# 2.0

Hazard History and Consequence Tool

What is the Hazard History and Consequence (HHC)?

- Enhancement to the Hazard Mitigation Plan (HMP)
  - Contains historical events and associated consequences
  - FEMA requirement to document the above
    - The HHC is frequently referenced in our HMP to establish that connection
- Central repository of when, where, and what happened in the city during past weather events
  - ~3,000 natural hazard events
  - Non-natural hazard events still in development
- Data examples
  - Localized, hourly weather information - meteorological data from over 40+ weather stations, 20+ tide gauges, 60+ flood sensors, radar imagery, and more
  - Data on 10 associated consequences (such as flood complaints, financial assistance, school closures, and transportation) from local, state, and federal government agencies
  - Media articles and scientific papers to provide more narrative information on the event

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Weather Data

- NOAA Storm Events Database/NWS Significant Weather Events Archive
- Hourly weather data from automated surface observation stations around NYC (JFK/LGA/Central Park)
  - NYC Micronet and MADIS
- Archived radar imagery
- Tide Gauges – Stevens Institute of Technology – Flood Advisory System
- **Flood Sensors – FloodNet**
- Upcoming: NWS MRMS GRIB2 Radar Imagery
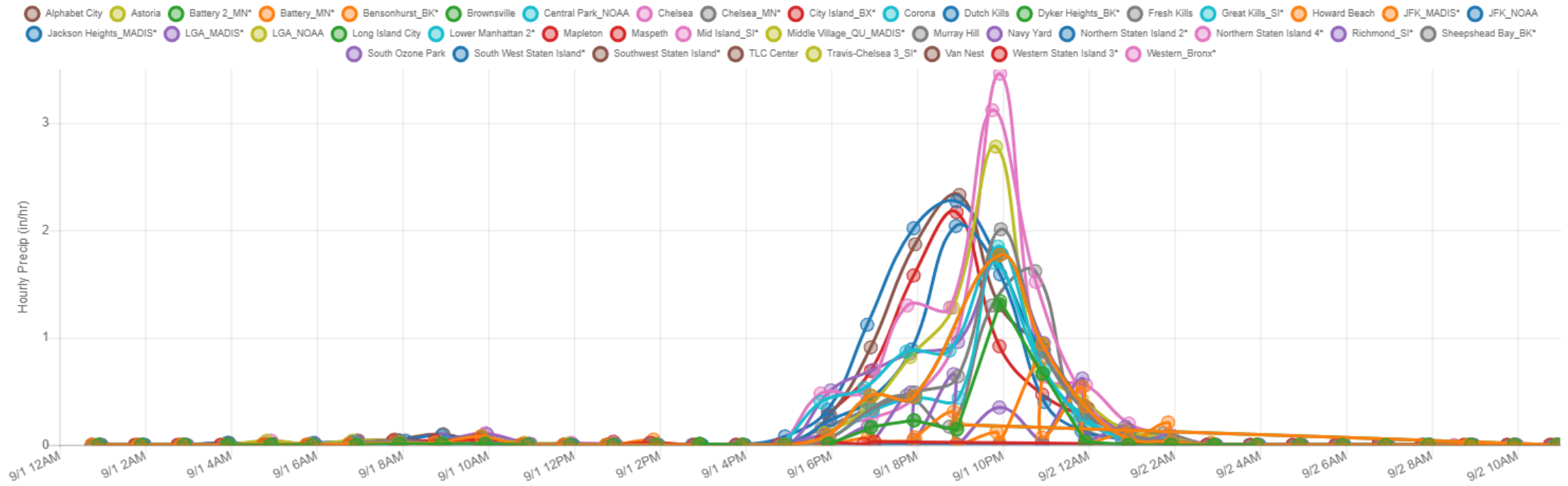
Not for public distribution. All charts and maps provided by NYC Emergency Management.

*the data above presents hourly rainfall amounts from PTC Ida (9/1/21 - 9/2/21).

Agency x Consequence

- Total Flood Assistance
- Total Individual Assistance
- Total Public Assistance

- Inland Flooding
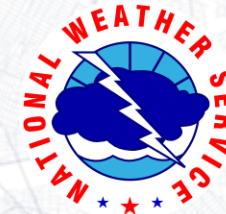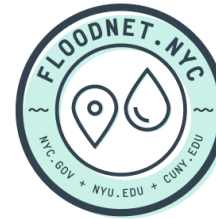- Tree Emergencies
- No Heat/Hot Water

- Peak Surge Level
- Weather Alerts

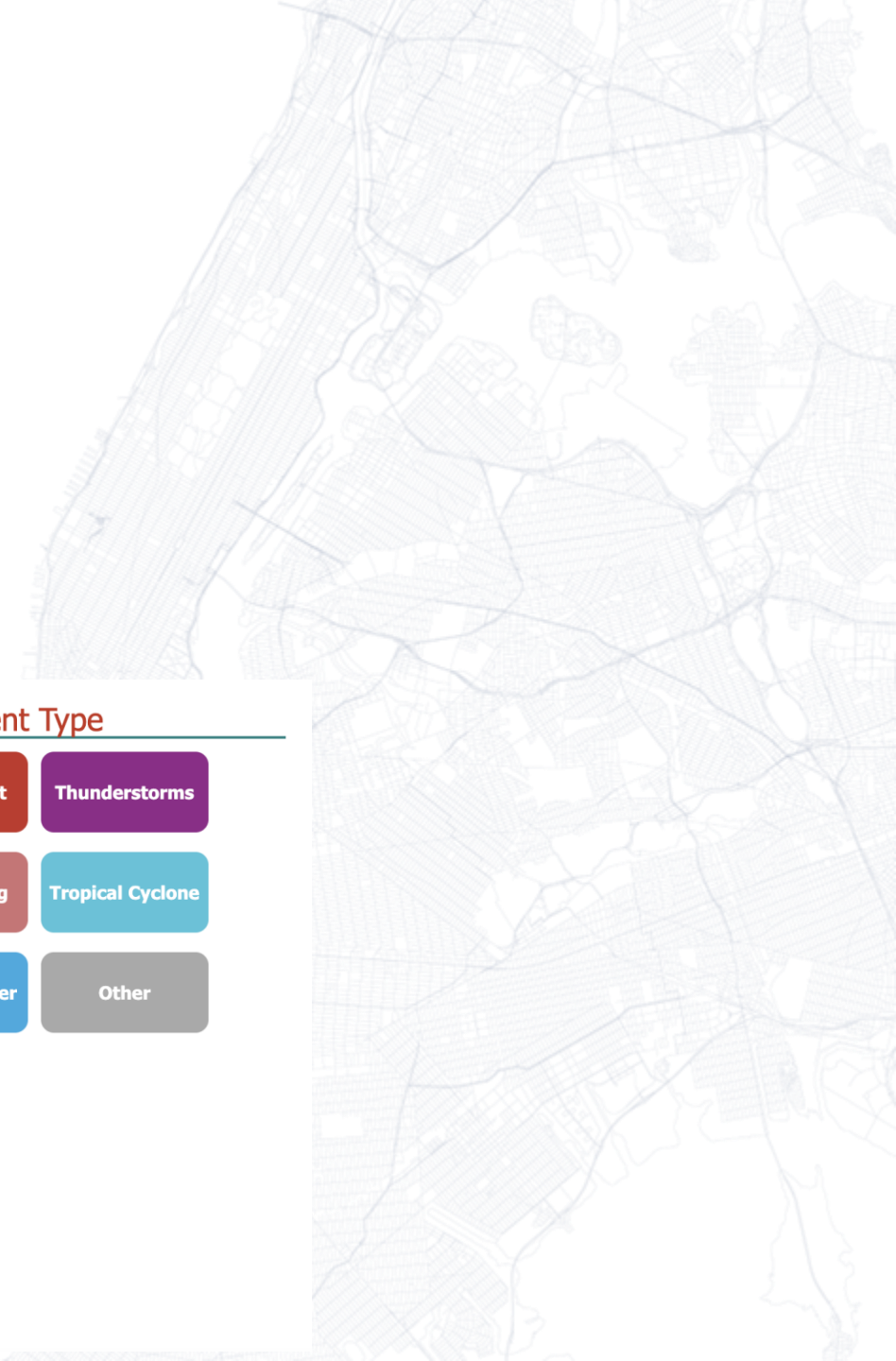- School Attendance

- Beach Advisories

Hazard vs Event Type

- Hazards occur during the events
  - Multiple hazards may occur during a given event
- Events are the bigger picture

CRA Feature

- Community Risk Assessment Dashboard
  - https://nychazardmitigation.com/cradashboard/

- Analyze the impacts and trends of hazards in your community district
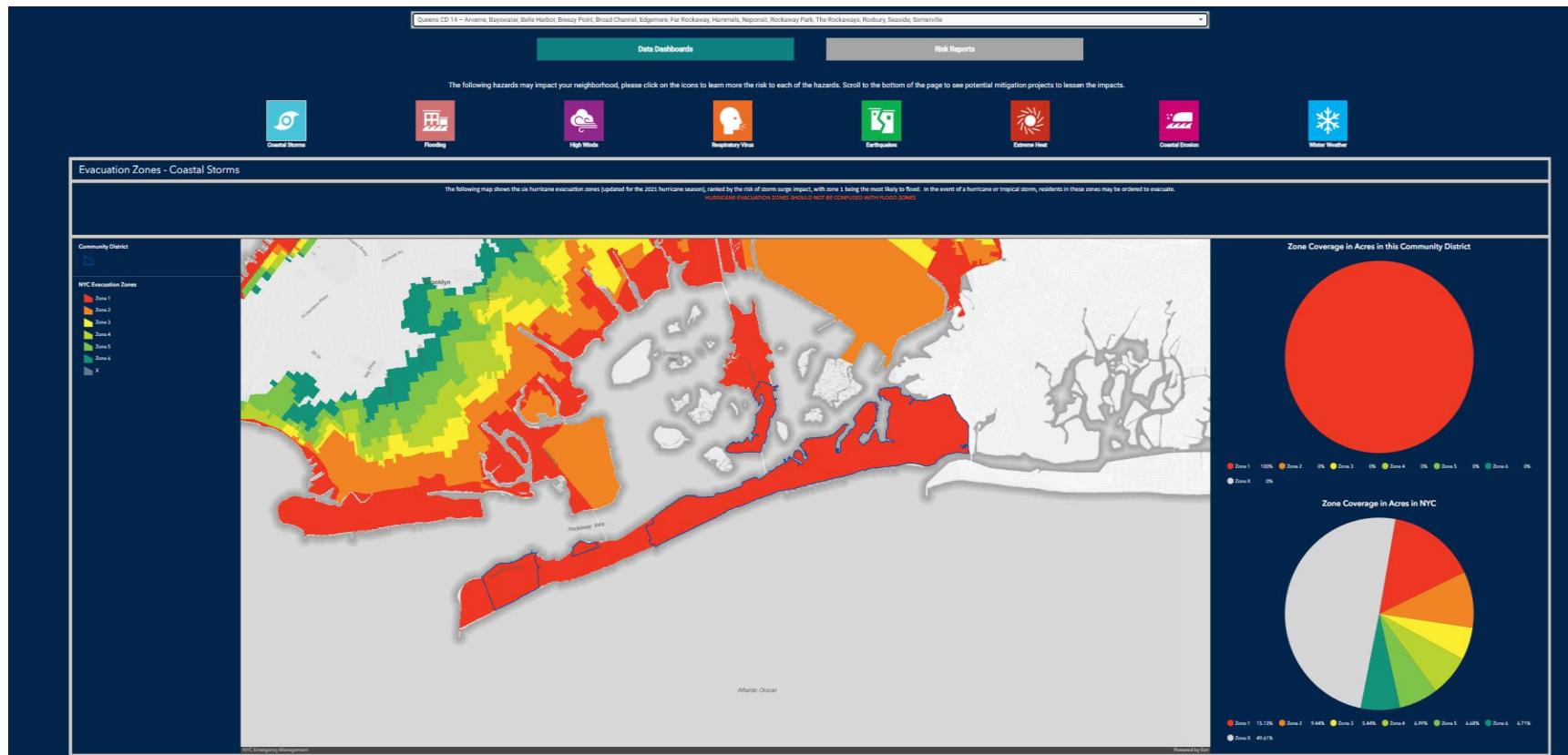
How can you use this tool?

- A comprehensive look at hazard events to aid in risk and vulnerability assessments
  - Single event or Aggregated events
- Captures NYC's historical losses to better inform benefit-cost analysis for grant justification
- Provides detailed sets of data and graphics to support scenario planning for training, exercises, or emergency management protocols
- Case Study Examples:
  - External agency consequence analysis reports
  - Grant application support
    - Raw data to justify programs and projects
  - Neighborhood analyses
  - Academic research support
  - Weather severity analysis

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2.0 Features & Applications

Upcoming…

- Weather Severity Tool
- Creation of separate non-natural hazard profile
  - Including additional separate presentation of COVID-19
- Backend QA/QC for improved categorization and event association
- Future data collaborations with partners on consequence data
  - How can the tool be more useful for your group?
  - Do you have data to share or would like to see in the tool?

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