

CHICAGO GREENPRINT: USING FSI TO PRIORITIZE CLIMATE CHANGE INTERVENTIONS

MARCH 11, 2020

Chicago Greenprint: Questions

In Chicago and Cook County:

- 1. What locations have the greatest need for tree canopy interventions, based on urban heat impacts and air quality issues?
- 2. What locations have the greatest need for <u>stormwater interventions</u>, including issues of flooding and basement backups?
- 3. Are there areas where important biodiversity intersects with these human priority areas?
- 4. Conversely, are there areas where people also are <u>isolated from nature/greenspace</u> while also being exposed to climate change risks?
- 5. What locations have the greatest combined need in terms of our mission, looking across areas of flooding, air quality, excess heat, urban biodiversity, and connecting people to nature?



Data Layers Used – Flood Risk Targets

- US Census Data
 - Lower Median Household Income
- Flood Susceptibility Index (Source: Chicago Metropolitan Agency for Planning)
 - Reported Flood Locations
 - Topographic Wetness Index
 - Combined Sewer Service Areas
 - Elevation
 - Impervious Surfaces
 - Age of First Development
 - Precipitation Variation



Using FSI at Scale

FSI applied to CMAP Region



FSI in Chicago: Census tracts above the median for the City





Using FSI at Scale

FSI applied to Suburban Cook County





Tinley Park

801 ft

New Lenox

Hickory Cree

Frankfort

FSI Areas Above the Median in Both Chicago and Cook County

> 9.98

9.62

- < 9.26

> 9.86

8.82

- < 7.78

Hammond

Nie Calun

Highland

Dyer

Chicago

Heights



Flood Risk: Vulnerable Areas





Upcoming MWRD Stormwater Credit Trading Pilot Study

- MWRD set to modify WMO in March 2020 to initiate Pilot for 5 years
- Pilot will allow credit trading in two test watersheds:

Little Calumet and Lower Des Plaines

- WMO will allow stormwater control requirements to be met by offsite controls
- Developers still have to assure "no adverse impacts"





Municipalities that partially fall within GreenPrint and Lower Des Plaines Watershed:

City of Desplaines Rosemont Norridge Elmwood Park **River Grove** Franklin Park Melrose Park Maywood Bellwood Broadview Oak Park Cicero Berwyn Lyons Stickney Maine township Leyden township





Municipalities that partially fall within GreenPrint and Little Calumet Watershed:

Robbins Blue Island Riverdale Dixmoor Posen Midlothian Markham Hazel Crest South Holland Dolton Calumet City Burnham Lansing



Data Layers Used – Combined Targets

• US Census Data

- Lower Median Household Income
- Higher Percentage of Youth Under 18
- Higher Percentage of Adults Over 65
- Lower Tree Canopy Density (Source: Morton Arboretum)
- Higher Percentage of Impervious Surfaces (Morton Arboretum)
- Higher Median Summer Temperature (Source: USGS LANDSAT)
- Higher Flood Susceptibility (Source: Chicago Metropolitan Agency for Planning)
- Higher Air Toxins and Cancer Risk (Source: US EPA)
- Higher Average Daily Vehicle Traffic (Source: IL Department of Transportation)



Air Quality: Vulnerable Areas





Urban Heat: Vulnerable Areas





Combined Risks: Vulnerable Areas







Chicago Greenprint online: <u>http://bit.ly/ChicagoGreenprint</u>

For more information on Greenprint and data packages:

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For more information about Stormwater Credit Trading

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