



Climate Resiliency Plan for Grant Park

Milwaukee County Parks

May 2024



Agenda

- Who – Who is Mead & Hunt
- What – Scope of the project
- When – Project timeline
- Where – Start with Grant Park
- Why – Planning for a changing climate
- How – Key Recommendations



Who

Is Mead & Hunt

Mead & Hunt
provides services
nationwide
and employs
approximately
1,300 people.



- Milwaukee County Centric slide...
- 3 offices, projects, etc....

MARKETS & SERVICES

Since our founding in 1900, we have significantly expanded and diversified our disciplines, markets, services, and geographic presence.





What

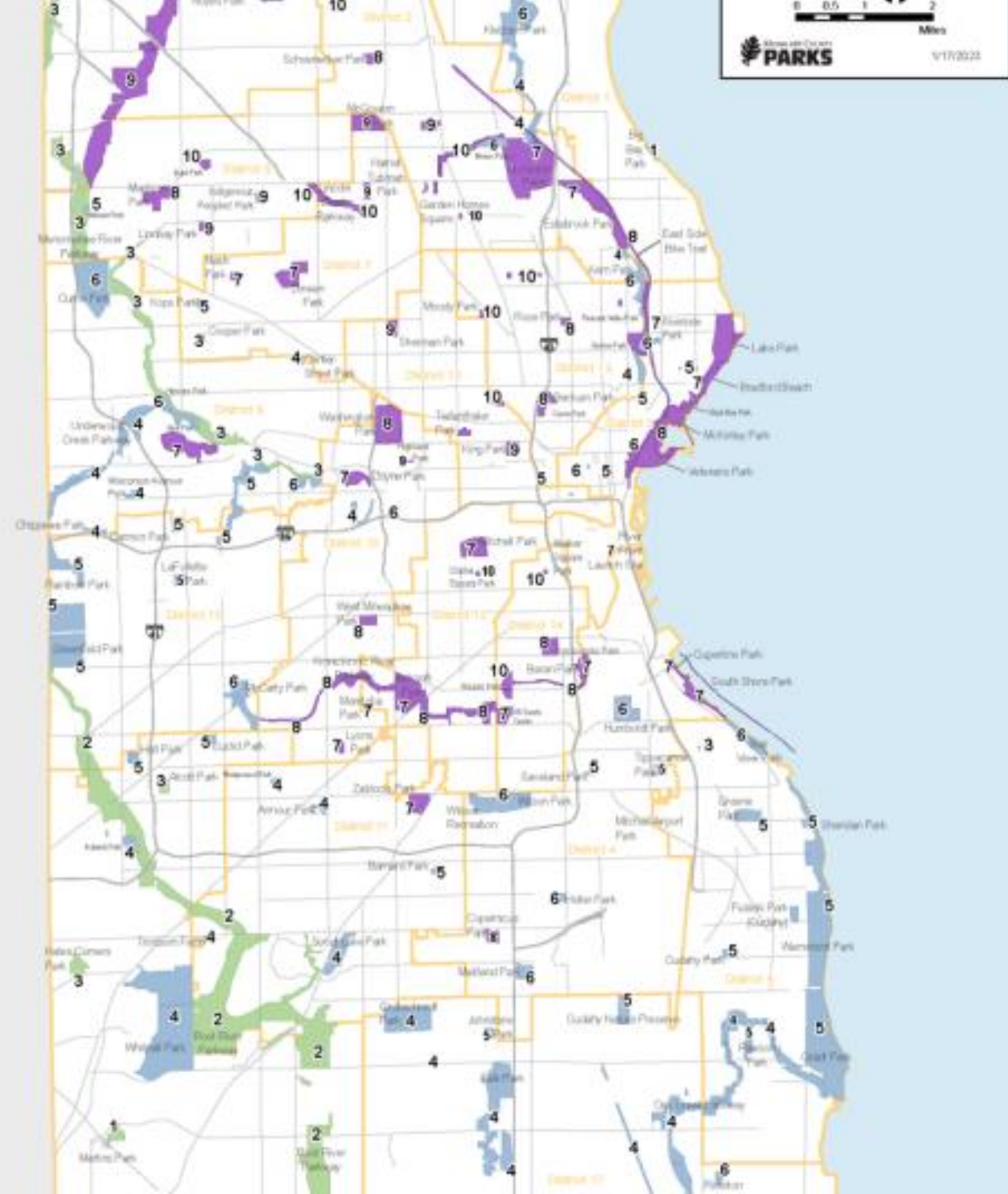
Scope of the Project

Scope of the Project

- Identify potential risks caused or exacerbated by climate change.
- Recommendations to prepare for and respond to risks.
- Milwaukee County Parks System
 - Parks, greenways, buildings, etc.
 - *Broad scope - Key Question - Where to start?*

Key Question

- *Where to start?*





When

Project timeline

Project timeline

- ✓ January 2022
 - County Board Resolution
- ✓ February 2023
 - County Meet & Greet at WPRA
- ✓ April 2023
 - Scoping Kick-off Meeting
- ✓ August 2023
 - Contract signed
- ✓ August 2023
 - Kick-off meeting
- ✓ Oct '23– Apr '24
 - Monthly progress calls
- ✓ February 2024
 - Draft Report
- ✓ April 2024
 - Final Report
- May 2024
 - Board Presentation

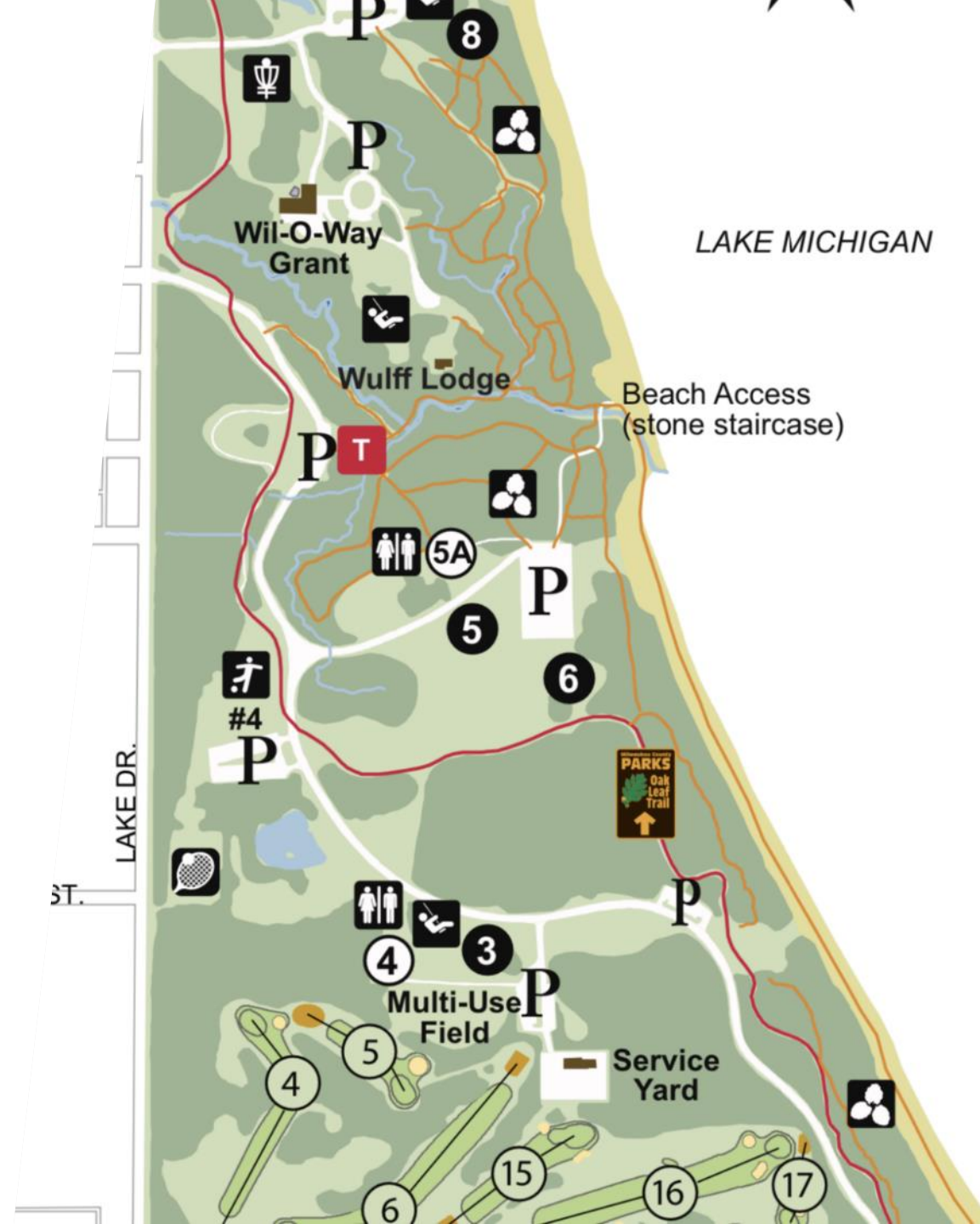


Where

Grant Park

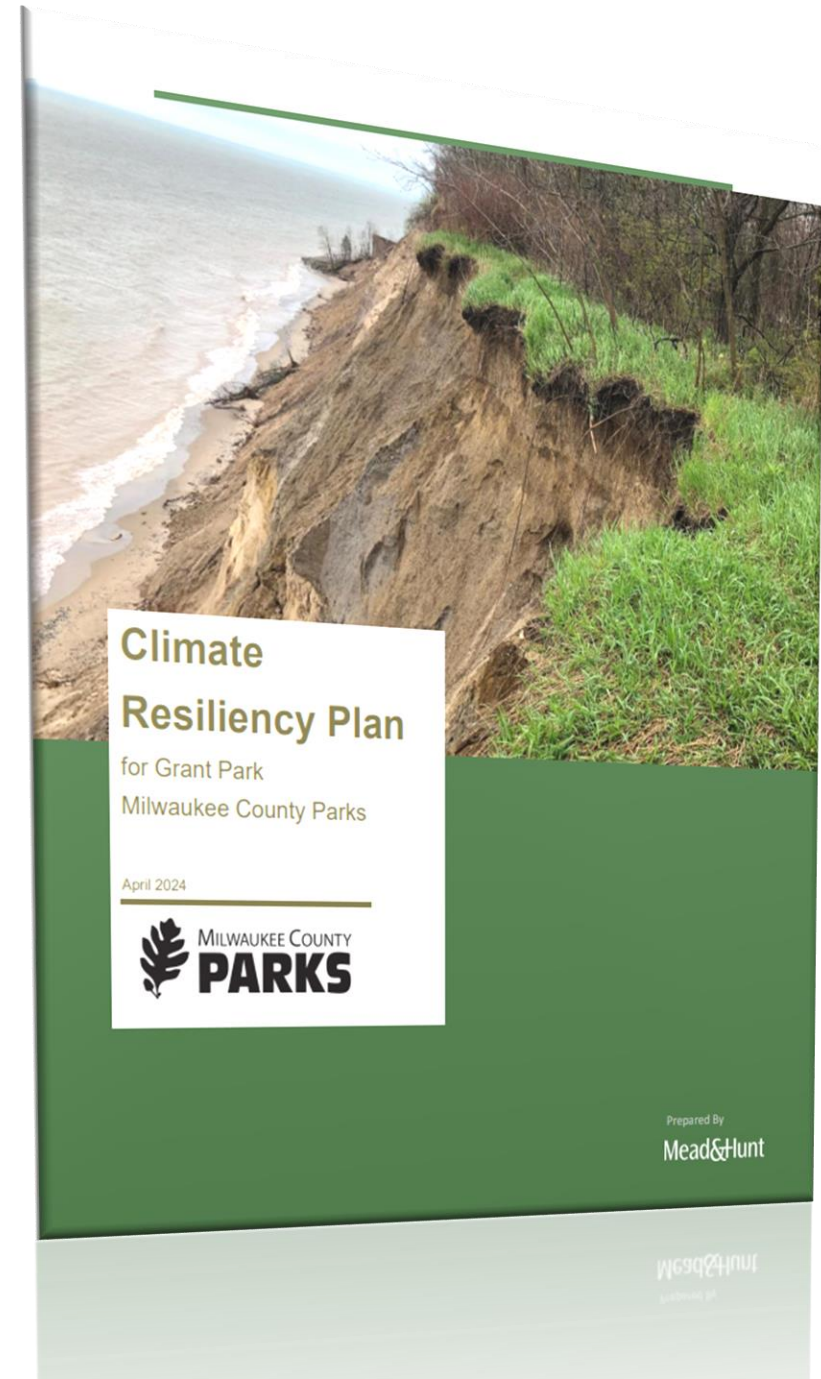
Grant Park

- Acreage
- Habitat
- Buildings/Facilities
- Parking Lots
- Forest
- Coast
- Waterway(s)
- Stone walls
- Pond(s)
- Trails
- Playgrounds
- Picnic Areas
- Golf Course
- Fields (soccer)
- Programming



Report Outline

- Executive Summary
- Introduction
- Trends in Plans in the US
- Local Partnership Opportunities
- **Grant Park Climate Analysis**
- **Recommended Actions**
- Funding Opportunities
- Conclusion





Why

Planning for a changing climate

Changing Climate Issues

Severe Heat

- 328% increase in days over 90.7° by 2050

Severe Precipitation & Flooding

- Since 1950 annual precipitation in WI has increased 17% (+/- 5 inches).

Ice Coverage

- Decreasing coverage
- Nutrient mixing impacts & recreational impacts

Changing Climate Issues

Drought

- May 2023 was considered the sixth driest since 1871.
- Over 58% of the Midwest was in moderate to extreme drought in July 2023.

Coastal / Bluff Erosion

- Record high and record low lake levels.
- Variable freeze/thaw cycles.

Forests

- Hardiness zone changes and prevalence of invasive species and pests.
- Deer population increases restricts new forest growth.

Facilities, Staff, & Patrol

- Tree damage, flooding, increasing or shifting staff priorities, increased hours.

Stresses to County Parks



Severe Heat

Recreation, human health, nature, migration, algae, flooding, etc.
Demand for pools, golf courses, and facilities (bathrooms, bubblers)



Severe Precipitation & Flooding

Power outages, land and mudslides, agriculture damage, etc.



Ice Coverage

Aquatic habitat health – algae, nutrient mixing, etc.
Beach and bluff erosion – larger winter waves
Fishing limits – recreationally or food systems.

Grant Park – Severe Heat, Forest Impacts



Grant Park – Flooding, Drought



Stresses to County Parks



Drought

Algal blooms, damages to fish and habitat, changing hardiness zones, cost and frequency of watering/impact on infrastructure, flooding frequency, wildfires,



Coastal / Bluff Erosion

Geology, vegetation, ecosystem degradation, beach access, ravine trails, dangerous and unpredictable.



Forests

Dead/dying trees, wildfires, changing species compatibility, invasive species management.



Facilities, Staff, & Patrons

Increased staff needs – longer “off-season” hours or demands (pools/golf), invasives management, limited winter activities, beach algae.

Grant Park – Coastal Effects, Erosion



Grant Park – Facilities, Staffing Needs





How

Key recommendations

Recommendations

Climate Hazard	Recommendations
<i>Severe Heat</i>	<ul style="list-style-type: none">• Plant more trees and flora• Paint park facility roofing, benches, and other traditionally dark surfaces white• Increase mechanical and electrical efficiencies in buildings• Add canopies over picnic benches and other areas for people to shelter• Make sure there are ample drinking water stations throughout the park• Install more cooling systems in occupied public park facilities• Improve record keeping• Develop a Heat Action Plan
<i>Severe Precipitation and Flooding</i>	<ul style="list-style-type: none">• Retrofit stormwater infrastructure• Install green infrastructure (e.g., bioswales, permeable pavements, rain gardens, green roofs, etc.)• Raise facilities to avoid flooding• Add canopies over picnic benches and other areas for people to shelter from rain• Trim tree limbs near buildings annually• Move electric/ mechanical and other critical systems to the second floor of buildings where feasible• Fill any gaps and holes in existing facilities at lowest levels to avoid flooding



Recommendations



Climate Hazard	Recommendations
Ice Coverage	<ul style="list-style-type: none"> Collaborate with research institutes such as the U.S. National Ice Center Enhance documentation and record keeping Diversify winter recreational activities
Drought	<ul style="list-style-type: none"> Plant native and drought resistant vegetation Program irrigation systems to only turn on at night or early in the morning, and fewer days per week Incorporate weather station into irrigation system Create a list of irrigated spaces that do not need to be watered in case of a drought Explore rainwater harvesting systems
Coastal/ Bluff Erosion	<ul style="list-style-type: none"> Increase width and amount of sloping beaches Plant local vegetation such as dune grasses to help support the substrate Relocate infrastructure, including trails, that are close to the edge of bluffs Consider green infrastructure installations in the water such as local boulders, fiber rolls, live staking, etc. Collaborate with other municipalities facing the same challenges to find innovative solutions
Forest	<ul style="list-style-type: none"> Keep an up to date tree inventory Update forest management plans Track the creep of new species into the region Be diligent in pest and invasive species monitoring and removal

Funding Opportunities

Funding Type	Funding Organization	Program	Link
Regional	Wisconsin Department of Natural Resources	<ul style="list-style-type: none"> Wisconsin Wetland Conservation Trust 	<ul style="list-style-type: none"> https://dnr.wisconsin.gov/topic/Wetlands/wwct
Regional	Fund for Lake Michigan	<ul style="list-style-type: none"> Fund for Lake Michigan 	<ul style="list-style-type: none"> https://fundforlakemichigan.org/apply-for-funding/
National	Federal Emergency Management Agency	<ul style="list-style-type: none"> Building resilient Infrastructure and Communities (BRIC) Pre-Disaster Mitigation Grant Program Hazard Mitigation Grant Program (HMGP) 	<ul style="list-style-type: none"> https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities https://www.fema.gov/grants/mitigation/pre-disaster https://www.fema.gov/grants/mitigation/hazard-mitigation
National	National Oceanic and Atmospheric Administration (NOAA) for Coastal Management	<ul style="list-style-type: none"> Coastal Habitat Restoration and Resiliency Grants for Underserved Communities Coastal Management Zone Management Habitat Protection and Restoration Grants National Coastal Resilience Fund 	<ul style="list-style-type: none"> https://www.rivernetwork.org/wp-content/uploads/2023/09/coastal-habitat-restoration-and-resilience-grants-factsheet.pdf https://www.fisheries.noaa.gov/grant/coastal-habitat-restoration-and-resilience-grants-tribes-and-underserved-communities https://coast.noaa.gov/resilience-grant/
National	National Fish and Wildlife Foundation	<ul style="list-style-type: none"> Five Star and Urban Waters Restoration Grant National Coastal Resilience Fund Sustain our Great Lakes 	<ul style="list-style-type: none"> https://www.nfwf.org/programs/five-star-and-urban-waters-restoration-grant-program https://www.nfwf.org/programs/national-coastal-resilience-fund https://www.nfwf.org/programs/sustain-our-great-lakes-program
National	Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> Great Lakes Restoration Initiative (GLRI) 	<ul style="list-style-type: none"> https://www.glri.us/funding
National	US Department of Transportation	<ul style="list-style-type: none"> Rebuilding American Infrastructure with Sustainability and Equity (RAISE) 	<ul style="list-style-type: none"> https://www.transportation.gov/RAISEgrants
National	US Fish and Wildlife	<ul style="list-style-type: none"> North American Wetlands 	<ul style="list-style-type: none"> https://www.fws.gov/service/north-american-wetlands-

