MRCC Climate-Related Data Mapping & Analysis Brainstorm

Precipitation / Water

- Detailed precipitation data and trends from a historical, current and future standpoint.
- Precipitation data—including stormwater frequency, intensity, annual volumes.
- Mapping the connection between precipitation and future flood? Can you map where rain actually fell within a given storm, and where flooding occurs from that particular storm?
- Finer grained information on precipitation data that is tailored for public use. The public can be skeptical and having easy to understand maps that illustrate precipitation would be helpful. What is the difference between a 100-yr flood and a 100-yr rain fall?
- Precipitation patterns and spatial trends in the region with a particular focus on the south side
- Mapping of hydrology vis-à-vis groundwater re-charging? Perhaps connected to known discharge sites that can be mapped and how they affect groundwater/runoff?
- Snowpack melting patterns. Can we track snowfall and see how it affects flooding? Possibly overlay with MWRD's CSO overflow data
- Mapping of frozen waterways—in some areas can cause flooding
- Map stream flow gauges to identify any correlation between increased flows and increasing development over time. Can be helpful information for public education as well.

Other Climatic Themes

- Heat islands - map tree canopy and how this may overlap with regional hot spots to identify ideal green infrastructure placement.
- Air quality: understanding where better air quality exists as it relates to trees and plant data.

Green Infrastructure

- Mapping of green infrastructure in the region, SSMMA has a good start on this.
- Mapping the effectiveness of green infrastructure. Mapping the delta, or change over time.
- Tracking green infrastructure performance where we know it exists to track changes (benefits) over time e.g., heat island mitigation, habitat, runoff, etc.

Wildlife & Vegetation

- Is there data that would help track species? Bird counts? Is species diversity growing or absolute numbers of great Blues? King fishers? What is the connection of green infrastructure to habitat? Bees, butterflies? Have there been marked improvements?
- Mapping of plant data. Are there more trees less tress in the area? Is there more plant coverage now than before? What is the trend? Use LIDAR data.

Soil Conditions

- Soil and permeability mapping and datasets. How does the rain fall relate to soil conditions? Imperviousness?

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Health & Social Assets

- Health data and trends (e.g. asthma, obesity)
- Mapping demographic and census data on top of precipitation trend data

Reformatting & Amalgamating Datasets

- Publishing data in formats that models can easily use?
- Combine/merge MRCC's precipitation data, Cook County Precipitation Network data, MWRD data, ISWA data, etc. (basically all rain gauge data in the area) to create an addendum of recent precipitation levels for bulletin 70 - what is currently an actual 5 year, 100 year storm today? Per a conversation Danielle had with Momcilo and John Watson, maybe Mason's work group could initiate a conversation with all potential data parties (including Nancy Westcott (nan@illinois.edu) to see about this).
- Data gap analysis