

Updates on SC Large River Macroinvertebrate Study

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Ambient Monitoring

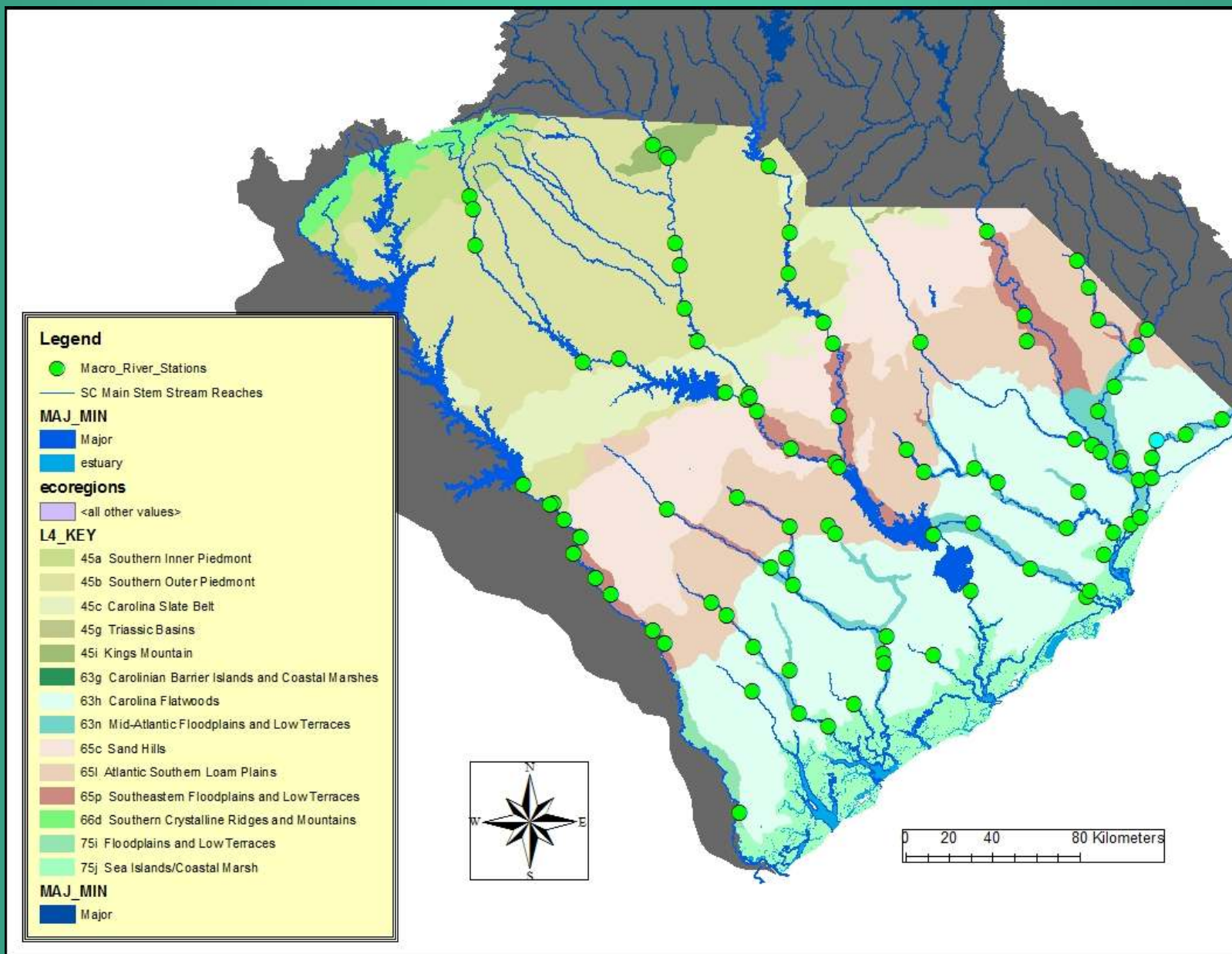
- Timed qualitative
- Kicknet
- D-frame
- Midge sampling
- Individual habitat picking
- P-chem data, habitat form, photos

Ambient Monitoring

- NCBI and EPT index to get Bioclassification score
- Blue Ridge, Piedmont and Coastal Plain scoring

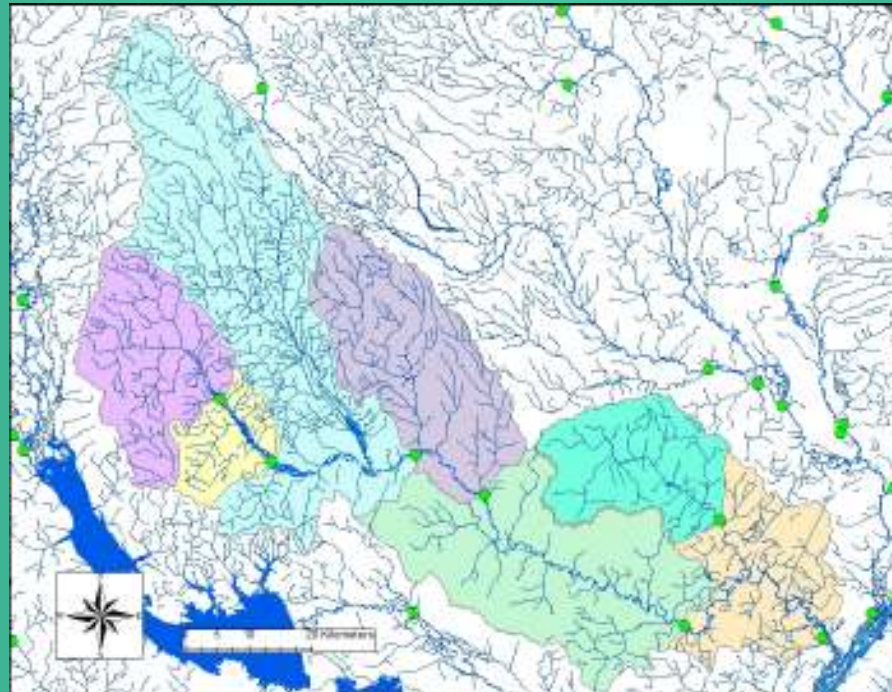


Preliminary Work

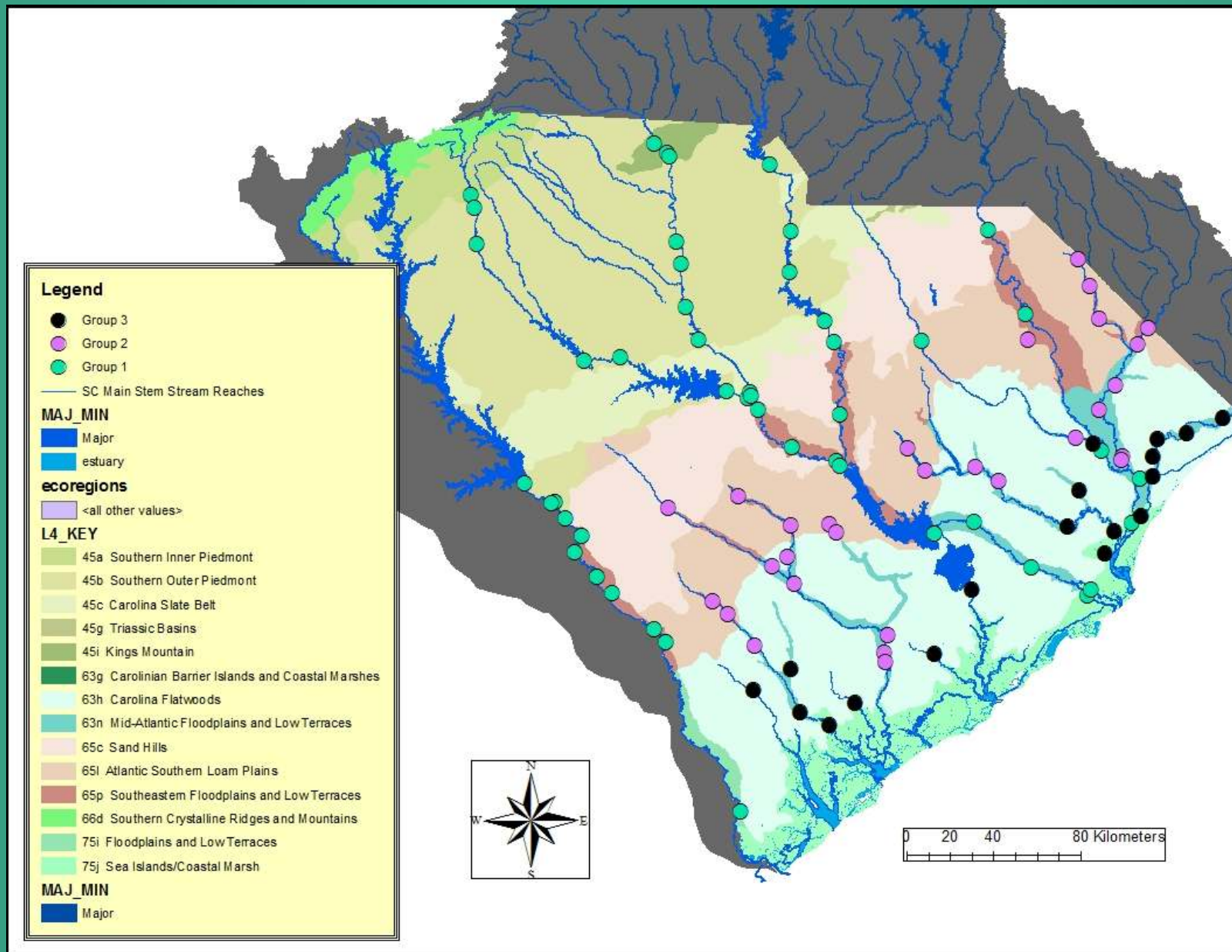


Preliminary Work

- Looked at land use and ecoregion percentage in each station's watershed
- Ran cluster analysis to divide into groups

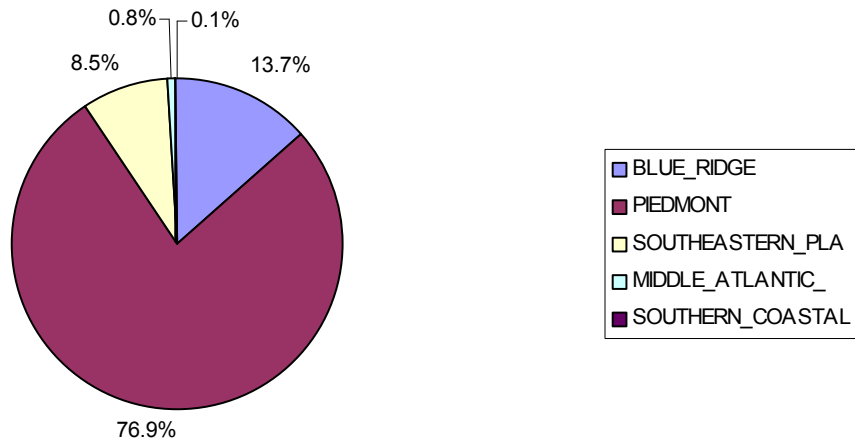


Preliminary Work

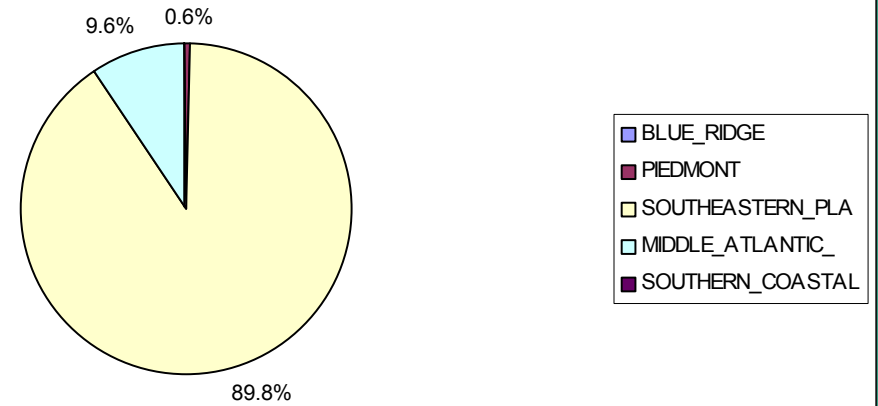


Group Ecoregion % Averages

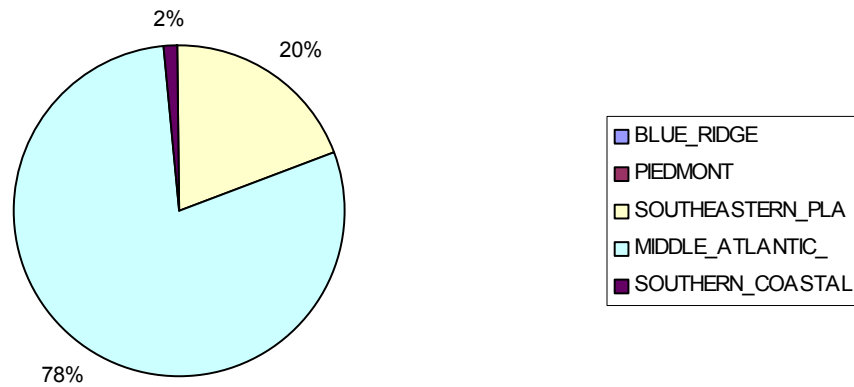
Group 1 Ecoregions



Group 2 Ecoregions

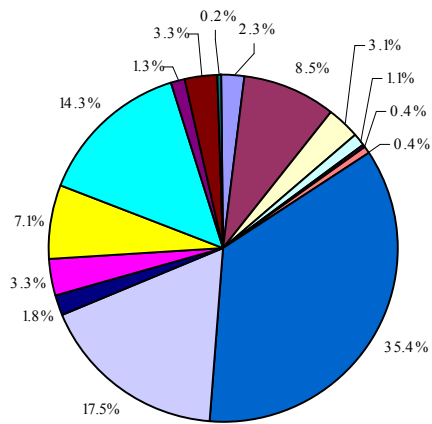


Group 3 Ecoregions

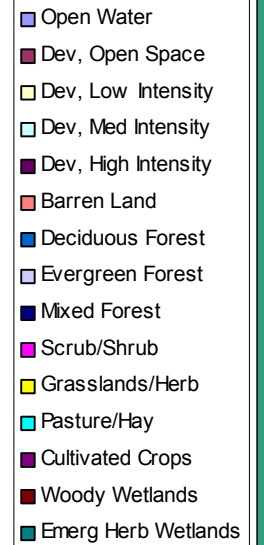
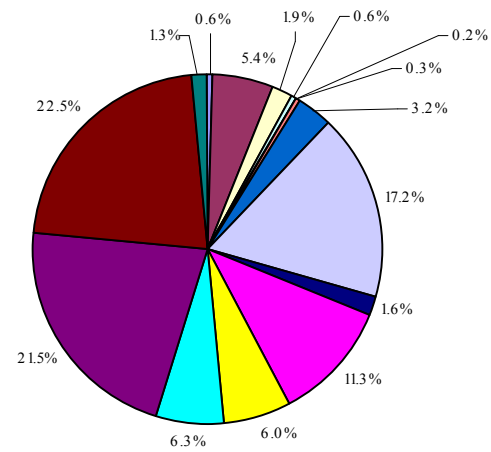


Group Landuse % Averages

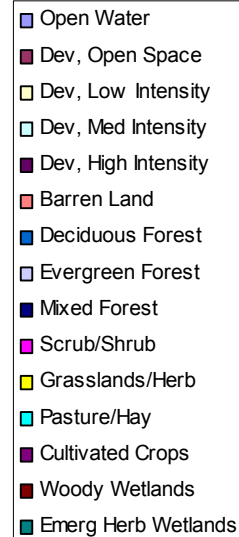
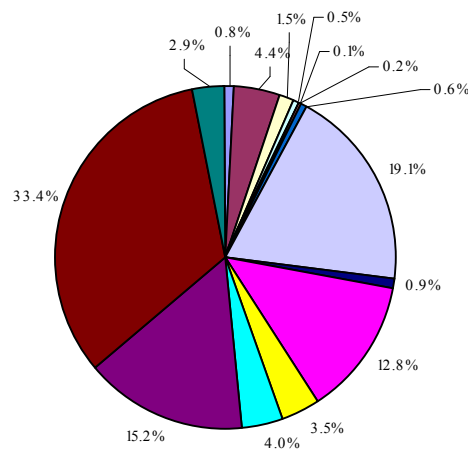
Group 1 Landuse



Group 2 Landuse



Group 3 Landuse



Sampling Methods (New to Rivers)

- Boat/kayak
- Not Timed
- Dragging habitat into boat
- Ponar
- Mussel collection



Sampling Methods (Same as Ambient)

- Used same collection techniques as ambient monitoring when possible
- P-chem data,
habitat form,
photos



Sampling Methods

- Above and below dams



Sampling Methods

- Recorded:
 - length of time sampling
 - use of boat/kayak
 - use of kicknet and/or dragging habitat in boat
 - use of sieve and/or ponar
 - flow conditions

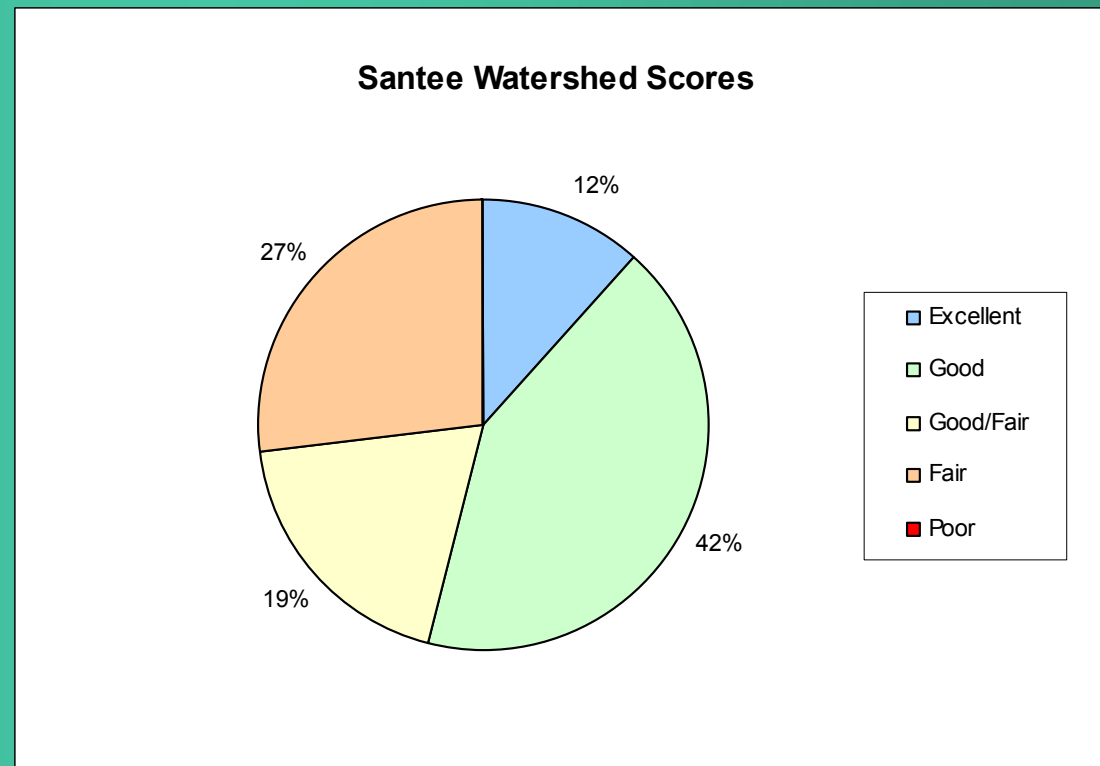


Results so Far

- Have sampled Savannah, Salkehatchie, Edisto, Santee, Black, Pee Dee, and Waccamaw River watersheds
 - Savannah: 10 sites
 - Salkehatchie: 3 sites
 - Edisto: 8 sites
 - Santee: 32 sites
 - Black: 7 sites
 - Pee Dee: 18 sites
 - Waccamaw: 6 sites

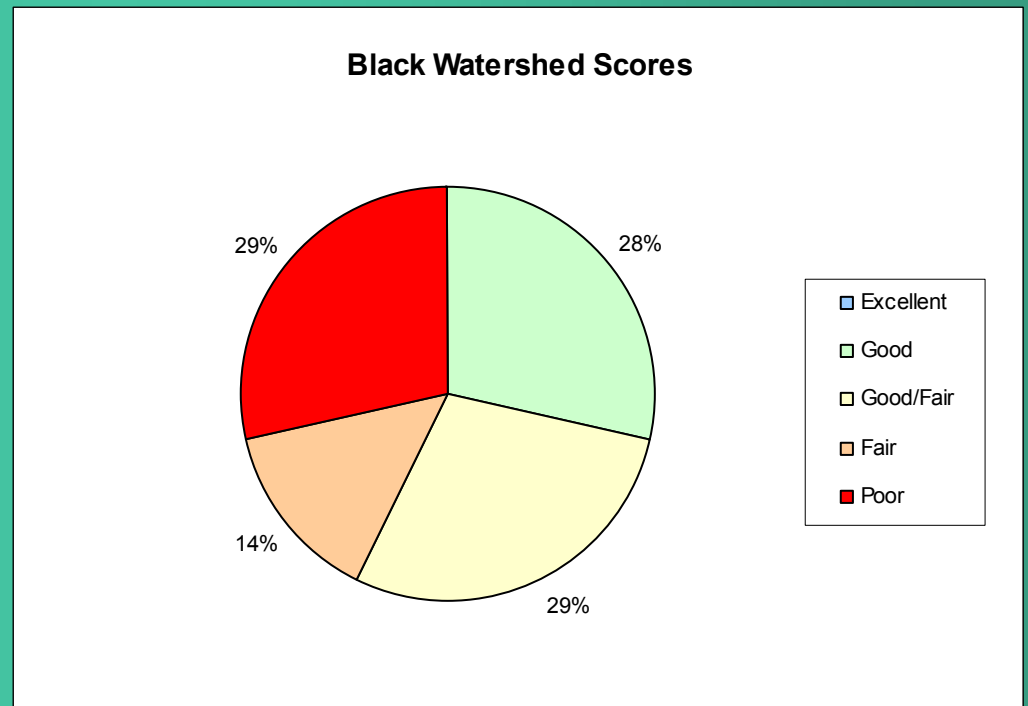
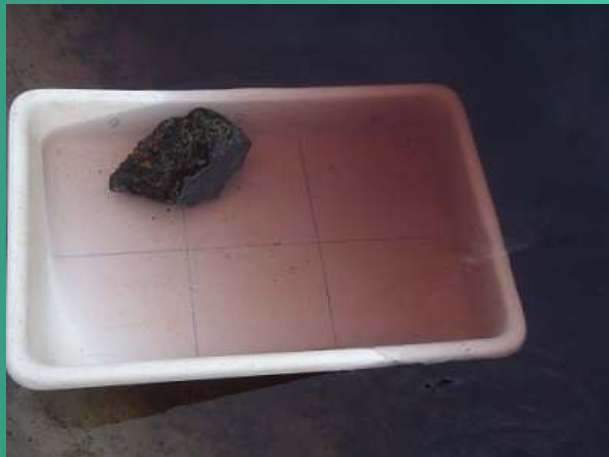
Santee Watershed

- 26 sites
 - All in Group 1



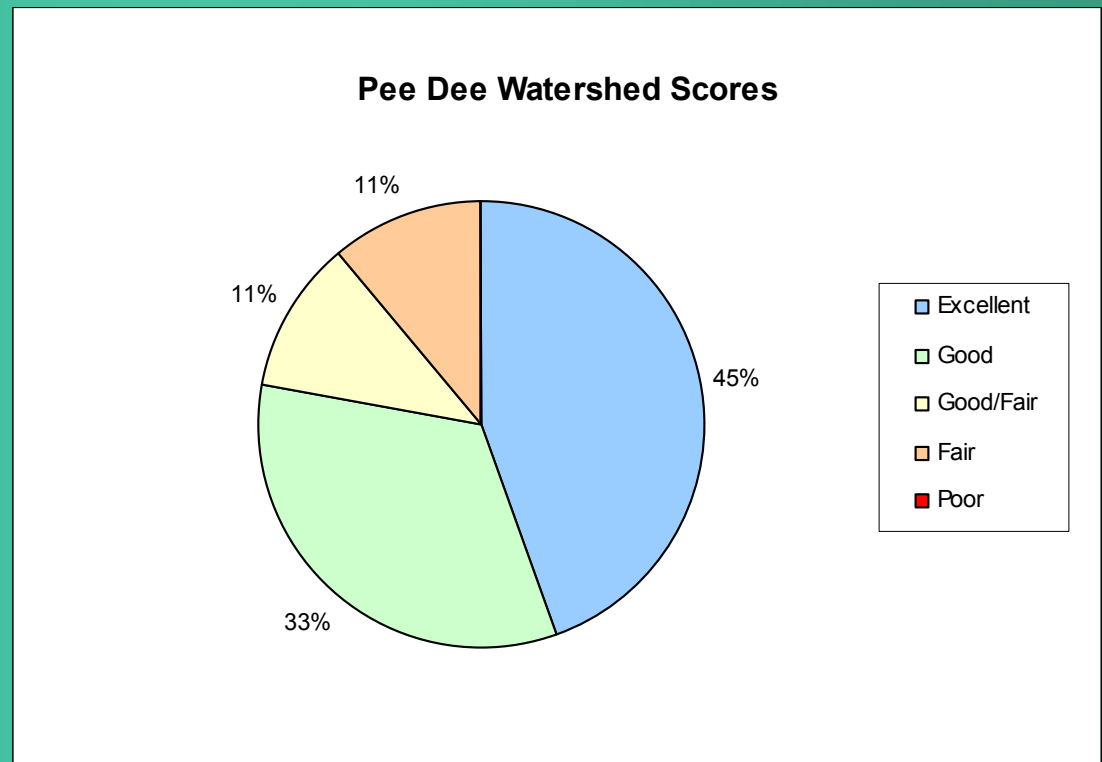
Black Watershed

- 7 sites
 - Upstream sites Group 2, downstream Group 3
 - Several lentic-like sites



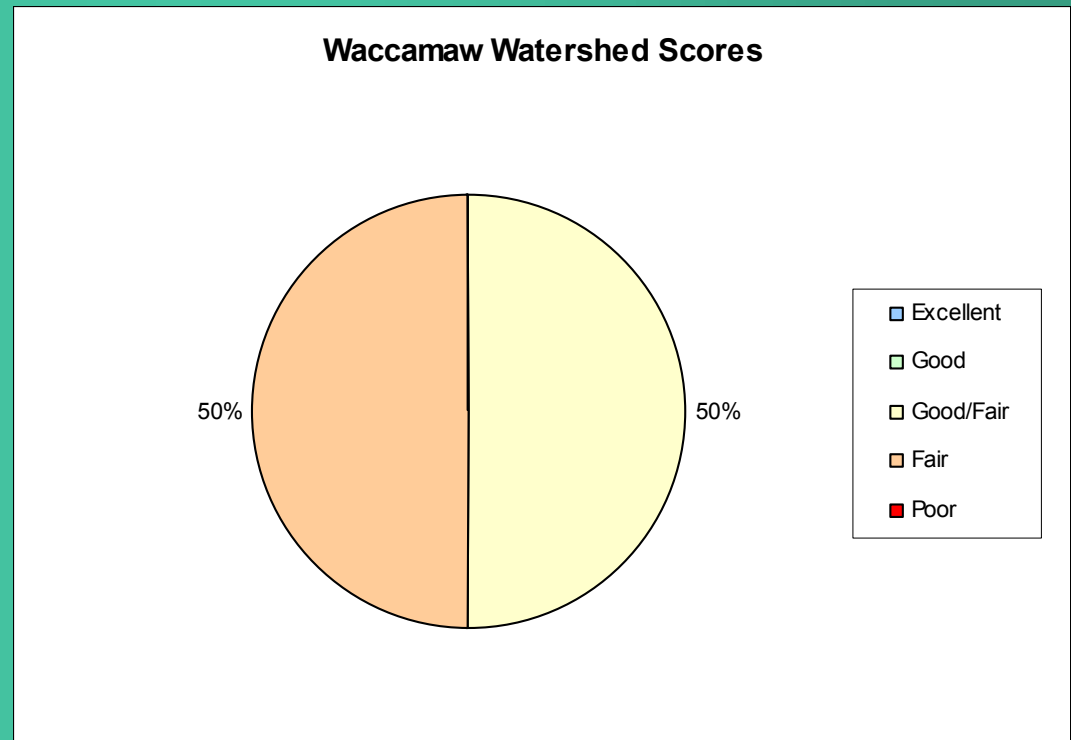
Pee Dee Watershed

- 18 sites
 - Variable groups



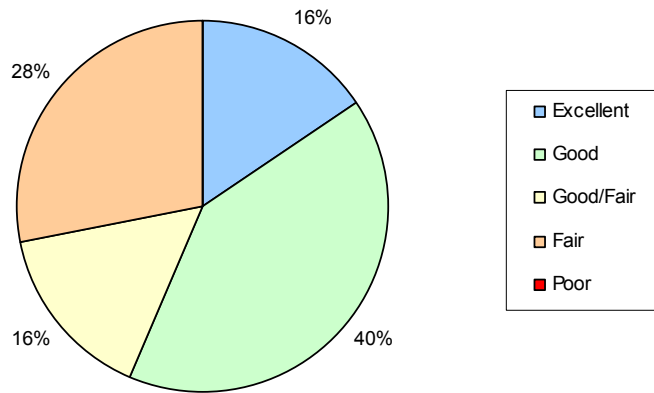
Waccamaw Watershed

- 6 sites
 - All in Group 3
 - Very slow flow at multiple sites

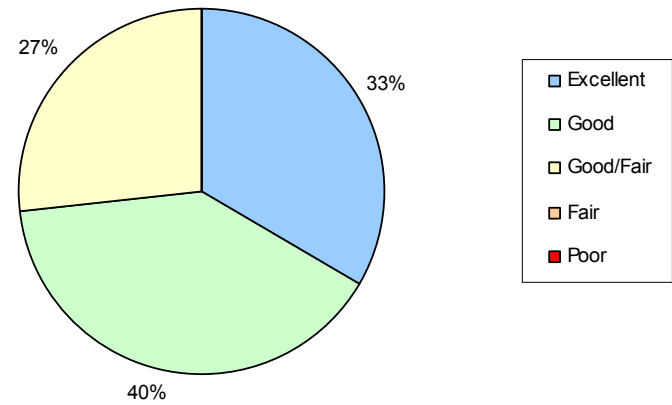


Group Score Comparisons

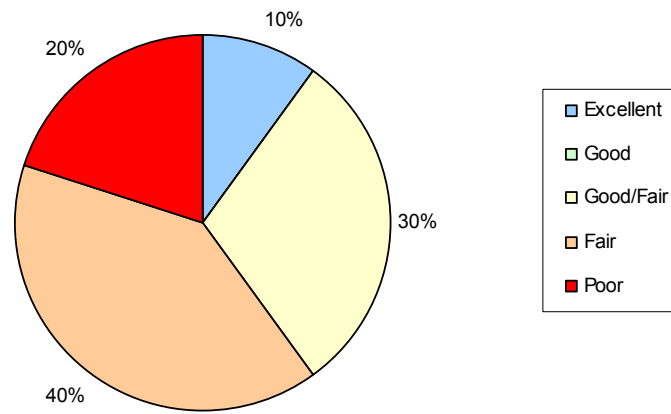
Group 1 Scores



Group 2 Scores



Group 3 Scores



Interesting Finds



Cyrnellus fraternus



Asioplax dolani



Paragnetina kansensis

Interesting Finds



Coryphaeschna ingens



Lioplax subcarinata



Viviparus georgianus



mussels

Interesting Finds



Cassidinidea lunifrons



Rangia cuneata

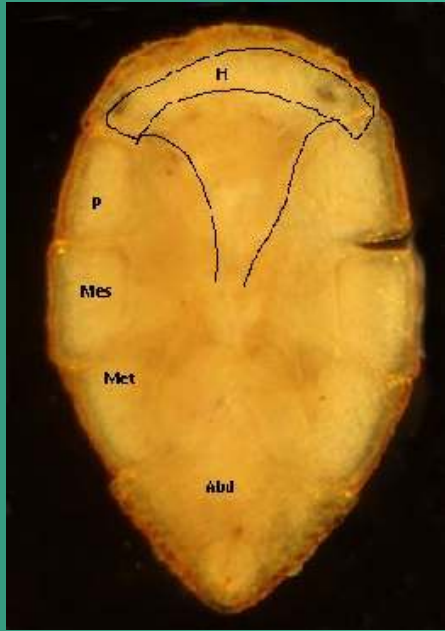


Cyathura polita

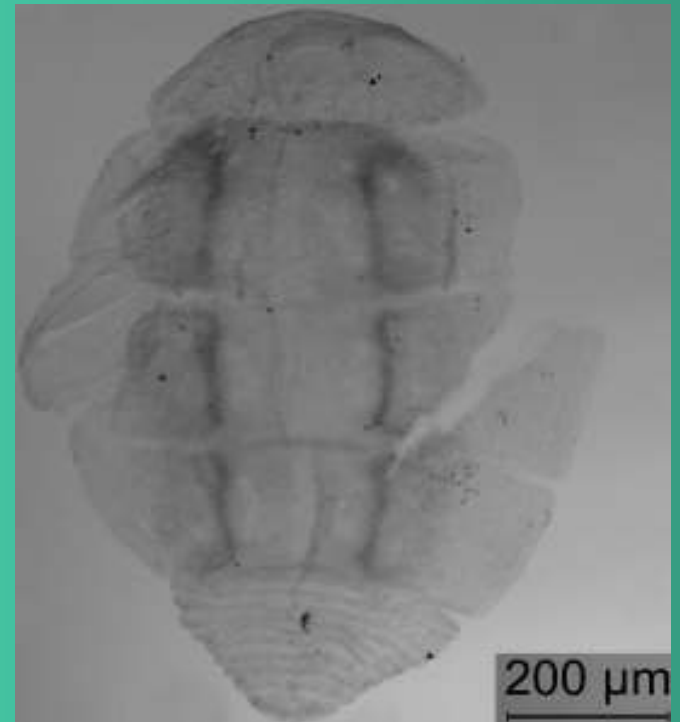
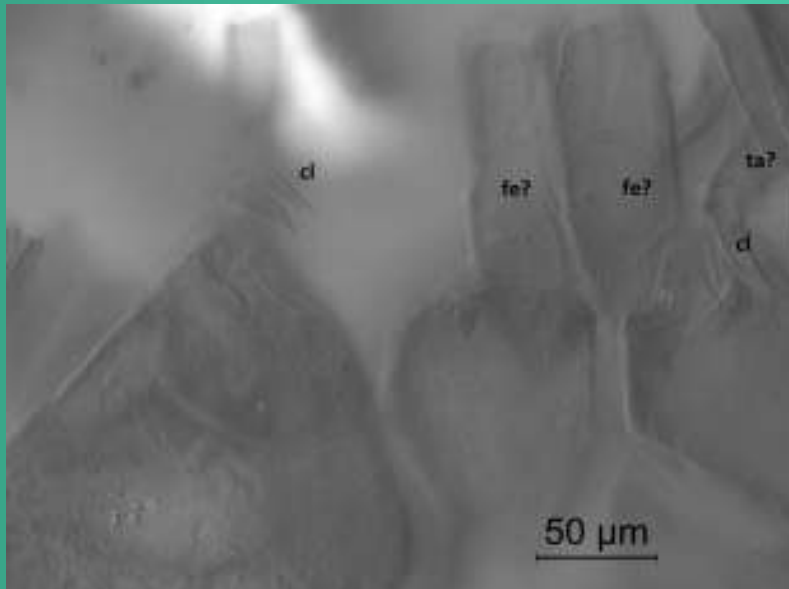


Littoridinops tenuipes

Interesting Finds



mystery critter



Looking Ahead

- Finish 2016 identification and data entry
- Analyses



Thanks!

- DHEC coworkers
 - David Eargle
 - Scott Castleberry
 - Stephanie LaPlaca
 - James Glover
- EPA
- Everyone who helped out with the mystery critter!

Questions?

