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Sent: Friday, July 29, 2022 1:31 PM

To: Eder, Daniel J. <DEder@lakecountyil.gov>; Laramy, Jeffrey A. <JLaramy@lakecountyil.gov>; Woolford, Kurt A. <KWoolford@lakecountyil.gov>

Subject: [EXTERNAL] July 23, 2022, Flash Flood Event

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Lake County EM and Stormwater folks,

Today I finished an analysis of the heavy rainfall event that occurred on the morning of July 23.

I collected rainfall data from about 200 ASOS, AWOS, COOP, CoCoRaHS, USGS, and private observation locations. I then used that data to then bias correct MRMS radar rainfall estimates.

For the 0500-1100 UTC (12:00AM to 6:00AM) period, rainfall peaked out in the 6-7 inch range between Libertyville and Lake Bluff, which was a 1-in-200 to 1-in-500 year event according to NOAA Atlas 14. The locations experiencing the 1-in-500 year rainfall were very isolated, covering only about 0.5 mi². Although we did have some decent flooding, the flood impacts do not appear to have been as severe as I would have expected based upon the rainfall severity (at least based upon the reports that we received by our office).

-Scott

W. Scott Lincoln, GISP

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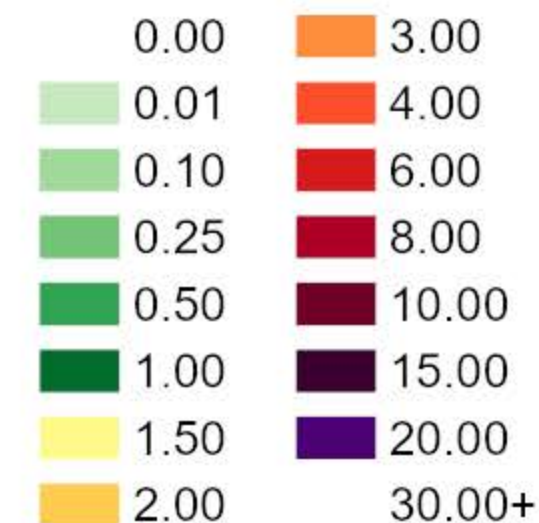
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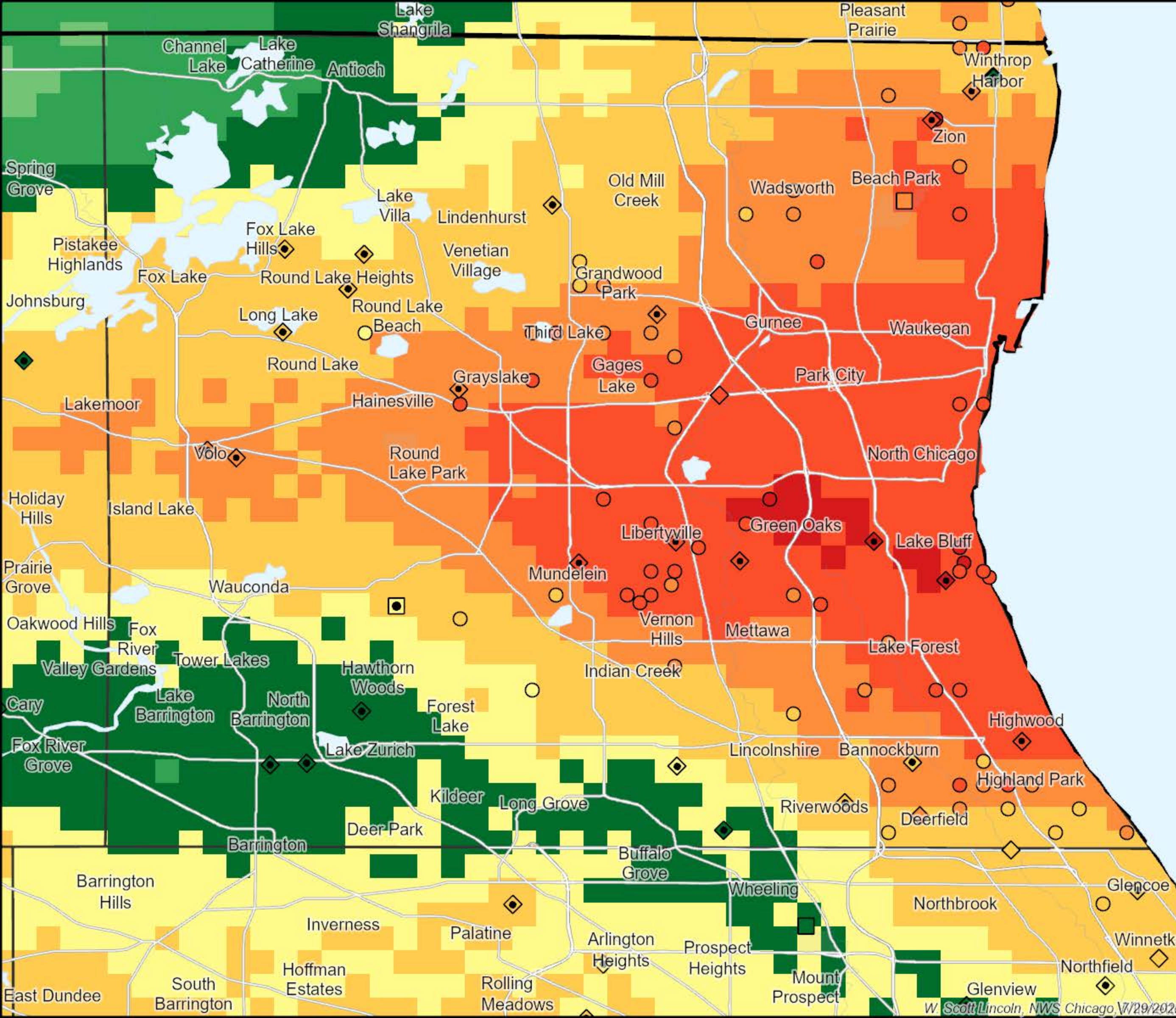
July 23, 2022 Flood Event

Gridded Radar
Rainfall Estimates,
Rain Gauges

6-HR RAINFALL ENDING 1100 UTC



RAIN GAUGE SOURCE

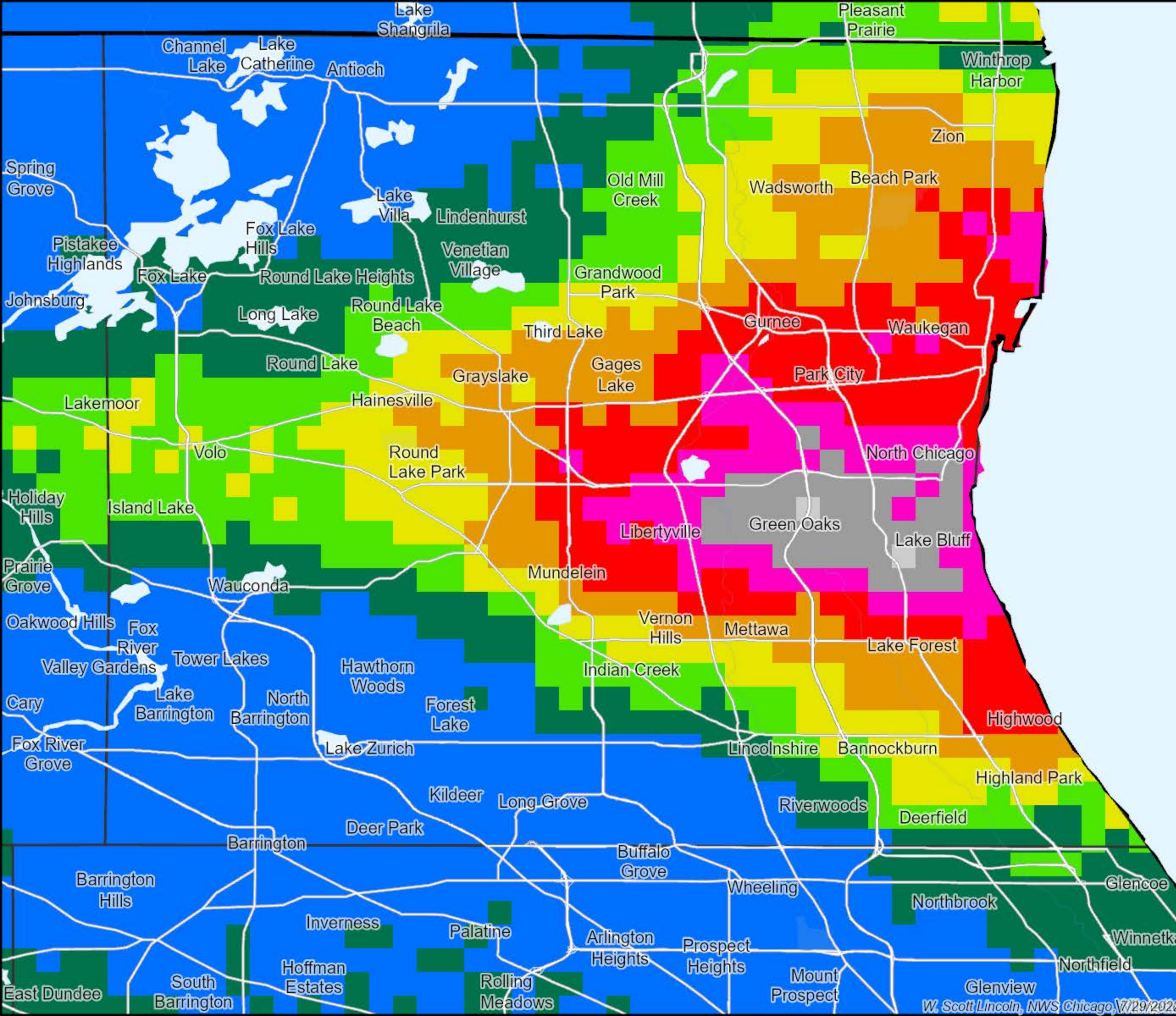


July 23, 2022 Flood Event

Gridded Radar
Rainfall Estimates,
Rain Gauges

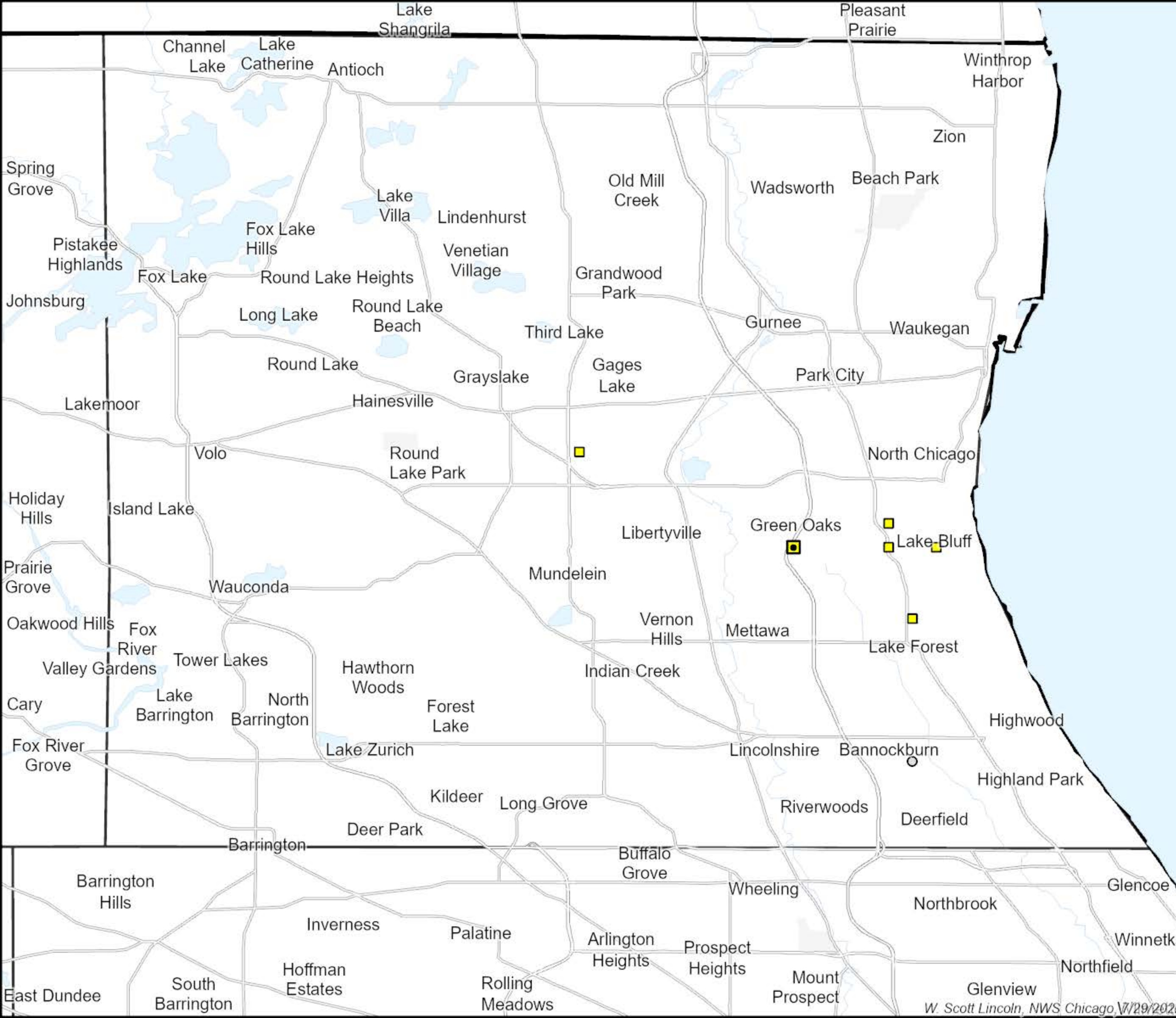
6-HR RAINFALL AVERAGE RECURRENCE INTERVAL ENDING 1100 UTC

- >50% (<2yr)
- 50% (2yr)
- 20% (5yr)
- 10% (10yr)
- 4% (25yr)
- 2% (50yr)
- 1% (100yr)
- 0.5% (200yr)
- 0.2% (500yr)
- 0.1% (1000yr)






July 23, 2022 Flood Event

Flooding Reports



FLOOD REPORTS BY TYPE

-  flooded roadway (major)
-  flooded roadway
-  other