidi and me

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00:29:36.473 --> 00:29:41.483

right from the very beginning of all this research. So include a biological expert.

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00:29:42.084 --> 00:29:46.763

Ideally include them in every stage of the process. If that's an individual

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00:29:47.003 --> 00:29:50.304

Project, it is sort of the design phase,

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00:29:50.304 --> 00:29:51.683

but also the construction phase,

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00:29:51.683 --> 00:29:53.094

and the post construction phase,

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00:29:53.483 --> 00:29:53.753

,

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00:29:53.903 --> 00:29:58.344

these are the people that you want to have involved in the ecological site assessment,

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00:29:58.344 --> 00:30:05.364

because they know what's happening on the landscape and ideally they are folks that are independent from the development process.

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00:30:05.548 --> 00:30:15.269

The ecological site analysis is the second theme, and this is absolutely critical and as Heidi will explain in a few minutes

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00:30:15.269 --> 00:30:19.528

this is not often required in the context of development and

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00:30:19.644 --> 00:30:23.993

not often required that it'd be done prior to the site design, which really doesn't make any sense.

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00:30:23.993 --> 00:30:35.782

So, ideally, you want to have a collaborative process of site analysis that involves not just the developer and the planner, but also biologists, ecologists, and any folks with sort of relevant, local expertise.

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00:30:36.263 --> 00:30:48.023

Absolutely critical that this be done prior to the design of the site. It doesn't make any sense, for example, to try to do a conservation design if you don't know what the very resources are that you're trying to conserve in the first place.

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00:30:48.564 --> 00:31:00.473

This should make use of sort of, local and regional scale databases. We recognize that all of these things are kind of scalable and if you have a very, very large project, then you ought to be using the best possible resources.

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00:31:00.473 --> 00:31:07.463

You ought to be out there year-round, looking at winter and summer resources on site. If you have a smaller project that maybe it doesn't have that sort of

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00:31:07.739 --> 00:31:14.788

impact or budget, there are still a whole variety of online resources that are available that can tell you a whole bunch about

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00:31:14.788 --> 00:31:19.739

natural resources on a site that should be utilized and generally are not being utilized.

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00:31:20.544 --> 00:31:29.124

Ideally, this is the place in which you would do, spatially explicit mapping and ranking of what's important and what's sort of less sensitive.

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00:31:29.394 --> 00:31:37.253

And ideally, again, this would evaluate of potential impacts, not only about proposed design, but also of some different alternatives to that design.

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00:31:39.239 --> 00:31:51.263

The third concept is clustering and whether or not that's a term that you like it has to do with the idea of concentrating the development on a particular location of the site.

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00:31:51.503 --> 00:31:58.523

And we believe that this should certainly be allowed and encouraged if not required in the context of development.

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00:31:59.128 --> 00:32:07.949

Clusters should be located on the least ecologically valuable areas of the property, on the edge, and to the extent possible near any existing development.

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00:32:07.949 --> 00:32:21.449

And one of the critical ideas behind clustering is that we know as mentioned that each of the houses, each of the rows that we place on landscape has a certain zone of ecological impact associated with it.

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00:32:21.449 --> 00:32:33.509

When you cluster them, or when you concentrate the development, you gain the benefit overlapping those ecological impact zones, and allowing a larger proportion of the property to be less impacted.

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00:32:33.509 --> 00:32:39.358

And so the flip side of that is the open space. Again. That's a term. That is

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00:32:39.384 --> 00:32:50.933

leadin, but it is a fundamental to conservation design that a certain proportion of a given development is protected as open space. What the actual standard is for

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00:32:50.933 --> 00:33:03.653

how much that should be is very dependent on where the project is located, but we believe that there need to be standards to establish not just the amount, but also the location and the configuration and ultimate stewardship

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00:33:03.898 --> 00:33:07.048

of the open space parts of the project.

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00:33:07.048 --> 00:33:15.328

This again should be a collaborative process that involves the developer, the planner, the ecological site, and now informed by the ecological site analysis.

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00:33:15.328 --> 00:33:26.578

Ideally, going back to your basic principles of conservation biology, this should be one intact piece, or if not one or two large intact pieces, ideally is round.

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00:33:26.963 --> 00:33:35.933

Rather than sort of broken up into many backyards. The two images on the bottom part of the screen there are conservation subdivisions in New Hampshire,

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00:33:36.203 --> 00:33:38.604

and the top image is one that David Foster took,

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00:33:38.604 --> 00:33:39.233

I believe,

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00:33:39.233 --> 00:33:40.223

in Massachusetts,

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00:33:40.523 --> 00:33:43.644

and I think that one in the top there illustrates what we don't want,

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00:33:43.673 --> 00:33:51.594

which is just that everybody is sort of collective green in their backyard gets added up together and counted as the open space on a given parcel.

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00:33:51.594 --> 00:34:04.284

I think we could argue that that open space is by no means as functional as the open space that's on the bottom there. So there should be an open space plan. There should be setbacks and buffers. The calculation of open space.

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00:34:04.314 --> 00:34:06.864

should involve all the developable land on the site.

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00:34:07.169 --> 00:34:19.259

You might consider ecological restoration of degraded areas and ideally, the open space gets held in some sort of common ownership and has some sort of protective covenants and or easements

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00:34:19.259 --> 00:34:25.199

placed upon it. Again, all of this depends in part on the scale and the context of the project and the available funding.

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00:34:26.849 --> 00:34:32.668

The next theme is one that is, I think, often overlooked when people think about

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00:34:32.668 --> 00:34:36.148

some of these processes. A lot has been written about the design phase,

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00:34:36.148 --> 00:34:47.184

we have found that Mark Hostettler in particular is a person that has thought and written a lot on the actual construction phase, and is reminding us to think not just about where we decide to put stuff.

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00:34:47.213 --> 00:34:51.833

But how do you actually build it in such a way that you minimize negative impacts on the site.

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00:34:51.864 --> 00:35:05.813

And I would point again, to his book, *The Green Leap*, and some of the papers that he has published and providing very specific recommendations about how you go about construction, that goes all the way from minimizing the use of certain kinds of equipment, designating parking sites,

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00:35:05.813 --> 00:35:11.364

designated staging areas for building materials, using temporary fencing again.

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00:35:11.668 --> 00:35:17.938

Developing covenants and contracts for site construction, ideally, involving a construction site manager

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00:35:17.963 --> 00:35:30.684

and construction workers who are trained in these techniques, and who are aware of the resources that you want to protect on the site, going all the way down to, you know, making sure your contractors are not feeding wildlife during the course of the construction.

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00:35:30.684 --> 00:35:38.184

So this is a vital phase of the development process that is potentially underrepresented in the literature, but equally as important.

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00:35:39.599 --> 00:35:46.643

And then, last is this notion of stewardship and education again, going all the way back to the ecological site analysis.

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00:35:46.853 --> 00:35:55.914

Ideally, we have identified objectives for a given process, a given project and when it's finally built and constructed, and is in place on the landscape

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00:35:56.159 --> 00:36:10.373

the stewardship of it becomes very, very important and so, ideally, there's a plan for stewardship and education that has involved again, a biological expert it involves appropriate conservation science. It provides guidelines for management

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00:36:10.373 --> 00:36:23.873

not just of that open space, but potentially for management also of the private ownerships. It specifies what's permitted and what's prohibited in that open space. Are you, for example, going to consider agriculture

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00:36:24.148 --> 00:36:33.898

an open space use that you might use that's part of the protected area of a given development. It has a clear organizational and or potentially individual lead;

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00:36:33.898 --> 00:36:47.639

it's adaptive, there's a process for adjusting. Ideally, it involves monitoring and particularly monitoring conducted by folks who live there and who are invested in this. I don't know about you, but I have a couple of neighbors who

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00:36:47.784 --> 00:36:59.664

are involved in every single citizen science project that they can get their hands on, because they have so much fun doing this. So, if you have the benefit of being, in a place like that, those are the folks that you can enlist to do this stewardship and to do the monitoring on a given property.

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00:37:00.083 --> 00:37:06.384

And again, all of this is more likely to be successful if you have a dedicated funding source to put behind all of it.

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00:37:07.914 --> 00:37:20.753

So that is sort of our best take at this point on what some of those best management practices are and we are in the process of publishing this work, but we're willing and happy to share it with you at any time.

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00:37:21.023 --> 00:37:27.233

What Heidi will now tell you about is whether or not, we're actually achieving any of this on the landscape and why that might be.

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00:37:29.159 --> 00:37:36.838

All right thanks, Michale. Given the work. Okay you can go ahead and advance the slides.

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00:37:36.838 --> 00:37:43.829

Given the work that we and many others have done, the solutions seem relatively clear yet

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00:37:43.829 --> 00:37:49.559

development demand continues to increase rapidly. People want detached single family homes.

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00:37:49.559 --> 00:38:01.284

They want to work from a nice place remotely. They want to escape the cities to retire, to escape covid, and this just in, to escape the impacts of climate change. I know you've heard of snowbirds.

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00:38:01.554 --> 00:38:10.253

But I recently apparently, there's now talk of fire birds. The photo in the back is from a Forbes article, discussing the pandemic

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00:38:10.528 --> 00:38:14.550

demand boom for single family homes, even a tweet from Elon,

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00:38:14.550 --> 00:38:21.420

where people are begging for more housing construction. So what is missing between knowing how.

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00:38:21.420 --> 00:38:27.269

the landscape needs to be configured and it actually being configured in a way that benefits wildlife.

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00:38:27.414 --> 00:38:32.905

Next slide. Okay, so remember, this talk is still about birds and other wildlife.

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00:38:32.934 --> 00:38:44.755

Hopefully your list is getting longer, your species list for the talk. To address this question of why we aren't configuring our development in ways that that minimize the negative impacts to wildlife.

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00:38:44.844 --> 00:38:49.255

We needed to dig in to the social system to complement our ecological work.

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00:38:49.559 --> 00:38:53.400

So, this started out started by figuring out.

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00:38:53.400 --> 00:38:56.579

Who makes the decisions that impact wildlife on private lands?

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00:38:56.579 --> 00:39:07.230

We've got two options, people who own the houses in the land are people who govern the lands and the landscape context, but as, Michale alluded to, although both are important,

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00:39:07.230 --> 00:39:13.949

it's that broader landscape context that turns out to be the biggest driver. So, who has that governing authority?

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00:39:14.005 --> 00:39:28.105

Next slide please that it comes back to you: the planning board folks, the consultants supporting the planning boards, the state wildlife folks, advising those blending boards and just a quick note about the dedicated people, working on the planning boards.

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00:39:28.105 --> 00:39:31.554

Like yourself, might be, you might be some of the people you're supporting.

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00:39:31.860 --> 00:39:43.195

Previous research from the U. S. shows at 90% of all town and county volunteer appointed, or elected officials have no expertise in biology, ecology, or related topics.

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00:39:43.195 --> 00:39:56.574

And, of course, that's not you anymore because you are here and hopefully a regular member of this fantastic seminar series, and privy to other great work by the Hudson River Estuary Program. But many of many people who are in your shoes do not have access

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00:39:57.510 --> 00:40:00.690

to the resources required to make decisions

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00:40:00.690 --> 00:40:08.340

that will benefit wildlife and as, you know, these amazing of individuals who mostly volunteer to be in these seats,

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00:40:08.340 --> 00:40:11.940

often make their decisions based on, next slide please

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00:40:11.940 --> 00:40:24.594

, what is in the codes it's got to be in the codes for it to matter and these might be newish codes that are updated on an online, or they might be older codes. That haven't been reviewed for 30 years.

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00:40:24.594 --> 00:40:31.914

But what is in the codes helps to drive what decisions are being made by these by these entities. So, next slide please.

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00:40:32.219 --> 00:40:45.539

This is the context that led us to examine two key social questions. The first, is what's in the adopted ordinances that are supposed to be wildlife friendly or good for conservation?

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00:40:45.539 --> 00:40:52.320

And then the second question is what leads the community to adopting such ordinances? Next slide please.

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00:40:52.320 --> 00:40:59.909

For this first question, we decided to do a little research to come up with our answer. And so I'll explain that research very briefly.

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00:41:00.054 --> 00:41:11.934

Next slide, we were specifically looking at conservation development or CD. This could be subdivision development, a cluster policy. It could be named a variety of different things.

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00:41:11.965 --> 00:41:16.074

We'll call it conservation development as a protection measure.

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00:41:16.315 --> 00:41:30.594

So this is an approach, kind of combined some of the best management practices that we've talked about, that achieves the functional protection of natural resources while also providing social and economic benefits to human communities.

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00:41:30.925 --> 00:41:45.355

It's, it's similar to that clustering best management practice where the development is in one part of the subdivision and a well-managed open space is another part of that same subdivision and it's based very much so on

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00:41:45.659 --> 00:41:56.159

Cclear ecological analysis. So although our data is a little bit older, this tool is relatively prevalent, making up more than 25% of privately conserved lands.

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00:41:56.184 --> 00:42:10.675

Next slide. These maps to pick what counties in the West and towns in the Northern Forest have adopted conservation development in their local land use regulations roughly a third of governing entities in these areas.

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00:42:11.244 --> 00:42:18.864

To answer our question about what's good for wildlife and conservation in the codes we collected and reviewed these documents. next slide.

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00:42:19.199 --> 00:42:32.610

And first, the exciting news, there is an increasing rate of adoption, especially in the Northern forest areas, compared to the West. So that gives us a lot of opportunities going forward potentially. Next slide. Please.

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00:42:32.610 --> 00:42:39.300

We then evaluated each city ordinance on a series of criteria, deemed to be beneficial

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00:42:39.300 --> 00:42:51.360

to wildlife. On average the mean percent of the site area required to be protected is 41% in the East and 58 in the West. Then the next question is.

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00:42:51.360 --> 00:43:04.199

What is required to be protected? Next. We found that site analysis for ecological features was required only by 18 of the ordinances in the Northeast.

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00:43:04.199 --> 00:43:07.769

And 13% in the West next slide.

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00:43:08.394 --> 00:43:23.364

And back to that point, that Michale was emphasizing that site analysis for ecological features was required before the houses were determined where they were going to go by only 11% of the ordinances in the Northeast and 5% in the West.

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00:43:24.715 --> 00:43:24.925

So,

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00:43:24.925 --> 00:43:33.445

the lack of emphasis on this ecological site analysis hints that the protected portions of many CD projects,

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00:43:33.684 --> 00:43:38.784

maybe serving much more of a visual open space role than meaningful protection of species,

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00:43:38.784 --> 00:43:39.295

habitat,

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00:43:39.295 --> 00:43:40.644

or other natural resources.

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00:43:41.070 --> 00:43:48.630

Again, hearkening back to some of those best practices about how open space should be configured and designed.

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00:43:48.684 --> 00:43:57.474

Next slide please, we asked a series of questions about where information to guide the design of the conservation area should come from.

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00:43:57.625 --> 00:44:07.855

And we found that the design of conservation area requires consultation with an ecological expert or plan in 26% of the ordinances that we found in Northeast and only 10% in the West.

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00:44:09.235 --> 00:44:21.474

However, we defined ecological expert or plan quite broadly, and when we look more closely at the data of those ordinances, requiring consultation, we've saw that the vast majority required consultations

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00:44:21.715 --> 00:44:25.375

were with the town or county planning board. Next slide.

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00:44:25.739 --> 00:44:29.760

And that was 87%

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00:44:29.760 --> 00:44:33.690

in the Northeast. Okay next slide.

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00:44:34.465 --> 00:44:46.014

So, as you just saw the first, question is relatively easy, even though it took some effort to sort it all out and I've only scratched the surface of the results. The short answer is almost nothing.

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00:44:46.795 --> 00:44:59.155

Most ordinances are lacking in basic stuff, such as requiring review by someone who actually has a shred of expertise in biology, ecology, related field and they lack a requirement of conducting any sort of ecological site analysis.

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00:44:59.184 --> 00:45:03.715

Especially before a decision is made about where houses should be placed on the landscape.

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00:45:04.739 --> 00:45:19.110

Again, it's bleak, but the good news is that many communities continually update their codes and after reviewing so many codes, we are pretty clear about some easy fixes that could transform ordinances into something that could actually make a difference for wildlife.

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00:45:19.110 --> 00:45:24.389

That is: a strong ordinance, quote unquote next slide.

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00:45:24.389 --> 00:45:34.829

So, strong ordinance characteristics that we think should happen include an objective that is explicitly about conservation, wildlife protection.

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00:45:34.829 --> 00:45:41.610

Another requirement would be a quantitative requirement for land protection. That is how much land will be

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00:45:41.724 --> 00:45:54.684

will be protected and, of course, we'd like to see an ecological site analysis again. Ideally happening before deciding where the houses go, and last a management plan for open space.

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00:45:54.835 --> 00:45:58.344

That is what are you going to allow to happen on that space?

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00:45:58.530 --> 00:46:11.639

It's quite one thing to understand what could really be strong criteria and it's another to actually figure out how, how, and why towns adopt this

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00:46:11.639 --> 00:46:20.699

these criteria. next slide please. So enter our second question what leads a community to adopt strong ordinances?

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00:46:21.264 --> 00:46:30.655

So we said about to figure out how ordinance came to be adopted in the first place and identifying conditions that might help us focus work on specific communities,

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00:46:30.655 --> 00:46:31.405

who are quote,

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00:46:31.405 --> 00:46:31.735

unquote,

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00:46:31.735 --> 00:46:32.724

ready to adopt,

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00:46:33.054 --> 00:46:33.295

or,

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00:46:33.295 --> 00:46:42.144

in most cases ready to update their existing codes and may be willing to look at some of these more environmentally wildlife friendly codes. next slide.

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00:46:42.510 --> 00:46:47.010

To do this, we identified eight communities in the Northeast.

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00:46:47.010 --> 00:46:55.469

And eight communities in West who had, er eight communities in the Northeast and the West who had strong ordinances and eight that had more typical ordinances.

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00:46:55.469 --> 00:47:10.224

And again, those strong ordinances include, and an explicit objective for conservation, a quantitative requirement for the open space, an ecological site analysis that's required, and required management plan for open space.

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00:47:10.224 --> 00:47:11.335

And I'll note here

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00:47:11.610 --> 00:47:18.324

that none of our communities with strong ordinances actually met all 4 of those criteria. But some had three.

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00:47:18.804 --> 00:47:29.394

So we talked to a whole bunch of planners and board members, elected officials and volunteers from these communities to kind of really understand the context under which the adoptions or updates took place. next slide.

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00:47:29.699 --> 00:47:42.750

And we know from the literature that to get to a collaborative conservation action, that is a situation where people work together to make a decision that will yield conservation outcome, certain conditions need to be in place.

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00:47:42.750 --> 00:47:48.775

The first is you need to be able to have strong relationships and dialogue or a social foundation,

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00:47:49.014 --> 00:47:49.255

,

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00:47:49.284 --> 00:47:56.605

that people are working with. There needs to be an enabling process that gives the group the authority to make the decisions,

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00:47:56.605 --> 00:48:00.775

or gives them some sort of legitimacy in the eyes of those being affected by the decision.

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00:48:01.139 --> 00:48:03.744

And we also need necessary resources,

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00:48:03.744 --> 00:48:07.914

such as money or labor to actually get to the action,

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00:48:08.215 --> 00:48:08.364

,

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00:48:08.394 --> 00:48:08.934

Next,

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00:48:09.025 --> 00:48:09.414

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00:48:09.474 --> 00:48:16.465

And we use these ideas to guide our research with communities who had adopted strong versus

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00:48:16.679 --> 00:48:22.050

more typical CD ordinances, .

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00:48:22.074 --> 00:48:36.985

Okay next slide. So, with that framework in mind, we went and talked with all these people and we learned that communities don't really get to the point of even considering coming together to discuss adoption or updates

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00:48:37.199 --> 00:48:52.135

until there is a meaningful reason to do. So what is a motivation? A nearby development, a state requirement to update the regulations, an environmental event that gets people thinking such as a catastrophic flood or weather event.

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00:48:52.554 --> 00:48:53.905

All this is to say that,

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00:48:53.934 --> 00:48:56.784

because this work is now nearly a decade old,

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00:48:56.784 --> 00:49:00.655

and we are post covid and headed toward a serious climate situation,

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00:49:00.894 --> 00:49:08.094

at least between impending developments and disasters, people are likely more ready than ever for these types of ordinances.

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00:49:08.215 --> 00:49:12.775

Because this stuff is happening, happening everywhere. So they have a motivation to act.

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00:49:13.050 --> 00:49:20.760

Next slide second, and more important to that category of necessary resources,

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00:49:20.760 --> 00:49:28.014

in nearly all the places that adoption or that had adoption or updated strong ordinances,

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00:49:28.315 --> 00:49:36.505

there was a warm body, a somebody, a Nate, a Laura, who could specifically shepherd the community through a decision, making process.

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00:49:36.715 --> 00:49:50.815

They provide the necessary resources, like, access to a good model ordinances, or giving some language that offer a little bit more conservation oomph. These warm bodies are the people who guide the process of asking the community,

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00:49:50.815 --> 00:49:56.755

What do you want to look like, in the future? And then they can explain how the codes can be updated to meet that vision.

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00:49:57.150 --> 00:50:04.409

Next slide. So we're still talking about birds in case anybody has been wondering.

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00:50:04.409 --> 00:50:10.769

And in addition to the social ecological research, as Michale noted, we ran some workshops to generate guidance

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00:50:10.769 --> 00:50:20.280

on wildlife friendly development, we worked very closely with individuals and organizations and supported a number of different local governments in many places. So, next slide please.

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00:50:20.280 --> 00:50:26.429

We'd like to share a couple of cool outcomes just very briefly first in the Adirondacks.

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00:50:26.429 --> 00:50:39.150

We worked with a large group to share our work about what we've learned on the impacts of development on wildlife and it was a process that ended up completely reshaping

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00:50:39.150 --> 00:50:48.780

the way that large scale housing developments are reviewed. So the Adirondack Park agency governs private lands development in the park, and they changed their application process

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00:50:48.780 --> 00:51:00.989

to do a couple of things that would help move that ecological site analysis more towards the front. And over time, it could affect much of the private lands as well as the adjacent public lands in the park.

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00:51:01.644 --> 00:51:14.844

There are also a number of organizations in the Adirondacks currently working on a conservation development bill, which could greatly benefit wildlife as well as communities. And incidentally, this bill may be stymied right now, due to lack of warm bodies.

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00:51:15.144 --> 00:51:22.375

But in our second, example, from Maine, we have a lead planner from the land use planning commission in Maine, attend one of our

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00:51:22.739 --> 00:51:37.710

workshops, and she actually sent a note to us a few years later, just read that a little bit she said, "thanks again, for including me, in the workshop several years ago, it really helped me think through this unique and important issue of subdivisions in extremely rural areas."

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00:51:37.710 --> 00:51:45.300

She went on to say that our work inspired their new thinking on an adjacency rule that governs development in the

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00:51:45.300 --> 00:51:50.309

10.4 million acres of land in the organized and deorganized areas of the state.

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00:51:50.309 --> 00:52:00.719

It was approved at the time and while it's currently undergoing additional updates, the notion that they are considering these issues in that decision making context is a definite win for conservation.

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00:52:00.719 --> 00:52:10.500

Next slide please. So, notably from our experience, we've learned that this kind of community work takes time.

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00:52:10.500 --> 00:52:18.030

And that people, the local leaders, the movers and shakers, the individuals, like you are absolutely essential.

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00:52:18.030 --> 00:52:27.269

Next slide. So now we, Michale and I are shifting gears a little to think about the big picture for conservation of private lands.

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00:52:27.269 --> 00:52:31.559

Knowing what we know now, the question is, how do we

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00:52:31.824 --> 00:52:45.474

do large scale support getting the resources for capacity building into all of these important places where people want to prioritize the environment, but are potentially working against deep pockets of developers? We like to think about this question.

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00:52:45.474 --> 00:52:54.835

And for the final part of our talk today, share some ideas for you for future consideration. We would love your feedback and encourage questions of discussions about this idea.

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00:52:55.199 --> 00:53:09.360

So, sending staff, whether it be NGO staff or state agency staff, or consultants, sort of in a piecemeal way into a few places, in a couple of areas, one at a time is not really enough.

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00:53:09.360 --> 00:53:21.420

If we want billions of birds or to halt, or hopefully reverse the catastrophic declines we see across the board from many species, we need a 1 billion makers for wildlife on private lands in North America. Next slide.

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00:53:21.420 --> 00:53:24.929

So here is our pie in the sky idea.

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00:53:24.929 --> 00:53:25.349

What

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00:53:25.344 --> 00:53:34.255

if we could design a grant program that could provide multi-year resources to local organizations who provide that warm body,

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00:53:34.494 --> 00:53:38.574

that critical capacity piece to help do the work of integrating wildlife

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00:53:38.574 --> 00:53:40.014

Friendly, climate-

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00:53:40.014 --> 00:53:44.425

smart and disaster prepared ordinances into local land use regulations.

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00:53:44.789 --> 00:53:55.019

And just briefly on these three topics as well, as the topic of say, water quality, they are all very complimentary. Chances are if you do something in the codes that benefits one,

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00:53:55.019 --> 00:53:58.920

It's likely that you'll be benefiting all three of these things.

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00:53:59.364 --> 00:54:14.034

Next slide. A critical component of this fund would be the requirement that recipients participate in a larger training network that each warm body would effectively become a soldier and an army of

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00:54:14.034 --> 00:54:24.175

individuals devoted at that most devolved town and county level where decisions get made to help improve those decisions around land development. Next slide.

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00:54:25.224 --> 00:54:39.565

So, how might this work? Remember, it's all pie in the sky, to start ideas right now completely ready for an overhaul. But, A, we would need to have a huge amount of money and B, we would want a stellar advisory group to review all applicants.

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00:54:39.594 --> 00:54:41.724

And that seems to be a lot easier than A.

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00:54:42.030 --> 00:54:50.519

But C. this kind of network, we would offer trainings for the recipients of the, the grants and these would be serious trainings so that

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00:54:50.519 --> 00:54:57.840

some of the funds would be directed toward pulling together all of the material that's out there, that's really good, and making sure it's grounded in science.

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00:54:57.840 --> 00:55:02.219

D, we would highlight and promote early adopters of

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00:55:02.219 --> 00:55:15.539

and we would highlight their experiences and then we would promote any of the tools that they might use and hopefully make some model ordinances from those experience to share across the wider network of training providers.

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00:55:15.539 --> 00:55:26.039

So, the way it would have to work is to dig in over 10 years, and beyond to implement these ordinances at a scale with adequate capacity and training to deliver

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00:55:26.039 --> 00:55:36.000

the changes that meet community needs, address, any private property rights concerns that may arise. And this is a critical component, which we didn't get into very much in this talk today.

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00:55:36.000 --> 00:55:39.719

And determine solutions that promote conservation on private land.

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00:55:39.894 --> 00:55:53.184

Next slide, so we are right now in a space where we need solutions that work locally, and can scale globally. This type of work is happening in some pockets of the country like the Hudson River Valley.

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00:55:53.184 --> 00:55:57.025

For example, the coast of Maine, and parts of North Carolina.

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00:55:57.235 --> 00:56:12.144

But to make a difference on a continental scale, we need an army vigilant and trained individuals deliver to deliver easy to implement and cost effective tools that can sway decisions made locally every day across the globe that affect the habitat loss.

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00:56:12.295 --> 00:56:14.844

That is we need to influence those codes.

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00:56:15.210 --> 00:56:24.389

There are currently calls for protecting 30% of the lands by 2030. The so called 30 by 30 effort as well as efforts claiming that "nature needs half."

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00:56:24.389 --> 00:56:35.699

To meet these visions, we think that integrating conservation into private lands will be a very important natural solution for wildlife conservation as well as for climate action.

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00:56:36.505 --> 00:56:38.695

Private lands, in our mind,

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00:56:38.695 --> 00:56:40.735

hold the answer and more importantly,

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00:56:40.945 --> 00:56:52.735

it's people like you who work at the most devolved level of decision making and can think outside the box to bring innovative private lands protections to fruition who can really make a difference for wildlife.

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00:56:53.039 --> 00:57:01.110

Next slide so we hope that our presentation has given you an appreciation for the impacts of development on wildlife,

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00:57:01.110 --> 00:57:16.050

insights into some of the best management practices, some understanding of the limitations of existing protection mechanisms, and we hope for new and innovative approaches to take private lands protection to a much larger scale.

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00:57:16.050 --> 00:57:22.889

And we think this can be done, 30 by 30, and the need for innovative private lands protections across the U. S.

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00:57:22.889 --> 00:57:37.260

combined with the confluence of many climate related natural disasters, makes this an opportune time to think outside the box, consider ways to scale our impact on private lands conservation, and to bring bird and other wildlife conservation

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00:57:37.260 --> 00:57:48.175

wild populations back, and as a community of practitioners and decision makers, we are going to need to take some big risks to make this happen.

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00:57:48.414 --> 00:57:56.125

So, we say, "let's go big or go home" and start by building conservation into local codes. Thanks a lot for your time today.

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00:58:00.775 --> 00:58:04.195

Nate Nardi Cyrus: All right, well, Heidi and Michale Thank you so much.

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00:58:04.375 --> 00:58:15.864

That was that was really tremendous and really acted as a, as a nice advertisement for our conservation and land use program for folks that are in the Hudson River watershed.

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00:58:16.170 --> 00:58:25.434

You know, we're always available to help warm body to warm body to help make this work done and we need you to contact us to get in touch.

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00:58:25.465 --> 00:58:38.965

And we're very happy to discuss all levels of this type of work and share examples. So, yeah, thanks for that, that ringing endorsement. We have a lot of question and answer which, I think it'd be really fun.

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00:58:38.994 --> 00:58:46.554

Everyone was very much engaged in this, and I think it's easy to see why the first question just to start you out cold.

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00:58:47.965 --> 00:58:54.144

There was a lot of comments about, solar and wind development and their impacts to wildlife.

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00:58:54.204 --> 00:59:08.335

So without getting too much into the specifics of any one project, could you just talk about maybe some of the, the impacts and how that might be different or similar to kind of residential or commercial development that you might have studied.

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00:59:09.840 --> 00:59:15.750

Michale Glennon: I all I can do is say that I have not studied the impacts of solar or wind at all.

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00:59:16.315 --> 00:59:29.724

My suspicion is that some of those impacts would be similar, because we see sort of these commonalities of, of infrastructure and human activity on the landscape often, translating into these same sorts of patterns with regard to wildlife.

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00:59:29.755 --> 00:59:34.375

However, I would say, and this, I'm just speaking for me, Heidi might want to weigh in here, but,

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00:59:34.469 --> 00:59:42.389

you know, climate change is such an enormous and overarching issue that influences everything else that we're talking about.

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00:59:42.389 --> 00:59:56.070

That I would not argue for stopping solar or when development on those concerns alone. I think that there are probably some very good, good guidelines for how to do it. Well, but I would never say we shouldn't do it.

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00:59:56.070 --> 01:00:02.340

Because it's enormous and needs to be integrated into all of these considerations.

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01:00:03.744 --> 01:00:12.655

Heidi Kretser: Yeah, I guess I would, I haven't worked in that space at all either. I know there are some, some really amazing groups that are starting to look at, you know, what

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01:00:12.655 --> 01:00:23.304

those impacts might be. And clearly from the research that we've done on just, you know, the extension of roads, extensions of housing infrastructure, it looks like, you know, these kinds of infrastructure

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01:00:23.579 --> 01:00:37.949

developments could result in similar impacts that we might be seen in the residential field but, you know, in with solar and wind projects, there's, a lot of opportunities for doing them a little bit differently because we're kind of at the

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01:00:38.034 --> 01:00:50.755

early stage of adopting these technologies. What about, you know, roofs? What about you know, agriculture that can happen underneath the solar panels. So you're not like cutting down new trees or breaking into new areas.

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01:00:50.994 --> 01:01:00.954

What about, you know, smaller size wind turbine development that could be more located in already developed areas. So these are all things that will need to be considered.

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01:01:00.954 --> 01:01:08.605

And I can't think of the name of the group, but I think they're based out of California, but they're working U.S. wide on just these types of issues.

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01:01:09.900 --> 01:01:21.840

Nate Nardi Cyrus: Great, the next question, any insights on how to protect habitat in much more densely developed areas than those, that you've been working in.

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01:01:23.610 --> 01:01:32.369

Michale Glennon: Heidi again, you might want to weigh in here too, because I know, you know, some programs that I'm less familiar with but I think, I should've stressed more that I think

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01:01:32.369 --> 01:01:35.760

all of what we're talking about is very scalable.

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01:01:35.760 --> 01:01:45.659

And so I will, I'm actually I'm going to tell a story because I end up telling this story all the time. I went to a conference once years ago for the,

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01:01:45.659 --> 01:01:56.934

and it was a regional version of the International Conference on Road Ecology, on ecology and transportation and there was a woman there who gave a talk. She was not a scientist. She was like a nurse or something.

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01:01:57.175 --> 01:02:07.164

She gave a talk and all her talk was, was just showing images of animals that were traveling through a culvert that had been installed in her neighborhood outside of Boston.

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01:02:07.974 --> 01:02:19.824

Her point was that nobody would have looked at that particular neighborhood and identified it as a critical connectivity zone and said we really need this better culvert in this exact spot.

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01:02:19.855 --> 01:02:33.864

No, scientist would have done a large scale analysis and identified that neighborhood to do that in. It was because Richard Foreman lived in her neighborhood and he argued for it. Richard Foreman being the father of landscape ecology. He argued for it and it got installed.

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01:02:34.045 --> 01:02:39.835

But her point was, despite the fact that this was, you know, a highly developed neighborhood outside of Boston.

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01:02:40.079 --> 01:02:52.014

And nobody would have potentially identified it as one of the most critical areas, look at all the difference it made for all of these critters. They all would have been switched on the highway if we hadn't done this. And so, I think of that all the time.

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01:02:52.195 --> 01:02:58.885

I think that there is tremendous value to what we are doing on tiny, tiny scales in our backyard and there are some terrific

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01:02:59.159 --> 01:03:12.960

researchers and terrific programs out there to tell you how to do this, sort of on all scales. We've worked on really big scales in the Adirondacks around the notion of really big developments just because that's what sort of generated a lot of that really work. But I would say

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01:03:12.960 --> 01:03:26.369

Doug Tallamy's work, for example, is phenomenal, and it's wonderful information about what you could do in your own backyard to benefit wildlife. And benefiting them on a tiny scale is just as important as benefiting them on big scales.

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01:03:26.369 --> 01:03:35.460

Heidi Kretser: Yeah, and I would just like to I'll just point out that, , there are a number of different cities namely, Chicago and I think the Phoenix area, I mean.

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01:03:35.460 --> 01:03:35.909

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01:03:35.905 --> 01:03:39.804

and even to some extent in New York City that are looking at just these issues at the very,

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01:03:39.804 --> 01:03:40.644

very local scale,

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01:03:40.644 --> 01:03:42.295

“How do we improve the environment?”

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01:03:42.324 --> 01:03:47.155

The urban environments and there's a whole bunch of reasons why you might want to do it aside from,

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01:03:47.335 --> 01:03:47.844

,

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01:03:47.875 --> 01:03:50.364

the ecological and biological reasons.

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01:03:50.364 --> 01:03:56.994

There's also environmental justice and access for communities to have access to nature and,

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01:03:57.025 --> 01:03:57.414

you know,

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01:03:57.414 --> 01:04:00.295

the same principles applied at these you know,

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01:04:00.324 --> 01:04:02.034

most of our work is done thinking about,

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01:04:02.034 --> 01:04:02.364

like,

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01:04:02.394 --> 01:04:02.605

you know,

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01:04:02.605 --> 01:04:03.894

“Are protected areas enough?”

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01:04:03.925 --> 01:04:17.844

No, we have to look to the, the private areas that are adjacent to these protected areas and that gets us working in a lot of much more rural areas. But that urban environment is also really key for the larger picture.

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01:04:17.844 --> 01:04:30.114

And if you think, for example, I think of the number of birds from the Adirondacks that migrate right through New York City. And that's one of their stopover points. So, you know, these are all critical habitat.

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01:04:30.114 --> 01:04:33.985

So, anything we can do anywhere is a benefit.

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01:04:35.875 --> 01:04:49.224

Nate Nardi Cyrus: Yeah, and just bringing that back to the Hudson Valley region. I know that in our work with the Estuary program, we found that a lot of the small cities that are along the Estuary, often, have a greater capacity to take on these types of projects.

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01:04:49.224 --> 01:04:49.344

So,

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01:04:49.344 --> 01:04:50.514

we really end up having,

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01:04:50.755 --> 01:04:51.054

,

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01:04:51.054 --> 01:04:51.235

you know,

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01:04:51.235 --> 01:04:52.224

our small cities,

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01:04:52.224 --> 01:04:54.204

like the city of Kingston, city of

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01:04:54.204 --> 01:04:55.945

Poughkeepsie, Beacon,

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01:04:56.094 --> 01:04:57.264
and many others that are,

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01:04:57.264 --> 01:04:57.565
you know,

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01:04:57.565 --> 01:05:04.585
actually way out ahead of a lot of other communities and understanding their habitat and crafting,

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01:05:04.614 --> 01:05:05.215
,

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01:05:05.244 --> 01:05:07.135
local code to help protect them.

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01:05:07.135 --> 01:05:07.585
So,

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01:05:07.585 --> 01:05:07.885
,

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01:05:08.155 --> 01:05:08.394
you know,

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01:05:08.425 --> 01:05:09.025
a lot of ways,

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01:05:09.025 --> 01:05:10.465
I think that they're ahead of the game,

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01:05:10.465 --> 01:05:11.485
at least in our region.

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01:05:11.760 --> 01:05:12.300
Heidi Kretser: Yeah,

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01:05:12.295 --> 01:05:13.255
and actually Nate,

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01:05:13.255 --> 01:05:13.764
that's like,

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01:05:13.795 --> 01:05:15.414
perfect to say that,

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01:05:15.505 --> 01:05:16.045
,

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01:05:16.074 --> 01:05:16.315
you know,

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01:05:16.315 --> 01:05:27.445
many of those areas have ordinances on the books and they would be great places to look to really figure out what are going to be model ordinances that can scale to all kinds of different places.

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01:05:27.780 --> 01:05:42.025
You know, if one billion acres for wildlife were to ever come to fruition, I think we'd have that be one of the first things ,we get a grad student, or somebody to work on is like, looking at what are the model ordinances that are out there that are working and how can we tailor them

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01:05:42.025 --> 01:05:45.864
so they can be applied to another, maybe more rural areas or more urban areas.

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01:05:47.844 --> 01:06:01.405
Nate Nardi Cyrus: Great. Okay switching gears a little bit, we had a question about beavers and their role is amazing ecosystem engineers but also some of the issues that they have with human infrastructure.

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01:06:01.405 --> 01:06:10.014
So, this person is just asking, if you could comment on how management of wildlife can fit into habitat protection.

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01:06:12.025 --> 01:06:24.954

And that's a pretty broad question. Michale Glennon: I'll give that one to Heidi as the wildlife conflict expert. Heidi Kretser: I knew that was coming. Yes, of course beavers are amazing ecosystem engineers and they're the bane of existence of road crews.

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01:06:25.224 --> 01:06:28.315

I mean, I think that they're,

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01:06:29.005 --> 01:06:40.525

certainly when I think of beavers out West, like, their, their loss, you know, them not being there, , from being extirpated has really been felt throughout all of the water systems of the West.

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01:06:40.525 --> 01:06:54.954

So there's are there are efforts to either mimic what beavers have done, or actually bring beavers back to many places, the Northeast, you know, their populations are quite high. There are a lot of different people working on beavers at the state wildlife agencies.

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01:06:54.954 --> 01:07:08.454

And I think generally there's, like, you know, an idea that, yes, we want beavers around. But again, if you're if you're building and you're keeping more larger open spaces, there'll be more space for beavers to do their thing in those open spaces

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01:07:08.454 --> 01:07:18.324

And if we're kind of clustering or keeping kind of the minimal footprint in the places where we are then then again, that gives beavers a little bit, more time.

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01:07:18.324 --> 01:07:32.155

But, you know, beavers can elicit all, very strong, emotional feelings from anybody who's involved with them, if they're, like living right next to you and blocking the roads that you have to drive on.

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01:07:32.155 --> 01:07:41.275

So there has to be some movement of them to different places. But also, there are a lot of good tools out there and beaver deceivers and different things that that people can look into.

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01:07:43.914 --> 01:07:58.585

Nate Nardi Cyrus: Great, we have someone asking for examples of those strong ordinances for conservation and wildlife, habitat protection that you talked about. And so maybe you could share some of those with us and we can pass those along in our follow up email. Heidi Kretser: Yeah. Yeah, we'll do that.

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01:07:58.614 --> 01:08:08.454

That would be easier, cause I can't like remember names off the top of my head. Nate Nardi Cyrus: Yeah. And in that follow up email, we will also share a link to this presentation, , as well as the recording.

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01:08:08.454 --> 01:08:15.534

So you should a lot of information covered today, but you can you can digest it over time at your, at your leisure.

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01:08:18.145 --> 01:08:31.104

We have someone saying, shouldn't, shouldn't it not only be a 1 Billion acres for wildlife a specific number of acres by eco-region across the state? Heidi Kretser: Sounds great. Our pie in the sky idea already taking form. I love it.

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01:08:33.984 --> 01:08:35.935

You're, you're hired for the advisory group.

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01:08:38.305 --> 01:08:39.175

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01:08:40.225 --> 01:08:41.125

But that's a good I mean,

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01:08:41.125 --> 01:08:41.935

that is a good point,

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01:08:41.935 --> 01:08:42.055

though,

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01:08:42.055 --> 01:08:44.994

to just kind of going back to Michale's graphic on,

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01:08:45.024 --> 01:08:45.805

on the,

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01:08:46.135 --> 01:08:47.784

the Adirondack habitats and,

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01:08:47.814 --> 01:08:48.085
you know,

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01:08:48.085 --> 01:08:49.194
when we start to think about,

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01:08:49.194 --> 01:08:49.314
like,

520
01:08:49.345 --> 01:08:50.185
what are these,

521
01:08:50.425 --> 01:08:52.854
what are these acres that need to be protected and,

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01:08:53.064 --> 01:08:53.243
you know,

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01:08:53.243 --> 01:08:56.545
these efforts of 20 by 30 or "nature needs half" like,

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01:08:56.545 --> 01:08:59.154
we can't just have it all be Alpine and rocks.

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01:08:59.154 --> 01:09:09.984
Right it has to be some of these ecosystems that actually offer a certain level of protection and Michale I don't know if you want to add anything more to that, given that we have some of the time for that.

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01:09:10.289 --> 01:09:23.725
Michale Glennon: I guess there's a lot I would just say that there's been some, some very good work on, on bigger scale than what we have worked on. But nature Conservancy, for example, and identifying, sort of underrepresented ecological settings that we need to focus more on.

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01:09:23.725 --> 01:09:37.944
And they've been generally overlooked and what's represented in our protected spaces. And so they, they have a lot of resources that organization and others that have looked at that very question of sort of not just half, But which half and where do we find it?

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01:09:37.944 --> 01:09:39.925

And how do we make sure it meets our needs?

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01:09:42.954 --> 01:09:56.814

Nate Nardi Cyrus: Great , we have a great question how do you recommend addressing private property concerns, this scuttled a code revision that I was involved with not me, but the writer. Heidi Kretser: yeah, yes. , yes, that will happen.

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01:09:56.875 --> 01:10:08.335

It happens frequently, I think, you know, working with private property rights, it really does require a lot of time, a lot of time and engagement, and even doing that.

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01:10:08.364 --> 01:10:14.423

It has become a very inflamed political issue and, you know, part of...

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01:10:15.984 --> 01:10:29.994

I know, you know, we're talking about this pie in the sky idea, but part of the pie in the sky piece of it is that, you know, the funds would be at least six years of full coverage for that warm body to be part of the process. Whoever it is, maybe it's somebody from the town,

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01:10:30.024 --> 01:10:41.484

Maybe it's a local NGO, but that person is involved through different cycles of, of the political election. So that you might actually have 3 cycles of political elections. Maybe there'll be a backlash.

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01:10:41.725 --> 01:10:48.654

And, you know, these things take a lot of time and so, while, at one point, there might be a lot of backlash from the private property rights side,

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01:10:48.654 --> 01:11:01.975

maybe through conversation and discussion and pointing out of the other benefits that can be accrue to the community by having open spaces. And by having development that's clustered and the emergency services

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01:11:01.975 --> 01:11:06.774

don't need to go so far in and having some of these cost savings

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01:11:06.774 --> 01:11:11.664

that are usually associated with better types of development and having these,

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01:11:11.845 --> 01:11:18.715

these codes that also help to be a little bit more resilient to any climate disasters that might be happening ,

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01:11:18.744 --> 01:11:22.015

that stuff takes time and a lot of energy,

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01:11:22.015 --> 01:11:27.835

and a lot of patience and really good facilitation, to get people talking and even if you have the best of it,

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01:11:27.835 --> 01:11:29.215

it may get scuttled in the end.

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01:11:29.215 --> 01:11:37.765

And I'd love to chat with you about what the experience was. Because I think that that is that is key in this whole process.

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01:11:38.010 --> 01:11:42.960

I'm sure there's a lot of people on this call who have a lot of great experience with that.

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01:11:44.635 --> 01:11:56.574

Nate Nardi Cyrus: Yeah, Heidi and Michale, if you're okay with us, sharing your email , you know, we will do that on the follow up as well and folks can reach out to you, to help open up. There you go.

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01:11:58.404 --> 01:12:12.925

But we'll also share it on in the email. So you have kind of a one stop shop there. We have another comment, , if I'm down in the town of Bedford, in Westchester County, our town, in our town, there's an NGO that's mapping habitats in our town

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01:12:13.164 --> 01:12:20.005

to do an analytic quantity of carbon, that is stored in each habitat type at the same

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01:12:20.005 --> 01:12:33.744

time our town is working on an ordinance that identifies wildlife corridors, connecting existing habitats, that are existing projects to connect open space.

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01:12:33.954 --> 01:12:42.895

And combining those two projects, you have a win for wildlife and, you know, carbon sequestration. Heidi Kretser: Yeah, that's totally exactly what we're talking about.

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01:12:42.895 --> 01:12:44.814

That's the exact kind of stuff that we need,

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01:12:44.875 --> 01:12:54.324

like everywhere. Nate Nardi Cyrus: That wildlife connection project is actually funded by the program through our annual grants so another plug for,

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01:12:54.444 --> 01:12:54.895

you know,

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01:12:54.925 --> 01:13:00.354

we can help provide some of the money and person power to help move these projects forward.

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01:13:01.524 --> 01:13:14.395

Okay, as you stated, projects come before the planning board after design takes place, then we have several boards, wetlands, conservation, et cetera., decide, whether to conduct a site visit.

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01:13:14.484 --> 01:13:26.484

We are somewhat trained, but if the project requires a naturalist or biologists, the town will not pay. I believe sometimes they can request a developer, hire someone. But that's not really the best system to do what you said.

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01:13:28.439 --> 01:13:37.649

Heidi Kretser: Yes, yeah, we see this a lot. I mean, it isn't the best system when the developers get to hire

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01:13:37.649 --> 01:13:46.020

their biologists to make the assessments, it's not usually quite so thorough, In an ideal world there would be an independent

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01:13:46.020 --> 01:13:54.600

third party who funds those, but yes it's challenging. And that's why we need more and more trained people on the ground.

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01:13:54.600 --> 01:14:04.260

Michale Glennon: I think one of the recommendations we make somewhere in that report, is that potentially having municipalities have partnerships with

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01:14:04.260 --> 01:14:18.564

universities, if they exist in the area could be one way to maybe provide some of that expertise. And at the same time to provide, sort of real-world experiences for students, if there are projects that they could help in some of that consultation for.

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01:14:18.564 --> 01:14:25.645

Because universities are, they aren't a part of the decision. They would be a nice outside entity that maybe could help.

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01:14:28.314 --> 01:14:35.185

Nate Nardi Cyrus: Yeah, that's a great point. We have another question. Our town is supposed to be updating our comprehensive plan.

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01:14:35.545 --> 01:14:44.635

What to do, what do you do when there isn't a desire to look at ecological impacts other than going through the requisite SEQR EAF process?

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01:14:44.664 --> 01:14:51.145

Is there any discussion about, you know, DEC, working to,

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01:14:51.479 --> 01:14:54.840

I guess they're saying enhanced SEQR

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01:14:54.840 --> 01:15:09.689

perhaps within the, the, , yeah, within the SEQR process, something that will guide the new comp plan to incorporate ecological impacts for the planning board to conduct reviews. So, maybe comment on how you've seen comprehensive plans address this.

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01:15:11.189 --> 01:15:11.729

Heidi Kretser: Yeah,

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01:15:11.725 --> 01:15:12.055

I mean,

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01:15:12.055 --> 01:15:12.564

I think,

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01:15:13.555 --> 01:15:13.975

you know,

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01:15:13.975 --> 01:15:17.664

I don't know exactly the situation that's going on where you are I mean,

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01:15:17.664 --> 01:15:25.284

part of the comprehensive plan process is to get as many people as possible to the table to kind of discuss,

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01:15:25.375 --> 01:15:25.885

you know,

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01:15:26.034 --> 01:15:28.135

what's the vision of the community,

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01:15:28.135 --> 01:15:29.784

where do you want to see things happen?

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01:15:29.784 --> 01:15:35.335

And we've used a tool in years past looking at values that different

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01:15:36.114 --> 01:15:49.255

people in the community have about the areas in their community. Like, what are your, what areas do you value for historical purposes? What areas do value for recreational purposes? What are your value for wildlife purposes?

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01:15:49.255 --> 01:16:02.034

And those types of elements should be going into the comprehensive plan, ideally. But, you know, when there isn't a desire at all, it's it, it does pose a bit of a challenge.

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01:16:02.064 --> 01:16:06.414

So I would suggest, you know, perhaps looking at some of these other

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01:16:06.750 --> 01:16:20.069

venues that could get you in the same way, the climate smart ideas, or the disaster preparedness, you know, water quality. These different types of complimentary issues can also get you to

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01:16:20.069 --> 01:16:28.500

some of the content more conservation oriented pieces. In terms of talking with DEC.. I don't know.

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01:16:28.824 --> 01:16:40.795

I'm not familiar with any states that have, like, a kind of like, enabling legislation that would require one look at this. It's very possible that they're out there. And they're there's not currently any discussions going on.

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01:16:40.795 --> 01:16:47.994

I don't think with, although maybe Hudson River Estuary Program has a different idea on this or Michale, perhaps you want to ad anything.

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01:16:48.475 --> 01:16:49.255

Nate or Michale.

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01:16:49.824 --> 01:16:55.314

Michale Glennon: I probably don't have anything meaningful to add other than I would agree that that approaching it potentially through,

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01:16:55.404 --> 01:16:57.685

through climate mitigation or disaster preparedness,

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01:16:58.015 --> 01:16:58.314

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01:16:58.345 --> 01:17:01.824

both because you achieve the same goals for large part,

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01:17:01.824 --> 01:17:03.625

and the kinds of recommendations that we make but also,

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01:17:03.625 --> 01:17:08.484

because there might be funding for those kinds of things. Much more so,

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01:17:08.484 --> 01:17:10.045

than there's ever funding for a wildlife,

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01:17:11.845 --> 01:17:15.505

and maybe that would be an impetus to get a town to to consider it more strongly.

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01:17:15.869 --> 01:17:22.170

Nate Nardi Cyrus: And I'm not personally aware of any big changes to secret that would.

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01:17:22.170 --> 01:17:26.609

You know, that would involve this type of additional review .

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01:17:26.609 --> 01:17:39.750

Okay, given the challenges of large scale conservation of private open space, is there some comparable value in requiring native landscaping on developed lands and providing habitat?

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01:17:41.220 --> 01:17:52.289

Michale Glennon: Yes, I absolutely think that that's a a critical thing and that's people are attempting to chip away at, but it's gonna take a long time for us to get off of our.

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01:17:52.289 --> 01:18:04.350

love of non native shrubs and things like that but yeah, going back to the whole argument about, you know, your backyard, it's just as important. This can be thought about on all different scales.

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01:18:06.029 --> 01:18:17.550

Nate Nardi Cyrus: Okay, this is this very pertinent question. Large new multi-family housing developments are rare in the Hudson Valley compared to the incremental build out of new single 5 acre lots.

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01:18:17.550 --> 01:18:29.010

That are individually carved out of remaining larger parcels. The planning you described as expensive in time consuming, do you envision applying the same standards to these much more common forms of incremental development?

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01:18:30.024 --> 01:18:43.585

Heidi Kretser: We would love to, you know, as Michale indicated both of us have kind of day jobs where we do different things. But this issue is the one that, you know, I think if we could just tackle it, we would do it.

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01:18:43.675 --> 01:18:50.875

And I, and I do think that you, it should be these types of principles can be applied to any type of development. And I'll let Michele jump in here.

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01:18:51.925 --> 01:18:52.284

Michale Glennon: Yeah,

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01:18:52.314 --> 01:18:56.005

we have thought about that a lot recognizing that much of our work has been,

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01:18:56.244 --> 01:18:57.895

has been the result of,

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01:18:57.925 --> 01:18:59.574

of sort of large,

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01:18:59.574 --> 01:19:01.194

controversial attention,

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01:19:01.194 --> 01:19:04.015

grabbing things that came before the agency that we,

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01:19:04.015 --> 01:19:04.284

you know,

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01:19:04.284 --> 01:19:09.234

It spurred a lot of our work and thinking about what do you do in the context of a big development?

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01:19:09.234 --> 01:19:22.765

But that's where in the Adirondacks too we don't have that many that are on those big big scales. What we do have is the same incremental piece by piece and that was the next thing that we wanted to tackle. So this is on the mark. Again, I would say that,

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01:19:23.100 --> 01:19:28.739

the same general principles, but by no means the same level of

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01:19:28.739 --> 01:19:29.430

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01:19:29.515 --> 01:19:31.314

deep dive would be required,

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01:19:31.314 --> 01:19:31.914

I wouldn't think,

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01:19:31.914 --> 01:19:32.335

but we would,

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01:19:32.515 --> 01:19:35.635

we could still use many of the same sort of generic conservation,

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01:19:35.635 --> 01:19:37.375

biology ideas of,

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01:19:37.375 --> 01:19:37.734

you know,

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01:19:37.765 --> 01:19:44.154

to the extent that you can put new development near existing development and try to overlap those impacts. To the extent that you can,

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01:19:44.185 --> 01:19:44.725

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01:19:44.814 --> 01:19:47.755

protect your open space and connect it to open space

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01:19:47.755 --> 01:19:58.435

that already exists on the landscape. So, some of those sort of really simple ideas. I think how you translate that into the codes. I don't know. But that's partly what Maine was doing. And the adjacency rules, right?

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01:19:58.465 --> 01:19:58.734

So,

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01:19:59.635 --> 01:20:00.024

yes,

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01:20:00.024 --> 01:20:01.404

Heidi Kretser: and the rules,

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01:20:01.404 --> 01:20:06.564

I'm also thinking overlay districts are useful tool in this regard because they,

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01:20:06.595 --> 01:20:06.895

you know,

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01:20:06.954 --> 01:20:07.164

the,

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01:20:07.465 --> 01:20:13.944

the community comes together and decides what areas they believe should be prioritized for.

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01:20:14.279 --> 01:20:15.239

conservation.

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01:20:15.265 --> 01:20:15.564

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01:20:15.595 --> 01:20:17.125

They can still remain in private land,

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01:20:17.125 --> 01:20:18.024

but there might be like,

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01:20:18.024 --> 01:20:21.744

different incentives for doing a transfer of development rights from,

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01:20:21.774 --> 01:20:21.984

you know,

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01:20:21.984 --> 01:20:25.225

if you're going to put your single house in the spot,

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01:20:25.225 --> 01:20:26.994

where there's actually an overlay district,

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01:20:26.994 --> 01:20:29.574

then maybe there's an opportunity to transfer that development

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01:20:29.574 --> 01:20:29.814

right

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01:20:29.814 --> 01:20:36.654

so that it's actually just outside of that area or some other place. There's a lot of different mechanisms that are out there.

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01:20:36.654 --> 01:20:37.045

And again,

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01:20:37.045 --> 01:20:37.314

like,

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01:20:37.585 --> 01:20:43.795

I think there needs to be a fair amount of work done to consolidate the types of tools that have been used to address,

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01:20:43.824 --> 01:20:52.944

just this type of thing and really think a little bit more beyond what we've done to apply it at this incremental scale.

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01:20:54.895 --> 01:20:58.255

Nate Nardi Cyrus - And we'll also try to make sure to post in the chat again,

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01:20:58.614 --> 01:21:00.234

the Hudson River Estuary Program's,

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01:21:00.234 --> 01:21:00.774

Conservation

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01:21:00.774 --> 01:21:02.005

and Land Use team has again,

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01:21:02.005 --> 01:21:02.875

our own website,

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01:21:02.875 --> 01:21:10.734

which is really a great kind of resource for specifically for communities in the Hudson Valley that includes ordinances

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01:21:10.734 --> 01:21:19.854

and the typical mechanisms for protection, including models of communities that have done this before. So, for that local kind of

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01:21:20.159 --> 01:21:34.225

you know, perspective, please visit that website. It'll help. I also want to let everyone know there are a lot of questions, and a lot of folks and asking questions. We have a big backlog here that I'm that I'm sorting through.

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01:21:34.435 --> 01:21:43.645

If I don't get your question, I encourage you to follow up with the presenters directly. So that, you know, I'm sure they can answer those questions.

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01:21:43.854 --> 01:21:52.524

But we really, I want to try to cut off at 2:30 just to give them a break, at least from the kind of nonstop barrage, at this point.

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01:21:52.524 --> 01:22:05.845

But an interesting question, can you discuss if there are any efforts or if you've seen efforts to create kind of municipal endangered species act, what might be rare in one community and another?

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01:22:05.845 --> 01:22:19.795

I'm sorry, I'm getting things blocking my view of what might be a rare in one community might be common in another, but rarely contributes to biodiversity. What are the predictions that these common species at the fringe of their range might receive?

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01:22:23.310 --> 01:22:29.100

Heidi Kretser: I haven't seen that only state by state. That's the lowest range, but it's a great idea.

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01:22:29.100 --> 01:22:35.760

Michale have you seen anything? Michale Glennon: Not no, but it's a really interesting idea. I, but I have not seen anything.

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01:22:37.859 --> 01:22:41.609

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01:22:41.609 --> 01:22:54.840

Nate Nardi Cyrus - Okay, here's the 1. , can you comment on the fact that at least in the mid Hudson Valley the vast majority of our landscape is severely contaminated with invasive species that do not provide a good habitat for native species.

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01:22:55.854 --> 01:22:56.244

Heidi Kretser: Yeah,

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01:22:56.244 --> 01:22:56.604

I mean,

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01:22:56.604 --> 01:23:00.625

that comes down to kind of that stewardship and education component and,

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01:23:00.654 --> 01:23:00.984

and,

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01:23:00.984 --> 01:23:01.555

,

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01:23:01.614 --> 01:23:01.914

you know,

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01:23:01.914 --> 01:23:09.085

those are the places where individuals can start to make choices and work with various invasive species teams to try to,

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01:23:09.265 --> 01:23:09.685

you know,

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01:23:09.925 --> 01:23:16.585

take out the invasive pieces that are there and bring in allow for the native species to grow .

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01:23:16.890 --> 01:23:31.439

Yeah, I mean, it's it's a big issue in the Hudson River Valley, for sure. And it's starting to be a bigger issue just about everywhere, but still, I mean, I would argue, you know, given sort of the, the climate situation that we're in, you know, we're talking about, like

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01:23:31.439 --> 01:23:46.345

saving, you know, reducing habitat fragmentation so that species can move anywhere and, so anything that we do to kind of save the stage, even if it is filled with invasive species right now, you can work on those things over time.

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01:23:46.555 --> 01:24:00.295

But at least you don't have housing or roads or some other sort of infrastructure that's kind of really obliterated a lot of the ecological function. And you can work on some of those, invasive species. But perhaps Michale would like to

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01:24:01.614 --> 01:24:11.425

add a few bits since she works now for an invasive species organization. Practically. Michale Glennon: I worked for a watershed organization that does a lot of invasive species work, but in the water.

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01:24:11.694 --> 01:24:17.814

So, I don't, I don't have any particular expertise with terrestrial invasive, but I, I would just reiterate what Heidi said.

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01:24:17.814 --> 01:24:18.085

But,

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01:24:18.414 --> 01:24:18.625

you know,

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01:24:18.625 --> 01:24:33.594

one of the concepts that we hear about often more and more often is this is this notion of resilience and that to the extent that we can maintain the intactness of habitats to conserve the underlying ability of landscapes to function that will give us

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01:24:33.625 --> 01:24:36.744

greater time to work on those invasive issues.

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01:24:36.744 --> 01:24:46.255

We know even given climate change, all else equal things are going to move. Things are going to change. We cannot expect to be able to keep the same ecological communities in every location that we have right now.

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01:24:47.154 --> 01:24:56.965

Some things are just going to be lost, but we still want to maintain the ability of the system to function in a way that it wants to and needs to as a forest, or as a wetland, for example.

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01:24:59.310 --> 01:25:07.859

Nate Nardi Cyrus: Okay, moving along. Is there a movement of education to farmers about modifying timing of mowing of hay fields? The support grassland

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01:25:07.859 --> 01:25:14.699

bird populations, publication material, or to provide the municipalities on hand.

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01:25:15.984 --> 01:25:26.305

Michale Glennon: There is I, I'm sure probably somebody from DEC might be able to provide more information from that agency because they have a grassland bird program.

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01:25:26.305 --> 01:25:36.805

I can just talk about work that, you know, I'm involved in in Lake Placid, but that's exactly what we're trying to do. And trying to take a little bit of a model from one location, transfer it to a broader landscape.

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01:25:36.805 --> 01:25:50.965

There's tremendous work in Vermont on and birds and various kinds of programs to support paying farmers, not to cut their hay, for example, and there's some attempt to bring those ideas over here, but I only really know the northern part of the state and what's happening.

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01:25:50.994 --> 01:25:55.194

I think in other parts of New York, there is much more advanced efforts to do that.

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01:25:55.500 --> 01:26:05.819

Particularly Washington County where we have a significant grassland, some other parts of the state too. So perhaps somebody from DEC knows better than me. But the short answer is yes, there is efforts to

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01:26:05.819 --> 01:26:09.210

do that, and they are more advanced in some parts of the state than others.

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01:26:12.354 --> 01:26:12.625

Nate Nardi Cyrus: Okay,

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01:26:12.625 --> 01:26:13.015

this is,

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01:26:13.015 --> 01:26:13.404

,

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01:26:13.614 --> 01:26:14.875

a message from our,

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01:26:14.875 --> 01:26:15.204

,

693

01:26:15.234 --> 01:26:15.774

our good friend,

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01:26:15.774 --> 01:26:16.465

Ingrid Haeckel,

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01:26:16.675 --> 01:26:16.854

,

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01:26:16.885 --> 01:26:18.744

did the towns with strong ordinances,

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01:26:18.744 --> 01:26:28.704

retain their own ecological consultants to do the site conservation analysis or field assessments? Who typically does those analysis or verified the work done by the project sponsor?

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01:26:29.039 --> 01:26:40.470

Heidi Kretser: That's a good question. I don't necessarily know off the top of my head because we did this work a little while ago. I think it varied. I think it varied in terms of who

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01:26:40.470 --> 01:26:54.055

the consultants were, but I think, you know, in terms of, like, where the strong ordinances were, you know, they had the ecological site analysis requirement. So I'm not sure. Yeah. We'd have to look into that more.

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01:26:54.265 --> 01:27:00.055

But, I mean, I think there is, you know, to be fair, there is a distinction between having a strong ordinance

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01:27:00.805 --> 01:27:13.524

that sits on the books and having a strong ordinances ordinance that has been implemented. Because a lot of the ordinances are voluntary. And that's a whole other issue that we didn't get into. But it's something that comes up a lot.

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01:27:13.555 --> 01:27:24.444

And then, you know, are people required to implement it or not? And I think in one of our best practices we wanted to, we talked about making the ordinance the the standard.

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01:27:24.720 --> 01:27:39.475

And any deviance from the ordinance would be, you know, something that needed to be okayed as opposed to oh, we're gonna just apply this ordinance on this particular group. So, yeah, there's a whole other issue of adoption

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01:27:39.835 --> 01:27:52.885

versus implementation. Nate Nardi Cyrus: That's a good question. The best management practices include stewardship and, , and post construction monitoring.

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01:27:52.885 --> 01:28:01.104

And I'm wondering about the role of local government and the limits of their authority as well as the limited capacity of local governments. Who do you envision would play that role?

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01:28:06.324 --> 01:28:20.635

Michale Glennone: Looking at the social scientist, Heidi Kretser: I'm looking at the ecologists, you know, There there are good, one of our collaborators on this project who works for the, I think the US Forest

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01:28:20.635 --> 01:28:31.255

Service, not sure if she's still there, but, she had a lot of like, kind of stewardship and longer term monitoring and so I think it would it would likely. I mean, yes. Local government is

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01:28:31.555 --> 01:28:43.164

limited in capacity. It would likely end up being maybe like a local or maybe the state wildlife agency. I mean, somebody asked and one of the questions. Like, what could the state agency do differently? Like, maybe they start a monitoring program.

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01:28:43.435 --> 01:28:57.204

Maybe, there's something that they can some role that they could step up and play to look at the, the, you know, what's happening on private lands that are built in these, you know, built with these ordinances in mind.

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01:28:57.444 --> 01:29:01.074

I think there's a lot to be learned, going forward on those types of things.

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01:29:02.760 --> 01:29:08.279

Michale Glennon: I would just add that, you know, what we have in that report really represent sort of

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01:29:08.279 --> 01:29:15.479

our best ideals from getting a bunch of us together and saying, what would the ideal situation look like? We, we fully recognize that

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01:29:15.479 --> 01:29:25.680

we may not achieve that level of detail in, in many of these instances, but certainly availability of dedicated people and funding to support it

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01:29:25.680 --> 01:29:29.399

is critical and so I hope that we

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01:29:29.399 --> 01:29:35.729

can get that money, but recognizing that, you know, they are, they're the best practices. We know that we're not there yet.

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01:29:37.289 --> 01:29:45.600

Nate Nardi Cyrus: Okay, how do you deal with the management of a wildlife as a policy, specifically overabundant deer?

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01:29:49.704 --> 01:29:56.904

You guys are getting all the questions.

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01:30:00.114 --> 01:30:05.064

Heidi Kretser: Yeah, well, speaking of the over abundant deer in my own, my own backyard.

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01:30:05.814 --> 01:30:19.614

Yeah I mean, those I haven't seen I haven't had enough experience with local towns and communities that are dealing with deer very locally through the codes, but I would suggest.

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01:30:20.005 --> 01:30:28.824

To go to my alma mater, the Cornell University, the Human Dimensions Research unit, which now goes by the Center for Conservation Social Sciences.

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01:30:28.824 --> 01:30:39.444

They have a website and they have tons of literature on that, about, , deer and local communities and and management of deer and, and also their, their extension.

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01:30:39.779 --> 01:30:44.460

group is pretty well versed and dealing with these kinds of things.

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01:30:44.460 --> 01:30:48.329

Yeah, deer are an issue.

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01:30:50.814 --> 01:31:03.864

Nate Nardi Cyrus: Well, it is, it is 2:30 now, and we have given you a lot of question time, so I want to give our presenters a little bit of a break. So I apologize to those who I skipped over your questions, but please reach out to them directly.

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01:31:03.864 --> 01:31:06.475

I'm sure they'd be happy to, to discuss offline.

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01:31:06.475 --> 01:31:19.765

I'm going to be analyzing this chat and question and answer session, and we'll make sure that we develop a resource list based on these comments and the responses so that you have all of that information, right at your fingertips.

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01:31:19.765 --> 01:31:29.994

So, again, I want to thank both Heidi and Michale for coming and presenting. This has been really a great topic and a lot of interest.

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01:31:29.994 --> 01:31:36.234

I encourage everyone to fill out that, that brief 3 question survey at the end of the webinar.

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01:31:36.234 --> 01:31:47.814

And remind folks, we're looking for municipal training credit to check their inboxes afterwards, and you'll see, an email that you can use to certify your attendance. So thank you all again.

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01:31:47.814 --> 01:31:56.395

And you know, this is the end of our 2021, conservation and land use webinar series but we'll be starting back up again in January. So we will see you all then take care. Everyone.

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01:31:58.498 --> 01:32:02.328

Thank you. Thank you. Bye.