A Conservation Design for the Northeast
Northeast Regional Conservation Opportunity Areas Version 1.0

Discussion Forum

September 28, 2016

Agenda

Overview

- Summary of review process

Discussion Forum & Updates

- Terrestrial cores
- Important habitat for SGCN
- Aquatic cores
- Connectivity
- Restoration tool

Next Steps Discussion

- What training / briefings are needed?
- What communications steps and materials are needed?
- Working toward Version 2.0

Overview

Investing in landscape science and SWAP coordination since 2006

	RCN INVESTMENT	LCC INVESTMENT
CORE AREAS	Northeast habitat classifications and maps, geospatial condition analysis, Resilience (NatureServe, TNC, states)	Improved habitat maps (TNC, UMass) Des. Sus. Landscapes, IEI, Rep spp. (UMass) Natural communities (NatureServe)
IMPERILED & SGCN HABITATS	Northeast habitat maps, species ranking from SWAP synthesis Updated SGCN compilation (TNC, TCI)	Expansion of PA SWAP habitat analysis (Western PA Conservancy) Updated RSGCN analysis (NALCC, TCI, and NatureServe)
RESTORATION	Geospatial analysis, Northeast Aquatic Connectivity (TNC)	SWAP data synthesis on Data Basin (LCC) Restoration tool (Chesapeake Conservancy)
CONNECTIVITY	RCN permeability analysis (TNC)	Revised permeability (TNC) Regional connectivity (UMASS)

Overview

Where are we in the process?

For Version 1.0 of an iterative process, the RCOA Team:

- Developed and vetted methodology last year
- Recruited new members in the new year, and met in March and July
- Completed the draft first iteration (Version 1.0) of a design August 1
- Provided webinars guiding a structured review by diverse users
- Will incorporate feedback, make minor revisions and present results to LCC Steering Committee and State Directors in October
- Roll out Version 1.0 to partners late fall
- Begin work on major revisions as part of the next iteration (Version 2.0) in 2017

Summary of Review Process

AUGUST 2016 - Launched Version 1.0 draft products for review

- **Developed website** to provide access to data and resources for reviewers
- **Developed review maps** on Data Basin
- **Led webinar series** to introduce users to components and facilitate review

SEPTEMBER 2016 - Gathering and responding to input

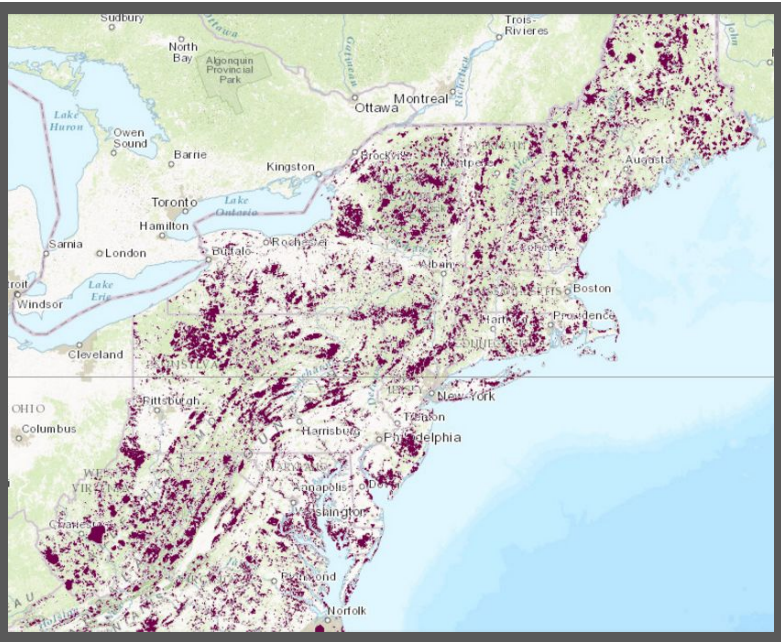
- **Collecting feedback** from test users in webinars and online comment forms
- **Providing briefings** to update partners and identify needs for training and outreach
- **Synthesizing input** to share with reviewers in online forum on 9/28

Summary of Review Process

Snapshot of participants in August webinar series

TOPIC	ATTENDEES	AGENCIES/ ORGS	STATES
Overview of Data Use & Application (Repeated 4 times)	60	25	MA, MD, NH, NJ, NY, PA, RI, VA
Terrestrial Core Networks	19	10	MA, ME, NH, NJ, PA, VA
Connectivity	19	8	ME, NH, NJ, VA
Restoration	17	8	MA, ME, NH, NJ, VA
Aquatic Core Networks	11	8	ME, NJ, VA
Important Habitats	19	8	NH, NJ, PA, RI, VA

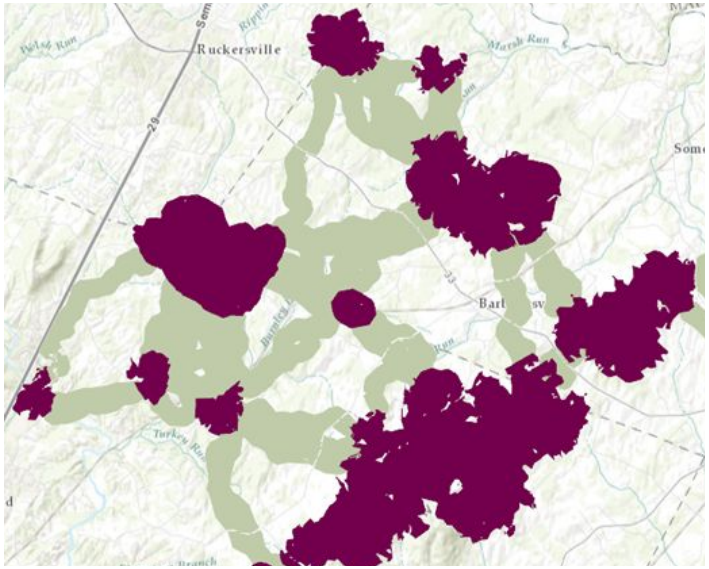
Terrestrial core area network



What are the components?

1. Terrestrial & wetland core areas
2. Connectors
3. Road-bounded natural blocks

Collectively: A network of intact and diverse terrestrial, wetlands, and coastal ecosystems and habitat for representative species



Comments

Open discussion:

Before we review some of the comments we've received, are there any issues to discuss?

Comments

QUESTIONS/CONCERNS

RE: Technical concerns with the means of identifying of core areas:

“Only concerns would be increased accuracy to identify the targeted core areas. In NJ, the areas that I expected to see were the areas identified in the map.” (Dan Roberts, NJ Fish and Wildlife)

RE: Utility of certain smaller core areas

“There appear to be many small ‘high priority’ areas that are of marginal conservation value.” (Andy Cutko, Maine Department of Agriculture, Conservation and Forestry)

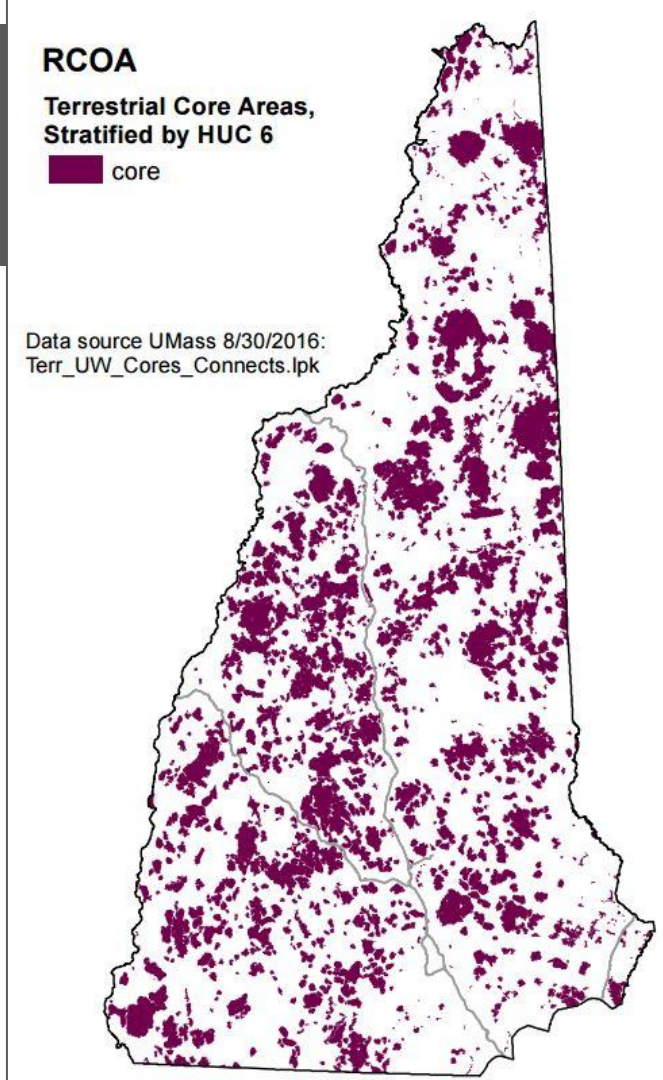
Comments

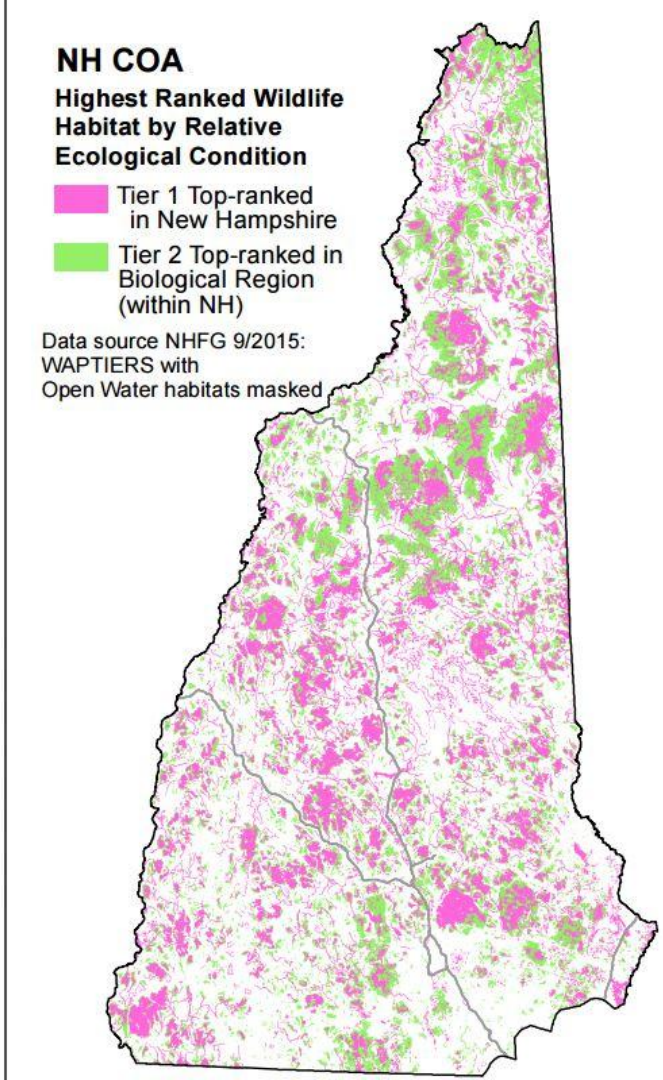
POSITIVE FEEDBACK

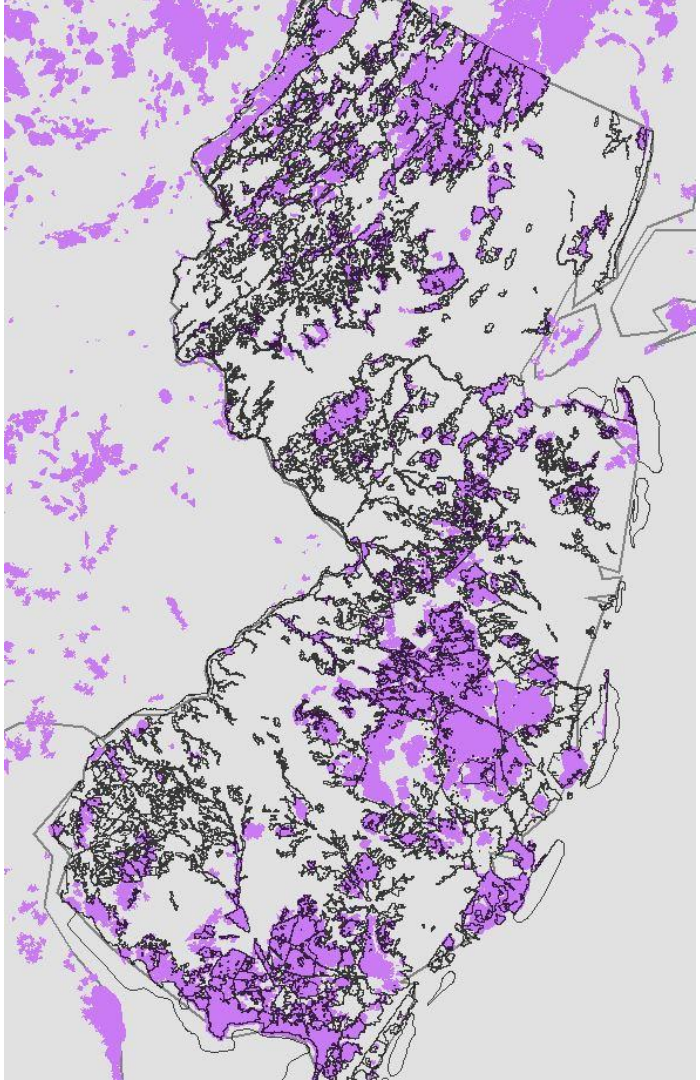
RE: Applications for the products:

“The information that can be pulled from the connectors can be very useful in our efforts to better select areas of management, purchase or restoration.” (Roberts)

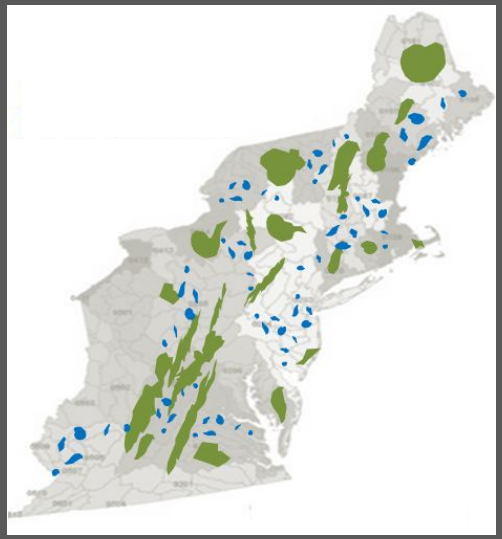
COA Comparison: NH & NJ







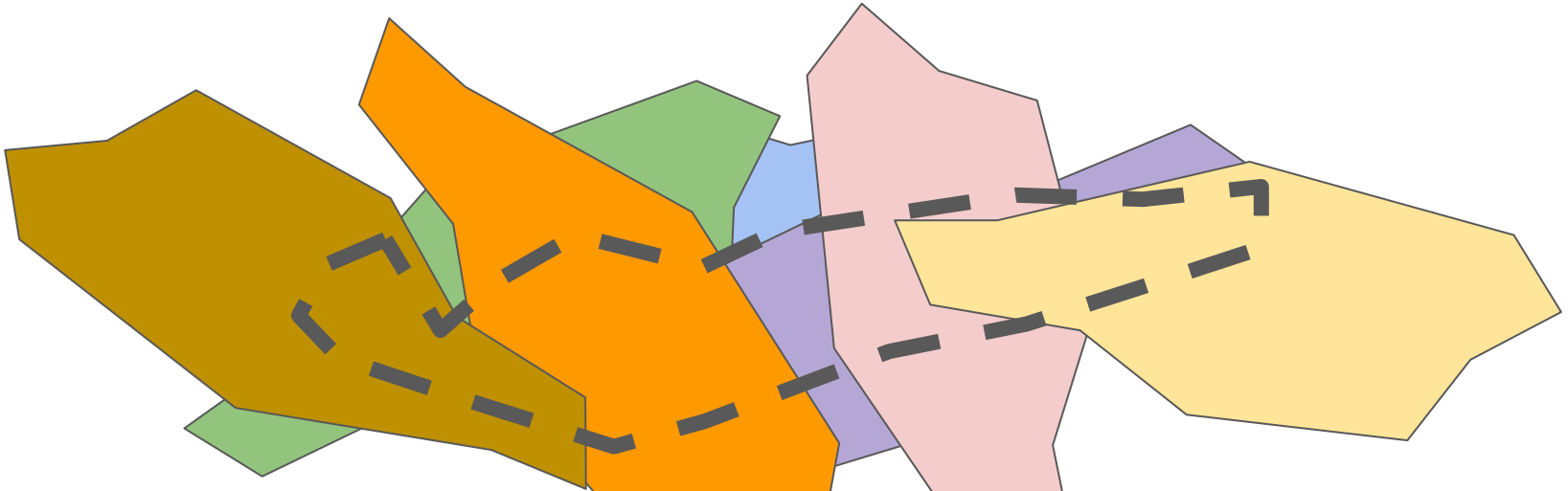
Important Habitats for Imperiled Species and SGCN



What are they?

Areas of overlapping habitat for many SGCN

- Finding areas of overlap for many species is efficient and helps fill in data gaps.



What products are available?

1. Important Habitats for Terrestrial species
    a. Imperiled Plants and Animals
    b. Terrestrial SGCN (on Data Basin)
2. Important Habitats for Aquatic species
    a. Imperiled Animals
    b. Aquatic SGCN (on Data Basin)

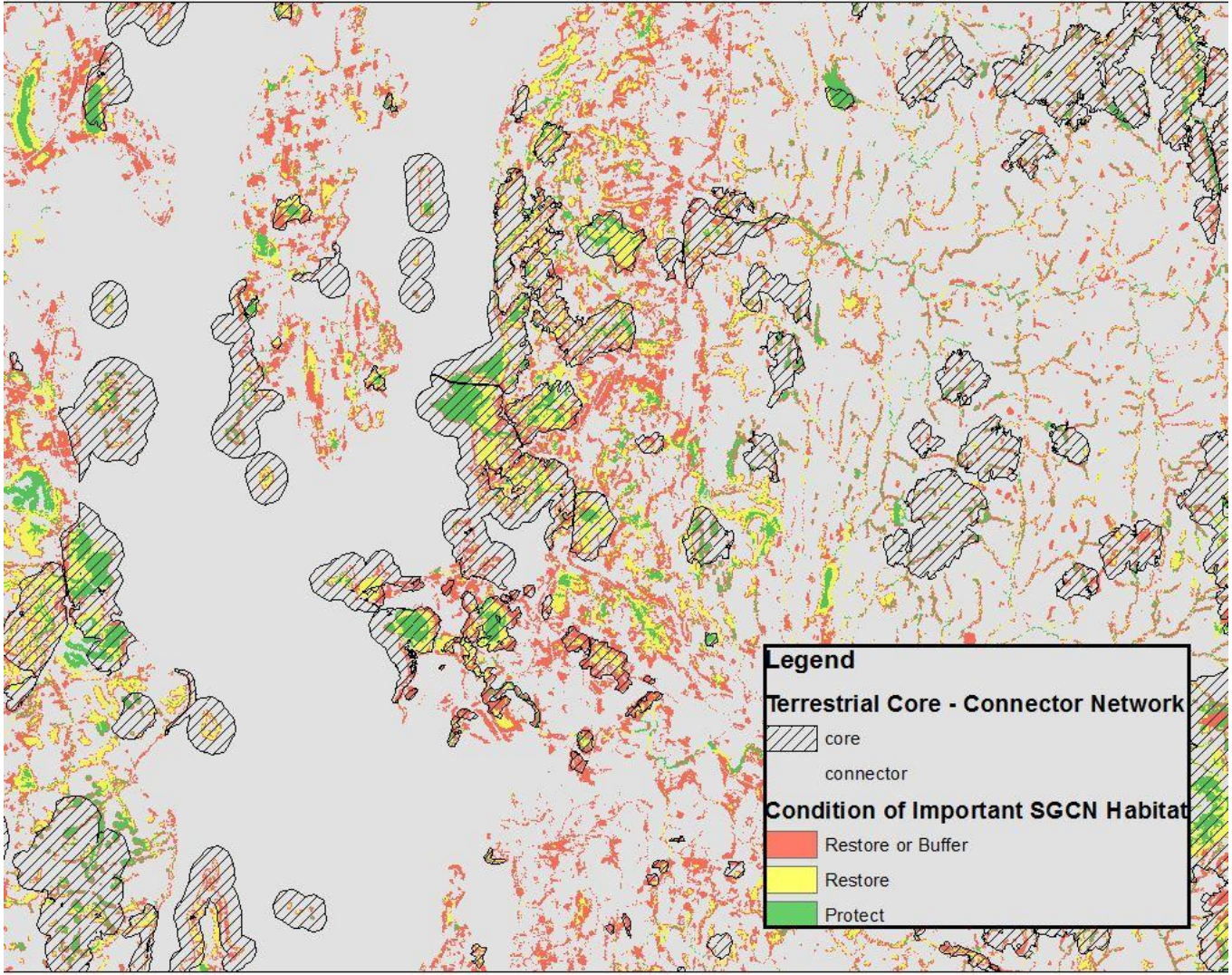
3. Condition of important terrestrial SGCN habitat **(new)**

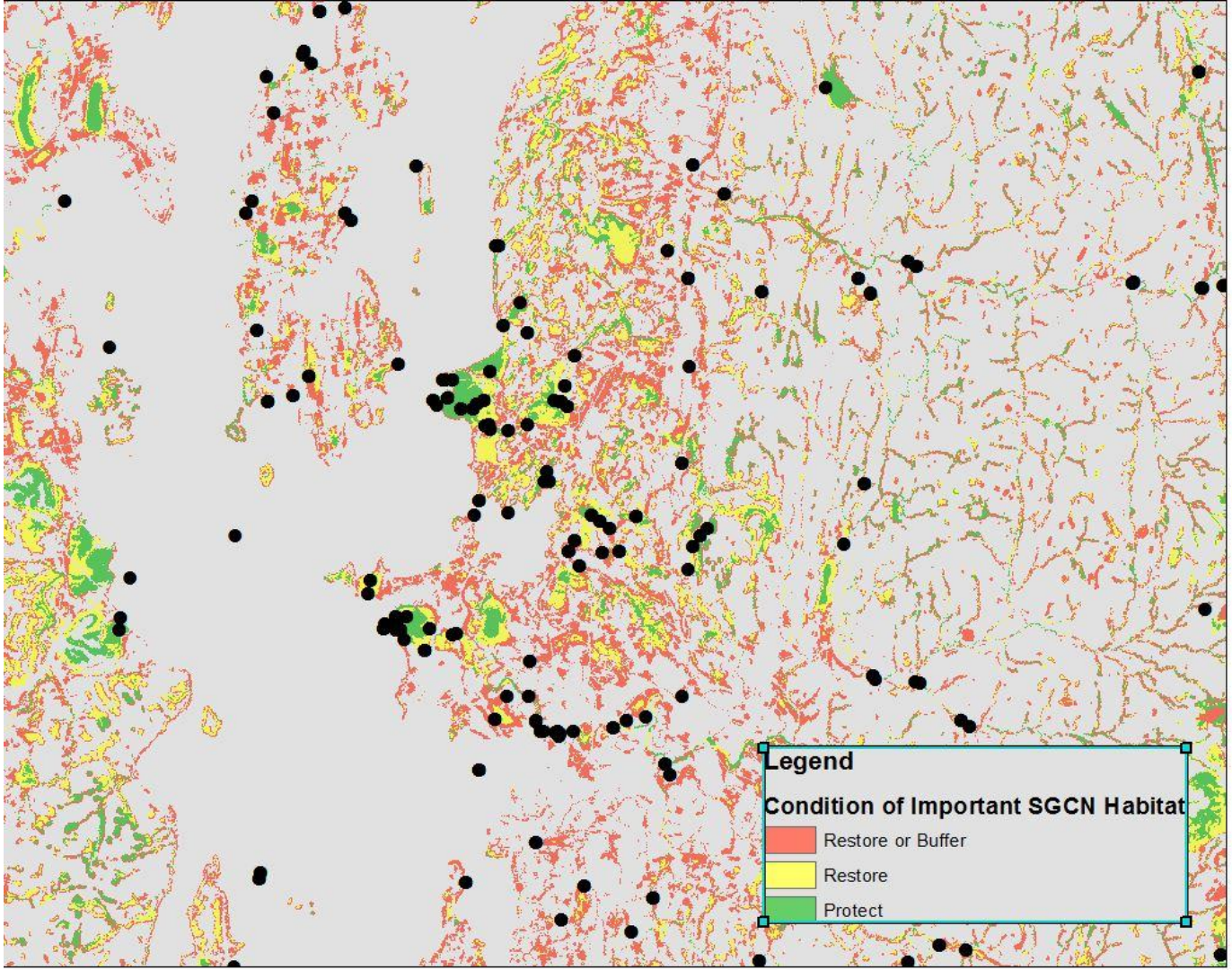
4. Single species models and focus areas **(in progress)**

Updates

Now available:

- Condition of important terrestrial SGCN habitat


Legend
Terrestrial Core - Connector Network
core
connector
Condition of Important SGCN Habitat
Restore or Buffer
Restore
Protect


Legend
Condition of Important SGCN Habitat
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Comments

Open discussion:

Before we review some of the comments we've received, are there any issues to discuss?

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

“Yes, it may indeed help [address data gaps], but it does not address the underlying issue that many species of concern (SGCN/RSGCN) are not tracked by NHP/NatureServe. This process has also shown that for many sp that are tracked, there is data deficiency for multiple reasons. The fact remains that NatureServe provides data for a subset of species that State/federal Fish and Wildlife Agencies (as its mission states) and that is neither good or bad- it simply is.” (anonymous)

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

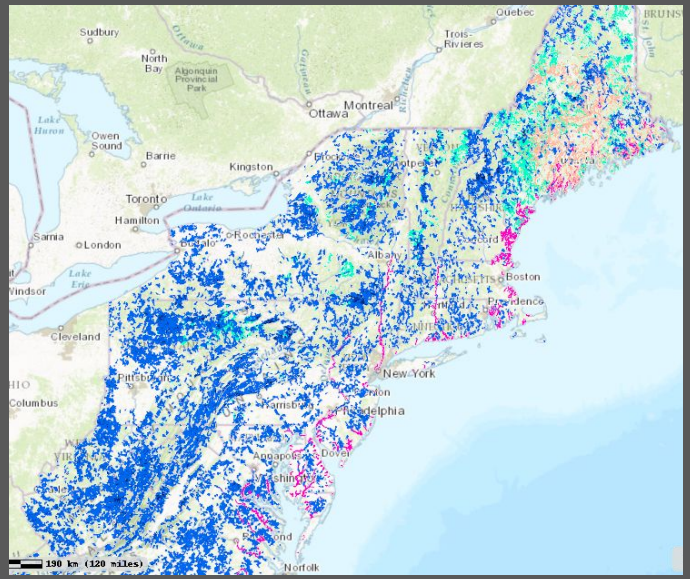
“Given the common association between disturbed landscapes and RSGN species data, it’s difficult to parse out whether it is a true signal of biodiversity, abundance of listed species, or higher likelihood of human encounters given higher population density. I think the current approach works in some places but it seems reasonable that this bias influences the results to some unknown extent. My guess is that this bias may be washed out by the huge sample size, but I think I will continue to interpret the results with caution.” (anonymous)

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

“I would be interested to see other aquatic RSGCNs besides fish and mussels included in the aquatic map—may be a more relevant way to include these species rather than with the terrestrial map (I was glad to see that they were included in some way in the analysis for Version 1 though, thanks). I would especially urge this if the aquatic cores will not be including other representative aquatic species in their analysis.” (anonymous)

Aquatic core networks



What are the components?

1. Lotic and lentic core areas (stream reaches, lakes and ponds)
2. Aquatic core buffers
3. Resilient networks

Collectively: A network of intact ecosystems representing aquatic biological diversity across the region.

Comments

Open discussion:

Before we review some of the comments we've received, are there any issues to discuss?

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

RE: Upstream conditions and impaired systems

“We find that immediate water conditions are influenced by upstream conditions. I wonder how we could incorporate upstream or upslope conditions and land cover into this sort of discussion. I think a discussion of significantly impaired waters might also help us prioritize.” (anonymous)

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

RE: Impaired conditions; slower, warmer streams:

“For VT, it appears that "slow winder" streams and rivers (like Otter Creek) are completely missing from identified core areas. These are warmer water streams and tend to be more altered by agriculture (because they flow through fine sediment glacial plains), but they are an ecosystem that appears to be under-represented. Similarly, Lake Champlain tributaries (including the Winooski, Lamoille, and Missisquoi Rivers) upstream to the fall line (150 feet elevation) are not identified as core at all. Due to the influence of biogeography, these waters support native fish and mussel species from two glacial refugia.” (anonymous)

Comments

QUESTIONS,CONCERNS, OR POSITIVE FEEDBACK?

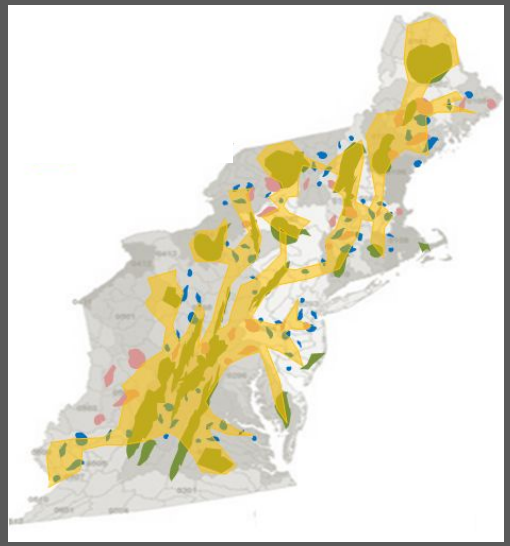
RE: Refinement to exclude suspect “streams”:

“I would ask for additional refinement to remove stream cores that would raise eyebrows, like tax ditches.” (anonymous)

RE: Review by fisheries biologists?

“I would like to provide an update of this effort to our Fisheries Section biologists to receive additional comments from them.” (anonymous)

Connectivity



What are the components?

1. Terrestrial and wetland connectivity areas
2. Regional flow
3. Marsh migration
4. Riparian climate corridors

Collectively: Areas that allow the movement of animals and plants from core to core, and across the landscape, into the future.

Comments

Open discussion:

Before we review some of the comments we've received, are there any issues to discuss?

Comments

QUESTIONS/CONCERNS

RE: Understanding methods used to develop connectivity products in general:

"The level of documentation was insufficient to determine what methods were used, so I can't say whether I'd be able to understand. If it exists and I didn't find it, there needs to be better navigation. At a bare minimum need to define most terms….how [is] hydro-connectivity is handled [in marsh migration] (I can't remember the right term for how you handle low elevation areas that are not connected to the ocean). This should be part of the documentation." She also had comments about improving color schemes and legends for products. (Amanda Babson, NPS)

Comments

QUESTIONS/CONCERNS

RE: Minimum size of marshes for Marsh Migration product:

"...it seems some minimum size of a marsh should be considered as an area that can seed further migration. Very tiny patches of fringing marsh are highly unlikely to migrate upslope, much less survive the next twenty years of storms." (Megan Tyrrell, NALCC)

Comments

QUESTIONS/CONCERNS

RE: Need to exclude certain land cover types from the Marsh Migration product:

*"You need a way to not include/filter out areas that are and will be **active beach dune**, or otherwise not suited for salt marsh habitat, e.g. **ocean side of barrier islands**. Webinar mentioned that **developed areas** were excluded but I ran across several areas I know to be developed when exploring, so needs further verification."* (Amanda Babson, NPS)

Comments

QUESTIONS/CONCERNS

RE: Need to exclude certain land cover types from the Marsh Migration product:

"I spent an hour or two looking at marshes that I know very well in northern New England (ME, NH, Cape Cod). Hydrologically unconnected units ***(e.g. freshwater ponds) are showing a fringe of area*** *where marsh migration can occur...* ***consideration of soils****...* ***marine rocky shore****...* ***upstream of dams****…* ***[some] areas are way too exposed to waves****."* (Megan Tyrrell, NALCC)

Recommendation:
"Although it wasn't designed with marsh migration, the Coastal Change Vulnerability maps produced by Hammar-Klose and Theiler (e.g. http://pubs.usgs.gov/fs/fs76-00/fs076-00.pdf) could be considered as a list of screening variables for further refinement of marsh migration areas." (Megan Tyrrell, NALCC)

Comments

QUESTIONS/CONCERNS

RE: Issues with Marsh Migration that should be considered for Version 2.0:

"It would be great if you could visualize by 1 foot increments, toggling on and off by layer, not just all 6 in one map. Also would be great to overlay with the Lentz et al. USGS work." (Babson)

Comments

QUESTIONS/CONCERNS

RE: Technical issues/concerns regarding the terrestrial core connectors product:

“I'd like to know more about whether/what considerations were made for connectors in urban areas.” (Babson)

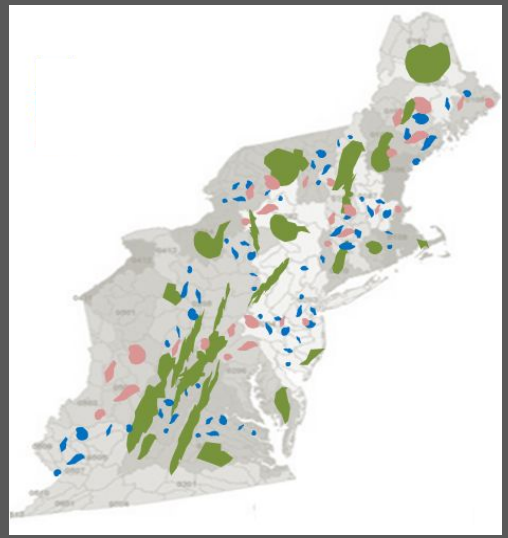
Comments

POSITIVE FEEDBACK

RE: Applications of terrestrial core connectors:

Core-to-core terrestrial would appear to be the most useful for our reviews of deer management zones and developing boundaries that may incorporate connected habitats. (Dan Roberts, NJ Fish and Wildlife)

Restoration



What are the components?

Scenarios comprised of various **metrics** (~400)

a. Series of "**expert**" scenarios
b. User interface for developing **custom** scenarios

Collectively: A tool for prioritizing HUC12 watersheds and stream reach catchments by using prioritization scenarios.

Comments

Open discussion:

Before we review some of the comments we've received, are there any issues to discuss?

Comments

QUESTIONS/CONCERNS

RE: Understanding methods used to develop products

"I was confused to some degree by the weighting." (Amanda Babson, NPS)
"*The availability of definitions and links to documentation worked well and gave me a high level understanding of methods."* (Babson)

RE: Suggestions to make tool more helpful for users

"[National] Parks would appreciate ability to overlay a shapefile of park boundaries." (Babson)

"I need to be able to save my weights so that I do not have to re-enter them each time I use the tool." (Emily Preston, NHFG)

Comments

QUESTIONS/CONCERNS

RE: Relevance of the tool at parcel scale

“The scale and level of complexity are not ideally suited to park management needs. I think there is the potential to come up with some examples where some pieces could be used, but based on a first exploration, it was designed with other users in mind and will need some demonstration to show the opportunities for park application.” (Babson)

“Some of the limitations on some of the input data layers are not apparent unless you dig in and know the area well...This isn’t a concern with the overlying methodology presented, but when you have questions about the input data at the park scale we are working at, then it’s challenging to embrace with bigger methodology.” (Babson)

Comments

QUESTIONS/CONCERNS

RE: Data coverage

Why are there some areas outside the geography? E.g. parts of Assateague Island were not included. I didn't look at all metrics, but it didn't seem to be limited to ones that may have limited data in this area. (Babson)

Discussion

Discussion

- **How will your organization use the RCOA products?**

Discussion

- **Do you have any other concerns or comments you want to discuss today?**

Discussion

- **What support or training needs do you or your staff have to begin using the information?**

Discussion

- **Are there specific applications or management problems you want us to address using the RCOA products?**

Next Steps

RCOA Team

- **What is the future function of the RCOA Team?**
- **How will the products be integrated?**

Outreach

- Beginning in November, we will begin a broad outreach effort to inform the conservation community about RCOAs.

Version 2.0

- **During 2017, based on your input and expected data updates, we will begin Version 2.0.**

Links

Website for RCOA Version 1.0:
http://rcoa.cicapps.org

Webinar series summary and archive:
http://rcoa.cicapps.org/news-and-info/