

# Committee Reports







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## MEMORANDUM

TO: Marine Fisheries Commission  
Strategic Habitat Area Region 4 Advisory Committee

FROM: Anne Deaton  
Casey Knight  
Division of Marine Fisheries

DATE: July 20, 2017

SUBJECT: Strategic Habitat Area Region 4 Advisory Committee Meeting

The Strategic Habitat Area Region 4 Advisory Committee met at 10:00 am June 21, 2017 at the Department of Environmental Quality Wilmington Regional Office, 127 Cardinal Dr. Ext., Wilmington, NC. The following attended:

Co-Chairs: Troy Alphin, Fred Scharf

Advisers: Mike Mallin, Fritz Rohde, Dawn York, Nora Deamer, Hope Sutton, Jeremy Humphrey

Absent: Jessie Jarvis, Robb Mairs, Hope Sutton, Kyle Rachels

Staff: Anne Deaton, Casey Knight

Casey Knight opened the meeting and said that the first business of the committee was to appoint a chair.

**Motion by Mike Mallin to appoint Troy Alphin as chair, seconded by Fred Scharf. The motion passed unanimously. Fred Scharf was selected by consensus to serve as co-chair.**

Troy Alphin then officially called the meeting to order.

### **MODIFICATIONS TO THE AGENDA**

The meeting agenda was approved unanimously without modification.

### **APPROVAL OF MINUTES**

The April 21, 2017 meeting minutes were approved unanimously without modification.

### **PUBLIC COMMENT**

No public comments were offered.

## **INPUTS USED IN MARXAN ANALYSIS**

At the prior meeting, advisory committee members were given an assignment to review and submit comments on the draft weightings for the alteration factors, and the representation levels for the natural resource targets. This information was used to finalize those input parameters. Casey explained the changes that were made to the alteration factors based on committee member input. She also reviewed the changes made to the natural resource target representation levels based on habitat abundance scaling. Committee members approved of all changes.

## **MARXAN SENSITIVITY ANALYSIS**

Since the prior meeting, a multiple run sensitivity analysis was conducted, as suggested by Scharf, to determine which natural resource target representation levels make the largest difference in the solution or output generated by the model. Casey reviewed the results of the sensitivity analysis of the Marxan model for the Region 4 strategic habitat area (SHA) nominations. She explained the analysis was conducted by running Marxan 21 times and adjusting each individual natural resource target representation level to zero. By examining the total area selected and cost (total sum of the alteration scores) of each Marxan run output, it was determined that forested wetland, hard bottom, and riparian wetland were making the largest difference in the model output and therefore, driving the model. Modifications were made to the representation levels of those targets to reduce their influence over the model. The calculation of alteration scores was reviewed and clarified.

## **MARXAN RESULTS**

Casey reviewed two additional Marxan runs that were adjusted with the input from the sensitivity analysis. It was suggested and decided to reduce the hard bottom representation level all the way to zero. The hard bottom will then be added back by manual selection the way it has been done in other regions previously. The Marxan model input was changed to zero representation level for hard bottom and was run an additional time during committee discussion. Upon review, the committee was satisfied based on total area selected, cost, and visual representation and selected this the Marxan output as the starting point for the region 4 SHA nominations.

## **MARXAN OUTPUT MODIFICATIONS AND CORROBORATING DATA**

The committee discussed establishing some criteria to make modifications to the selected Marxan output for the final SHA nominations. Anne Deaton explained that any changes must be based on established criteria, which include habitats present, alteration scores, selection frequency, occurrence of ecological designations, fish data, water quality impairment status, and size and connectivity of hexagon clusters. The committee decided to exclude any single hexagons and to try to provide connectivity among clusters by adding hexagons with the lowest alteration score where possible, based on professional opinion and corroborating data. Committee members then discussed corroborating data such as reports and GIS layers. The nomination of SHAs in joint, coastal, and inland waters was also discussed. The committee decided to wait to make any modifications to the inland waters until Kyle Rachels and the NC Wildlife Resource Commission can be consulted.

The committee discussed modifications to the final Marxan run output beginning at the South Carolina line and moving up the coast. Casey noted all modifications to be made. In the interest of time and efficiency, she will load the modified output, along with the unmodified output, and the available corroborating data into an ArcGIS online map viewer. The committee members were asked to use this application before the next meeting, to

review the modifications and look for potential modifications to the inland waters. Final modifications to the selected MARXAN run output for SHA nominations will be completed at the next meeting.

The next meeting was set for August, with the exact date determined later. The meeting adjourned.

Cc: Catherine Blum  
Mike Bulleri  
Scott Conklin  
Dick Brame  
Braxton Davis  
Charlotte Dexter

Jess Hawkins  
Dee Lupton  
Nancy Marlette  
Katie Mills  
Phillip Reynolds  
Jerry Schill

Gerry Smith  
District Managers  
Committee Staff Members  
Marine Patrol Captains  
Section Chiefs