

Meeting Summary

North Carolina Sandhills Conservation Partnership
Reserve Design Working Group Meeting
January 6, 2010 – 9:30am to 2:30pm
NC State University Campus – David Clark Labs

- Welcome and Introductions -

Scott Pohlman (SP) – NC DENR
Mike Schafale (MS) – NC NHP
Brian Ball (BB) - Ft. Bragg ESB
Jeff Marcus (JM) – WRC
Nick Haddad (NH) - NCSU
Sara DiBacco (SD) - USFWS/AEC-ORISE
Pete Campbell (PC) - USFWS
Brenda Johnson (BJ) – Sustainable Sandhills

Sara went through a short summary of the previous meeting held last October, discussed the goals for today's meeting, presented a brief overview of the Green Growth Toolbox (GGT), and briefly described what a Sandhills GGT Data Appendix would entail. Jeff provided further discussion about GGT, and Scott gave additional background information about the Reserve Design. Concerns about how the BRAC-RTF represents conservation priorities in their Comprehensive Regional Growth Plan were raised, and a decision to review available information and plan for future talks with BRAC-RTF were made. Pete noted that Don Belk, Regional Planner for BRAC-RTF, had requested a meeting with him.

- 1. Action Item – Evaluate how conservation priorities are weighted or otherwise represented in the land use planning chapter of the BRAC-RTF Regional Growth Plan. Communicate with Don Belk, Regional Planner for BRAC-RTF, about this issue and also about the GGT. |**

Post meeting – Sara reviewed this material in March of 2009. The only map presented in this section shows a prototype for a Center-Corridor-Wedge Regional Planning Model, which is based on the Sustainable Sandhills Land Use Suitability Model. This is the model that includes the Natural Areas Suitability Surface, which was developed using the Partnership's Reserve Design data sets and great amounts of input from the RDWG. Sara will provide her notes on the Land Use Planning Chapter (Ch. 10) of the Comprehensive Regional Growth Plan to the group. The website for the BRAC-RTF is: <http://www.bractrf.com/> and the above referenced document can be found at: http://www.bractrf.com/community_impact.php.

If RDWG members would like to review and provide comments on this material, Sara can compile the notes and provide them to Pete for his upcoming meeting with Don Belk. Alternatively, the notes can be used by Brenda and Sara during a meeting they intend to have with Don Belk and other representatives from BRAC-RTF about the GGT.

- Resolving Data Issues -

A suggestion made by Brian that applies for both internal and external uses is the need for good metadata, especially to note when the latest updates to a data set were made. Sara had been creating metadata for the data sets she has recently created or updated, but the absence of metadata for lots of the inputs she has worked with has made this task more difficult and time consuming.

Prior to the meeting, Sara provided a “Resolving Data Issues” document which described each data layer and presented questions or inconsistencies that the RDWG needed to address. The following notes capture decisions that were reached about each data layer; a distinction is made between those that apply to communication and presentation of data for external use versus those that apply to actions or decisions about data for internal use.

FOR THE PURPOSES OF THE GREEN GROWTH TOOLBOX:

For GGT data presentation, there was much discussion about pre-assigning some kind of priority to the data layers, e.g. assign layers as Tier 1 or Tier 2 resources. Pete suggested the possibility of considering that layers previously receiving suitability scores of 9, 8, or 7 in the Natural Areas Suitability Surface are Tier 1 and those below are Tier 2. Based on this and other recommendations made during the day, the data below are assigned as Tier 1 or 2 resources.

Alternatively, Jeff presented another idea that requires further consideration. He suggested a composite surface showing Very High, High, and Medium Conservation Priority (i.e. a Conservation Priority Layer), which is made up of the individual data sets that will comprise the Sandhills GGT Data Appendix (i.e. those presented below). He also noted that if that layer is created, it becomes even more critical to define the appropriate use and role of the Natural Areas Suitability Surface versus the Conservation Priority Layer.

2. Action Item – Do we want to create the Conservation Priority Layer? This will be straightforward if all we decide to do is take the data sets listed below as Tier 1 or 2 and further refine them so that each corresponds to 1 of the 3 conservation priority categories. Or, it will be more complicated if, similar to what was done in the creation of the Natural Areas Suitability Surface, attributes within each data set itself would be stratified by conservation priority category (e.g. for SNHAs, those that are attribute Type = Primary are Very High, Type = Blank are High, and Type = Secondary are Medium Conservation Priority).

Commented [SMP2]: I think I am in agreement with the Tier 1 and 2 idea, but I would be interested in seeing a sample map, and to get a better sense of how it will convey information on priorities.

GGT INDIVIDUAL LAYERS

TIER 1:

Significant Natural Heritage Areas (SNHA) – Tier 1 Layer

- For simplicity and ease of understanding by external audiences, do not distinguish among Type = Primary, Blank, or Secondary. Essentially, this implies that all SNHA areas will receive the same level of conservation priority and will convey the same set of recommendations.

o *Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around SNHA Type = Primary or Blank that fall outside of existing protected or managed lands and*

Commented [SD5]: Is it worth the additional processing of layers and additional explanation that would be required?

that are deemed (based on habitats contained within) to require fire for optimal management – this is dealt with more explicitly in a different section.

Rare Species Habitat – Tier 1 Layer

- ‘Rare Species Habitat’ will replace the name ‘Protosites’ for the data set that shows viable element occurrences that fall outside of SNHAs and for which Mike Schafale performed a separate evaluation to identify the habitat needed for the resource identified at that location.
- This data will be provided separately because it was created from a distinct method and does not have a regular update schedule (i.e. as compared to the SNHA layer that can come directly from the Natural Heritage Program without further processing).
- Only protosites for which element occurrence records could be located will be shown.
- Due to Natural Heritage Program’s data distribution restrictions, the data will at first be provided with only limited attribute information, i.e. only with an indication of whether it is a Plant, Animal, Natural Community, or Animal Assemblage. If and when the end user requests permission from Natural Heritage to see the full complement of attributes, the more detailed information will be provided.
 - *Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around Rare Species Habitats that fall outside of existing protected or managed lands and that are deemed (based on resources contained within) to require fire for optimal management – this is dealt with more explicitly in a different section.*

Commented [SD6]: Need to verify this with heritage.

Potential Upland Habitats – Tier 1 Layer

- All High and Medium potential upland habitats identified by Mike Schafale.
 - *Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around Potential Upland Habitats that fall outside of existing protected or managed lands. Because these sites were only drawn for uplands, it is assumed that for optimal management, all will need to be burned.*

3. Action Item – Do we need to distinguish between High and Medium Potential Areas? |

Red-Cockaded Woodpecker Foraging Habitat – Tier 1 Layer

- RCW foraging habitat is delineated by ½ mile boundary drawn around the geographic center of an RCW cluster.
- 4. Action Item – Are we in agreement to only show the Active and Inactive clusters and to exclude the Historic (trees are dead or cavities healed over), the Unknown/Not visited (this means either restricted access to the cluster or it has been inactive for so long, it is not visited every year), and the Not Created/Recruitment (these were areas identified as**

potential recruitment sites, but are not yet under active management, and in some cases not likely to be in the near future).

Commented [SD9]: Area of concern for that particular cluster. Regardless of ownership, areas that trigger some kind of review process, depending on the activity status of that cluster. Depending on the current status of the cluster, there may be a regulatory requirement. Keep historic and unknown not visited because this still shows potential for habitat in one condition or another. → restoration Pete's comments

Aquatic and Riparian Resources – Tier 1 Layers

- Aquatic and Riparian Resources consist of streams and adjacent riparian areas. These are identified by three individual layers:

Aquatic Significant Natural Heritage Areas – These are streams with known site-specific significant resources such as rare species. The buffering scheme applied to these stream areas matches the criteria applied to ASNHAs in the Biodiversity and Wildlife Habitat Assessment, a product of the State's One NC Naturally Conservation Planning Tool. The criteria are:

300 feet on each side of ASNHA portions of the stream, 200 feet on each side of a stream with federally listed species within an ASNHA watershed (per WRC 2002), and 100 feet on each side of a stream contributing to watershed containing an ASNHA.

5. **Action Item – This varies slightly from the buffering scheme applied to the Natural Areas Aquatic Areas in that a 200 foot buffer is applied to any stream in a watershed containing an ASNHA, regardless of whether it contained a federally listed species. This was a mistake in the interpretation of the methods from One NC Naturally and needs to be corrected before data distribution (Sara).**

Commented [SMP10]: I am good with using the One NC Naturally methodology. One additional benefit of using it is that it is already mapped, and updated regularly.

Perennial Streams – These are perennial streams that have been indexed by the Division of Water Quality. A buffer of 100 feet on each side of these streams is delineated. I checked on "indexed" streams, and it won't include a number of waterways (only about 2% of un-named tributaries). We would perhaps be better served by USGS 24K stream lines.

Commented [SMP12]:

Floodplains - 100-year floodplains represent areas adjacent to streams that are subject to a 1% annual chance of flooding.

Commented [SD13]: From Cam McNutt with DWQ, indexed streams were those named on USGS quad, further streams were then named by DWQ, it is possible that some of the streams that show up are intermittent, but essentially for DWQ buffering regulations, if it shows up as a blue line than it can be buffered and any disputes would be verified by a ground investigation or 'infield determination'

- In addition, a buffer of 50 feet will be recommended for either side of intermittent streams, which are most likely to be identified through site-specific surveys.

Animal Guild Habitat – Tier 1

- This layer will consist of all habitat core areas from Steve Hall's Landscape Habitat Indicator Guild Core Areas except for the Sparsely Settled Mixed Habitat type that will be shown as a Tier 2 resource.
- The associated definition will describe that Animal Guild Habitats were identified by a landscape-level analysis of habitat types and the groups of animals that use them. Each habitat type occurs in the landscape within a single or multiple core areas. A core area contains habitat

with sufficient connectivity to support a group of indicator species, or guilds. Guild species are both habitat specialists and sensitive to fragmentation.

- Descriptions of each habitat type or possibly, by groups of similar habitat types, will be provided along with associated recommendations. Likely the major concept will be to suggest minimizing [habitat fragmentation/degradation](#) within these areas.
- For the purposes of display, all the guild core areas will be shown in the same color.
- All of the guild data is being used instead of the Corridor or Proposed Corridor Study Areas.
- The guild core connectors are not being used for the purposes of the GGT. [I don't know that we got to that point. I was hoping that we could discuss these and the restoration areas at the same time.](#)

6. Action Item – Verify that this is consistent with the discussion. If warranted, ask Steve Hall to review the proposed use of the data. |

[In the Uwharries, Kacy is treating most guilds as Tier 2. Several guilds are extensive geographically \(e.g. grasslands, hardwood forest\). While based on field records of species occurrence, the guild polygons are drawn from remote data and within each polygon there is a range of habitat quality and even some small areas of non-habitat. The species that define the guilds are all habitat specialists, but are not necessarily all rare or priority species. For these reasons Kacy felt that the recommendations that went with the guilds fit better within Tier 2 than Tier 1. I would want to look at the list of guilds a little more closely and determine which might best fit the criteria for Tier 1 which are those places where we will make the strongest recommendations for restricting development. We want to do this for sensitive and rare habitats, where we have higher certainty that the habitat currently exists on the ground, and the habitat is somewhat limited in geographic scope so that we can make a more persuasive argument that loss of even a small amount would have unacceptable negative impacts. I concur](#)

TIER 2:

Sparsely Settled Mixed Habitat – Tier 2

- This layer will consist of the core areas identified as such from Steve Hall's Landscape Indicator Guild Core Areas.
- The description can note that these sparsely-settled areas often serve as important wildlife corridors, especially for wide-ranging species, and as connections between more suitable (or higher quality or intact) habitat areas.

Red-cockaded Woodpecker Corridors – Tier 2

- **7. Action Item – Eliminate any occupied areas, which are also protected or managed lands (Pete and Sara).**

Potential Smoke Impact Areas – Tier 2

- This layer shows areas which may be impacted by smoke from prescribed burns occurring as an active part of the land management regime on Sandhills Game Lands, Ft. Bragg and Camp

Mackall, Weymouth Woods State Nature Preserve, Carver's Creek State Park, properties owned and/or managed by The Nature Conservancy, lands owned and managed by the Plant Conservation Program, and some properties owned and/or managed by the Sandhills Area Land Trust (this should capture any managed natural areas that Mike described). In addition, smoke impact areas will be drawn for Safe Harbor properties that are actively burned.

- 8. Action Item** – All other lands in the Conservation Managed Lands layer should be evaluated to determine whether or not it warrants a smoke impact area. SALT lands should also be evaluated on an individual basis (Sara will prepare a shapefile and Excel sheet demonstrating the lands in the Conservation Managed Lands layer that require this evaluation and will send to Scott for the first pass).

- 9. Action Item:** A determination of which Safe Harbor properties will require smoke impact areas needs to be made (Pete and Sara).

- Potential smoke impact areas should be identified for other upland habitats where burning would be recommended.

- 10. Action Item – Review SNHA and Rare Species Habitats (i.e. the protosites) to determine which should have a 'potential smoke impact area' drawn for it (Sara will send the appropriate shapefiles to Mike for the first pass).**
 - a. Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around SNHA Type = Primary or Blank that fall outside of existing protected or managed lands and that are deemed (based on habitats contained within) to require fire for optimal future management.*

 - b. Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around Rare Species Habitats that fall outside of existing protected or managed lands and that are deemed (based on resources contained within) to require fire for optimal future management (For first pass, Mike).*

- 11. All potential lands falling outside of Conservation Managed Lands will receive this buffer (Sara).**
 - c. Potential smoke impact zones, or a ½ mile concentric buffer, will be drawn around Potential Upland Habitats that fall outside of existing protected or managed lands. Because these sites were only drawn for uplands, it is assumed that for optimal management, all will need to be burned.*

- Potential smoke impact areas could be distinguished based on whether burning is currently occurring as part of an active management regime or if it is habitat that ideally would be burned.

12. Action Item – Decide whether the smoke impact areas for known burn sites versus potential future burn sites should be distinguished. They could both be in the same shapefile but one color for ‘Current’ and another for ‘Future’. Any comments welcome.

Commented [SMP16]: If we plan to keep the data layers up-to-date, and find out more about the potential areas as quickly as we can, then one could argue that we don't need to differentiate, and make the map more complex.

FOR THE RESERVE DESIGN WORKING GROUP & NCSCP

Where appropriate, this section includes relevant discussion and action items copied from the Oct 1, 2009 meeting summary; it also incorporates questions posed in the ‘Resolving Data Issues’ document that were not explicitly addressed in today’s meeting.

THE BUFFER DISCUSSION:

Last time:

What are you buffering for? What is the purpose of the buffer? Ecological (e.g. protection from edge effects, wildlife management priorities) vs. non-biological, e.g. smoke management. An ecological buffer is based on biological value (e.g. secondary areas defined by Natural Heritage) that you are trying to protect for some reason (e.g. habitat connectors). Recommended buffers must be defensible, especially for GGT-type purposes; buffers should not be mapped unless we can define why (Jeff).

This time:

Biological buffers versus management buffers - It was generally acknowledged that aside from the Secondary areas drawn for SNHAs, existing information is insufficient to define defensible biological buffers. Ideally, all SNHAs and protosites would have some additional ‘supporting’ areas delineated, which although of lesser quality, would probably still support the biology of the important resources contained within the higher quality areas. Similarly, aquatic resources would receive buffers based on its ecological function, e.g. residential wildlife habitat, wildlife corridors.

It was also generally agreed that any buffers that have actually been drawn to indicate habitat or another ecological function, i.e. a biological buffer, should no longer be referred to as a buffer; instead, it should have a name that indicates its role. This will help distinguish buffers that are drawn to raise awareness about management, e.g. Potential Smoke Impact Areas, from those with a biological role. For example, instead of stating that a default ½ mile concentric buffer is drawn for the purposes of smoke management and RCW foraging habitat, separate and show the two layers independently; use the RCW data to show foraging habitat [as part of the habitat](#), and a ½ mi buffer drawn around prescribed burn areas to show smoke management areas/[areas that could be impacted by smoke](#).

PROTOSITES:

Mike and Sara have worked to refine this layer. So far, all protosites without corresponding element occurrence information has been eliminated.

Action Item: This data requires updating to determine if protosites should be drawn for new, viable element occurrences that are outside of SNHAs or Managed Natural Areas. The update would then be incorporated into the 'Rare Species Habitat' layer, which will be distributed through the GGT.

POTENTIAL AREAS:

Last time:

Action Item: Updating potential areas is important. It is also a potential opportunity to build landowner relationships if they are willing to provide access to their property for on-site data collection (which will be used to categorize the status of the potential areas). However, we do not currently have the needed resources to do the field work. Also, while it is labor intensive to review aerials as part of the updating process, this needs to be done prior to initiating field verification.

- Identify programs/individuals that are visiting private lands to solicit existing information on status and condition and/or use new inventory data to refine list of potential areas prior to the aerial-photo review.
- Generate a list of criteria to share with private-land biologists or possibly a seasonal technician to facilitate collection of consistent field data in order to make final determinations on each potential area.

Evaluate the need for buffers around "potential areas" based on assessment of lands during "potential areas" updates.

'Resolving Data Issues':

One of the current action items from the October meeting of the RDWG is to initiate work on resolving whether identified Potential Areas should qualify as Upland Primary Areas or Upland Restoration Areas. This work will involve review of the data set against new aerial photos and field verification.

Action Item: When this work goes forward, should an effort be made to distinguish the locations of targets such as streamheads, seeps, and upland depressions, which are generally difficult to identify and map?

1. If possible through aerial photo interpretation, this could either be done by indicating their presence in an attribute added to the existing data, or ideally, by creating new polygons, which identify these targets.
2. If it is possible to coordinate field verification with on-the-ground partners, would it be reasonable to ask him/her to GPS these features?

MANAGED NATURAL AREAS

The Managed Natural Areas layer was created by Mike to show managed areas with natural communities in fairly good condition that were not included as Primary Uplands through the SNHA or Protosite data sets (see NCSCP RDWG Draft Plan). These include portions of the Sandhills Game Land and Ft. Bragg.

Commented [SMP20]: Maybe future meetings of the Reserve Design could include some field component?

Mike noted that this data set seems to have been lost from the Primary Uplands, which should have consisted of the SNHA, the Protosite, and the Managed Natural Areas data sets. For the purpose of creating a “Potential Smoke Impact Area” layer for communicating smoke awareness through the GGT, it would be important to make sure these areas receive the ½ mi buffer. However, because these areas are contained within the large management units that are considered ‘actively burned’, i.e. Game Lands or Ft. Bragg, this will be accomplished.

Action Item: Is there agreement with this statement? |

Action Item: For the purposes of the Partnership Reserve Design, it is necessary to re-locate or reconstruct this missing data (Sara will work with Mike to do so).

Commented [SMP22]: Mike indicated at the meeting pretty strongly that it needed to happen

UPDATING THE RESERVE DESIGN & COMMUNICATION

There was definite agreement that a mechanism and timeline for updating the overall Reserve Design and the data sets that comprise it is needed. Every 2 years and every 5 years were suggested as reasonable intervals.

Action Item: Define an appropriate schedule and methods for regular updates to the Reserve Design. |

Nick emphasized the need for a clear communication strategy, which would likely involve providing a glossary of terms; this effort will also be aided by the creation and maintenance of metadata. This issue was also discussed at the last meeting and remains an Action Item, especially for internal communication, as the current work’s emphasis is on the external piece, i.e. via the GGT.

Last Time:

Action Item: We need to figure out how to have the map used more effectively by the partners internally and externally, and this needs to be addressed before we “tweak”/improve the map. | Some suggested approaches include:

- i. Bring the RD data to partners on-site and explain its utility. |
- ii. Host a RD ‘workshop’ for other Working Group chairs. |

THE NEXT RDWG MEETING

A brief meeting is scheduled for Tuesday, February 23rd, beginning at 9am and ending at noon in the Sandhills. The purpose of this meeting will be to finalize suggestions and comments on the Sandhills GGT data appendix. Another meeting to deal with remaining action items will be scheduled at that time.