EGLE's MS4 Program

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Topics

Brief overview of MS4 Program

2020 expanded urban area maps

Application updates

Uploading .kml files to MiEnviro

Compliance issues & successes

Climate Change Plan

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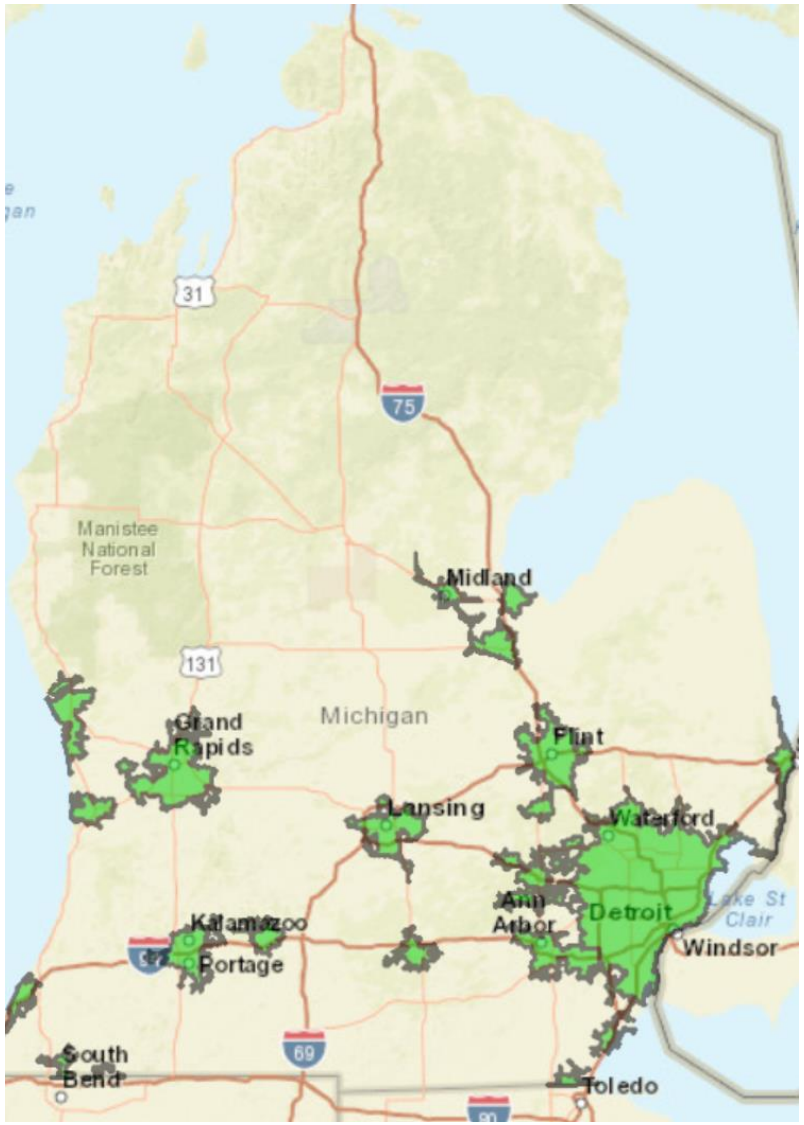
MS4 Program

Quick Facts

Phase I	Phase II	Regulated MS4 Area
Ann Arbor Flint Grand Rapids Lansing Sterling Heights Warren	Over 300 cities, villages, townships, counties, and school districts	Serves a population of 6.5 million people or 66% of Michigan's population



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MS4 Program: The SWMP

Each MS4 develops and implements their own Storm Water Management Program (SWMP) which contain the following Minimum Control Measures:

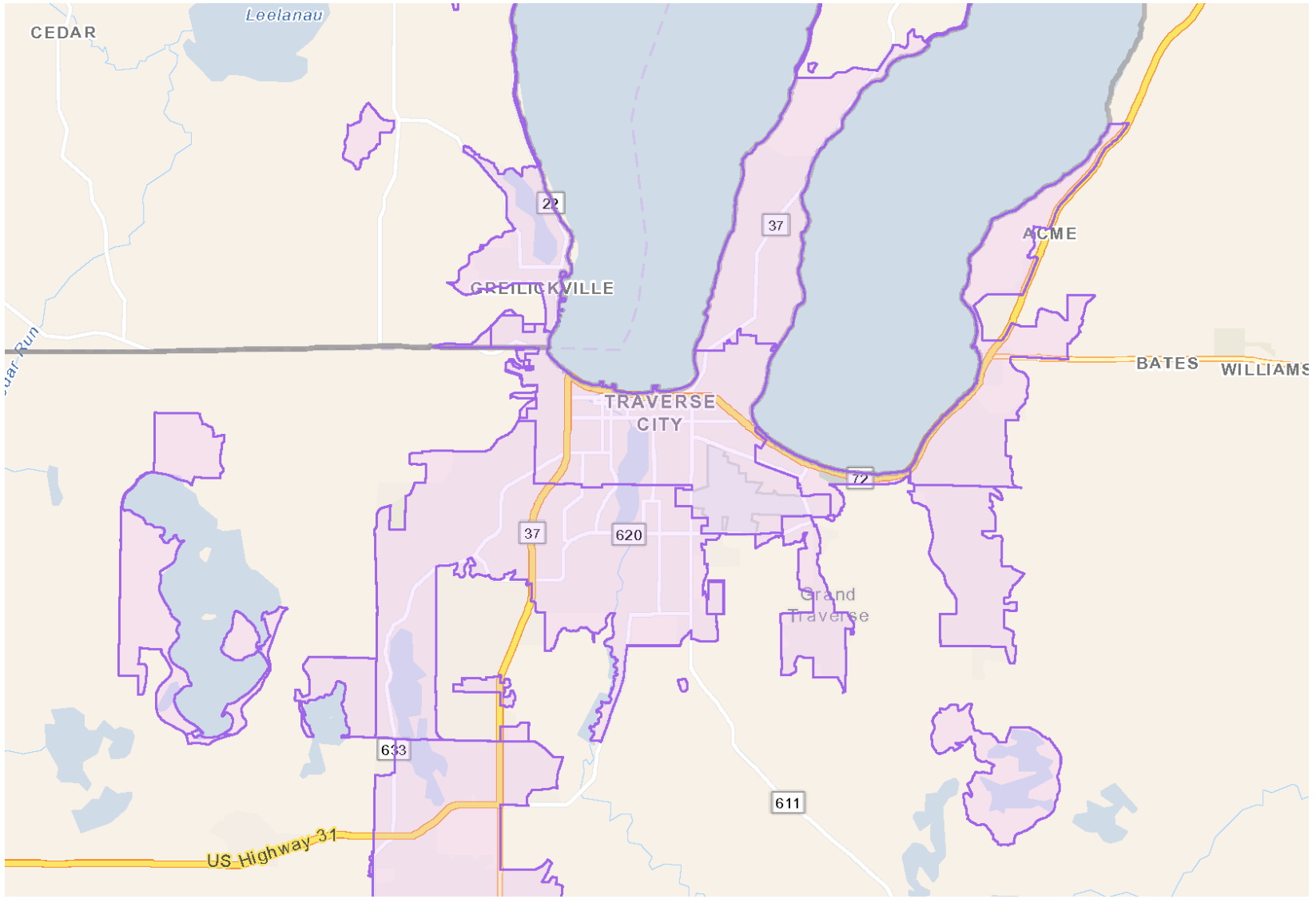
1. Public Participation/Involvement Process
2. Public Education Program
3. Illicit Discharge Elimination Program
4. Construction Stormwater Runoff Control Program
5. Post-Construction Stormwater Runoff Program
6. Pollution Prevention and Good Housekeeping Program

And Water Quality Requirements:

Total Maximum Daily Load (TMDL) Implementation Plan

Expanded 2020 Urban Area Map

- Updated maps from EPA based on the 2020 Census data.
- Interactive map to be available soon and will be posted on the MS4 webpage: Municipal Storm Water Program (michigan.gov)
- Traverse City area is newest area being brought into the MS4 Program
- Letters planned to be sent in July 2024 to notify potential MS4 permittees to apply.



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Application Updates

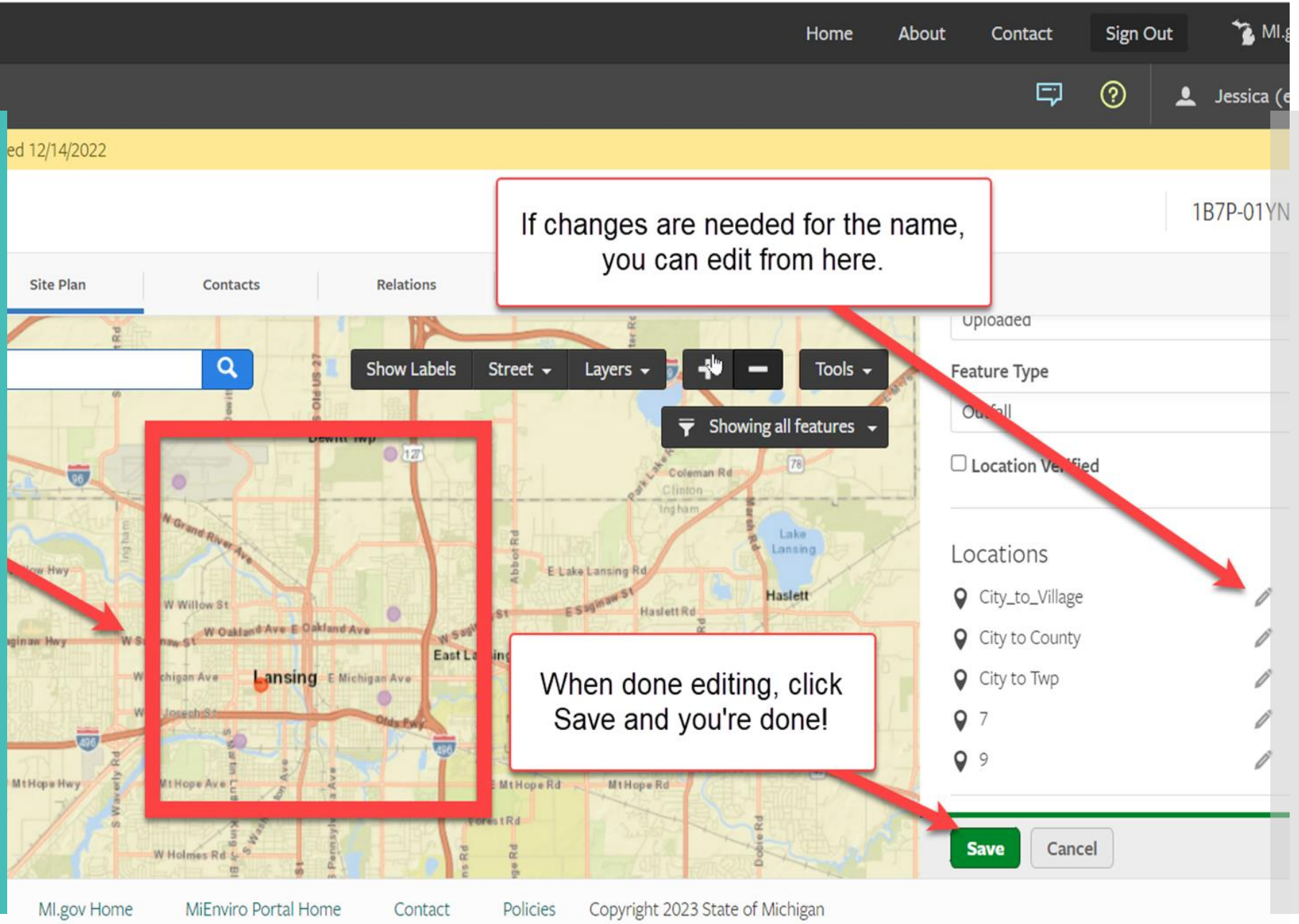
- In 2025, full applications will be required as the short-form applications in NPDES are used sparingly.
- Submitting full Stormwater Management Programs.

Uploading .kml files to MiEnvrio

- Locating and mapping of MS4 Points of Discharge and Outfalls are a permit requirement.
- The application requires that information be added to the application and in Site Plan in MiEnviro.

Link to guidance document:

How to Make a .kml file using Excel and Google Earth (michigan.gov)



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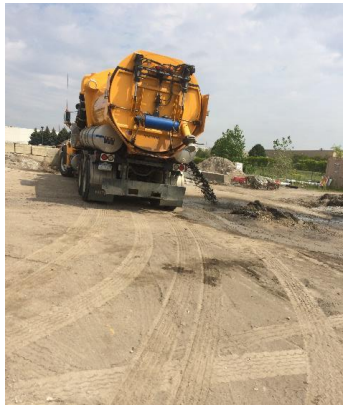
Benefits of Mapping Outfalls and Points of Discharge

Some benefits of this mapping requirement:

Helps with Illicit discharge and connection investigations.	Municipalities could work with surrounding municipalities to warn of issues if a spill occurred.

Common Compliance Issues

- Lack of timely follow up on illicit discharges.
- MS4s not applying post-construction standards to their own projects.
- Lack of sampling of impaired waterways.
- Lack of street sweeping.
- Lack of inspection and cleaning of catch basin sumps.



Compliance Successes

- Use of asset management technology to support SWMP implementation (e.g.,GIS-based programs such as Lucidity and Cityworks).
- Use of interns to assist with lower-level permit requirements.
- Increased awareness of other sources of E. coli, like dogs!
- Purchasing new equipment or contracting work to ensure long-term implementation.
- Reintroduction of legislation to allow for the creation of optional stormwater utilities.

WRD Climate Change Plan

Current Status

- Public comment on the draft Climate Change Plan ended October 9, 2023.
- WRD is continuing to go through the comments.

Why is this Important?

- Increasing intensity of storms.
- Increasing rainfall amounts.
- Planning for the future of infrastructure.

WEATHER

Michigan certainly isn't lacking precipitation so far this year; Some over 20 inches already

Published: May. 04, 2023, 7:38 p.m.

NEWS

Emergency declared in 6 more U.P. counties after destructive spring flooding

Published: Apr. 21, 2023, 3:40 p.m.

WEATHER

Michigan's rain in last month was incredible, one spot over 10 inches

Published: Aug. 18, 2023, 5:08 p.m.

MICHIGAN

Rainfall totals: Metro Detroit breaks precipitation record in series of storms

Brendel Hightower
Detroit Free Press

Published 4:52 p.m. ET Aug. 25, 2023 | Updated 5:54 p.m. ET Aug. 25, 2023

Whitmer declares State of Emergency for Wayne, Monroe counties

WEATHER

August rain in Michigan ranged from droughty to a super-soaked 10 inches

Published: Aug. 31, 2023, 7:00 a.m.

LOCAL NEWS

Torrential rain falls across southeast Michigan leaves behind flooded roadways

BY KAREN CARTER
AUGUST 24, 2023 / 11:56 AM / CBS DETROIT

Michigan faces drought conditions as rainfall remains scarce

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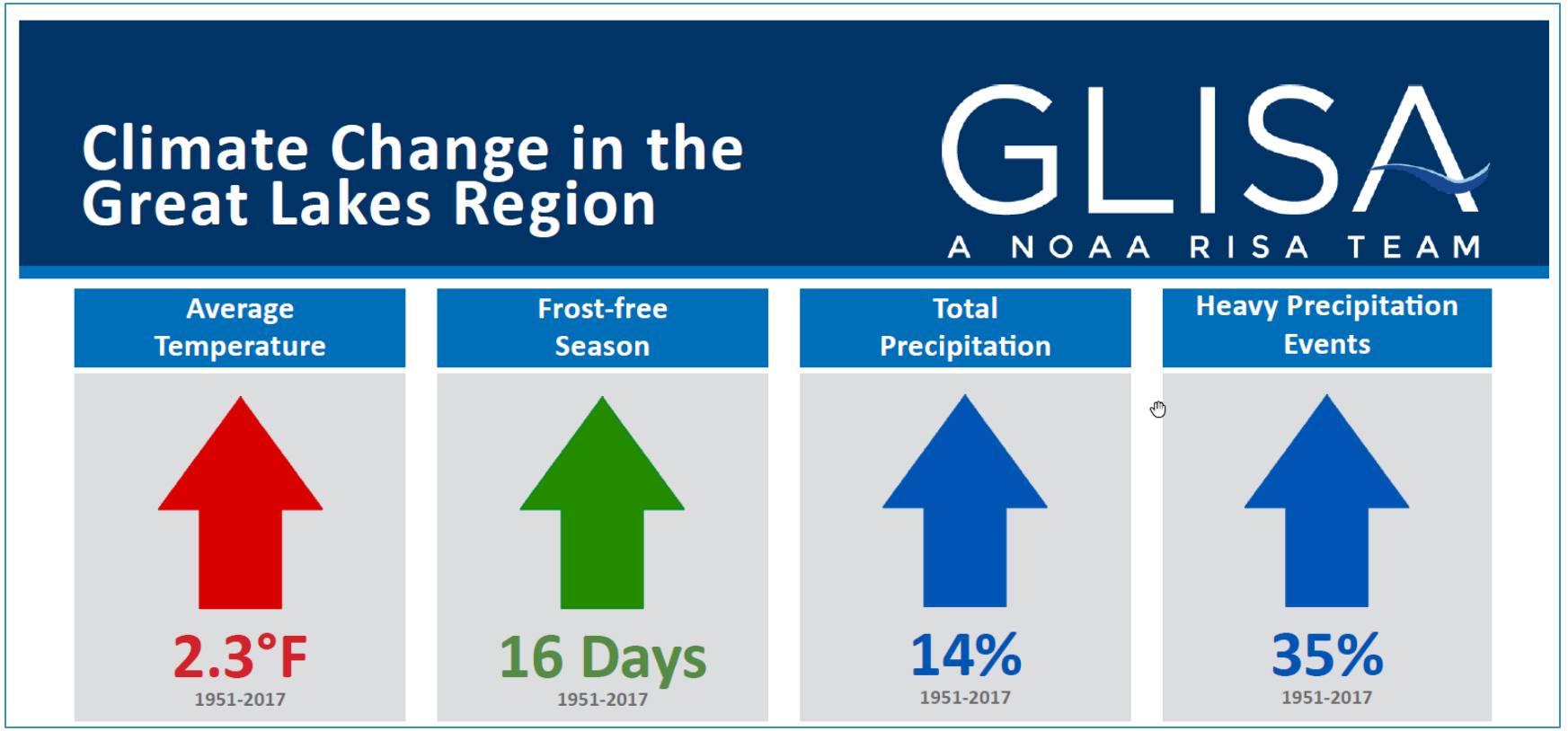
Increased Precipitation and Intensity



From: Great Lakes Integrated Sciences and Assessments

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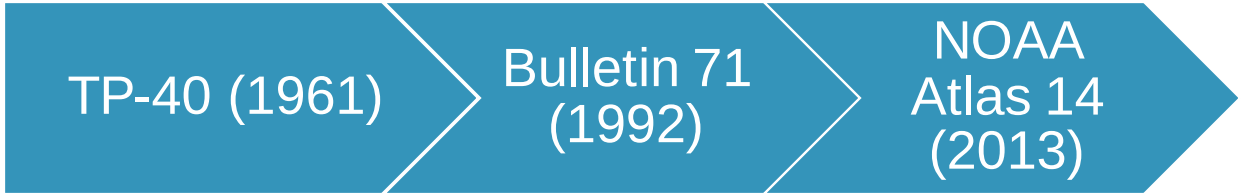
Infrastructure Status

Once installed, infrastructure often far exceeds the intended life span by decades; therefore, infrastructure designed for today must consider the future service or design life to withstand climate changes throughout the 21st Century.

Precipitation Frequency Estimate Data Sources



Climate Change Plan

- Consistent use of NOAA Atlas 14 across all WRD wet weather programs for the design storms
- NOAA Atlas 14 represents a greater period of recorded precipitation and denser data networks
- Support NOAA updating atlases every 10 years (Atlas 15 expected in 2027)

NOAA Atlas 15 Published in two volumes

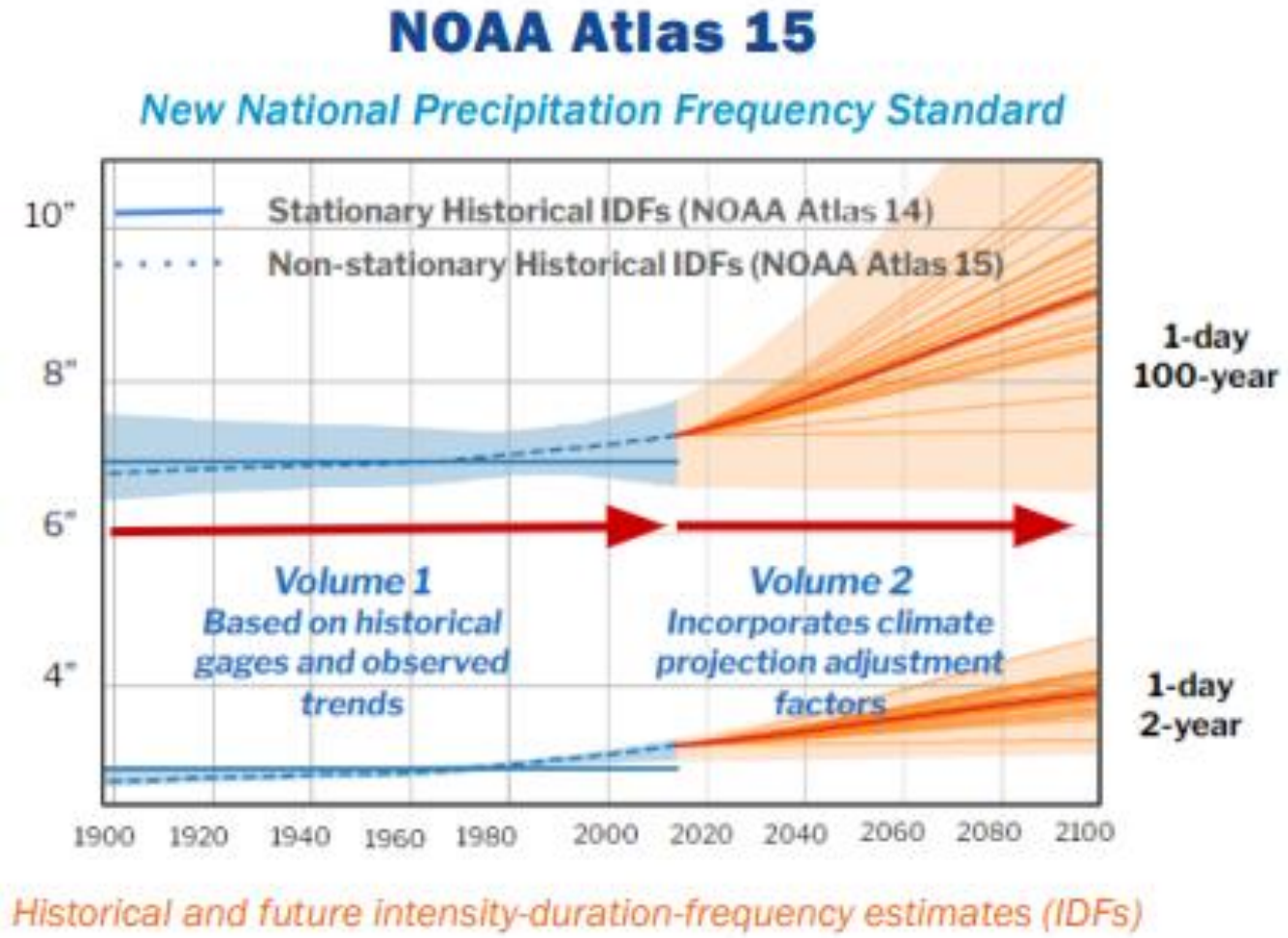
Volume 1:

Based on historical gages and observed trends.

Will consider stationary and non-stationary precipitation frequency

Volume 2:

Use future climate model projections to generate adjustment factors to Volume 1 to account for a changing climate.



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Proposed Resiliency Factor

Climate Change Plan includes all WRD Programs

CSO: 10% increase in storage volume for Retention Treatment Basins (RTB)

SSO: 10% increase in storage volume for design values using the Remedial Design Standard

MS4: 10% increase in stormwater runoff volume above the Channel Protection Performance Standard

Climate Change Plan and MS4s

Current Requirements:

Municipalities require developers to maintain the pre-development stormwater runoff volume up to the 2-year, 24-hour storm event (i.e., Channel Protection Performance Standard)

Climate Change Plan:

- Resiliency Factor: 10% increase in stormwater runoff volume above the CPPS
- Apply to MS4 permits and all EGLE-funded stormwater projects (e.g., nonpoint source and SRF stormwater projects)

Michigan Department of
Environment, Great Lakes, and Energy

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Questions?

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