



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Water Resources Division Overview

Jerrod Sanders

Director



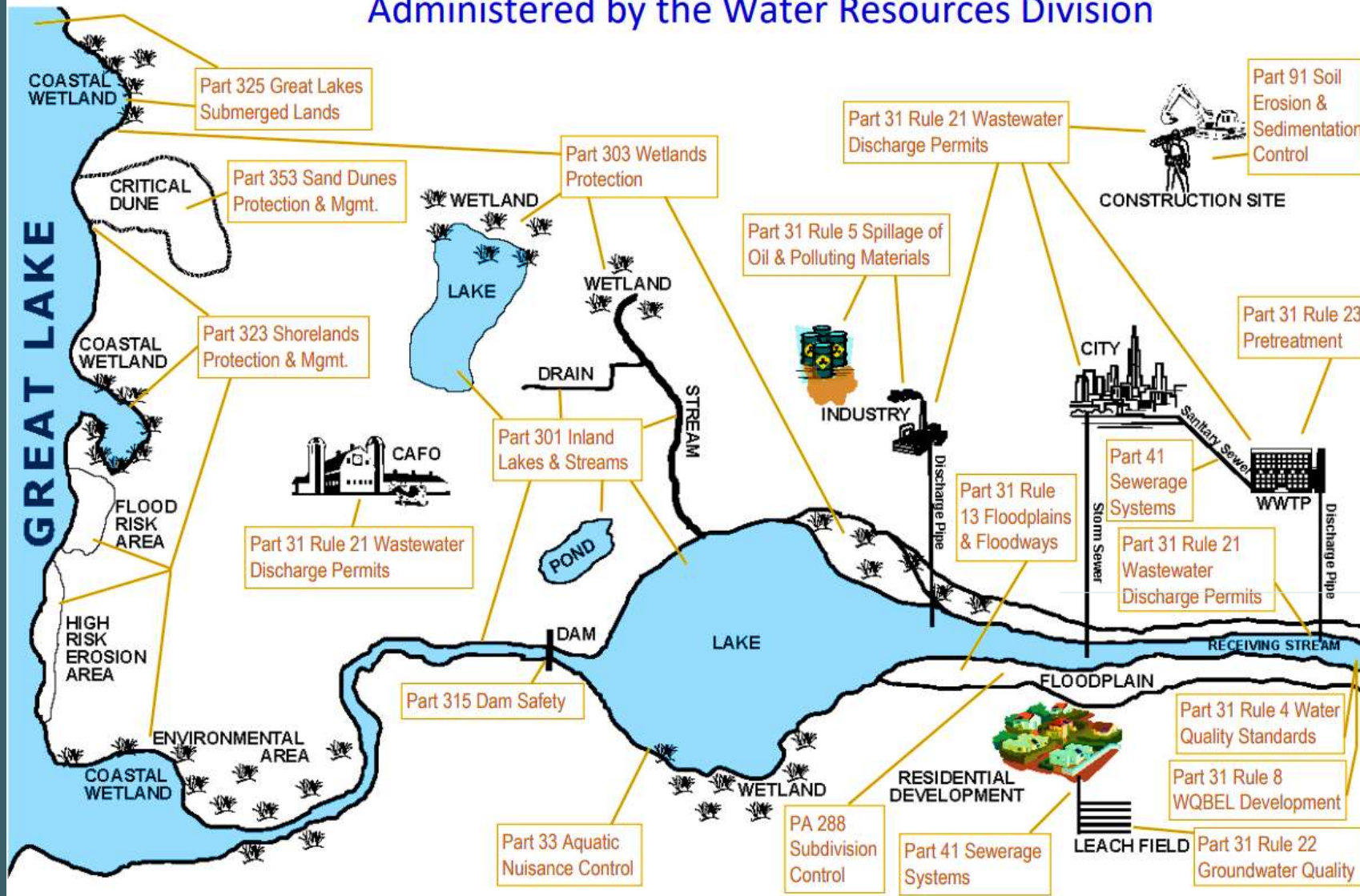
# Mission

Make Michigan's  
Waters Safe & Clean  
For Recreating,  
Fishing, Drinking &  
Healthy Aquatic  
Ecosystems

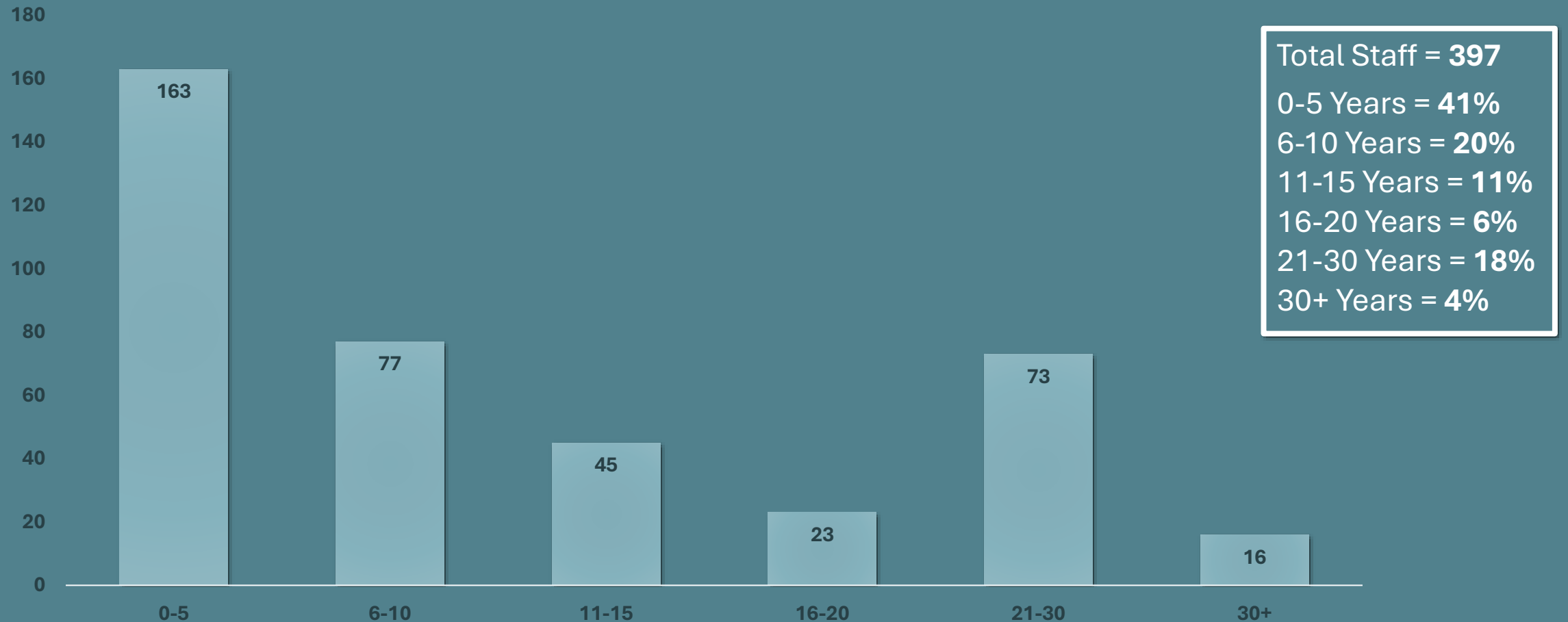




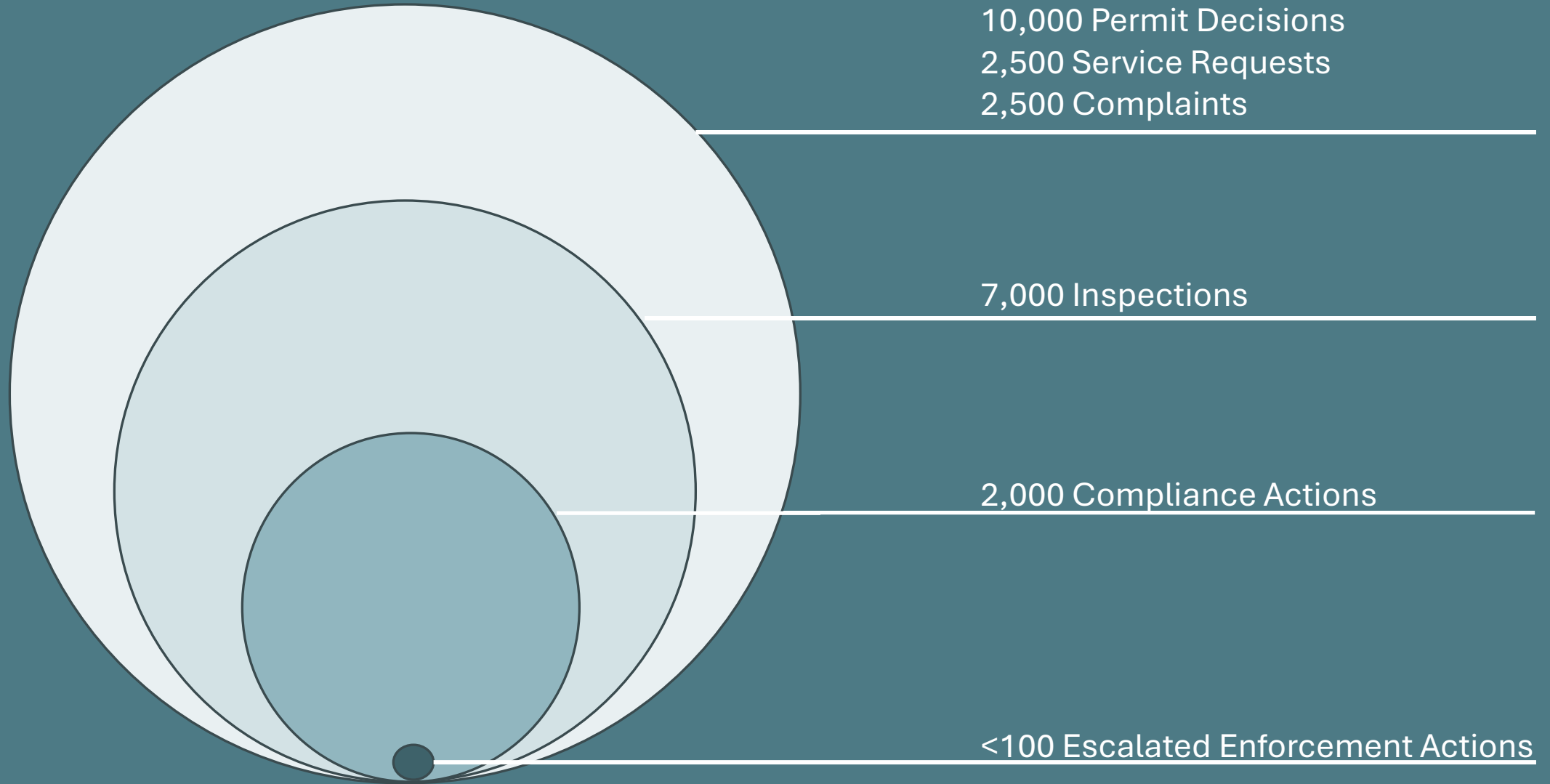
Michigan Statutes and Rules of the Natural Resources and  
Environmental Protection Act, 1994 PA 451, as Amended  
Administered by the Water Resources Division



# WRD Staff Years of Service



# Annual Regulatory Work





Water Quality



Water Resources

# Two Major Program Areas



# Permitting Timelines

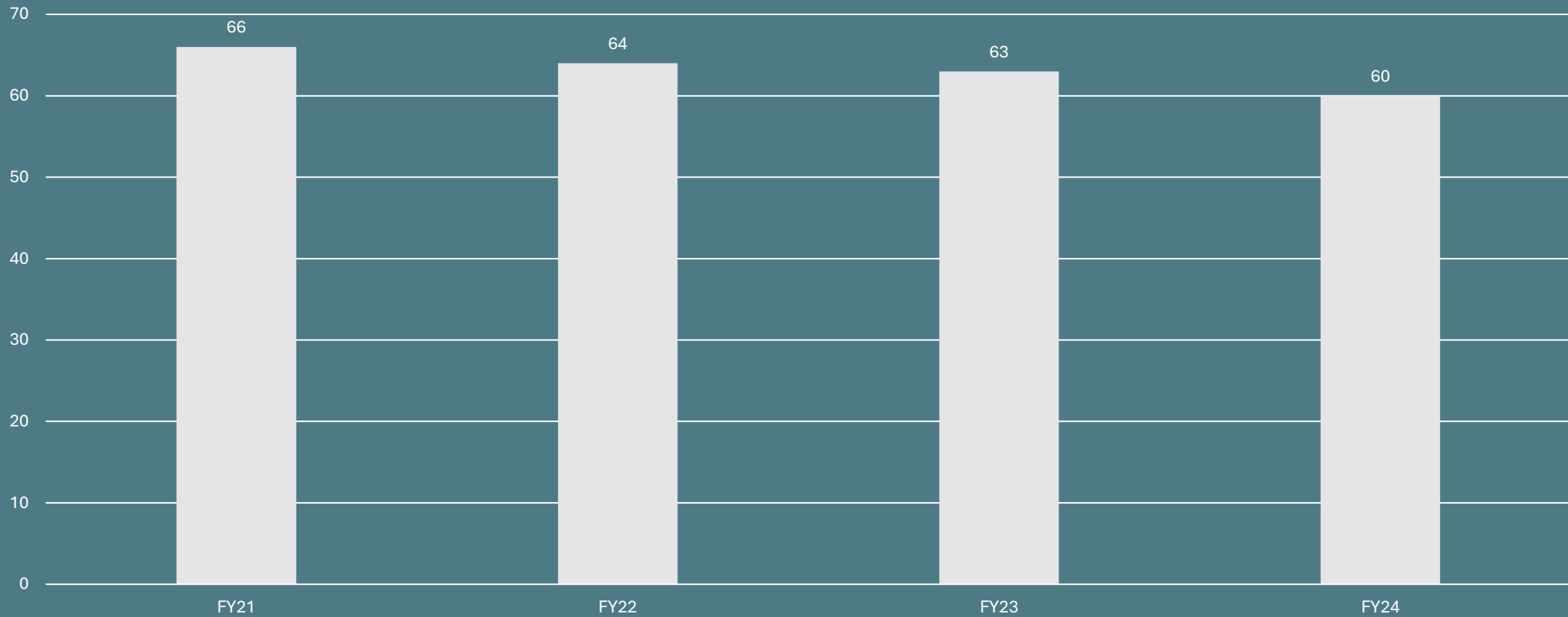
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- Governor's Priority
- Most common legislative inquiry
- Requires Partnership
- Will mostly, but not always, be appreciated by industry.

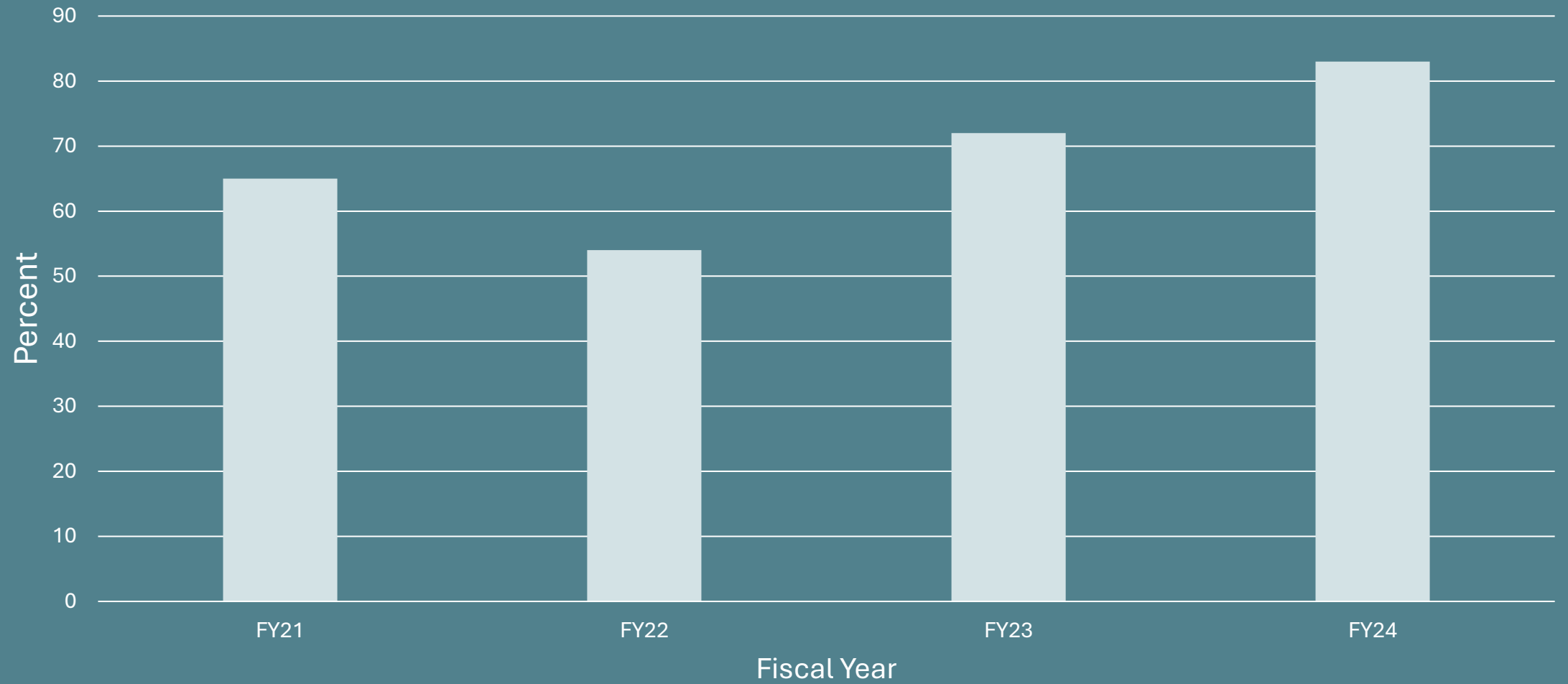


# Resource Programs

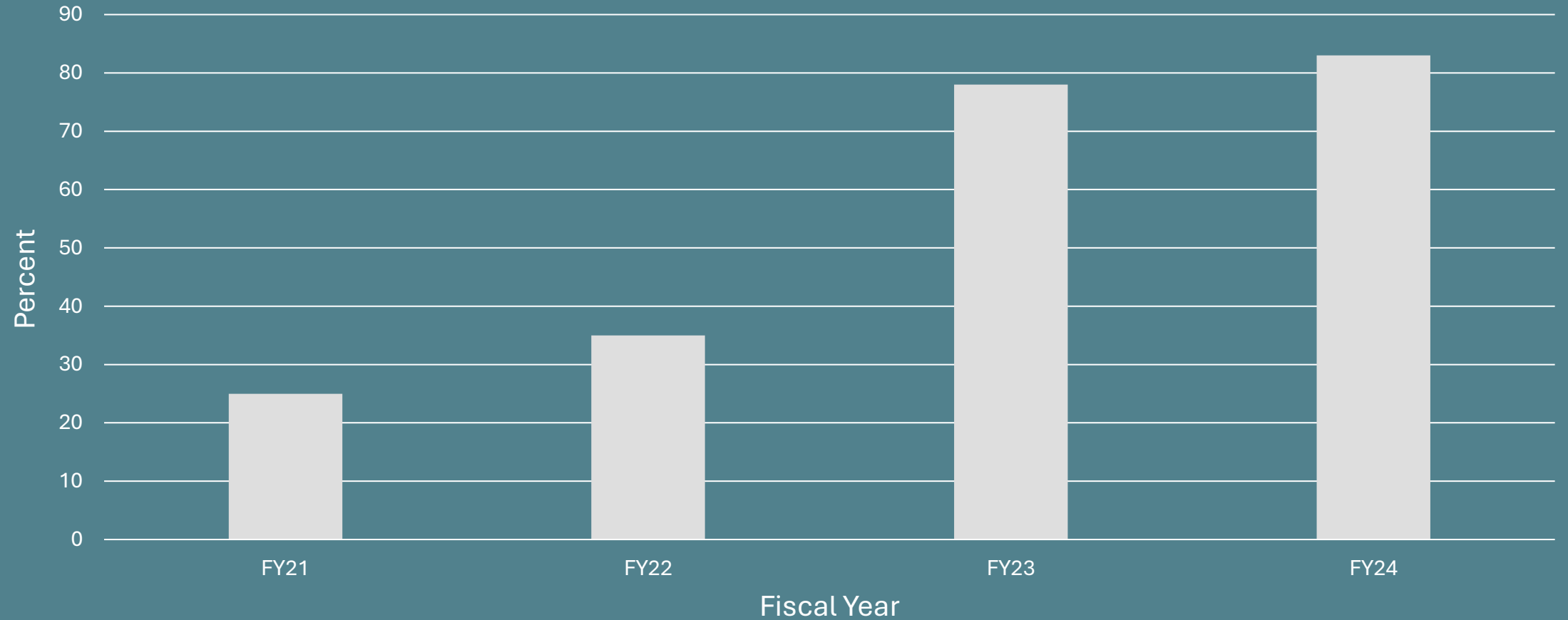
## Average Permitting Timelines (days)



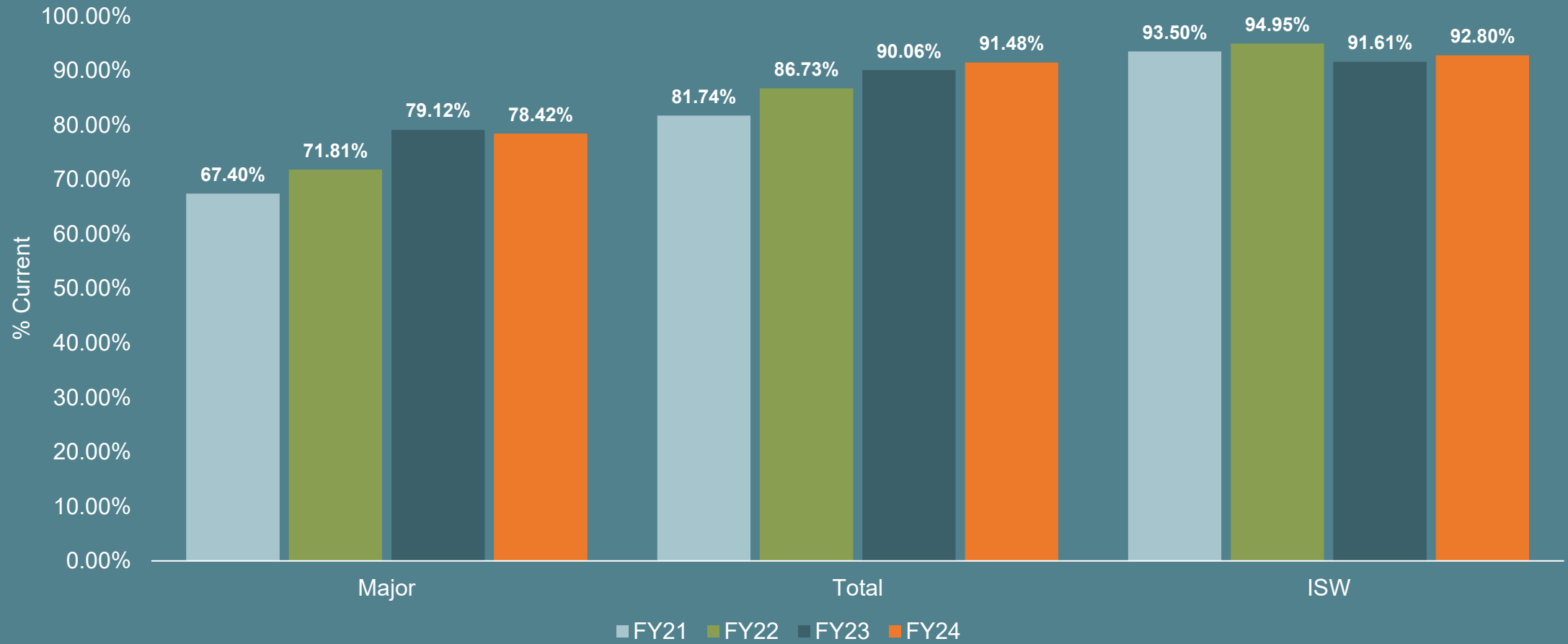
## Individual NPDES permits reissued within statutory deadline



## New Use/Major Modifications Individual NPDES permits issued within statutory deadline



## Percent Current NPDES Permits



# Michigan's first steps towards addressing PFAS in Wastewater

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Established Surface Water Quality Values for:

- PFOA, PFOS, PFBS, PFHxA, PFNA

Watershed Sampling and Fish Contaminant Monitoring identified elevated concentrations



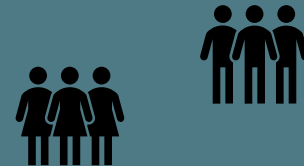
2018 - Evaluated PFAS in municipal wastewater and biosolids:

- Industrial Pretreatment Program PFAS Initiative
- Statewide WWTP and Biosolids Land Application Study



2020 - formed Emerging Pollutant Section

- Dedicated staff and resources to develop and implement PFAS compliance strategies





# Regulating PFAS in Wastewater

Developed Compliance Strategies for PFAS in regulated wastewater discharges (2021/2022):



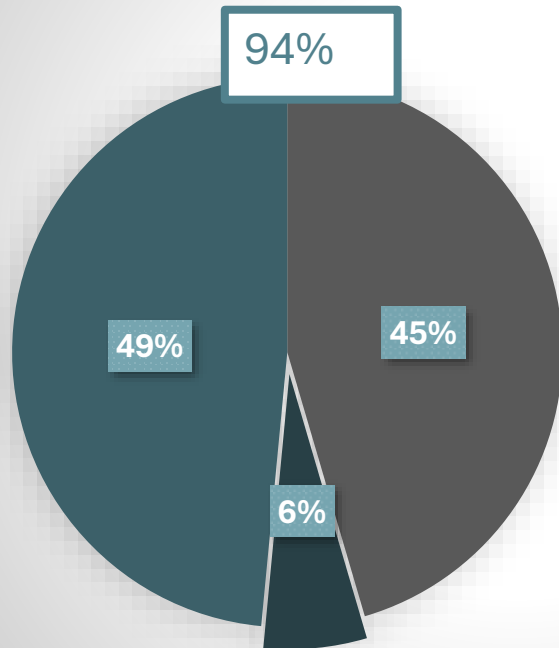
NPDES Municipal, Industrial Direct and Industrial Stormwater, Biosolids, and Groundwater Discharges

Focus on Source  
Identification and  
Control

Implemented under  
existing authority  
provided in state statute  
and rules

Prioritize compliance  
efforts at facilities with  
most potential to impact  
resources and/or public  
health

# Municipal Permitting/IPP Program



■ WWTP Discharge Meets PFOS Criteria but PFOS Source(s) Identified

■ WWTP Discharge Does Not Meet PFOS Criteria and PFOS Source(s) Identified

■ No Source(s) of PFOS Identified

## PFAS Requirements included in permits

- **139 WWTPs** with PFAS monitoring and/or limits
- **14 WWTPs with approved local limits** for PFAS; 4 pending

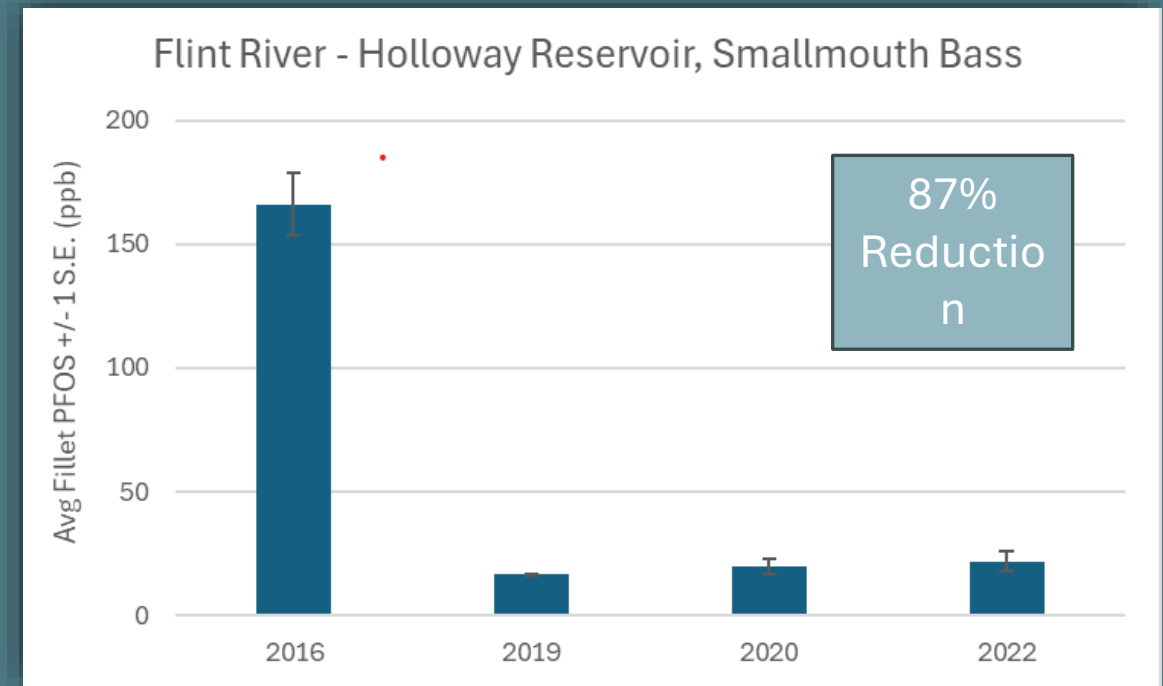
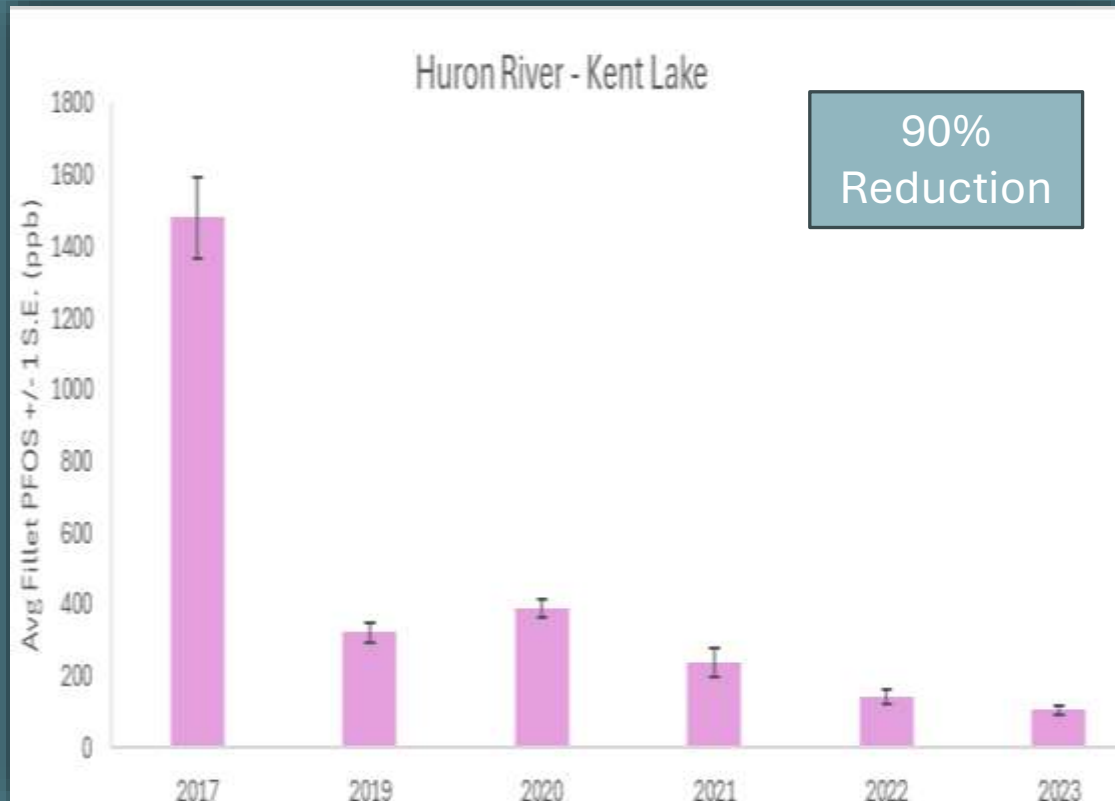
## Industrial User Source Control

- **68 have installed pretreatment** to remove PFAS prior to discharge
- **20 conducted cleaning, bulkheading, equipment change out, etc.**
- **6 limited leachate/restriction** of contaminated materials

## Results to date

- **59% reduction of PFOS loadings** in IPP WWTP effluent since 2019
- Up to **99% reductions in PFAS concentrations** at some WWTPs with significant industrial sources
- **94% WWTPs had effluent in compliance 2024.** Increased from 72% in 2019

# Successful Environmental Outcomes



# Biosolids Containing PFAS Interim Strategy

- Incorporated into the NPDES permitting strategy
- Prohibits land application of industrially impacted biosolids
- Requires mitigation and source investigation/source control if biosolids elevated
- Decreases in overall mean and median concentrations of PFOS and PFOA since implementation



Year	PFOS (ppb)		PFOA (ppb)	
	Mean	Median	Mean	Median
2018*	184	13	25	7
2021	21	9	8	4
2022	16	10	7	3
2023	11	7	6	3
2024**	8	5	5	2

\*Includes data from industrially impacted facilities as part of a statewide study

\*\*Calculations based on 152 results received as of 9/18/2024

All values listed are in parts per billion (ppb[μg/kg])

# Next Steps for PFAS

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Continued monitoring, tracking, and source ID (ongoing)

PFAS WQV Updates

Industrial Wastewater Discharges (ongoing)

Industrial Stormwater Discharges (ongoing)

Dredging and Disposal

2025 NPDES Res/Com Municipal Wastewater Study - influent, effluent, and residuals





# Groundwater Dependency

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More Than 4 Million People In Michigan Rely On Groundwater As Their Primary Source Of Drinking Water

Over 1 Million Private Drinking Water Wells Serve Single-Family Homes

1,086 Community Water Supplies Obtain Drinking Water From Groundwater

~1.5M On-Site Septic

Thousands of Permitted and Unpermitted Waste Discharges

# Groundwater Management

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Regulate Water  
Withdrawals

State Regulation  
of Waste  
Discharges

Local Regulation  
of Residential  
Well and Septic

State Cleanup  
Program and  
Criteria

Land Application  
Standards

Multi-Media  
Database

# “New” stuff coming down the pipe?

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- CAFO General Permit (5+ years of litigation)
- District Administrative Consent Orders (DACO)
- Wastewater Regionalization
- Industrial Stormwater General Permit – Benchmark Monitoring

# What's a DACO?

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Lowest Level of  
Formal Civil  
Enforcement –  
Penalties (smaller) +  
Compliance Plan

Negotiated in the  
Field/District

Intended to resolve  
simpler issues before  
they escalate

Not new, but WRD  
intends to increase  
utilization

Training field  
specialists now

# Industrial Stormwater Program: Upcoming Changes

- EPA requires benchmark monitoring for the sectors listed in the table since 1995.
- Currently WRD requires benchmark monitoring for Sectors M and N.
- Michigan has approximately 1,300 facilities under these sectors.
- EGLE plans to include benchmark monitoring to Sector AA at the next permit renewal.

Sectors	Sectors
Sector A: Timber Products	Sector J: Mineral Mining
Sector B: Paper Products	<b>Sector M:</b> <b>Auto Salvage Yards</b>
Sector C: Chemical Products	<b>Sector N:</b> <b>Scrap Recycling</b>
Sector D: Asphalt/Roofing	Sector Q: Water Transportation
Sector E: Glass, Clay, Cement	Sector S: Air Transportation
Sector F: Primary Metals	Sector U: Food Products
Sector G: Metal Mining	Sector Y: Rubber, Misc. Plastic
	Sector AA: Fabricated Metal Products



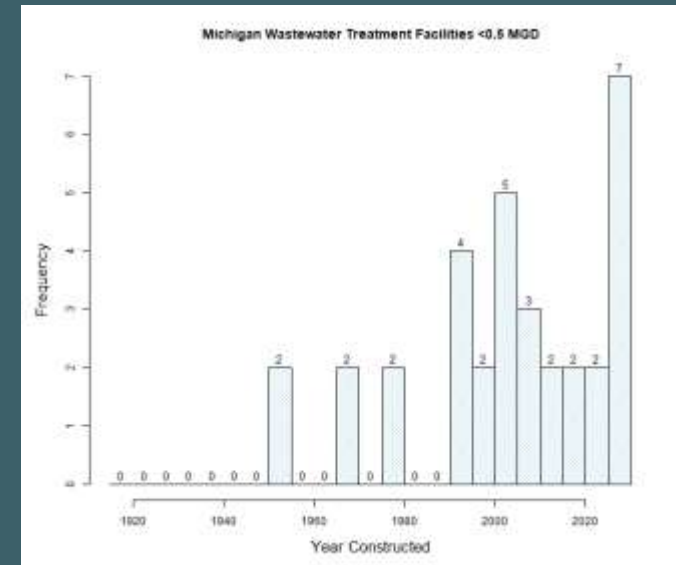
# Wastewater Regionalization

Regional wastewater management alternatives and plans:

1. Help meet the long-term challenges of development and urbanization expanding from major cities
2. Address community conflict that can arise from poorly planned development
3. Ensure adequate and consistent treatment of wastewater
4. Protect sensitive water resources like headwater streams and wetlands

Mechanisms:

1. CWA Section 208 plans
2. Less formal plans
3. Funding support through loans
4. Statutory or regulatory changes





Permitting  
Timelines



Effective  
Compliance



Timely & Effective  
Communication



Staff Retention &  
Training



Public Education  
& Engagement

# Ongoing Priorities



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Thank You

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