



Geospatial Enhancements to Support Park District Initiatives

Laura Schuch, PhD
April 25, 2024



Geographic Information Systems (GIS) Program Overview

- GIS Team
 - Brandon Garman – Cartographer
 - Laura Schuch – GIS Manager
 - Shane Elias – GIS Specialist
 - Tom Kraft – GIS Administrator
- Open-source technology
- Provide access to geospatial data for all Park District staff
- Collaborate with IT Services, Natural Resources and Marketing



Lakefront Reservation, Edgewater –
Eclipse, April 2024

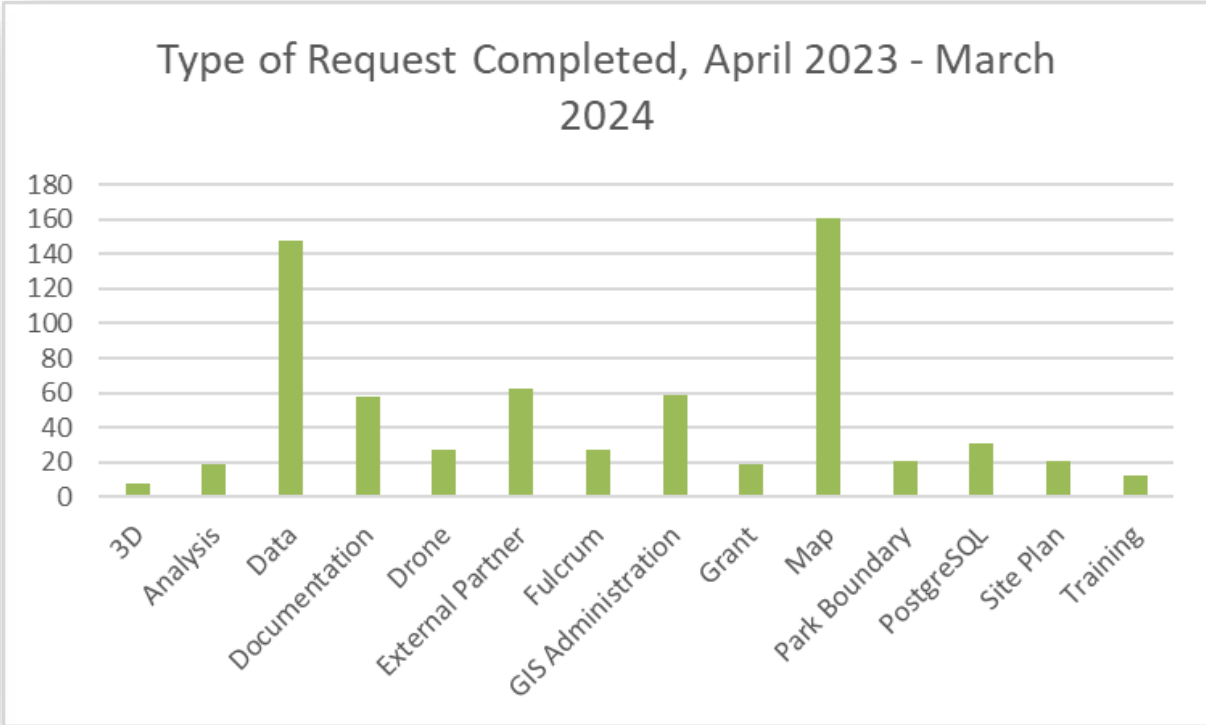
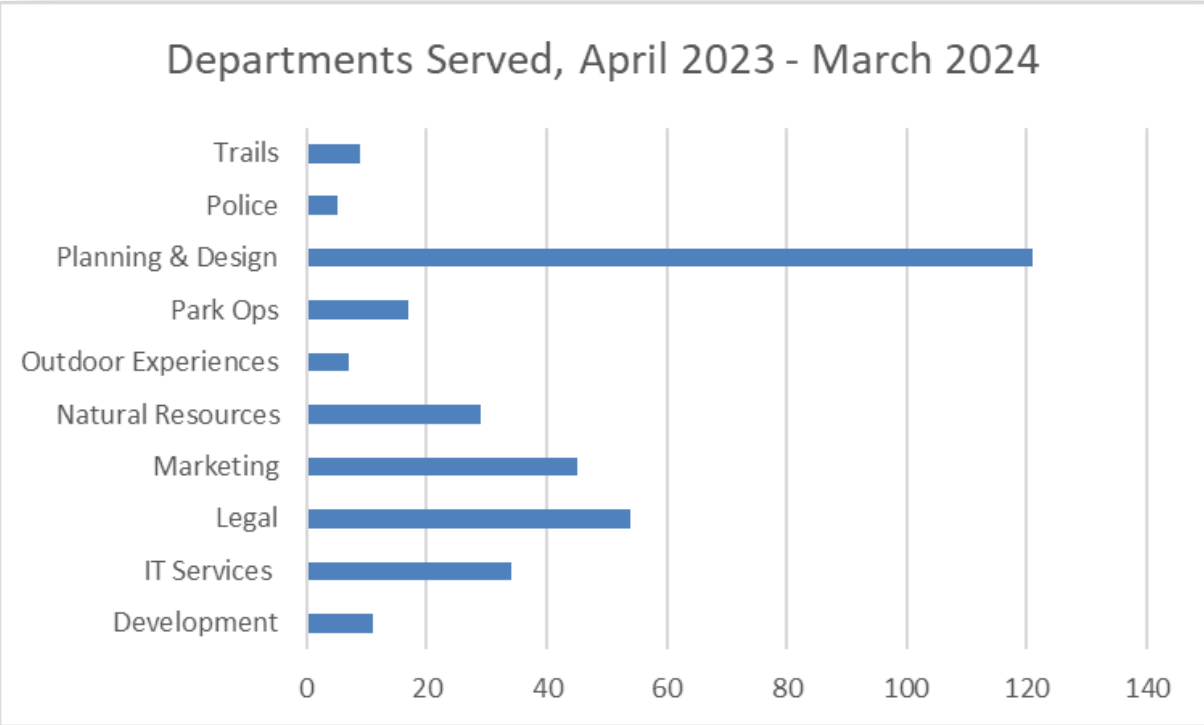
Geographic Information Systems Initiatives

- Utility database design and mapping
- MapStore: GIS data repository, web maps, visualizations
- Enhance access to GIS data across platforms
- Improve yearly update process for Trail Maps
- Training for staff



Rocky River Reservation, Stables –
GPS collection of hydrants, April 2024

Geographic Information Systems Metrics



Total Requests completed – 422

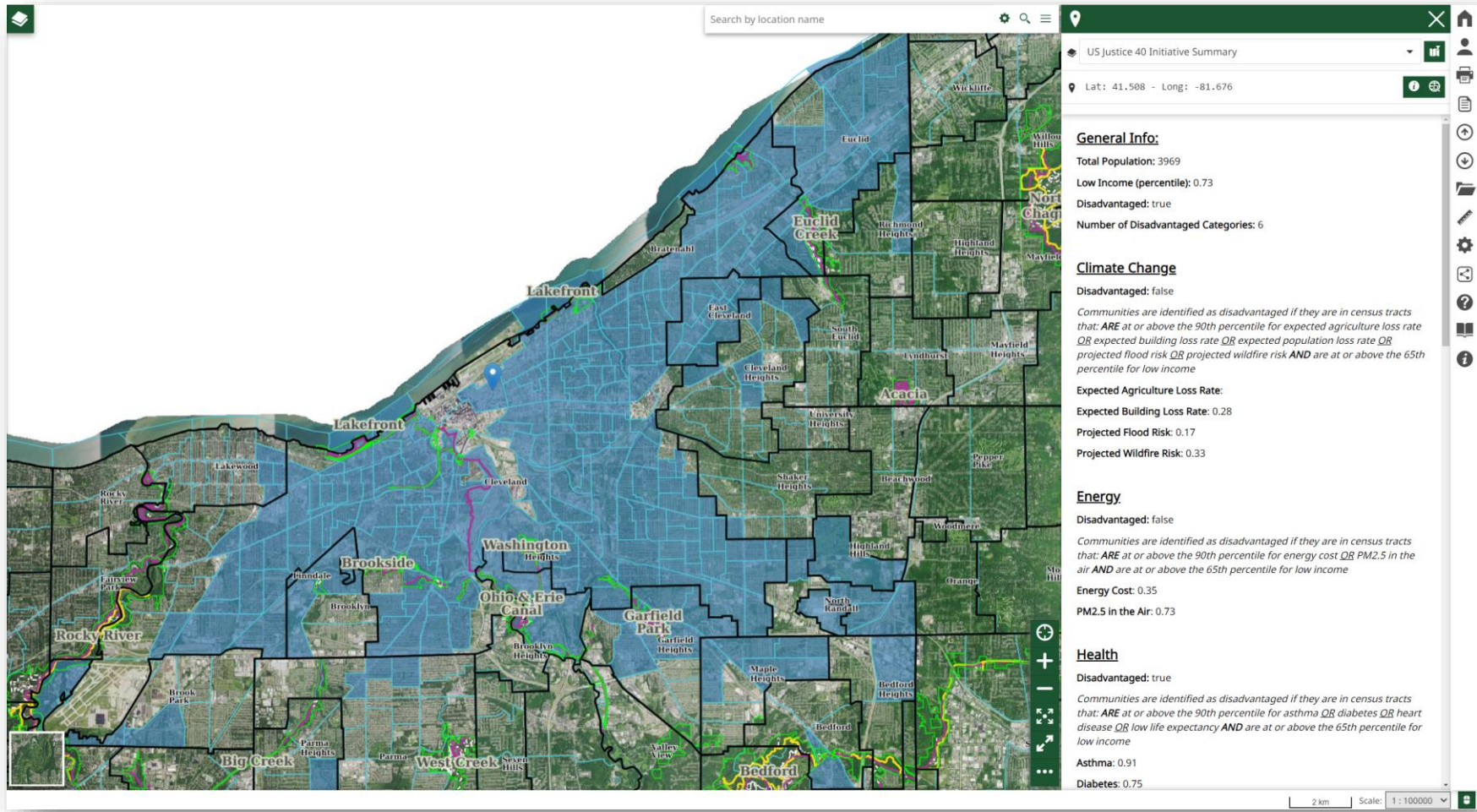
MapStore

The screenshot shows the Cleveland Metroparks GIS Portal. At the top, there is a navigation bar with 'Cleveland Metroparks', 'Featured', and 'Contents' tabs. Below this is a search bar with the text 'search...'. The main content area is titled 'Cleveland Metroparks GIS Portal' and features a 'Featured' section with three map thumbnails: 'CM Public BaseMap', 'CM Staff BaseMap', and 'CM Trail Dashboard'. Below the featured section, it says 'Results 3 of 3' and 'Contents' with sub-tabs for 'Maps (7)', 'Dashboards (1)', 'GeoStories (3)', and 'Contexts (0)'. The 'Maps' section displays a grid of seven map thumbnails: 'Cleveland Lakefront Bikeway Review', 'CM Managed Trails Map', 'CM Public BaseMap', 'CM Public Toner BaseMap', 'CM Staff BaseMap', 'CM Transparent Aerial BaseMap', and 'Justice 40 Initiative Summary Map'. Each thumbnail includes a small icon in the bottom right corner.

MapStore

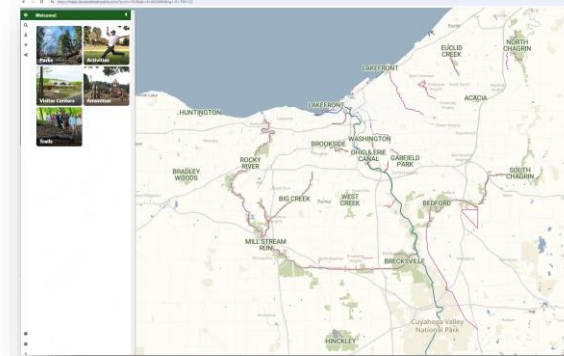


MapStore – Justice 40 Initiative Summary Map

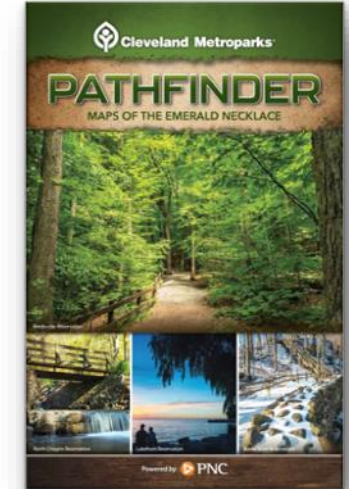


Trail Map Committee

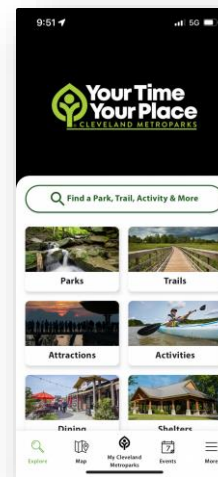
- Types / access / location
- Connections tied to spaces
- Improve communication
- Use the map medium as a space
- Experiment / Play / Innovate



maps.clevelandmetroparks.com



Pathfinder, 2022



Mobile app



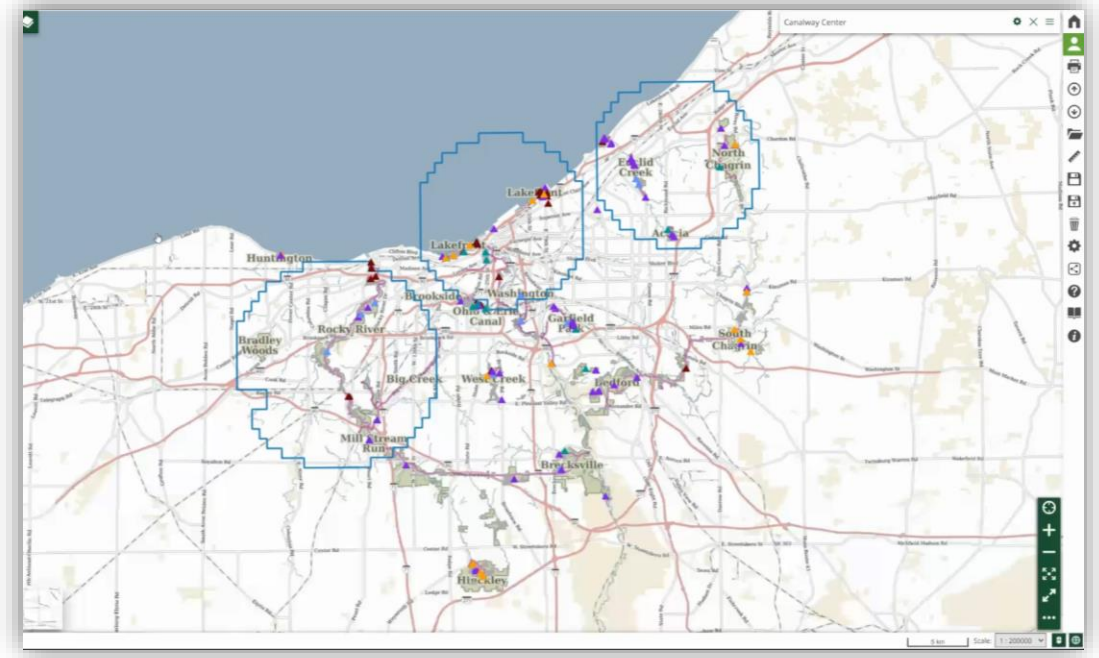
OEC Trail Map, 2022



Trailview – Inclusive Programs

Geographic Information Systems Future Enhancements

- Integrated GIS applications - Fulcrum
- Utility Mapping
- Data sharing with municipalities and utility providers
- MapStore – integration of drone imagery / 3D representation
- Improve trail representation in virtual spaces



Drone Flight Web Map in MapStore –
Ohio and Erie Canal Reservation, Canalway Center

Drone Program

Pilots

- Planning & Design / GIS – Laura Schuch, Shane Elias
- IT Services – Noah Utterback, Rachel Yurkovich, Tyler Smith*
- Natural Resources – Stu Davis
- Marketing – Joe Thompson

Support

- IT Services – Abigail Zemrock, Anthony Joy
- Natural Resources – Jenn Grieser, Erik Shaffer
- Marketing – Eric Hewitt, Tim Long
- Police – Officer Hodge, Officer Petitti, Officer Gunkelman

*Pilot In training



Garfield Park Reservation, Garfield Pond, March 2024

Drone Program Objectives

- Support Park District needs
- Promote safety and awareness
- Development of pilot skills
- Outreach to promote STEM
- Collaborative innovation



South Chagrin Reservation,
Squire's Castle – Eclipse 2024



Lakefront Reservation, Edgewater –
Eclipse 2024



West Creek Reservation, Watershed
Stewardship Center – Afterschool Program,
March 2024

Drone Program Highlights

96 flights completed since April 2023

Documentation

- Portal Request Form
- Flight Planning form
- Onsite Safety Checklist
- Maintenance Record Form
- Request and Deliverables workflow



Hinckley Reservation, Hinckley Lake Spillway, March 2024

Drone Program Future Focus

- Enhance mapping flights
- Expand skills
- Support existing research needs
- Support emerging needs



Garfield Park Reservation, Garfield Pond, February 2024



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