

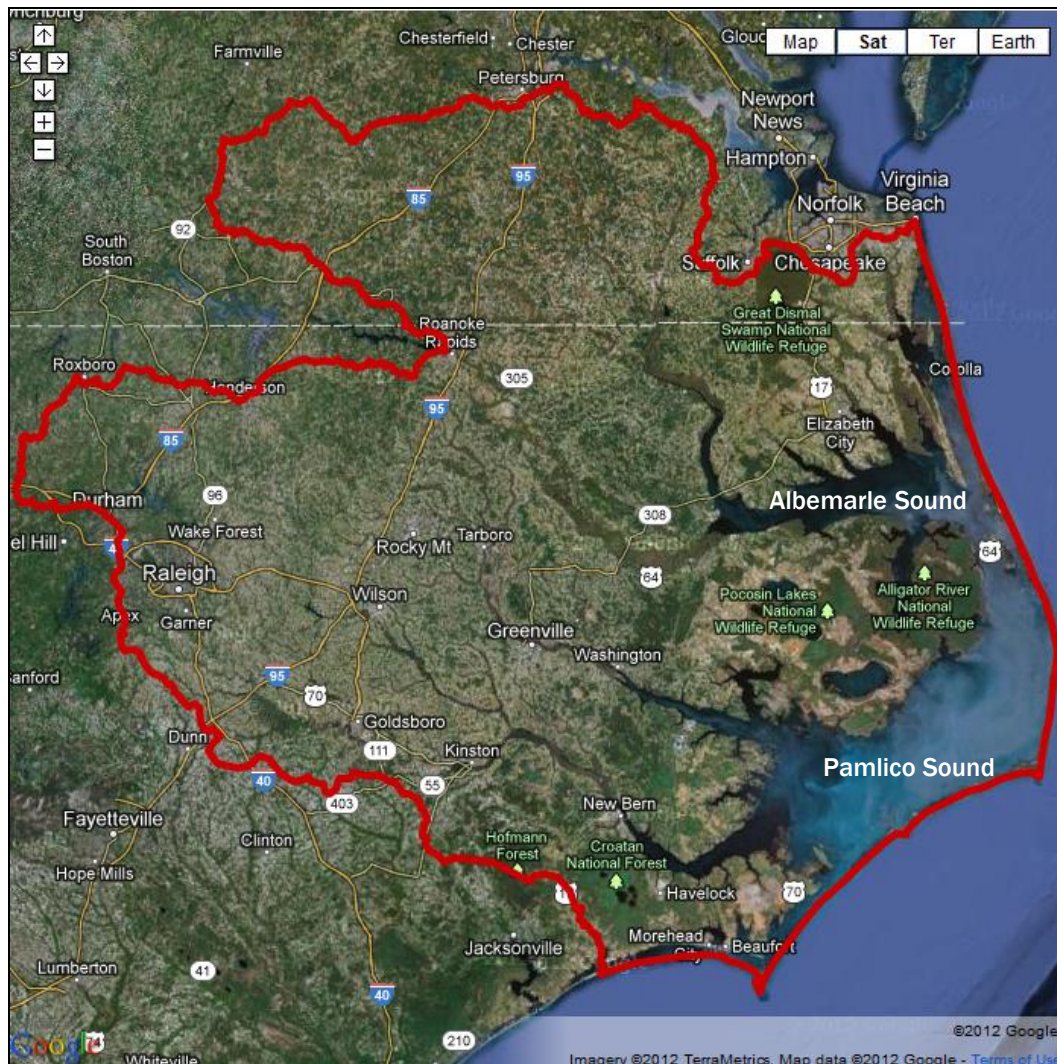


Social Network Analysis for the Albemarle-Pamlico National Estuary Partnership

Kate Brogan, Communications Specialist
NC Coastal Reserve

EBM Track
Craven Boardroom
3:00 – 3:30pm

ALBEMARLE-PAMLICO ESTUARY



Maps courtesy of APNEP and EPA

ISSUES

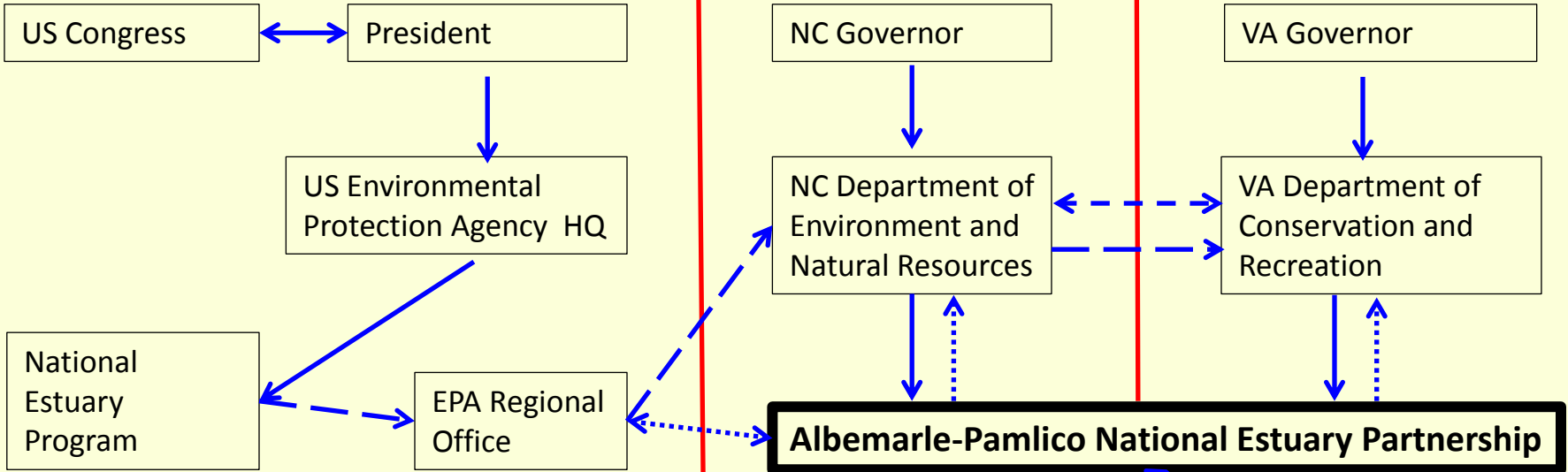
- Implementing communications directives
- Need for partnerships
- Better understanding of regional environmental network
- Improving capacity to reach target audience and partners



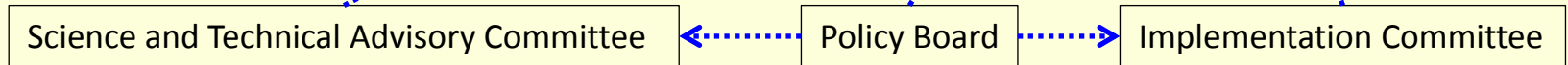
Federal Government




NC Government

VA Government



Extra- and Intergovernmental



- Direct Authority 
- Grantor/Grantee 
- Advisory 
- Memorandum of Agreement 

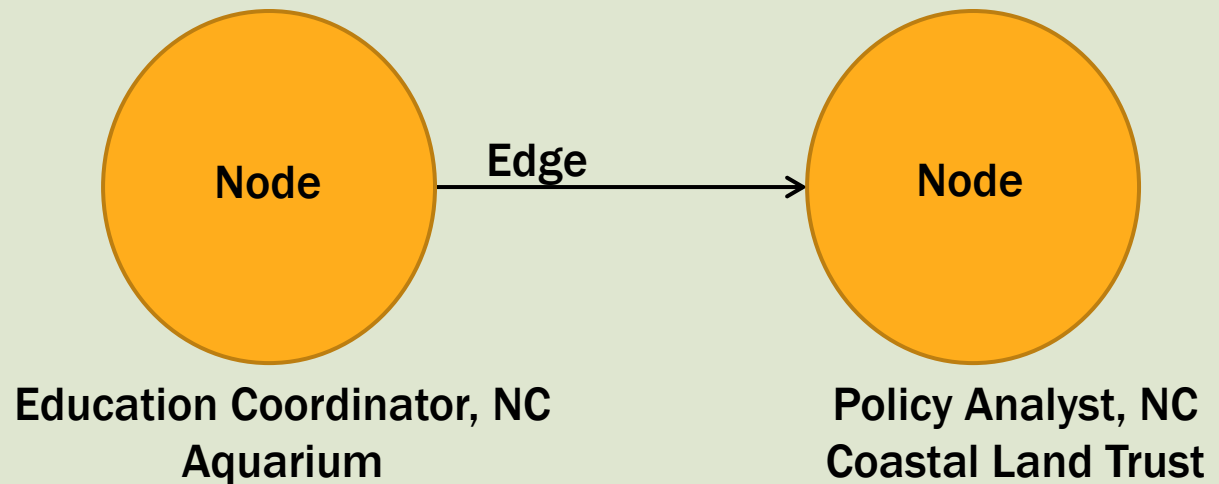
OPPORTUNITIES USING SOCIAL NETWORK ANALYSIS

- Understand how information from APNEP travels through stakeholder network
- Identify isolated organizations or geographic areas
- Inform management strategies



SOCIAL NETWORK ANALYSIS

- Quantity and direction of connections between stakeholders
- **Nodes** = individuals in APNEP region
- **Edges** = connections between nodes
- Key players

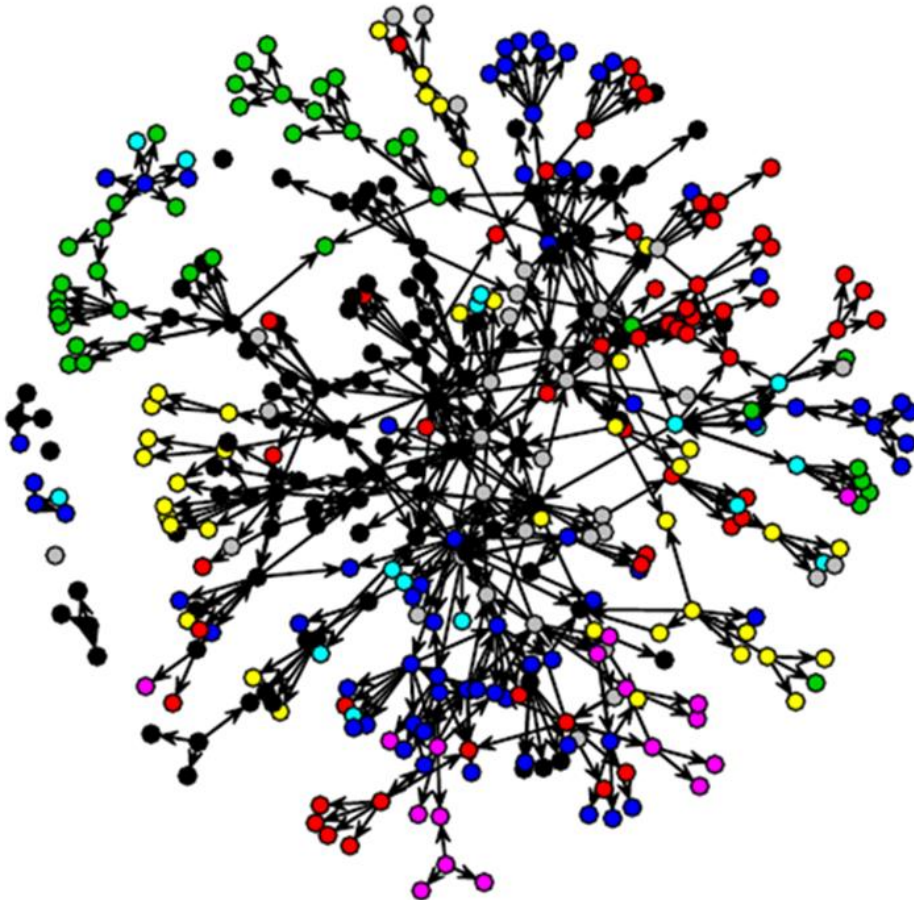


METHODS

- Email surveys
- Snowball sampling method
- Responses formed nodes and edges
 - 374 nodes
 - 520 edges
- Analysis with SNA package of R software

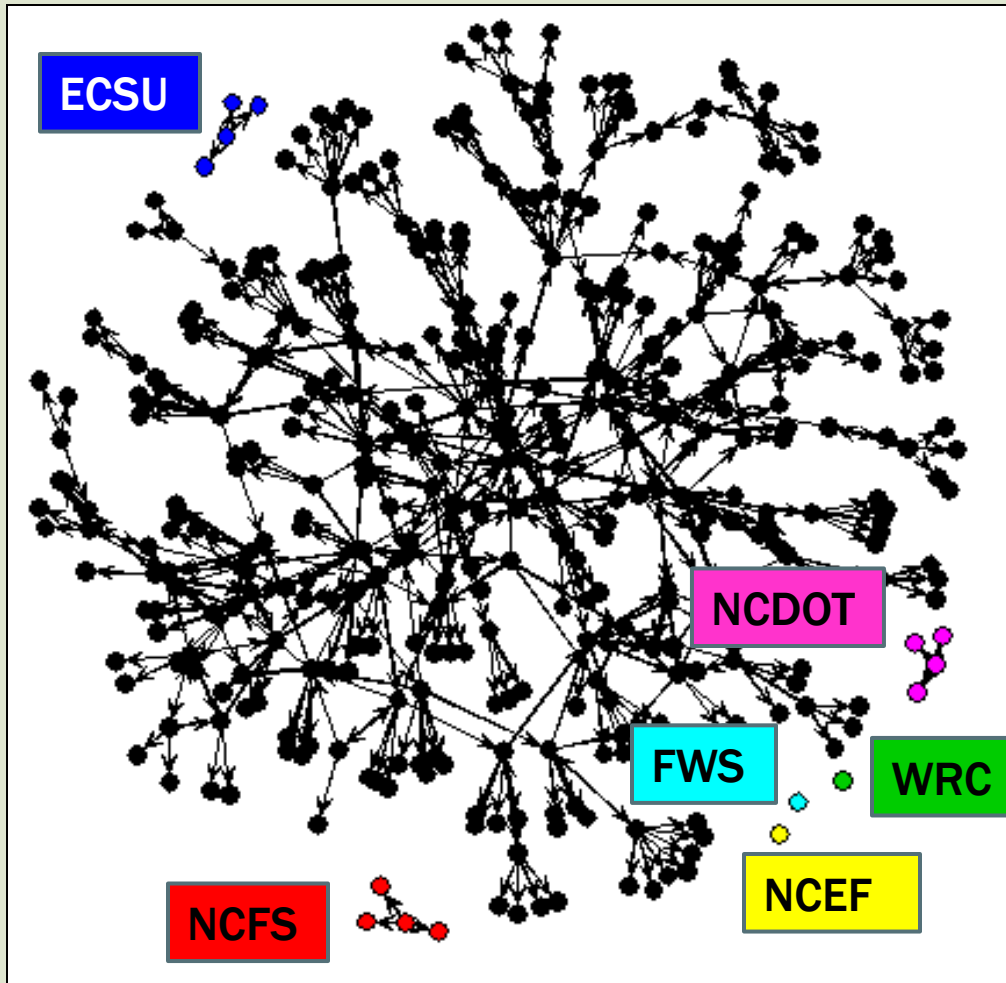


SECTOR-LEVEL TRENDS



- North Carolina NGO
- Federal government
- North Carolina university
- North Carolina educational institution, Virginia private sector business
- North Carolina state government
- Virginia state government, Virginia NGO, Virginia municipal government
- Virginia university, Virginia county government
- Federal government (office in North Carolina), Virginia regional government organization

NETWORK COMPONENTS



Elizabeth City State University

NC Forestry Service

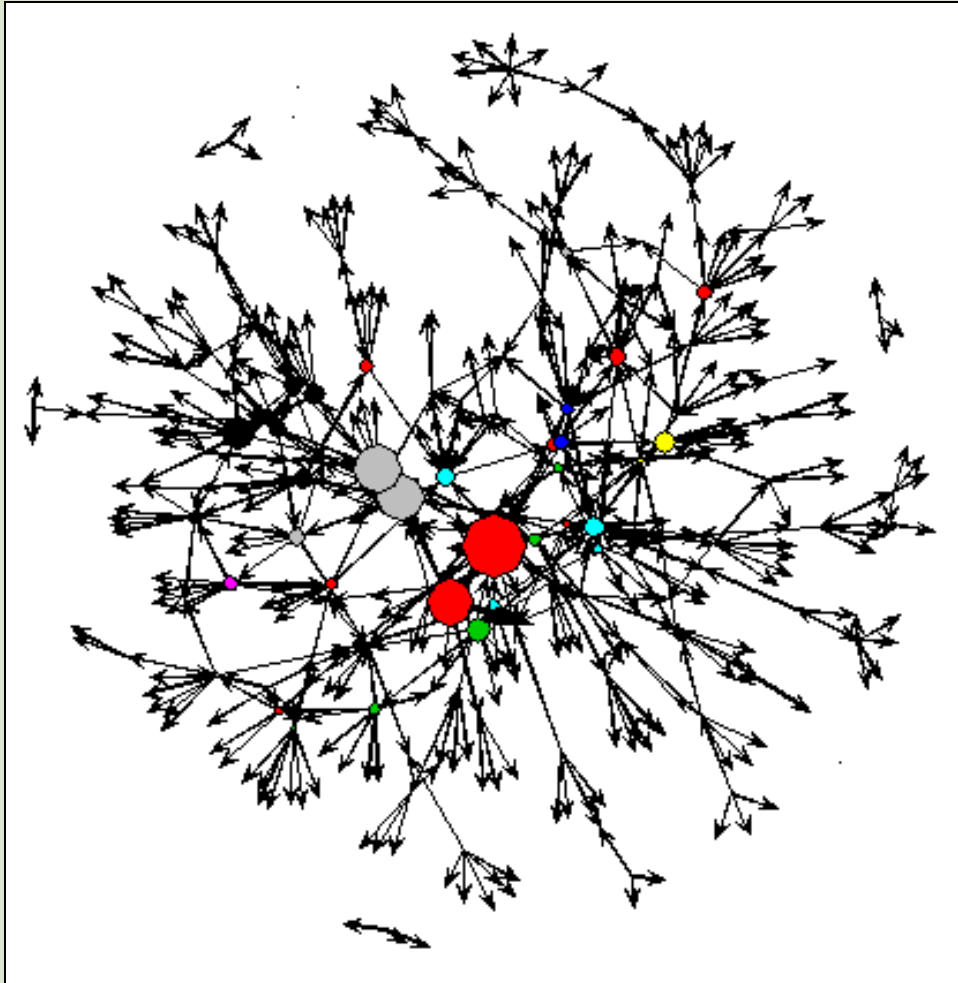
NC State Extension Forestry

US Fish & Wildlife Service

NC Wildlife Resources
Commission

NC Dept of Transportation

BETWEENNESS

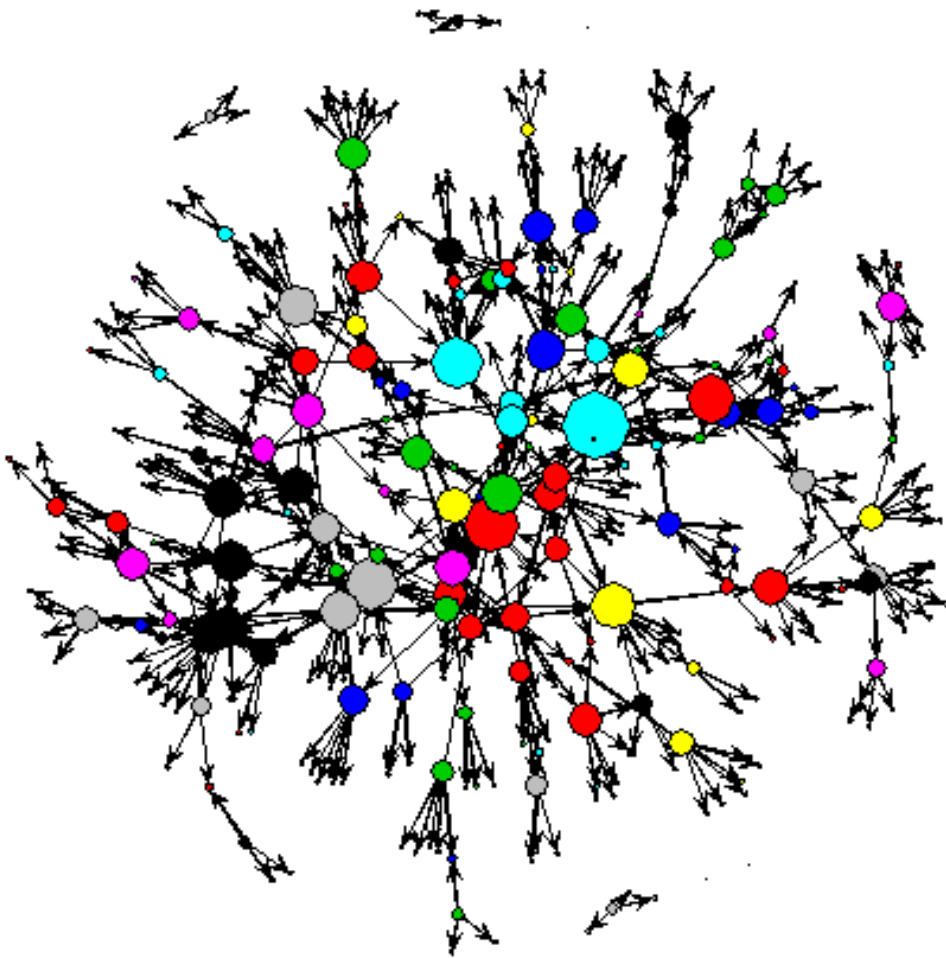


APNEP

**UNC Coastal Studies
Institute**

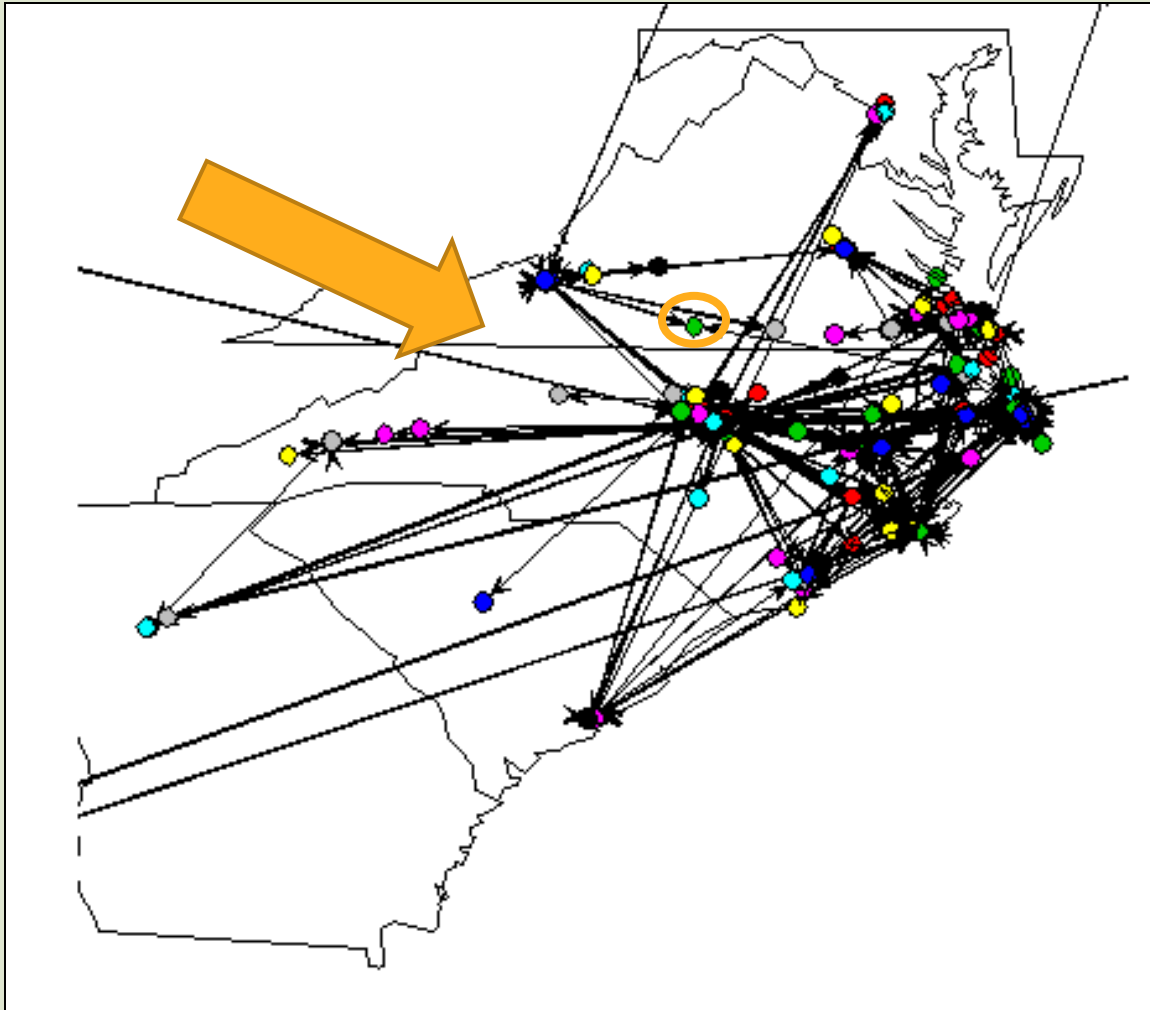
NC Sea Grant

DEGREE CENTRALITY



Organization	Connections
US Fish & Wildlife Service (Raleigh)	18
APNEP	15
NC Sea Grant	14
Pamlico-Tar River Foundation	14
NC Wildlife Resources Commission (Elizabeth City)	13
NC Water Science Center	12

GEOGRAPHIC ANALYSIS



Activity centers:

Raleigh NC

Coastal NC

Virginia Beach,
Norfolk VA

Silver Spring MD,
Charleston SC
(NOAA)

CHALLENGES

- Incomplete network
- Reach & response rate of survey
- Response limit of 8 contacts



RECOMMENDATIONS

- Evaluate software programs
- Expand network
- Metrics for implementation
- Future student projects



ACKNOWLEDGMENTS

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**Dr. Urban- Nicholas
School of the
Environment**

**Dr. Moody- Duke
Sociology Department**

Survey respondents

