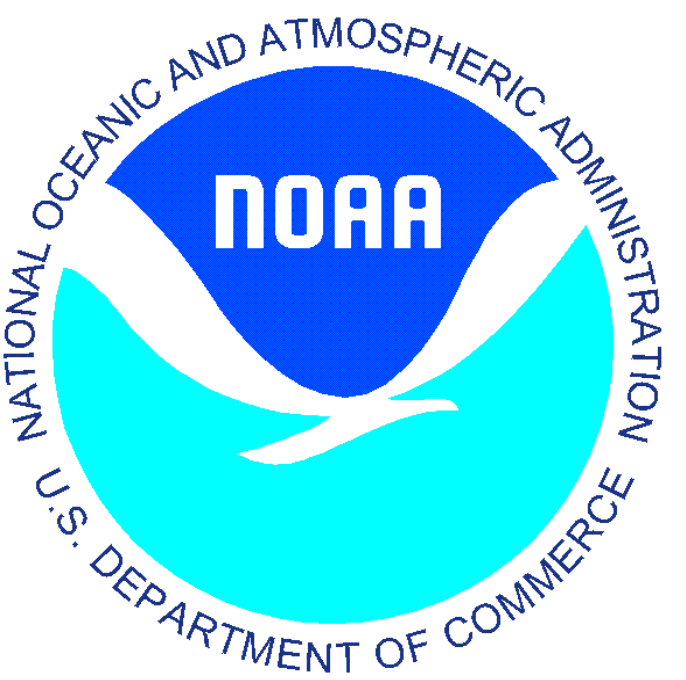


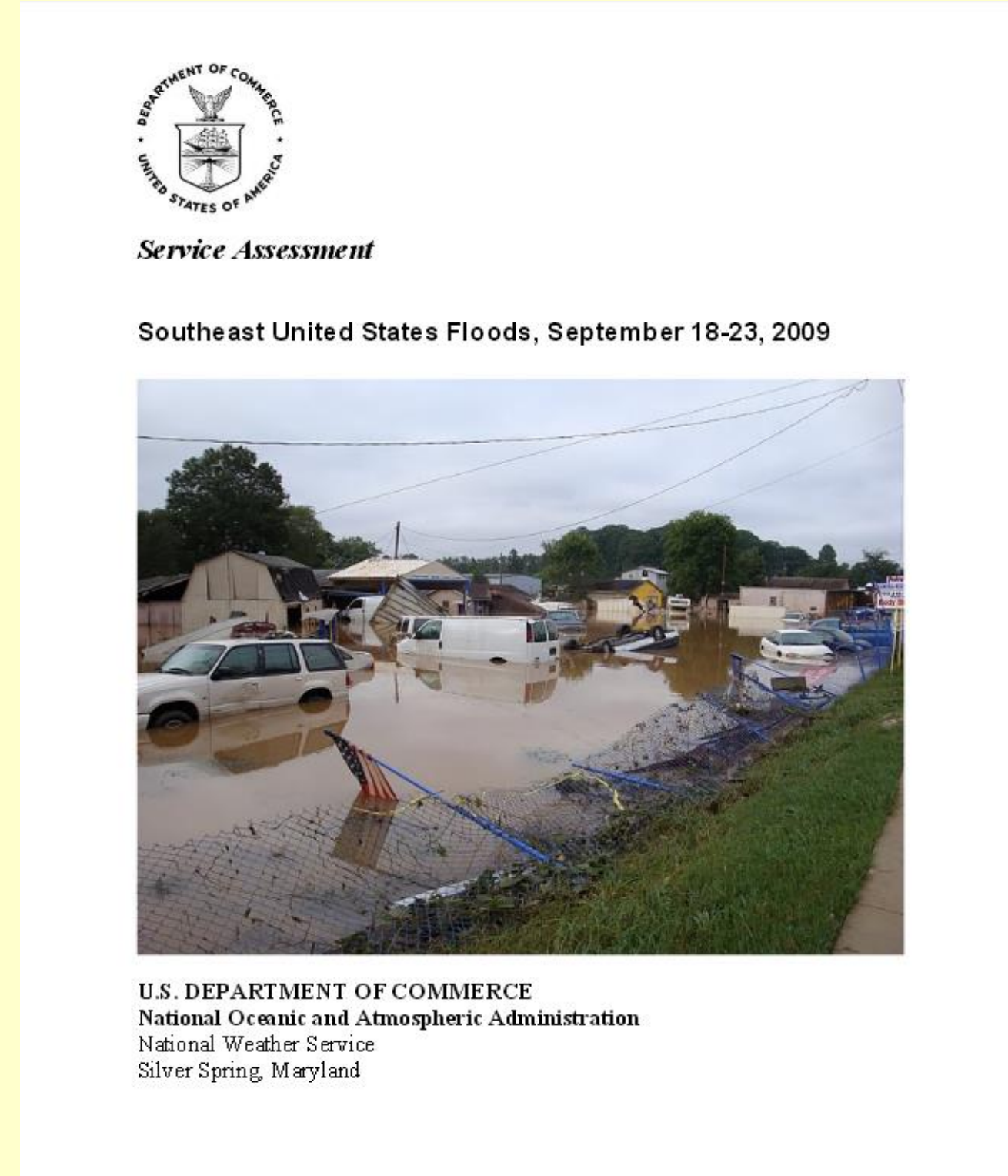


An Examination of Preliminary Local Storm Reports during the Historic South Carolina Rainfall Event September 30th, 2015 – October 6th, 2015



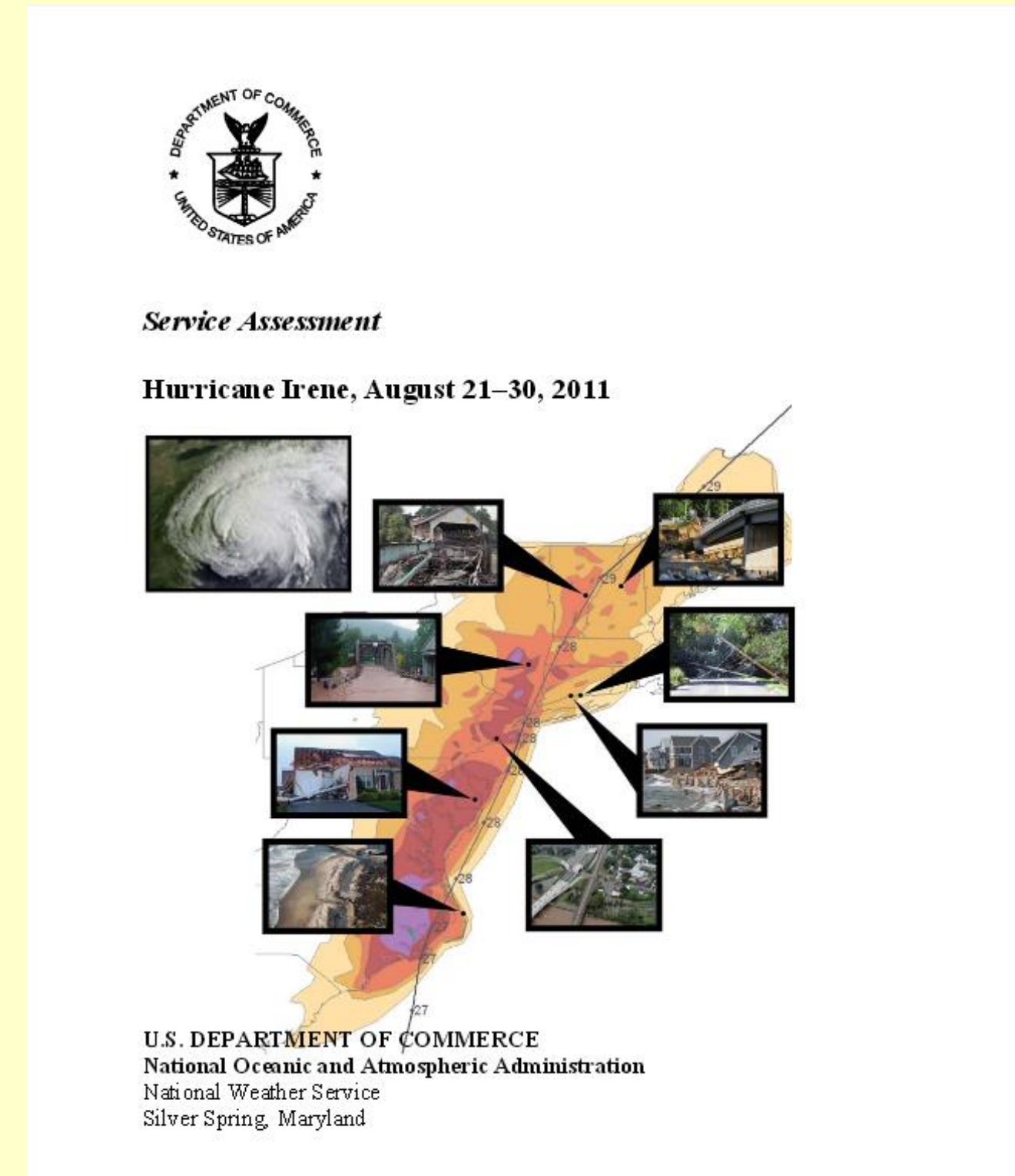
Neil Dixon, NOAA/National Weather Service, Greer, SC, Neil.Dixon@noaa.gov

1.) Background from Service Assessments

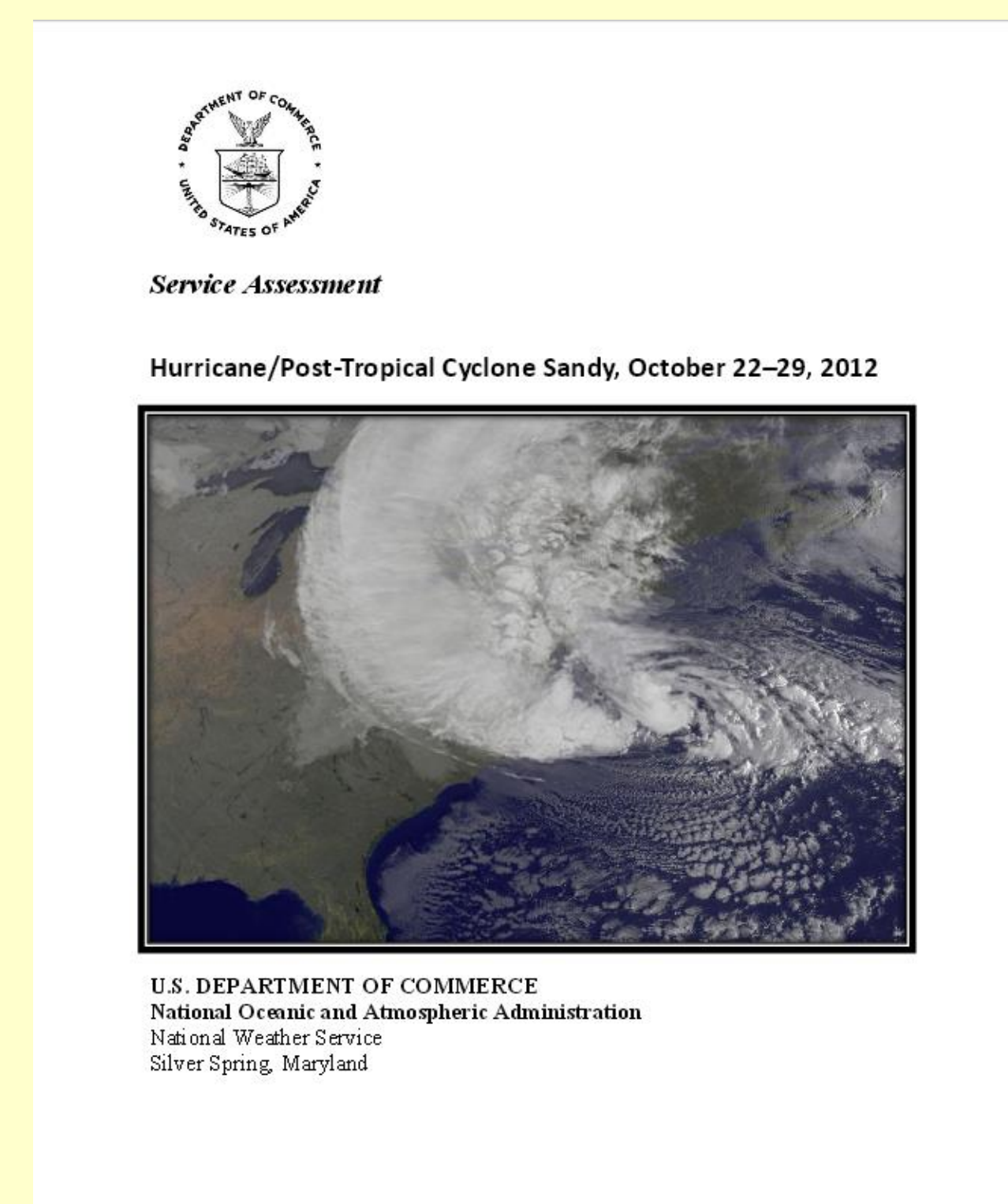


Fact: Many national and local media outlets stated they were looking for Local Storm Reports (LSR) overnight September 20-21. **WFOs did not send LSR products because they were unaware of the extent of the impacts.**

Finding 11: NWS does not consistently provide critical event information to private sector entities in critical, mission-related endeavors such as utilities, transportation, and medical services.



Recommendation 22: The NWS needs to renew its efforts to provide pertinent and sometimes critical observational and verification data to its users on a consistent basis during and after events such as Sandy.



2.) Why are LSRs inconsistently issued?

Information used in LSRs are collected from a wide array of sources (SKYWARN spotters, Facebook, Twitter, utility companies, CoCoRaHS, streaming emergency services scanners, and Web cameras). Gathering reports from some or all of these resources requires a significant amount of time and effort.

3.) Examination of South Carolina LSRs

During the historic South Carolina rainfall event of September 30th, 2015 to October 6th, 2015, National Weather Service (NWS) offices at Greenville-Spartanburg (GSP), Columbia (CAE), Charleston (CHS), and Wilmington (ILM) issued a combined 550 LSRs for the South Carolina counties within their County Warning Areas (Fig.1).

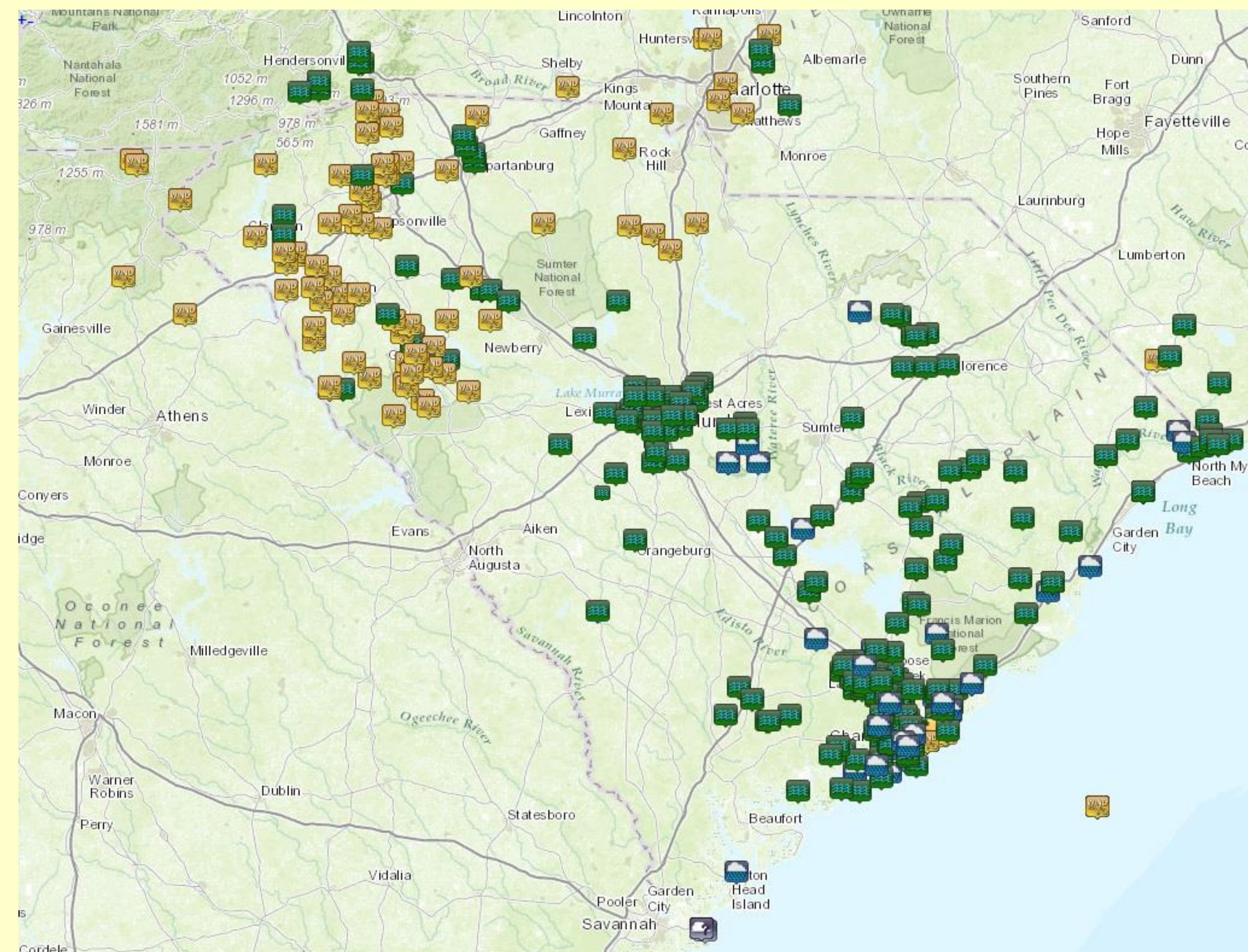


Fig. 1. NWSChat Local Storm Report App for GSP, CAE, CHS, and ILM September 30th, 2015 – October 6th, 2015. Key: Flooding, Heavy Rain, Non-Thunderstorm Wind Damage

Five verification sources provided nearly 75 percent of the 550 precipitation and non-precipitation related LSRs during this historic event.

Verification Source	All LSR % (Rounded)	All LSR #	All LSR Ratio to Law Enforcement
Law Enforcement	46	251	1:1
Emergency Mngr.	12	68	3.7:1
Public	6	34	7.4:1
911 Call Center	5	26	9.7:1
NWS Employee	5	25	10:1
Broadcast Media / Media	4	22	11.4:1
Trained Spotter / HAM	4	24	10.5:1
Dept. of Highways	3	14	17.9:1
Mesonet	3	18	13.9:1
Social Media	3	15	16.7:1
CoCoRaHS	2	11	22.8:1
Official NWS obs. / ASOS	2	13	19.3:1
Tide Gage	2	13	19.3:1
County Official	1	5	50.2:1
Other Federal / Coast Guard	1	6	41.8:1
Co-Op Observer	0	2	125.5:1
Fire Dept. / Rescue	0	1	251:1
NWS Storm Survey	0	2	125.5:1

Table 1. Percentage and total number of reports provided by verification sources for all event types.

Disclaimer: Mention of specific social media tools and services do not constitute an endorsement by, nor an affiliation with, the NWS. These social media tools and services are used under a government approved Terms of Service agreement signed by the U.S. Department of Commerce.

A comparison of the contributions of verification source for all events and for flood related events is illustrated with a doughnut graph (Fig.2).

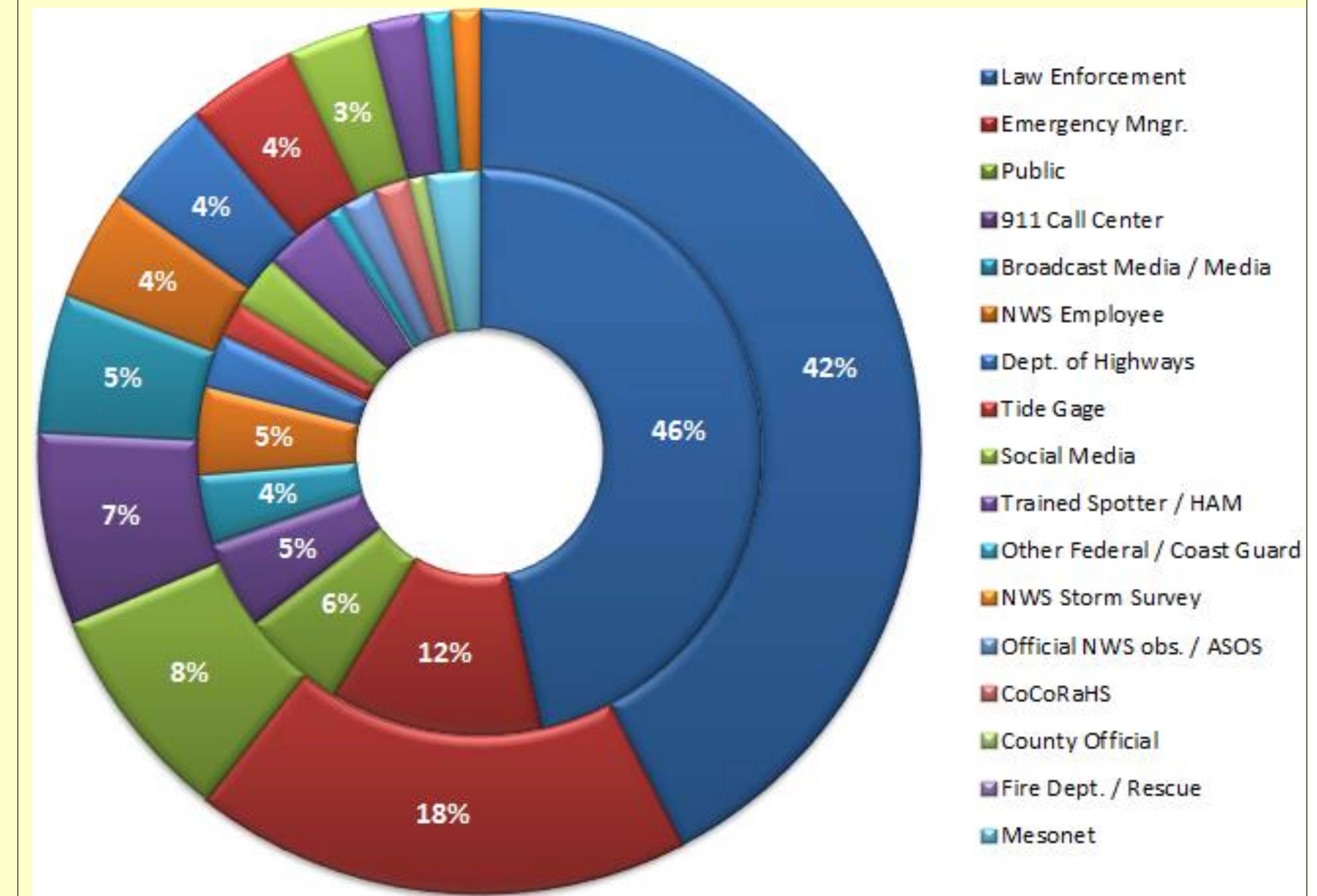


Fig. 2. Doughnut graph of percent of reports provided from all events (inner circle) and flood events (outer circle). Note: The legend list from top to bottom corresponds to the graph clockwise, starting at the 12 o'clock position.

4.) Effective Tool

NWS GSP developed a script called the SC Highway Patrol Collective (SCHPC) (Fig. 3). The SCHPC collects reports off the Department of Public Safety Web page that contain keywords (roadway flooding, tree on roadway, closed roads, etc.). The SCHPC was shared with CAE, CHS and ILM in 2014. NWS meteorologists used the SCHPC to efficiently collect and disseminate hundreds of law enforcement storm reports during the historic SC rainfall event of 2015.

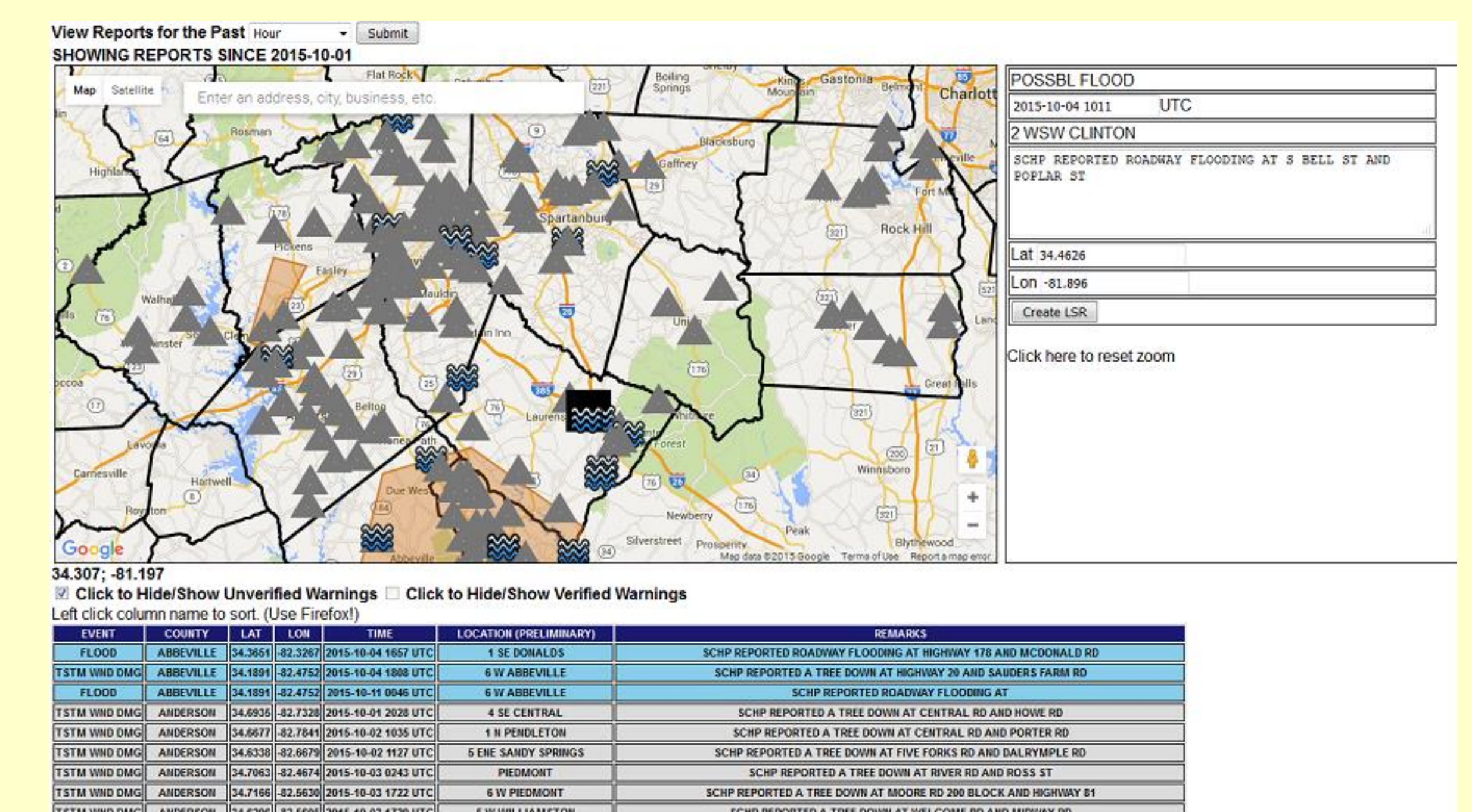


Fig. 3. Screen capture of the second version of the SC Highway Patrol Collective.