

Modernizing Conservation Response:
Digital Tools for Federal and State Disaster Site Reporting

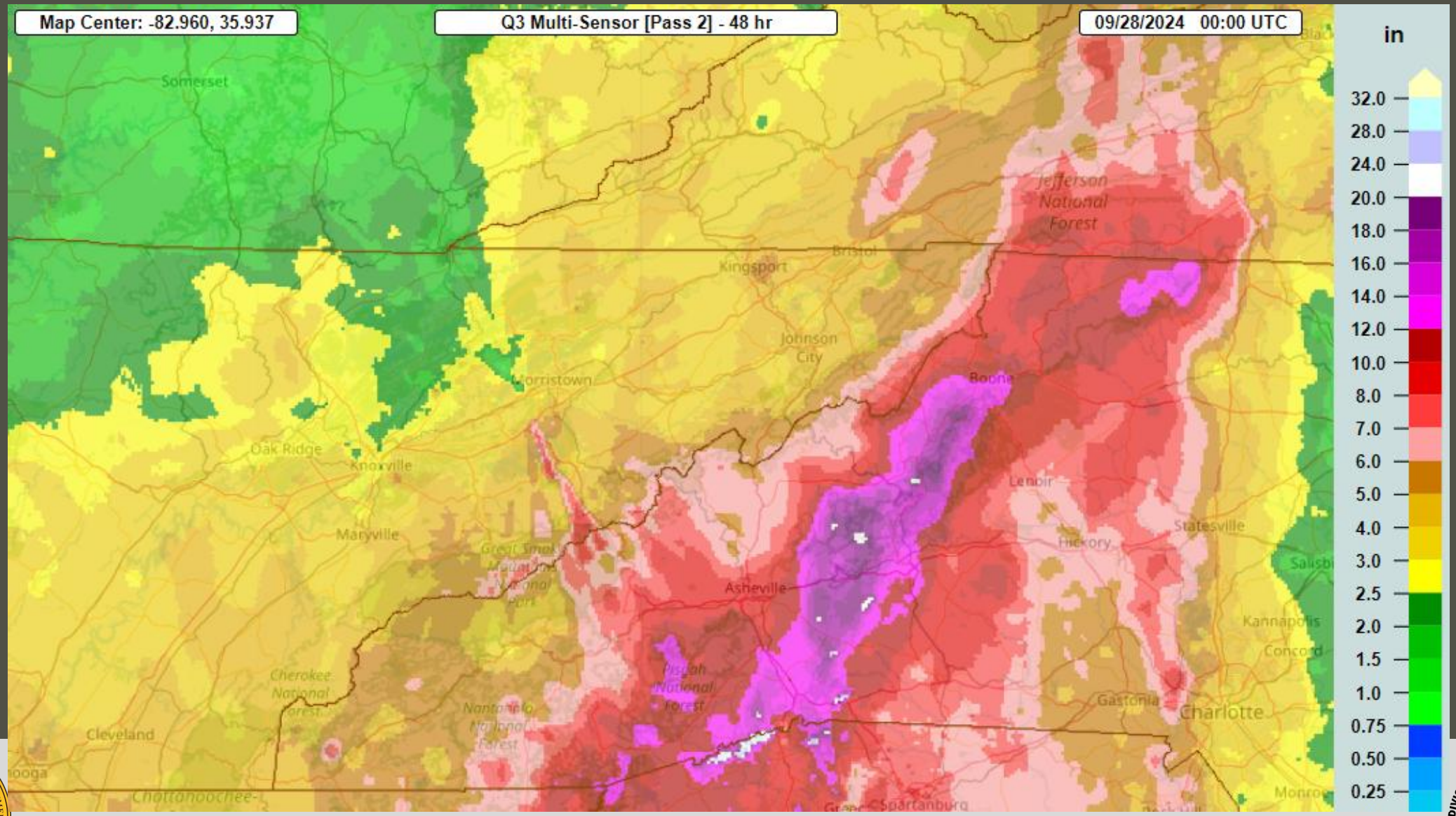
Why?

- Hurricane Helene: September 27, 2024
- 30 inches of rain



Photos courtesy of Asheville Citizen Times

Two Day Rainfall Estimates


















How can conservation staff assess all these sites?

- Over 1/3 of the state impacted – not our typical players or storm event
- No electronic tool widely available
- Help from a data management and staffing perspective needed

Assessment Tool Created

- Led to the development of a new tool that can be used for federal and state programs
  - Emergency Watershed Program (EWP)
  - Streamflow Rehabilitation Assistance Program (StRAP)

Special thanks to division staff: Allie Dinwiddie, Steven Porson and Matt Safford for the development of this tool and the MANY district staff who tested, refined and improved the app.

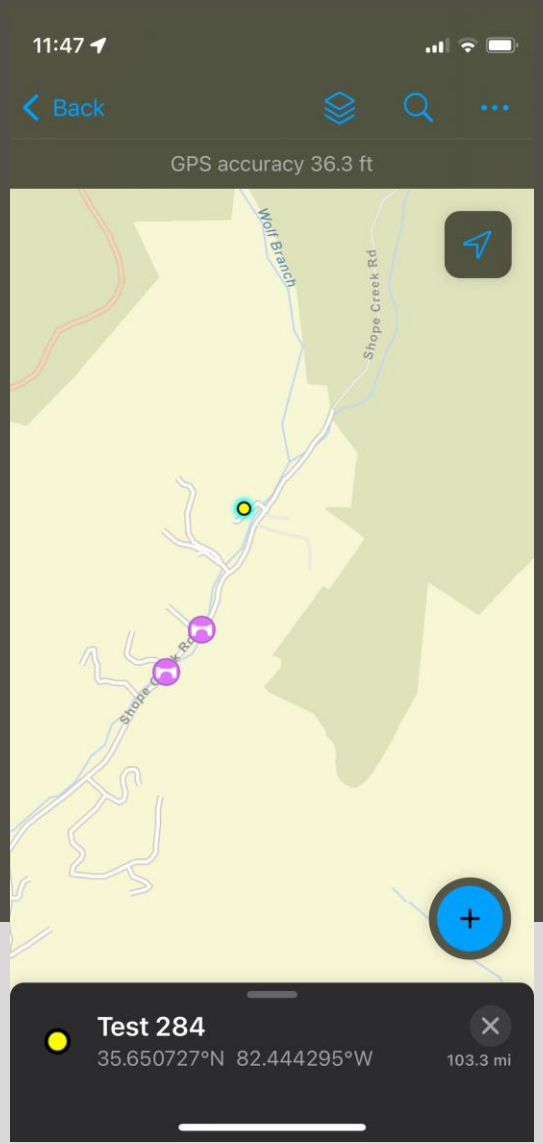
EWP & StRAP Site Assessment Tool

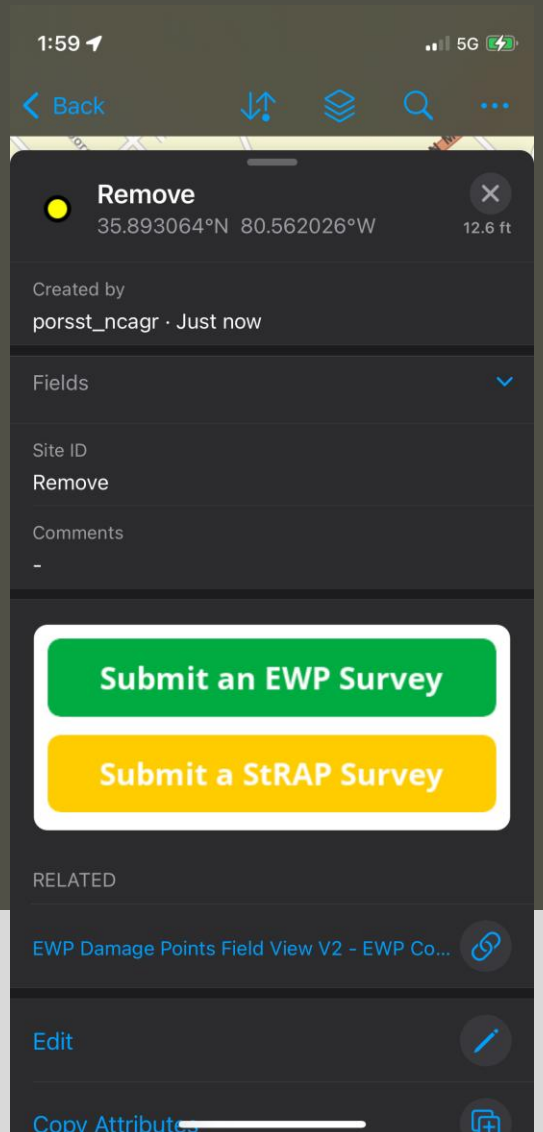
- What is the EWP & StRAP reporting tool?
  - Mobile and desktop ArcGIS app to gather data and generate reports for EWP forms
  - Projects denied federal funding move to StRAP consideration

- Why and How was it developed?
  - Simplified and automated the paper process
  - Coordinated and streamlined with NRCS & local SWC districts

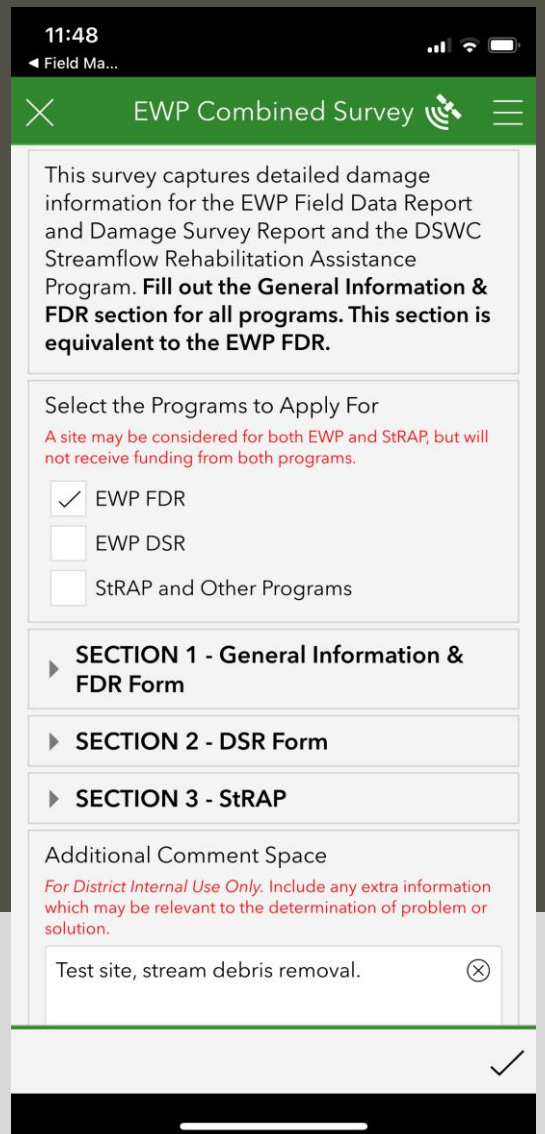
Data Collection

Field Maps

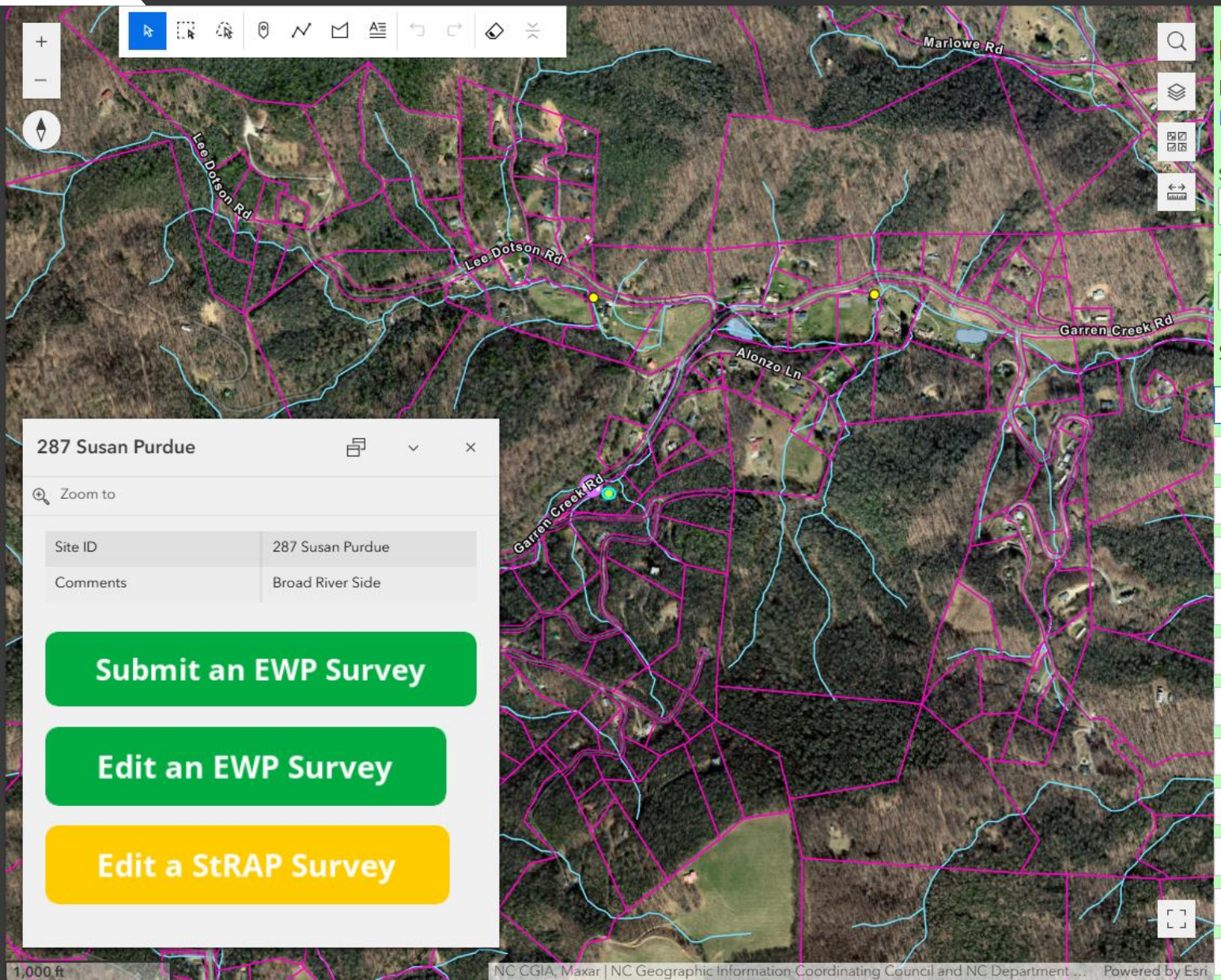




Survey 123



Online Editing



EWP Sites - Web Editor

Filter sites, select a site, then edit details in the Survey123 app.

Request a Report | Generate a Report

Site ID is

County is: Buncombe

Census Tract is: - All -

Township is: - All -

Subwatershed Name (HUC12) is: - All -

Scroll and select a site below to find it in the Map.

- 287 Susan Purdue - Headwaters Broad River - Buncombe
- 444 Brook Harris - Upper Cane Creek - Buncombe
- 425 Bruce Tettener - Headwaters Broad River - Buncombe
- 89 - Upper Cane Creek - Buncombe
- 106 - Upper Cane Creek - Buncombe
- 417 - Upper Cane Creek - Buncombe
- 534 - Upper Cane Creek - Buncombe
- 500 Deanna Knox - Flat Creek - Buncombe
- 442 - Headwaters Broad River - Buncombe
- 223 - Headwaters Broad River - Buncombe
- 558 Danny Phillips - Reems Creek - Buncombe
- 194 - Headwaters Broad River - Buncombe

Online Editing and Paperless Reporting

- Select and view sites
- Markup the map and view post-Helene imagery
- Edit details submitted by you or another mobile worker
- Generate or request reports within a few clicks

EWP Stream Bank Stabilization Field Data Report

Modelled Version: 2025-1
Creation Time: April 24, 2025 9:51 AM
You are responsible for reading and following the requirements of the NRCS form

Background

Event Name: Helene
Site Visit Date: April 23, 2025 2:17 PM
County: Polk
Sponsor Name: Polk SWCD
Investigators: KG, KG

Site/Local Name: Test 1
DSR Number:
Coordinates: 35.2298, -82.3447
Type of Structure: Occupied Residence

Site Eligibility/Defensibility

Damage a result of a natural disaster? *Yes*
Remarks: Damage sustained during Hurricane Helene.

Recovery measures would be for runoff retardation or soil erosion prevention? *Yes*
Remarks: Protection of structure for future events.

Threat to life and/or property? What is likely to happen if the damage is left untreated? List public, business, and commercial properties. *Yes*
Remarks: House is within 3 feet of the bank and clearly structure is threatened.

Event caused a sudden impairment in the watershed? *Yes*
Remarks: Yes, damage was clearly not here prior to Helene.

Imminent threat was created by this event? What is the evidence that there has not been an ongoing watershed problem at this site, and that the impairment suddenly arises as a result of the natural disaster? *Yes*
Remarks: Access bride completely destroyed and home is in danger.

Sample Report

Accessible online!

- Hurricane Helene EWP & StRAP Site Assessment Tool | NC Agriculture

The app is supported by the NC Division of Soil and Water Conservation. The EWP form is now publicly available for data submission.

Access Survey:

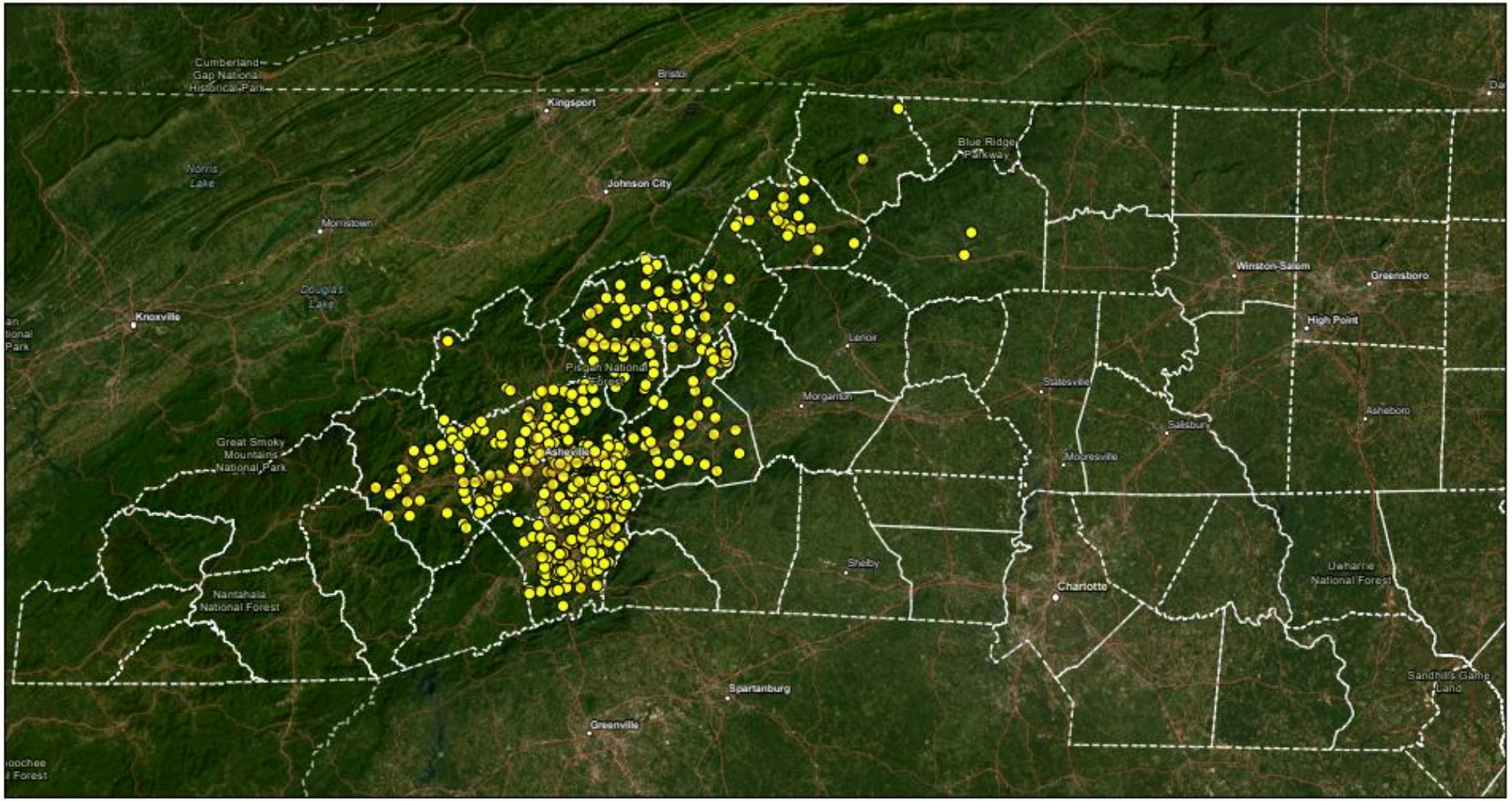
EWP Survey

StRAP Survey

StRAP Survey Link- Use this survey if you are submitting sites to be considered only for StRAP funding.

EWP Survey Link – Use this survey if you need to submit new sites from your desktop to be considered for EWP and/or StRAP funding.

Helene EWP Site Visits



10/27/2025, 1:40:57 PM

1:1,393,832

- EWP Combined
- External EWP Submissions
- NC Counties
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations
- 150m Resolution Metadata

0 12.5 25 50 mi
0 20 40 80 km

Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

Current State Funding

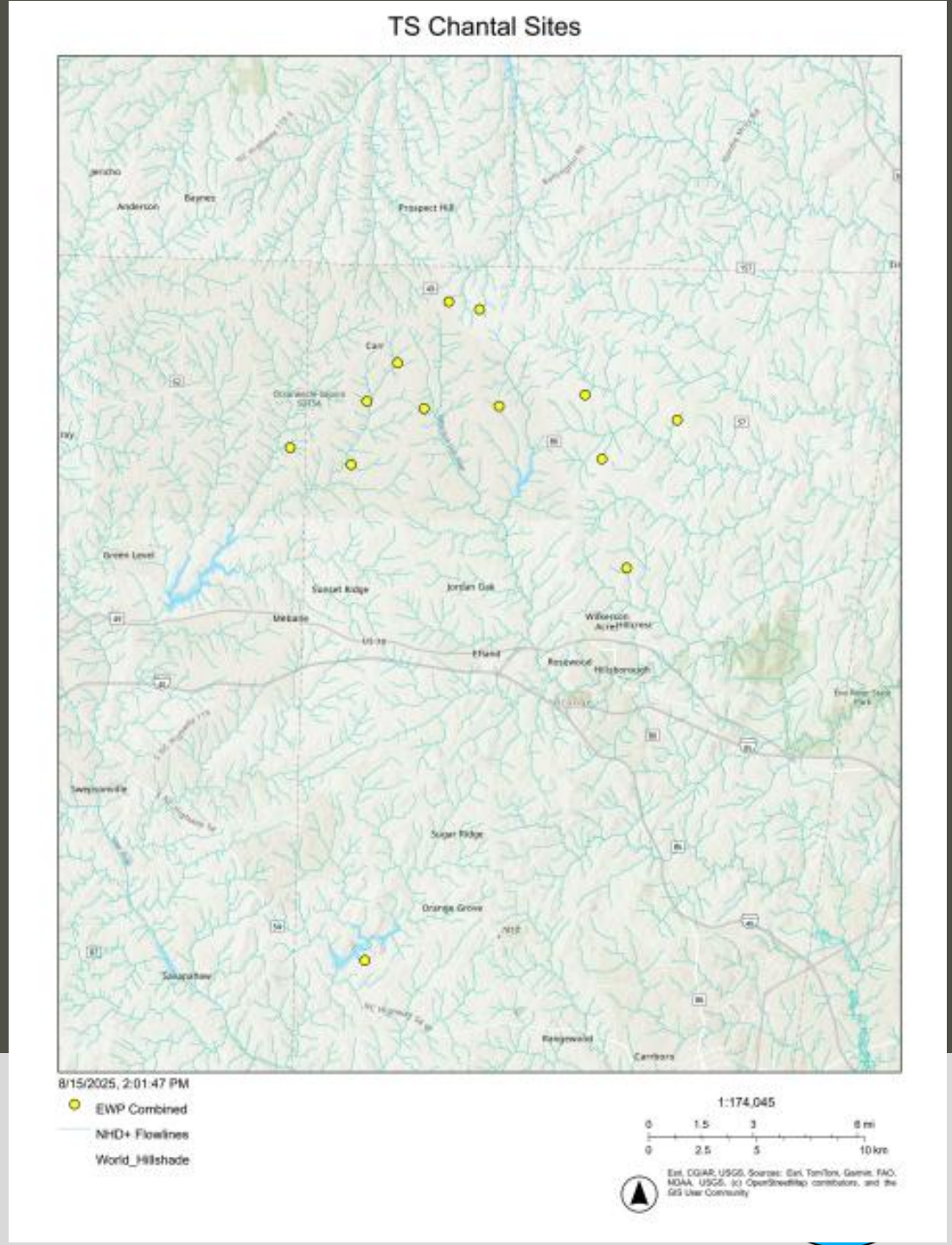
- $40 million total funding
  - $25M from Disaster Recovery Bill SL 2024-57
  - $15M from Disaster Recovery Act of 2025- Part II
- Limitation: “Shall not expend funds ... On any activities that will be, or likely will be, covered by federal funds.”
  - Allocations have been delayed as sites covered by Federal funds changed
  - FEMA and ACOE have done extensive work
  - Federal shut down implications

Tool is Available for Statewide Use

Tropical Storm Chantal
Central NC: July 6, 2025



Photo courtesy of ABC news





Surge Week – A Success Story

55 people 5 days Assessed 100+ sites 71 sites EWP eligible 3 counties

“When I was a boy and I would see scary things in the news, my mother would say to me, ‘Look for the helpers. You will always find people who are helping.’ Mr. Fred Rogers