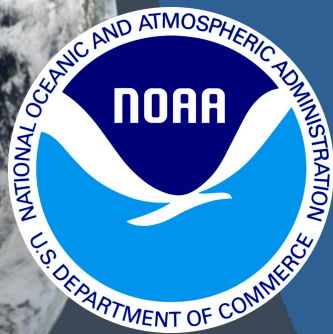
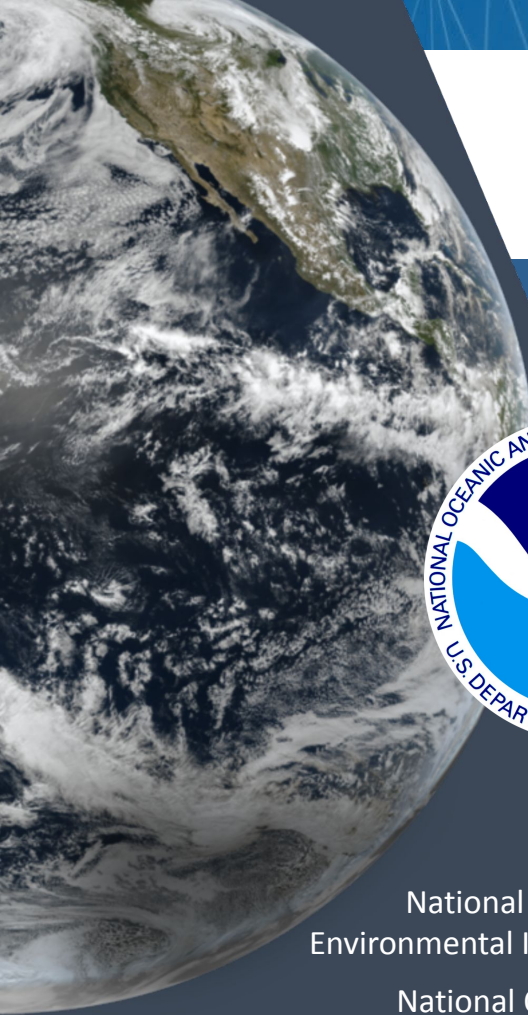




Industry Partnerships Presents

Flood Data in Action: Retailers Using Flood Data for Risk Management

September 17, 2026

National Centers for
Environmental Information (NCEI)

National Oceanic and
Atmospheric Administration (NOAA)





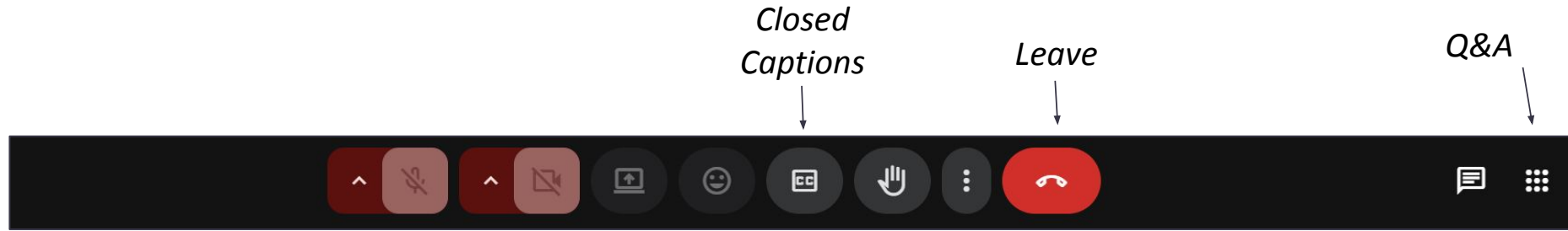
Opening Remarks

Jenny Dissen

*Director of Engagement and Strategic Partnerships, NCICS
/ NOAA CISESS / NCSU*



Guidelines for Discussion



- Audience cameras and microphones are **disabled**.
- **Technical Assistance** is available in the **Q&A**, so if you are having an issue, please reach out to our team there.
- To answer or submit a question for our **Q&A**, use the **Meeting Tool** option, and specify who your question is directed to.
- Presentation slides and a recording will be available after the webinar on the [Retail Impact Page](#).



Industry Partnerships

Allison Crimmins

*Director of Industry Partnerships, NOAA National Centers for
Environmental Information (NCEI)*



Industry Partnerships 2024-2026 Focus

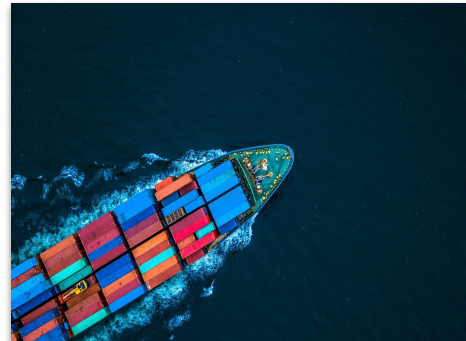
Architecture & Engineering



Insurance & Reinsurance



Retail



Through ongoing engagement with members of these sectors and developing new, informational products like maps, reports, and datasets, NOAA is helping **strengthen these industries' decision-making related to climate resilience** and **building economic resilience that will help all Americans.**

NOAA's Industry Engagement at a Glance

Connecting industry to actionable data, products, and services to build climate resilience

The following metrics highlight the scale and impact of the Industry Partnerships program engagement, product development, and modernization efforts:



Learn More:

4000+

Industry Users Engaged

1000+

User Needs Identified

17

Products, Tools, and Datasets Developed or Enhanced

60+

StoryMaps, Videos, Webpages, and Flyers Created

Poll #1

How would you rate your organization's current use of weather data?



Poll

Featured Speakers



John Carr

Director of Asset Protection;
Hannaford Supermarkets



Chris Cameron-Hann

Chief Technology Officer;
7Analytics



Staci Saint-Preux

Senior Industry Manager &
Meteorologist;
StormGeo





John Carr

Director of Asset Protection
Hannaford Supermarkets

Severe Weather Preparedness

Tracking Severe Weather Across Hannaford's Geographic Region

Who We Are...

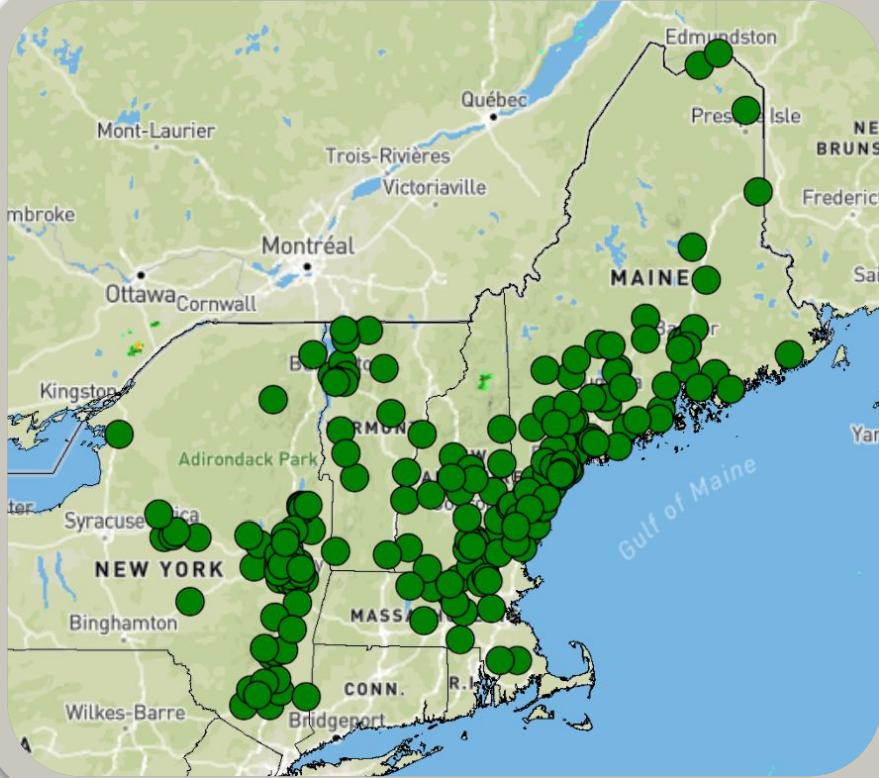
Hannaford Supermarkets **operates 188 stores across the Northeast**, with locations throughout New England and New York.

Hannaford is a **brand of Ahold Delhaize USA**, one of the largest grocery retailer in the United States.

Our parent company, **Ahold Delhaize**, is a **global grocery retailer** headquartered in the Netherlands.

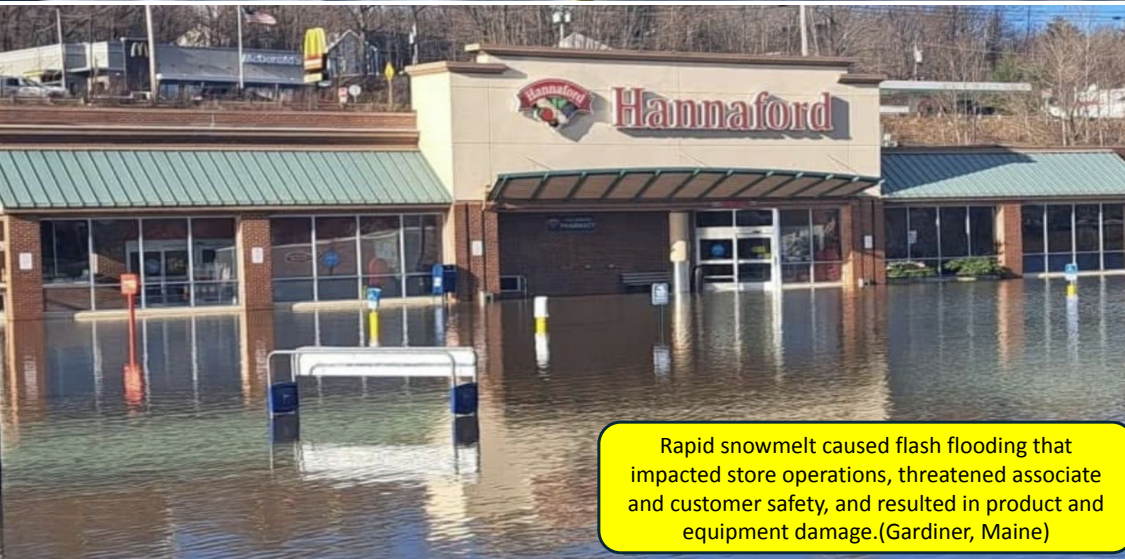
Our sister companies within Ahold Delhaize USA include:

- Food Lion
- Stop & Shop
- Giant Food
- The GIANT Company





Snow drift and blizzard conditions created excessive rooftop snow accumulation, increasing concerns for structure integrity, equipment access, and associate safety. (Hannaford Rome, New York)



Rapid snowmelt caused flash flooding that impacted store operations, threatened associate and customer safety, and resulted in product and equipment damage. (Gardiner, Maine)

Weather Events Impacting Our Stores

Hannaford operate across New York and New England, where weather conditions can vary significantly by season and location.

Our stores may be impacted by:

- Snowstorms, whiteouts and blizzards
- Ice storms and freezing rain
- Extreme cold and wind chills
- Heavy rain and flash flooding
- Coastal flooding and storm surge
- Tropical storms and hurricanes
- Severe thunderstorms, lightning, and damaging winds
- Tornadoes and microbursts
- Extreme heat and high humidity
- Wildfire smoke and poor air quality

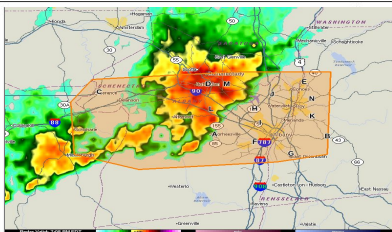
These weather events can affect associate and customer safety, store operations, transportation, deliveries, power service, and product availability.

Condition Orange - Hannaford Flash Flood Warning

Valid 7:12 PM, Thu, Aug 06 to 10:15 PM EDT, Thu, Aug 06, 2026

A Condition Orange for Flash Flooding is in effect for the following locations through 10:15 PM EDT, Thu, Aug 06.

Label	Location
A	Hannaford 8233 - Voorheesville
B	Hannaford 8236 - West Sand Lake
C	Hannaford 8336 - Troy
D	Hannaford 8339 - Delmar
E	Hannaford 8361 - East Greenbush



- Flash Flood Warning for... Central Albany County in east central New York... West Central Rensselaer County in east central New York... South Central Saratoga County in east central New York... Southern Schenectady County in east central New York... Northeastern Schoharie County in east central New York...

Condition Red - Hannaford Tornado Warning

Valid 2:22 PM to 2:45 PM EDT, Tue, Jul 21, 2026

A Condition Red for a Tornado Threat is in effect for the following locations through 2:45 PM EDT.

Label	Location
A	Hannaford 8328 - Oneonta

Examples of Real-Time Severe Weather Alerts

- Tornado Warning for... Southwestern Otsego County in central New York...
- Until 245 PM EDT.
- At 221 PM EDT, a severe thunderstorm capable of producing a tornado was located near Mt Upton, or 13 miles southeast of Norwich, moving northeast at 30 mph.
- This dangerous storm will be near... Gilbertsville around 225 PM EDT. Otego around 230 PM EDT. Oneonta and West End around 240 PM EDT.

Weather Monitoring

StormGeo provides Hannaford with weekly weather outlooks and weather-specific alerts as conditions develop, giving our teams advance notice to prepare for potential impacts across our operating area.

Types of Alerts:

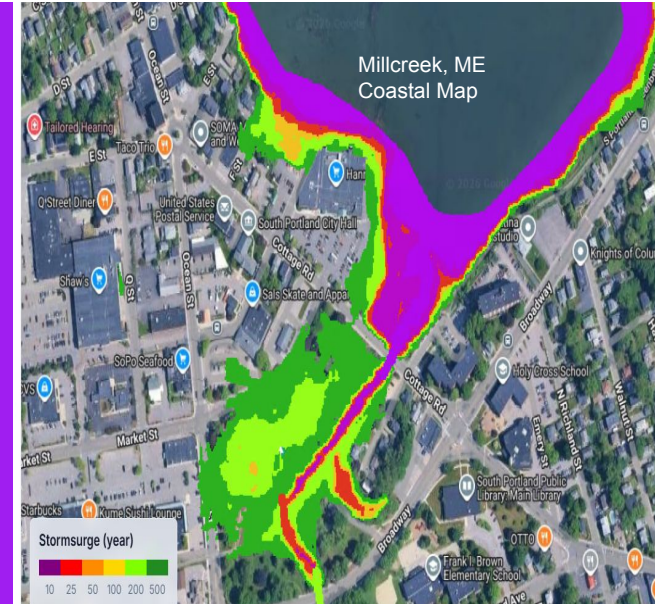
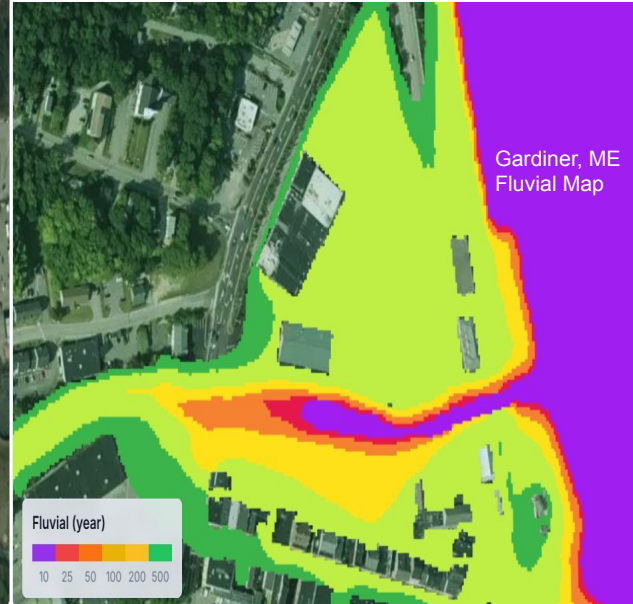
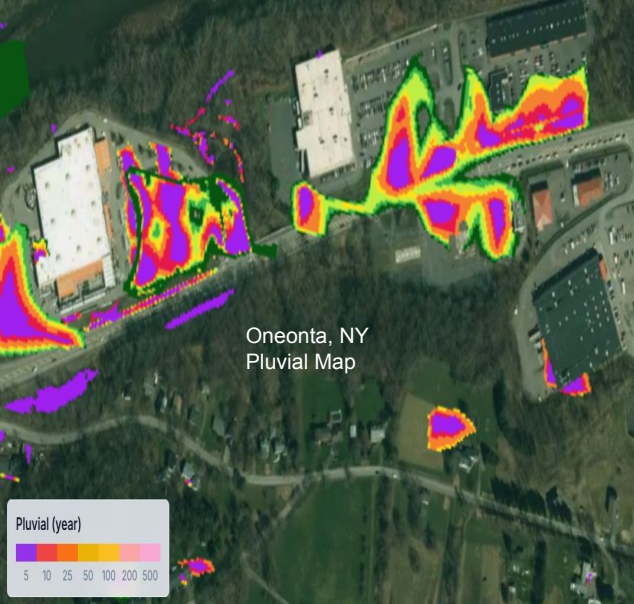
Planning Forecast Summary: 7-day district-level forecast used to proactively prepare stores for developing weather conditions and potential impacts.

Tropics Watch: Provides daily updates on tropical systems and areas of potential development that could impact Hannaford operations.

Real-Time Weather Alerts: Real-time severe weather alerts for tornadoes, hurricanes, blizzards, whiteouts, flooding, severe thunderstorms, and other high-impact weather events.

Flood Risk Monitoring (7analytics): Interactive flood risk assessments, live monitoring, and site-specific flood mapping.

Snow Accumulation Monitoring: Estimates potential snow buildup on store roofs based on snowfall and drifting patterns, helping identify locations that may require further assessment or snow removal.



Flood Risk Monitoring (7Analytics)

StormGeo provides Hannaford with flood risk assessments and live monitoring to improve visibility and preparedness for potential flood events.

Flood risk assessments for Hannaford locations

Interactive flood risk dashboard

Store-specific flood maps and risk scores

Live flood monitoring through the StormGeo Weather Portal.

Real-time flood forecasting and site monitoring.

Benefits to Hannaford

Identifies high-risk locations with “FEMA Zones”

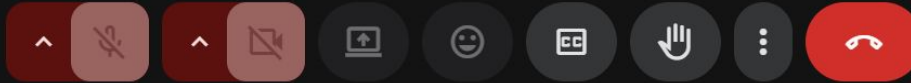
Supports proactive planning

Enables informed operational decisions

Ranks each store by Risk level

Poll #2

Which flood time frame is most critical for your day-to-day decision making?



Poll



7Analytics: NOAA Data via Cloud for Risk Analytics

Chris Cameron-Hann





FLOOD DATA IN ACTION

Flood Data in Action

NOAA data that strengthens risk models,
improves operations and builds
weather resilience

Chris Cameron-Hann

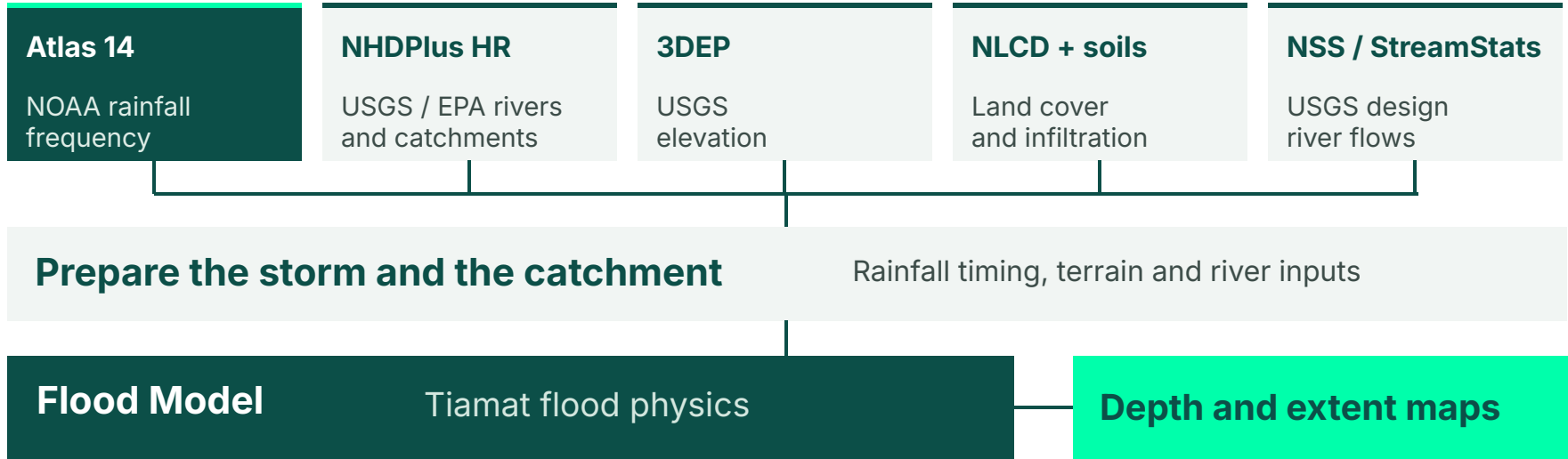
CTO, 7Analytics

7Analytics provides high-resolution
property-level risk data to insurers, banks,
asset owners and public institutions

DATA FOUNDATIONS

The data behind our flood modelling

Public rainfall, river and landscape data form the model inputs.



Buildings, asset data and observed events add the context for risk and validation.

NOAA INPUTS

NOAA's role in the modelling stack

Design rainfall

Atlas 14 / PFDS

Rainfall depth by duration and annual probability.

**Flood Model
Hazard and Risk Management**

Rainfall history

Stage IV, AORC, NLDAS

Rainfall patterns and weather records for hydrology.

**CEFA
Neural Learning**

Event & forecast

MRMS, NAM / HRRR

Observed rainfall estimates and forecast rainfall.

**Flood Model event replay
RealTime development**

NOAA contributes to NLDAS through a wider partnership. Forecast integration remains in development.



Why open data and cloud access matters

One public foundation. Many local decisions.

We can spend more effort on local modelling and the decisions our customers need to make.

Coverage

A common starting point across regions.

History

Events we can replay and learn from.

Traceability

Sources and methods others can inspect.

Reuse

The same evidence supports several products.

HOW THE PIECES CONNECT

The 7Analytics product stack

A shared data foundation supports six connected capabilities.

CEFA

Catchment hydrology
and flood frequency

Flood Model

Water depth and extent
from flood physics

Neural Learning

Learn patterns and
test against evidence

RealTime Flood Forecasting

Evolving flood conditions
at monitored locations

Hazard and Risk Management

Scenarios for assets
and portfolios

PFI

Property Flood
Intelligence

NOAA weather and water data combine with terrain, rivers, buildings and observed events.

Atlas 14 gives the storm a frequency

**Rainfall depth. Storm duration.
Annual probability.**

NOAA's precipitation-frequency estimates anchor the rainfall scenario.

**Rainfall probability differs from
flood probability. Catchment
response connects them.**

Atlas 14 / PFDS

Rainfall depth and duration

Design storm

Distribute rainfall through time

Flood Model

Scenario depth and extent

FLOOD DATA IN ACTION

Learning from past storms. Preparing for the next.

Past storms

CEFA replays rainfall history to understand how rivers respond to storms.

The next storm

NOAA observations and forecasts help assess where flooding could develop.

More than 1 million

historical US storm records in CEFA research

**Better risk assessments.
Clearer priorities for preparation.**

AN ILLUSTRATIVE BUSINESS EXAMPLE

A storm is approaching. Which sites need attention?

One weather event can call for different preparation at each location.

Distribution center

A low-lying loading area

**Protect vulnerable stock
before the rain arrives.**

Office

An exposed access road

**Plan alternative access
for staff and deliveries.**

Upland site

Lower expected exposure

**Keep monitoring as
the forecast changes.**

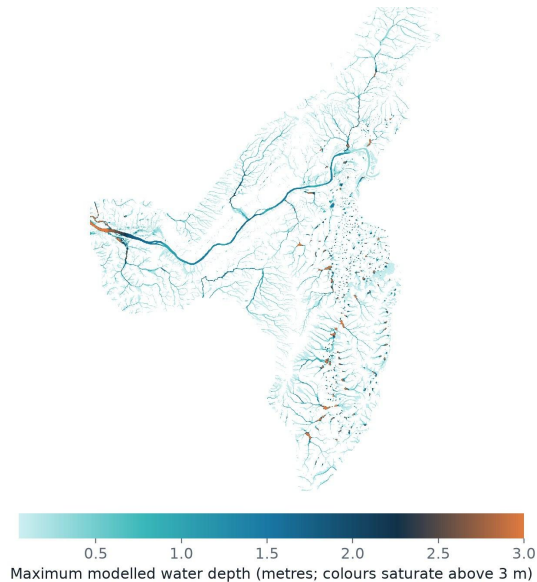
Illustrative scenario. The aim is to help teams focus preparation where it matters most.

A flood map connects the water to the asset

Modelled depth and extent

The flood model resolves where water goes.
Hazard assessment compares scenarios.
PFI adds the property context.

**Where is the risk, and
what should we do about it?**





FLOOD DATA IN ACTION

Open data supports better flood decisions

Risk models

Compare hazard at the places that matter to the portfolio.

Operations

Prioritize sites and prepare as conditions develop.

Weather resilience

Use event evidence to improve plans and future assessments.

**NOAA provides the shared evidence.
7Analytics brings it into local decisions.**



StormGeo: Flood Modeling for Retailers

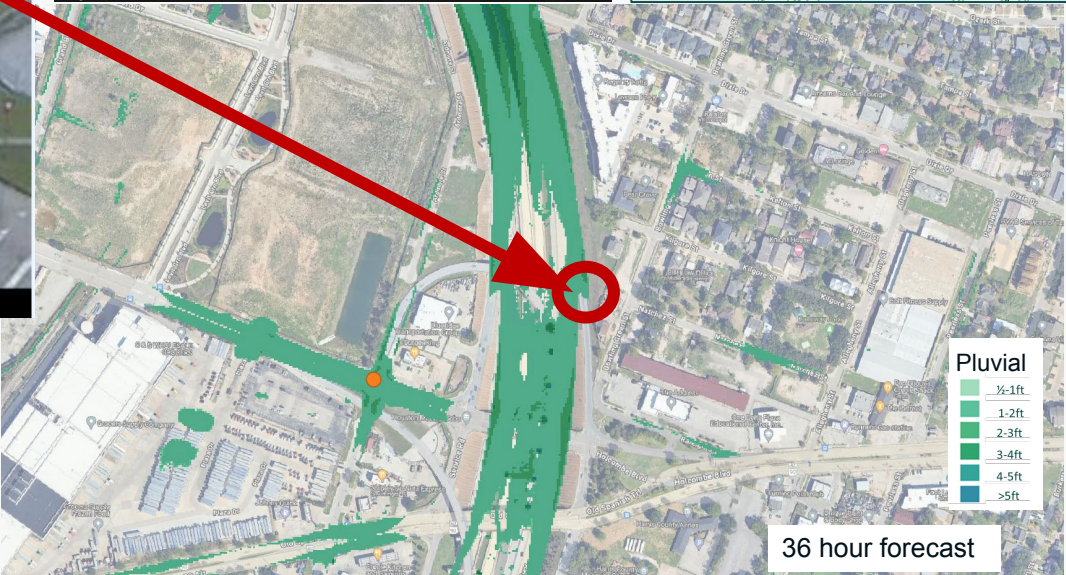
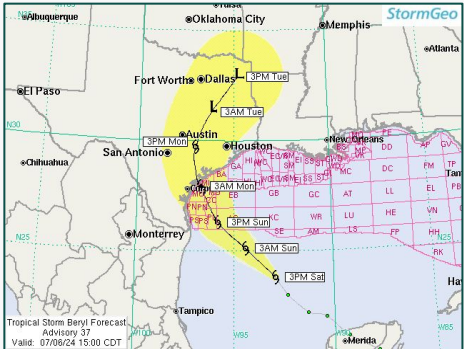
Staci Saint-Preux



Flood Modeling for Retailers



SH-288 at Holcombe



Flood model accurately predicts severe flooding of SH288 near Holcombe with visible water level on the access road at 36 hours lead time

36 hour forecast

Accurate predictions provided to large hospital before Hurricane Beryl



- Street flooding near hospital & on Highway 288
- Bayou stayed within banks
- Buildings stayed dry

Hwy 288 at 610 S flooding from Hurricane Beryl

SunSentinel

Weather | Some power restored in Houston after Hurricane...



A vehicle is stranded in high waters on a flooded highway in Houston, Texas on Monday, July 8, 2024. Beryl came ashore in Texas as a Category 1 hurricane and dumped heavy rains along the coast before weakening. (AP Photo/Juan A. Lozano)

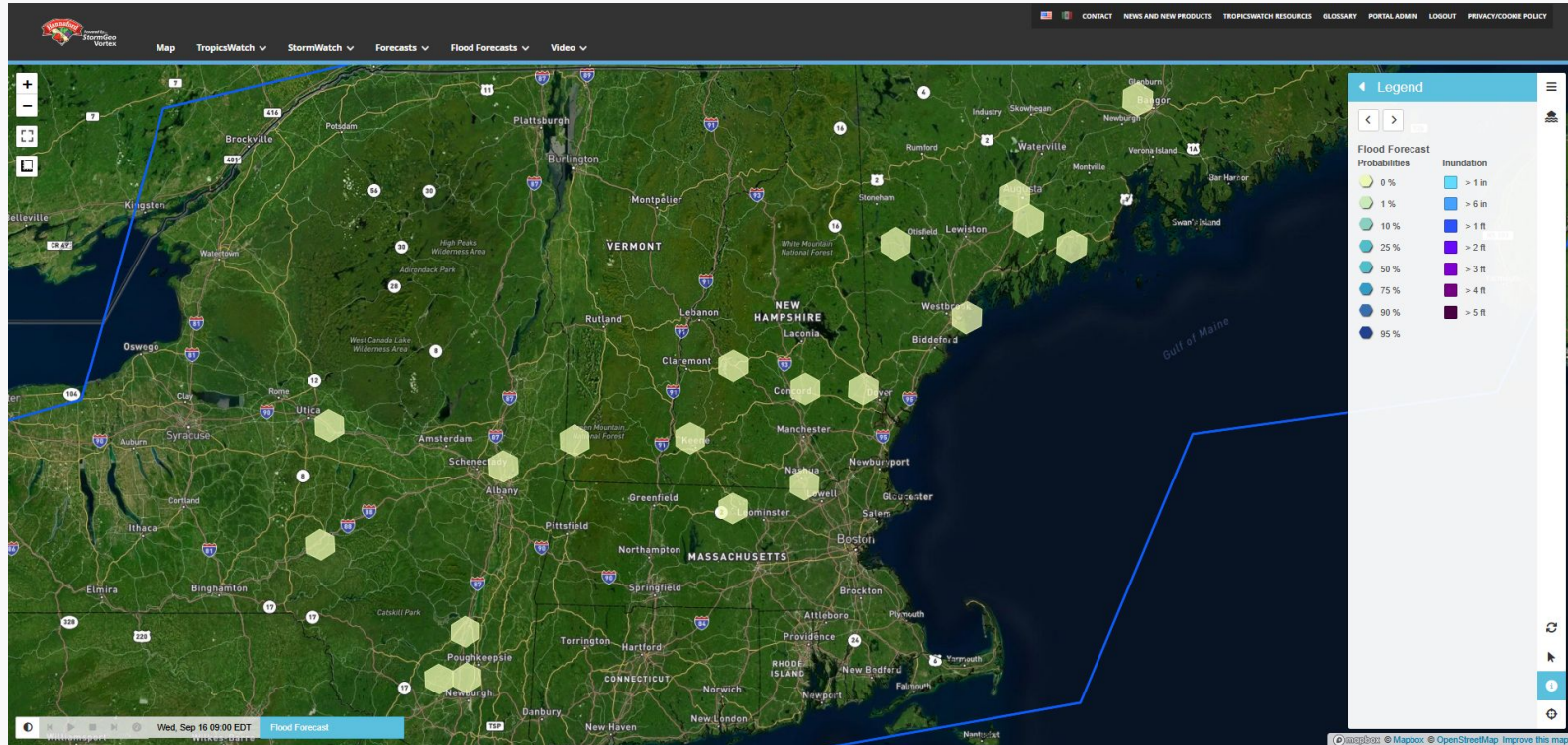


Pluvial

1/2-1ft
1-2ft
2-3ft
3-4ft
4-5ft
>5ft

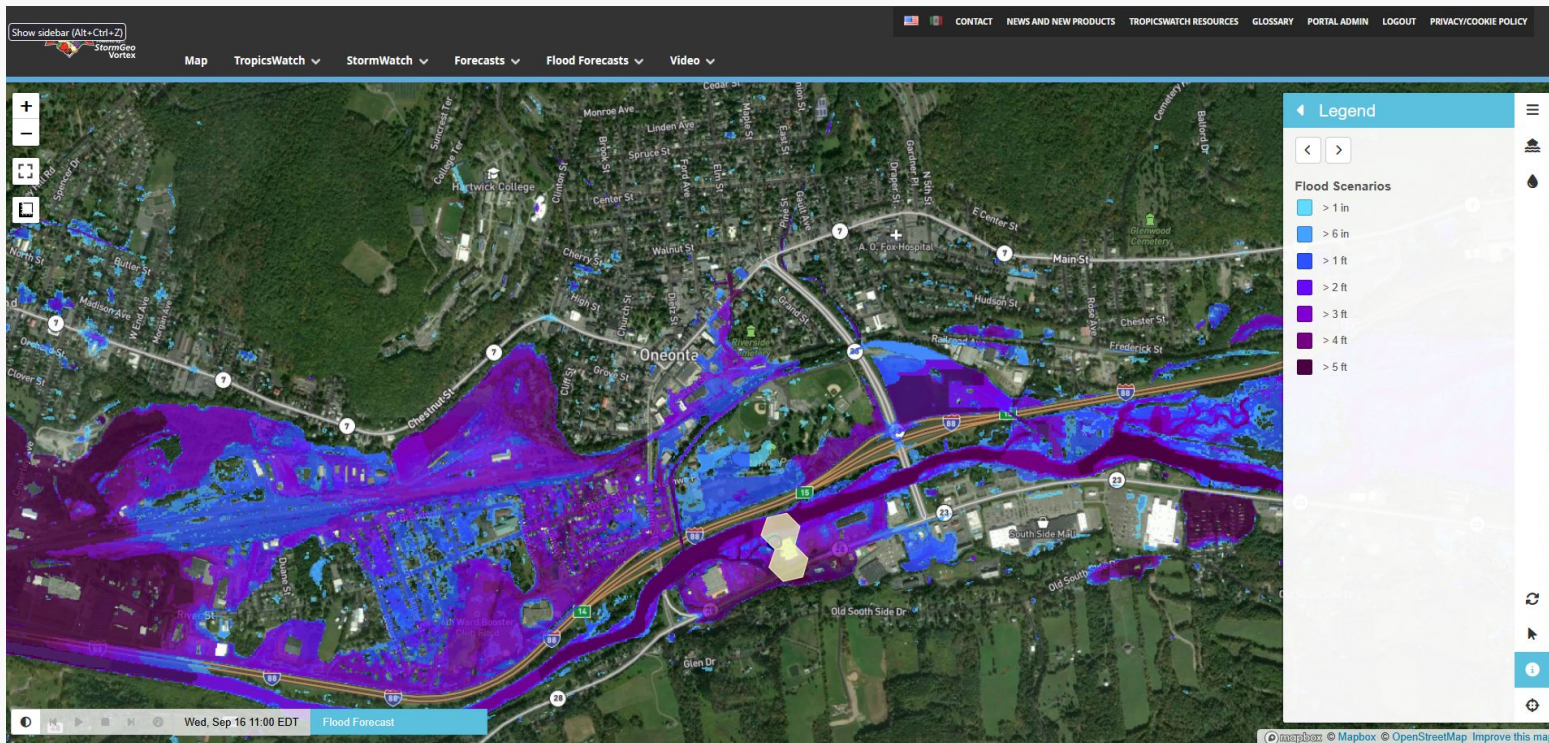
36 hour predicted inundation

Operational flood Forecasts for Hannaford



- Realtime forecasts & Inundations (max & hourly timesteps)
- Risk Assessments & Forecasts for at-risk locations

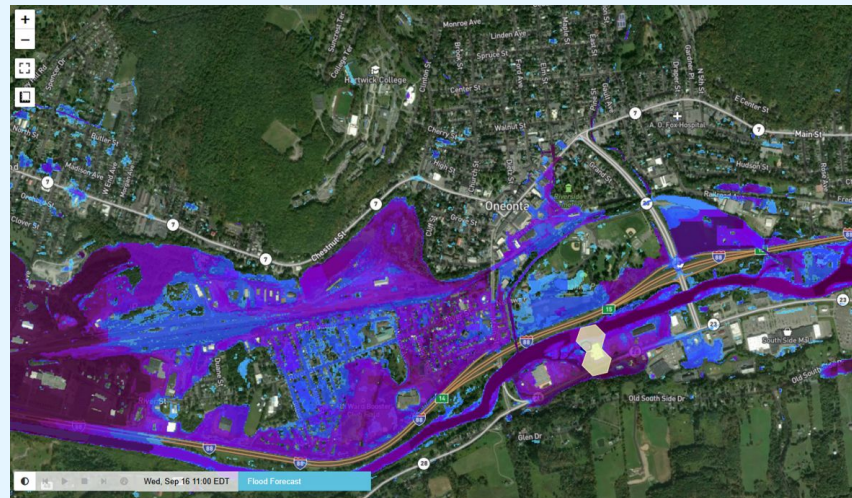
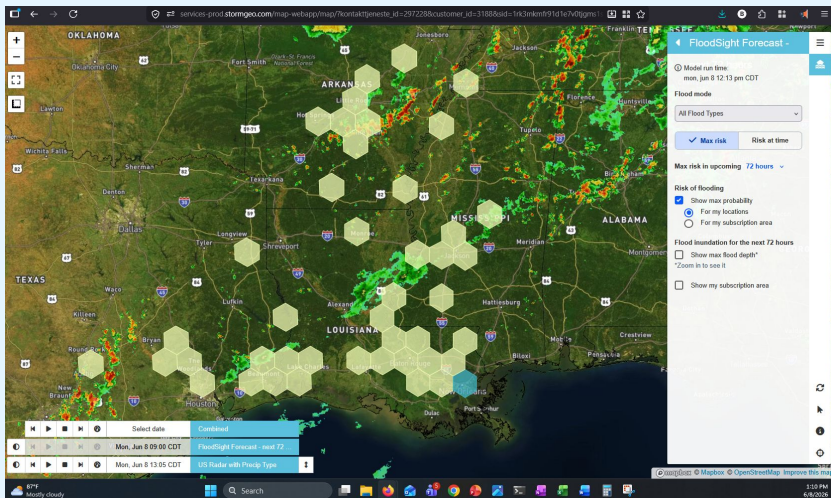
Inundation Forecasts & Flood Scenarios for Hannaford



- Forecast Inundations at 3 ft horizontal resolution
- Flood Scenario Planning for different annual return periods
- Covers rainfall-driven, river, and coastal flooding

StormGeo + 7Analytics, powered by NOAA open data sets, now has a scalable US flood model

- Covers Retail, Hospitals, Manufacturing, Oil & Gas, Banks, Utilities
 - Or any business with a flood risk
- Can cover
 - specific locations / critical infrastructure
 - large regions / transportation concerns



Q&A

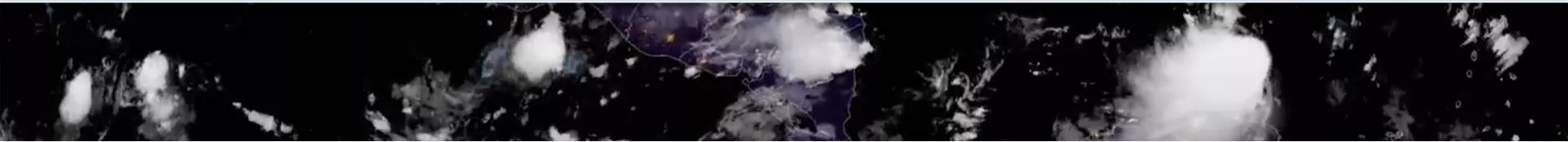
Please use Q&A feature to ask questions and specify who your question is directed to.



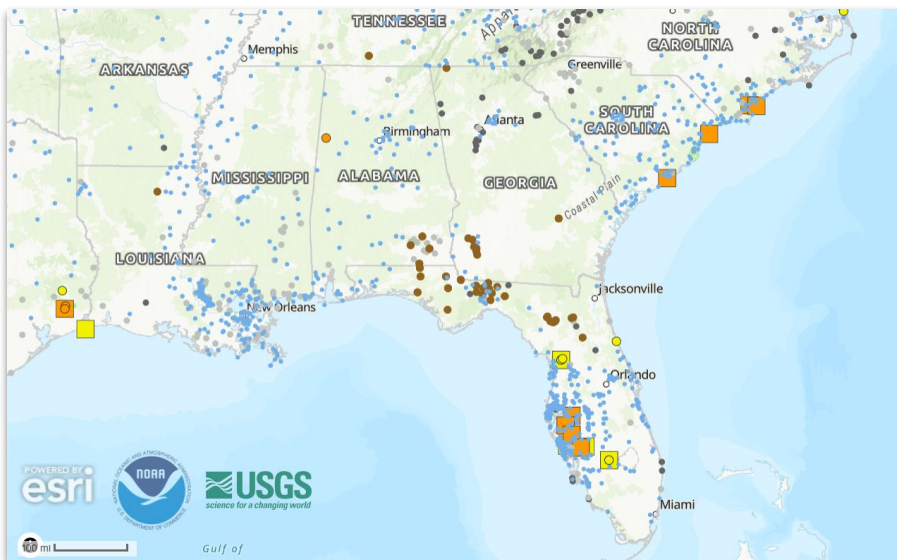
Q&A



Announcements & Closing Remarks



Top Flood Data Resources



- [National Water Model](#)
- [River Forecast Centers](#)
- [National Water Prediction Service](#)
- [USGS National Water Dashboard](#)
- [ATLAS 14 Point Precipitation Frequency Estimates](#)
- [Service Records Retention System](#)

The NOAA industry impact pages will feature a new, filterable hazard-based data products directory!



Industry Partnerships Data Resources

Complete!

- [Weather Coder \(WxCoder\)](#)
- [Billion Dollar Disasters - Sub-Billion Update \(BDD\)](#)
- [Sector-Specific Web Portals](#)
- [ADT-HURSAT](#)
- [Typical Meteorological Year \(TMY\)](#)
- [Global Summary of the Month](#) / [Global Summary of the Year](#) (GSOM/GSOY)
- [Storm Events Database \(SED\)](#)

Finalizing!

- Automation Technology Optimized for Monitoring (ATOM)
- COOP Processing / Datzilla
- [Climate Atlas](#)
- [Event Footprint Catalog \(EFC\)](#)
- Automated Surface Observing System (ASOS)
- Precipitation Time Series Explorer (PTE)
- International Best Track Archive for Climate Stewardship (IBTRaCS)
- C-HPD Refactor (COOP-HPDv2)

Retail Sector Releases

NOAA Industry Partnerships Case Studies: Coming Soon! Case study papers are meant to be utilized by industry professionals, community leaders, and the general public. They capture how NOAA data, products, and services inform retailers' ability to prepare for, respond to, and build resilience from the impacts of weather events and other long-term climate trends.

Website Development: Coming Soon! The [retail industry website](#) will feature a new, filterable hazard-based data products directory, making it easier for users to quickly find NOAA tools and resources tailored to the weather and climate hazards most relevant to their needs.

Seasonal StoryMap Announcement!



Collaborate With NOAA Industry Partnerships!

How you can engage with NOAA moving forward

Newsletter collaboration

- Collaborate on industry perspectives, use cases, and relevant updates

Hazard-based webinars and workshops

- Join and collaborate on sessions for specific weather and climate hazards, industry impacts, and related NOAA data and tools



Help shape future engagement!

Email: jenny.dissen@noaa.gov and cera.schrems@noaa.gov

What topics should NOAA focus on? What conferences or webinars should we join?

Where could NOAA data and expertise best support your organization?

Join Us At Upcoming Engagements 2026-2027

NextGen Supply Chain Conference | Oct 22

- *Presenting on Climate-Responsive Supply Chains: Leveraging NOAA Data for Retail Resilience*

American Geophysical Union (AGU) Annual Meeting | Dec 7-11

- *From Forecast to Shelf: How Federal Environmental Data Protects Retail Supply Chains and Communities*

American Meteorological Society (AMS) Annual Meeting | Jan 10-14

- *From Data to Decisions: Retailers Co-Developing NOAA Environmental Tools for Resilience*



Learn More About NCEI Industry Partnerships



Thank you! Questions?

Jenny Disson
NCEI Retail Sector Lead
(NCICS/NCSU)
Jenny.Disson@noaa.gov

Cera Schrems
NCEI NCEI Contract User Engagement
and Outreach Specialist (CASE)
Cera.Schrems@noaa.gov

Connect with NCEI's Industry Partnerships



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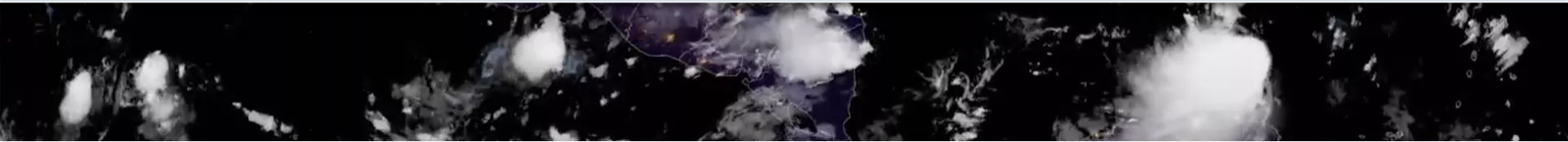
[@NOAADATA](https://www.instagram.com/NOAADATA)



[www.ncei.noaa.gov/
about/our-impact](http://www.ncei.noaa.gov/about/our-impact)



Appendix: Resources



Flood Data Resources

Multi-Radar/Multi-Sensor System (MRMS)	<i>Current and near-term radar, observations, models, and more for national analysis of hydrological conditions such as precipitation, among other hazards.</i>	GRIB2
FEMA Resilience Analysis and Planning Tool (RAPT)	<i>A GIS web application containing more than 100 preloaded layers with data on population, infrastructure and hazards. Of particular interest may be the National Risk Index layer, which combines data from available sources for natural hazard and community risk factors to develop a baseline risk measurement for each United States county and Census tract.</i>	Web Application, with underlying data exportable in CSV
NOAA Open Data Dissemination	<i>A hub for providing public access to NOAA's open data on commercial cloud platforms through public-private partnerships.</i> <i>Operational products of particular relevance for tracking flooding will be the 1 and 5 Day composites from VIIRS (375m), the ABI daily composites (updated every hour, 1km), and the Daily ABI/VIIRS (375m).</i>	List of all datasets here
EPA National Hydrography Dataset Plus	<i>A suite of geospatial products that integrates the National Hydrography Dataset (NHD) stream network, the National Elevation Dataset (NED) gridded land surface, and the Watershed Boundary Dataset (WBD) hydrologic unit boundaries to allow for the delineation of local catchments for every NHD stream segment, facilitating the association of precipitation, temperature, and runoff data to estimate stream flow.</i>	Shapefiles, grids, and .dbf tables
OPERA Dynamic Surface Water Extent	<i>Provides 30-meter resolution maps of water on land every few days using Sentinel-1 SAR (cloud-penetrating) and Harmonized Landsat/Sentinel-2 (optical) data, offering valuable, actionable data for monitoring floods and water resources.</i>	GeoTIFF

Flood Data Resources

USGS 3D Elevation Program	<i>Provides high-quality topographic data and three-dimensional (3D) representations of the Nation's natural and constructed features. Source data products consist of lidar point clouds and digital elevation models (DEMs) at various horizontal resolutions. Most products can be explored via web applications or downloaded for GIS analysis.</i>	<i>Web Application, Geospatial</i>
Multi-Radar/Multi-Sensor System (MRMS)	<i>Current and near-term radar, observations, models, and more for national analysis of hydrological conditions such as precipitation, among other hazards.</i>	<i>GRIB2</i>
Synthetic Aperture Radar (SAR) Products	<i>A combination of all-weather and high-resolution satellite imaging, with products that blend SAR with other remote sensing instruments for improvements in the detection of water surface conditions. Products that may be of particular interest include Sentinel-1, RCM & Radarsat-2, and Tropical Cyclone Ocean Surface Wind Products; and the NISAR product that combines L-band radar penetrating foliage and snow to detect surface changes with S-band radar offering high-resolution monitoring of vegetation and surface moisture. Also available commercially at extremely high resolution (~1m) with targetable location.</i>	<i>Various</i>
NOAAPort	<i>An archive of National Weather Service alerts and other environmental data products with unlimited date range. Provides one file or link per product, per day (i.e., possibly hundreds of links to click and review based on your initial request). Fastest delivery with email notification. Use Station ID = KEWX (San Antonio Weather Forecast Office) and consult the below NOAAPort Flood Products Table for NWS Bulletin ID code.</i>	<i>Various</i>
IN DEVELOPMENT: NOAA Satellite Proving Ground Global Flood Map	<i>An experimental VIIRS downscaled (30m) flood depth product currently in development for transition to operations. Available in near-real time (non-operational) for external user evaluation, with a rolling five-day archive.</i>	<i>Web Application</i>