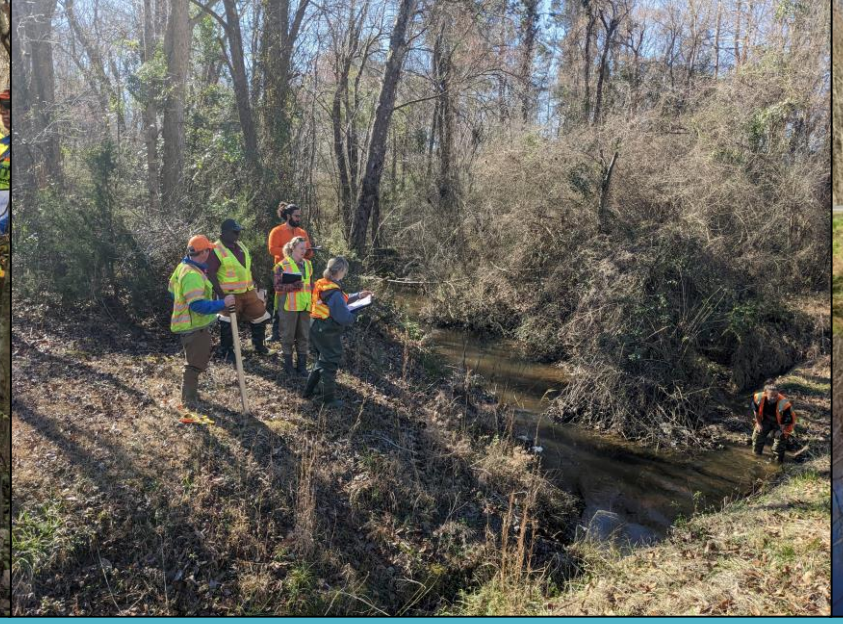
Lower Cape Fear River
SARP Field Training

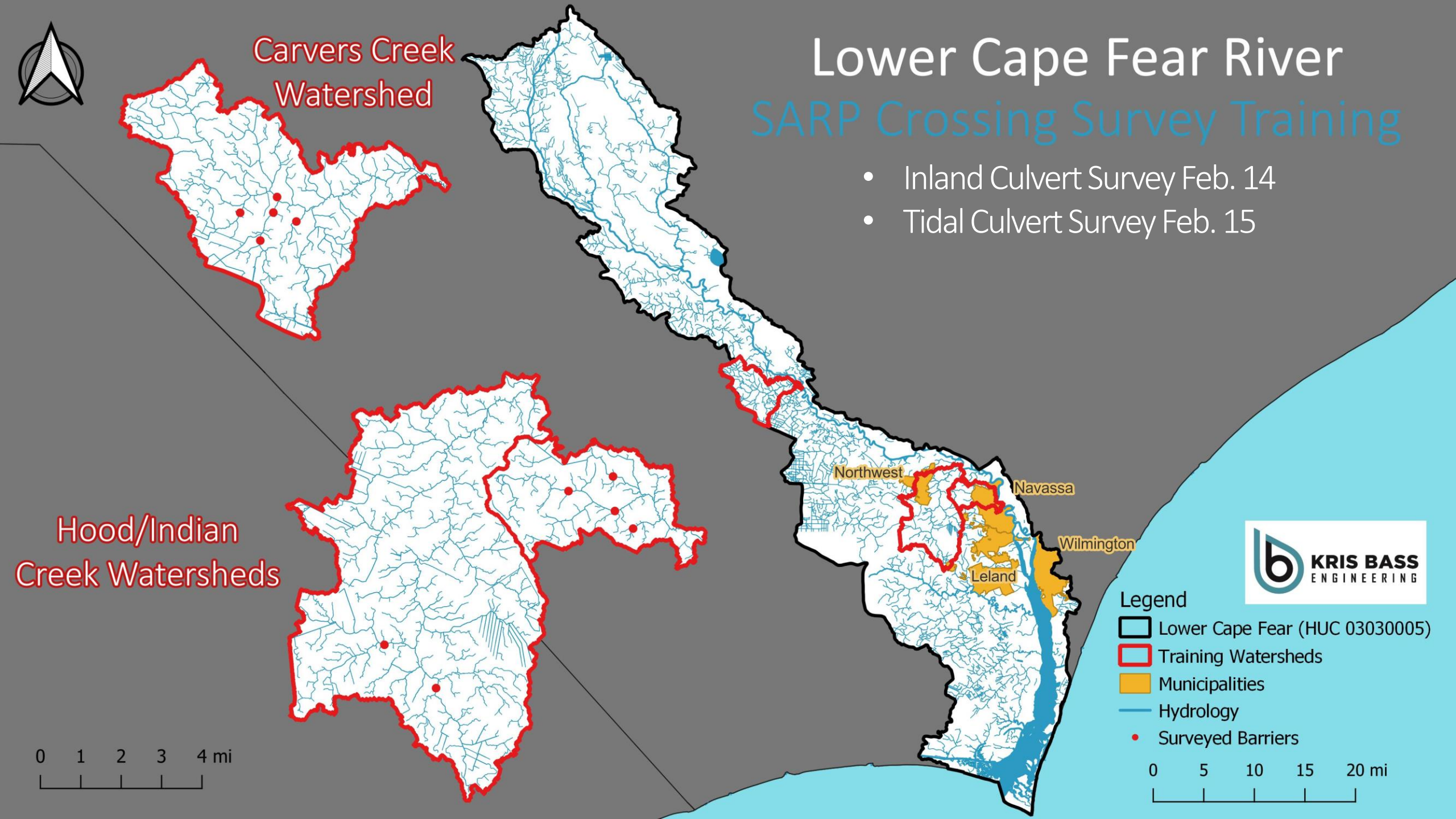


February 14-15, 2023

Lower Cape Fear River

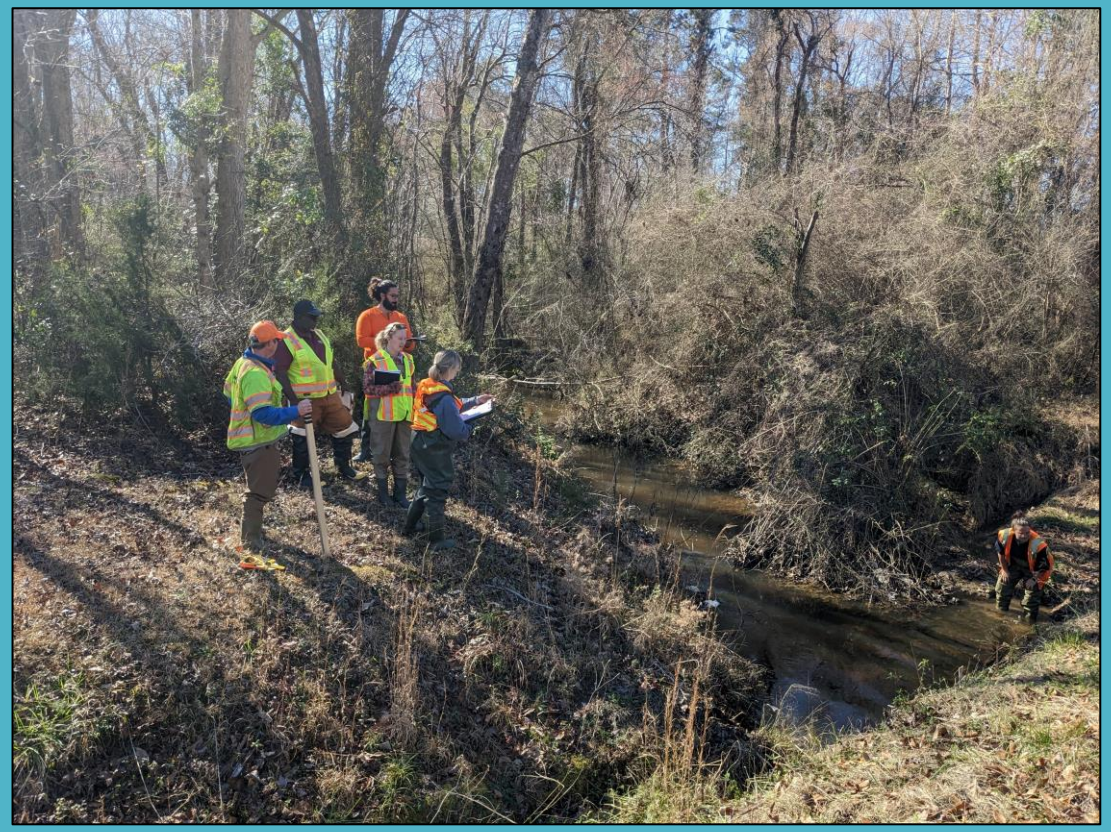
SARP Crossing Survey Training

- Inland Culvert Survey Feb. 14
- Tidal Culvert Survey Feb. 15



Groups in Attendance

- City of Wilmington
- NC DEQ
- NC Parks
- Moffatt & Nichol
- Davey Resource Group



Data Collection

SOUTHEAST AQUATIC RESOURCES PARTNERSHIP
SARP

AQUATIC CONNECTIVITY
Stream Crossing Survey
DATA FORM

DATABASE ENTRY BY ____ ENTRY DATE ____
DATA ENTRY REVIEWED BY ____ REVIEW DATE ____

CROSSING DATA

Crossing Code ____ Local ID (Optional) ____

Date Observed (00/00/0000) ____ Lead Observer ____

Town/County ____ Stream ____

Road ____ Type ☐ MULTILANE ☐ PAVED ☐ UNPAVED ☐ DRIVEWAY ☐ TRAIL ☐ RAILROAD

GPS Coordinates (Decimal degrees) ☐☐.☐☐☐☐☐ °N Latitude — ☐☐.☐☐☐☐☐ °W Longitude

Location Description

Crossing Type ☐ BRIDGE ☐ CULVERT ☐ MULTIPLE CULVERT ☐ FORD ☐ NO CROSSING ☐ REMOVED CROSSING ☐ BURIED STREAM ☐ INACCESSIBLE ☐ PARTIALLY INACCESSIBLE ☐ NO UPSTREAM CHANNEL ☐ BRIDGE ADEQUATE

Number of Culverts/ Bridge Cells ____

Photo IDs INLET ____ OUTLET ____ UPSTREAM ____ DOWNSTREAM ____ OTHER ____

Flow Condition ☐ NO FLOW ☐ TYPICAL-LOW ☐ MODERATE ☐ HIGH

Crossing Condition ☐ OK ☐ POOR ☐ NEW ☐ UNKNOWN ☐ FAILING

NKNOWN

Alignment ☐ FLOW-ALIGNED ☐ SKEWED (>45°)

Road Fill Height (Top of culvert to road surface; bridge = 0) ____

nnel
annel
idth ____

Confidence ☐ HIGH ☐ LOW/ESTIMATED

Constriction ☐ SEVERE ☐ MODERATE ☐ SPANS ONLY BANKFULL/ ACTIVE CHANNEL ☐ SPANS FULL CHANNEL & BANKS

Inlet Scour Pool
☐ NONE ☐ SMALL ☐ LARGE

Riparian Vegetation

Overstory	Understory	Ground level
☐ High	☐ High	☐ High
☐ Low	☐ Low	☐ Low

level
High
Low

Crossing Comments

BATS PRESENT? ☐ Y

STRUCTURE 1

OUTLET

Tide Gate Type ☐ NO TIDE GATE ☐ STOP LOGS ☐ FLAP GATE ☐ SLUICE GATE ☐ SELF-REGULATING ☐ OTHER (DESCRIBE IN COMMENTS SECTION)

Tide Gate Barrier Severity ☐ NO TIDE GATE ☐ MINOR ☐ MODERATE ☐ SEVERE ☐ NO AQUATIC PASSAGE

Outlet Materials (Select all options that apply) ☐ CONCRETE ☐ STONE ☐ WOOD ☐ METAL (SMOOTH) ☐ METAL (CORRUGATED) ☐ PLASTIC (SMOOTH) ☐ PLASTIC (CORRUGATED) ☐ OTHER (DESCRIBE IN COMMENTS SECTION)

Outlet Shape ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ FORD ☐ REMOVED ☐ UNKNOWN ☐ CLOGGED/COLLAPSED/SUBMERGED

Outlet Dimensions (ft.) A. Width ____ B. Height ____ C. Substrate/Water Width ____ D. Water Depth ____
E. Abutment Height (Type 7 bridges only) ____ High Tide Water Depth ____ Spring Tide Water Depth ____

Outlet Perch (ft.) Low Tide ____ High Tide ____ Outlet Armoring ☐ NONE ☐ NOT EXTENSIVE ☐ EXTENSIVE

INLET

Inlet Type ☐ PROJECTING ☐ MITERED TO SLOPE ☐ FLUSH (NOT MITERED) ☐ HEADWALL ☐ WING WALL(S) ☐ HEADWALL & WING WALL(S) ☐ OTHER (DESCRIBE IN COMMENTS SECTION)

Inlet Materials (Select all options that apply) ☐ CONCRETE ☐ STONE ☐ WOOD ☐ METAL (SMOOTH) ☐ METAL (CORRUGATED) ☐ PLASTIC (SMOOTH) ☐ PLASTIC (CORRUGATED) ☐ OTHER (DESCRIBE IN COMMENTS SECTION)

Inlet Shape ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ FORD ☐ REMOVED ☐ UNKNOWN ☐ CLOGGED/COLLAPSED/SUBMERGED

Inlet Dimensions (ft.) A. Width ____ B. Height ____ C. Substrate/Water Width ____ D. Water Depth ____
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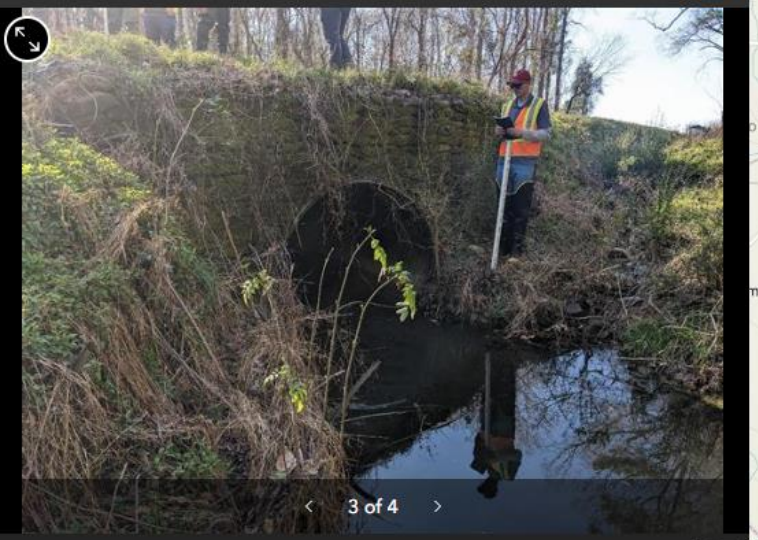
Inlet Perch (ft.) Low Tide ____ High Tide ____ Inlet Armoring ☐ NONE ☐ NOT EXTENSIVE ☐ EXTENSIVE

Assessing Road Stream Crossing Barriers in the United States

05012019 SARP AOP Stream Cross...



3 of 4

_05012019_SARP_AOP_Stream_Crossing_Survey_4822

1-499 Flake Rd, Council, North Carolina, 28434

Date

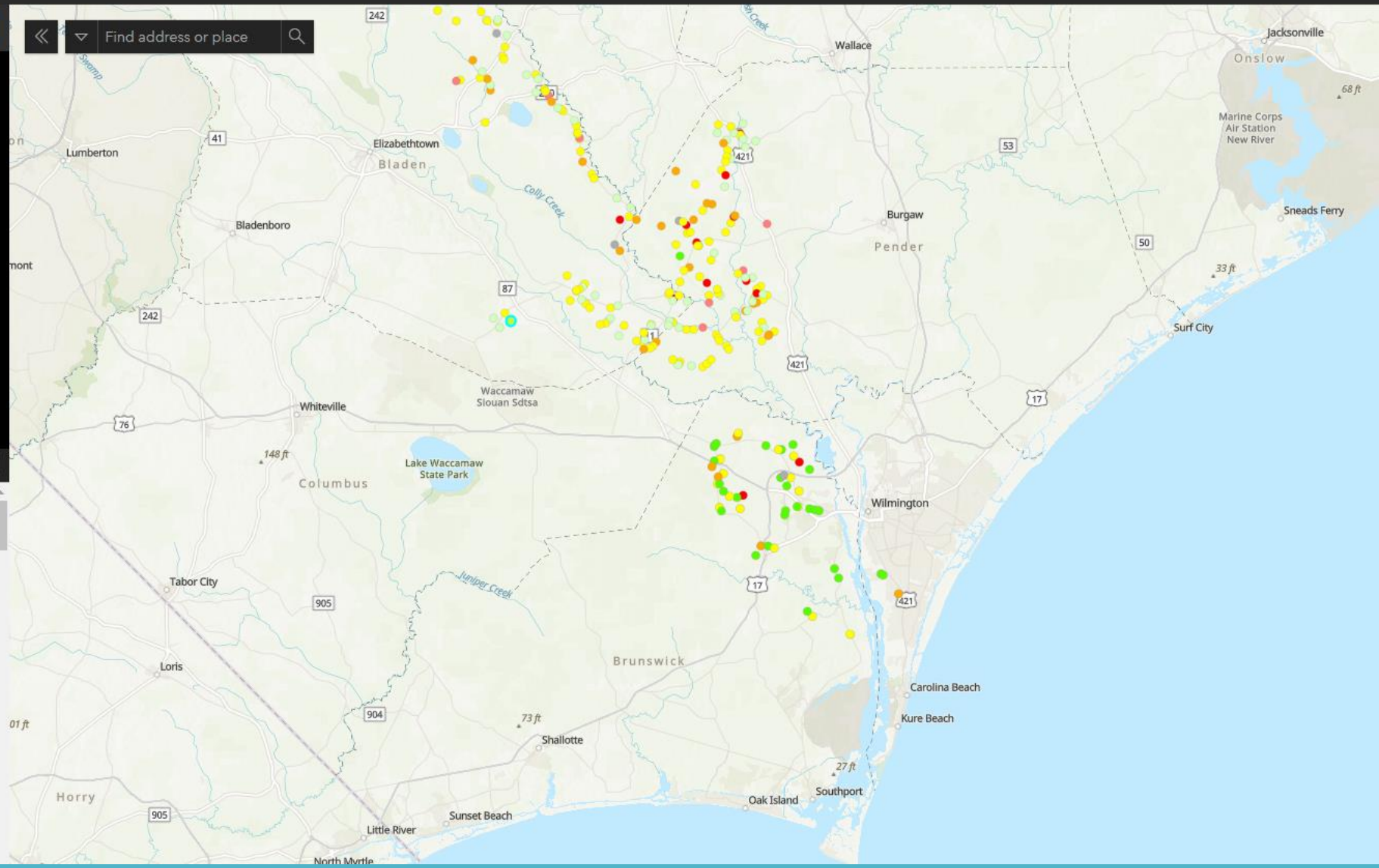
2/14/2023, 12:00 PM

County

Bladen County

Stream Name

Flake Rd



https://fws.maps.arcgis.com/apps/instant/attachmentviewer/index.html?appid=0e60c1c7da4d469d9cb7fd07aa6dd6af

Questions?

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shawna@southeastaquatics.net

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ENGINEERING