

# Anchors Way High Water Infrastructure Grant Requests

## Requesting Approval of:

- The selected alternative recommended by Wade Trim and City staff.
- A budget amendment to fund the increased scope of the selected alternative.
- A change order with Wade Trim to add design services for water main replacement and sewer rehabilitation required by the selected alternative.
- A proposal with Point Blue to complete a limited site environmental investigation of the soil and groundwater so that we don't run into any surprises during construction.

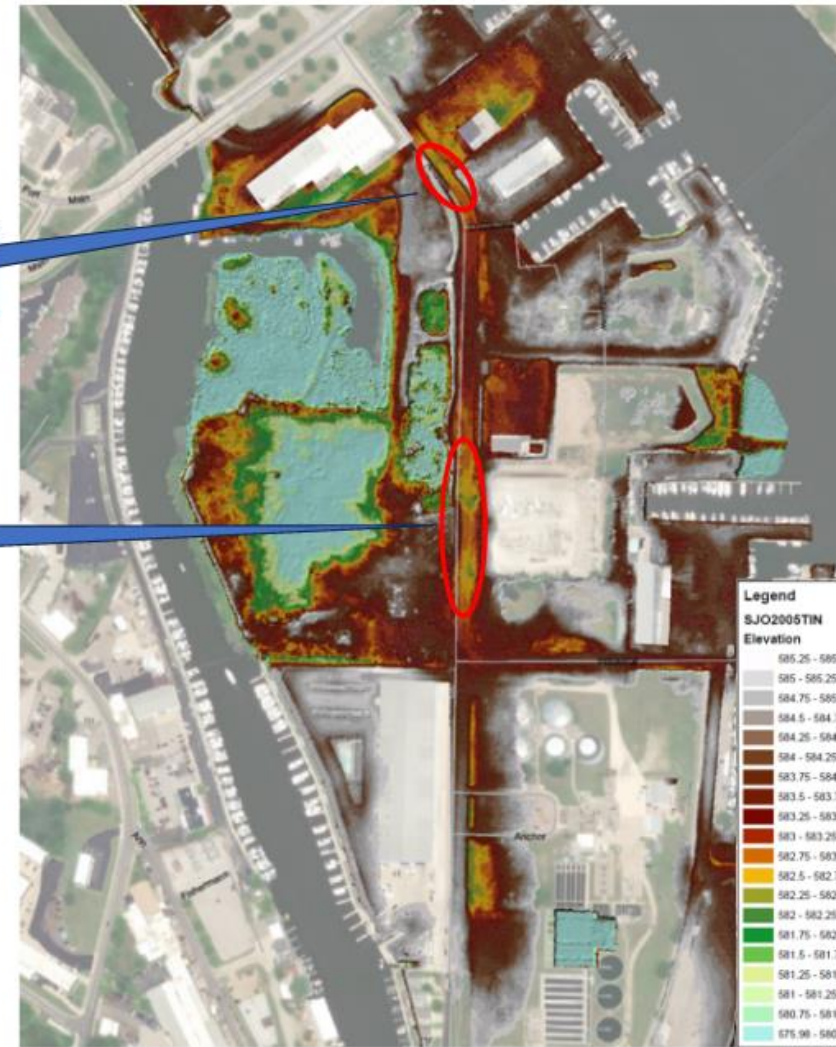
# Anchors Way High Water Infrastructure Grant Requests - Background

## History of Flooding on Anchors Way



# Anchors Way High Water Infrastructure Grant Requests

## Overall System Elevation Map



### Low Points Below the 100-year floodplain

Low point

Low point

Year	Pumping of Road Needed (Days)	Total Cost
2024	18	\$ 9,588.07
2023	30	\$ 9,985.56
2022	15	\$ 2,797.17
2021	12	\$ 4,569.03
2020	42	\$ 17,942.13
2019	31	\$ 12,747.64
2018	22	\$ 4,266.54
Total	170	\$ 61,896.14

# Anchors Way High Water Infrastructure Grant Requests - Progress

- City Commission approved application for Anchors Way HWI Grant - November 2022
- EGLE informed the City application selected for award - Summer 2023
- City Commission approved agreement - August 2023

## Design Team Progress

- Worked through the alternatives analysis process.
- Selected an alternative.
- Held a Public Meeting.
- Held a pre-application meeting with EGLE.

City staff has performed grant administration including amending and extending the grant, and hiring topographic survey & geotechnical services directly versus through Wade Trim. Staff time is part of the match.





# Anchors Way High Water Infrastructure Grant Requests

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## High Great Lake Level Effects

High Lake Level



High Lake Level With Wind

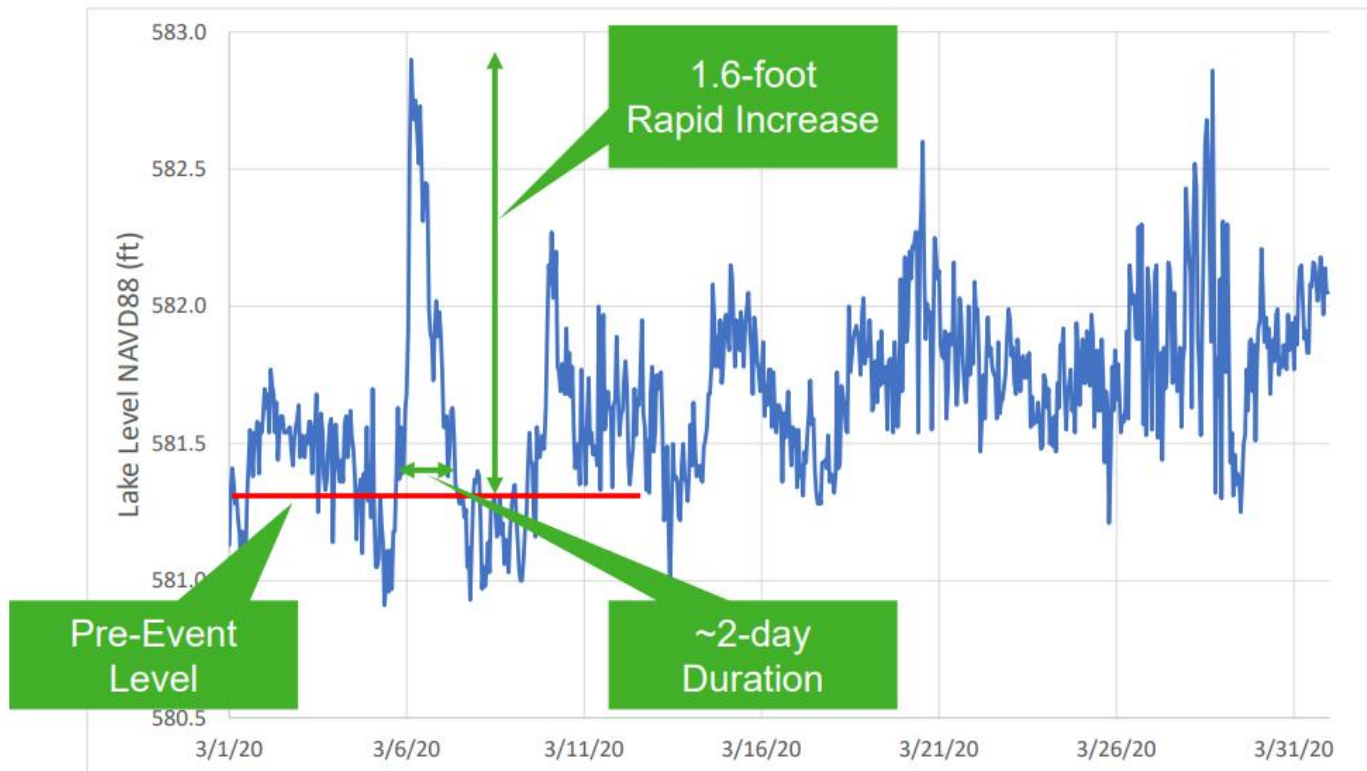


WADE  
TRIM

# Anchors Way High Water Infrastructure Grant Requests

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## Lake Level Wind Impacts March 6, 2020 Event



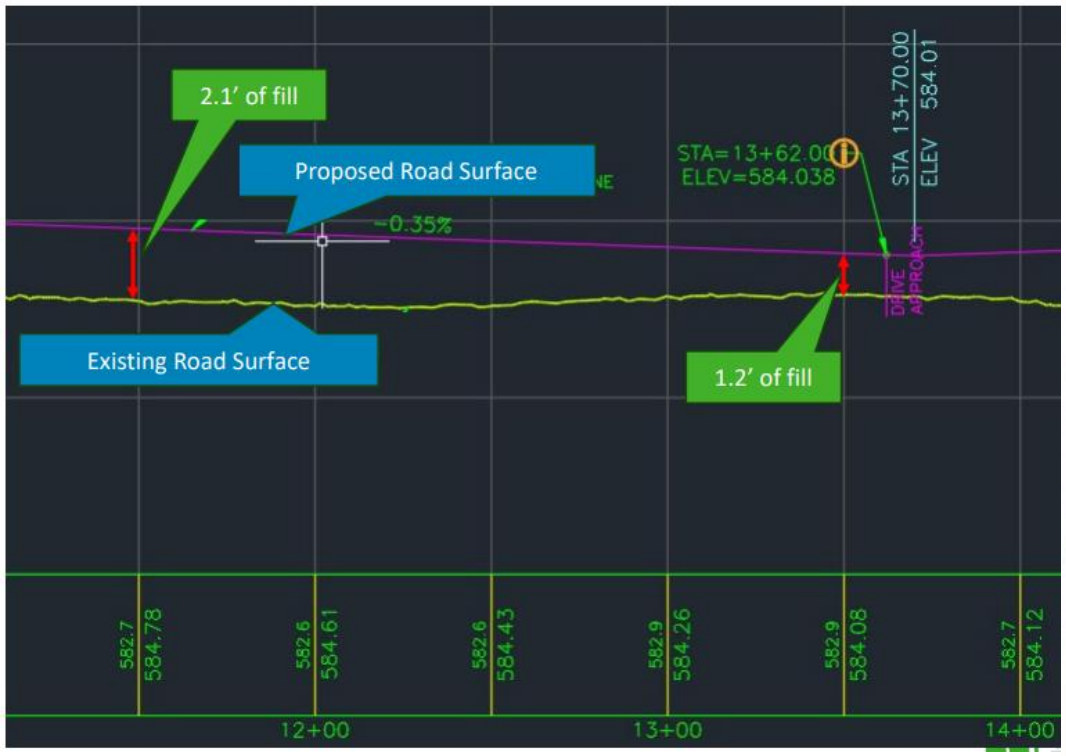
# Anchors Way High Water Infrastructure Grant Requests

## Selected Alternative

- Preferred alternative at the time of the grant application was to build berms to protect the road from flooding. Construction of berms proved to be impractical predominantly due to impacts to private property for the desired level of service.
- Raising the roadway by reconstructing approximately 2,200 feet of Anchors Way, proved to be the best solution for high Lake Michigan levels coupled with wind events.

The selected alternative the design team is recommending requires water and sewer design, and soil and groundwater environmental services.

# Anchors Way High Water Infrastructure Grant Requests



Legend

- driveways
- approach





# Anchors Way High Water Infrastructure Grant Requests

## Alternative 1: Pump Station – Cost \$1,420,000

- Gravity Storm Sewer
- Ditching
- Pump Station
- Protection up to Lake Michigan level of 583.25
- Approximately 10-year level of service\* including wind impacts

## Alternative 2: Raise Roadway – Cost \$1,568,000 (road & drain only\*\*)

- New higher road
- Gravity Storm Sewer
- Pump Station
- Protection up to Lake Michigan level of 584.0
- Approximately 35-year level of service including wind impacts

\* Level of service based upon return frequency of water over road.

\*\* Sanitary sewer & watermain construction raises total to \$2,500,000



# Anchors Way High Water Infrastructure Grant Requests - Funding

Grant Amount = \$144,800  
City Match = \$37,433.61  
Total = \$182,233.61  
City Staff Match = \$14,033.61 of above

End Date Extended to  
June 30, 2025

Funding has also been  
reallocated based upon  
actual costs for the various  
tasks.



## STATE HIGH WATER INFRASTRUCTURE GRANT AGREEMENT BETWEEN THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY AND THE CITY OF ST. JOSEPH

This Grant Agreement (Agreement) is made between the Michigan Department of Environment, Great Lakes, and Energy, Water Resources Division (State), and the City of St. Joseph (Grantee).

The purpose of this Agreement is to provide funding in exchange for work to be performed for the project named below. The State is authorized to provide grant assistance pursuant to Section 1006 of Public Act 87 of 2021. Legislative appropriation of funds for grant assistance is set forth in Public Act 166 of 2022. This Agreement is subject to the terms and conditions specified herein.

### PROJECT INFORMATION:

Project Name: Anchor's Way High Water Mitigation

Project #: 2023-SHWI-017

Amount of Grant: \$144,800

% of Grant State 100 / % of Grant Federal 0

Amount of Match: \$37,433.61

PROJECT TOTAL: \$182,233.61 (grant plus match)

Start Date: 7/1/2023

End Date: 12/31/2024



# Anchors Way High Water Infrastructure Grant Requests – Amendment Request

FY23-24		
Activity	Projected	Not Expended
\$ 37,210	\$ 100,000	\$ 62,790

FY24-25		
Approved	Approved + Not Expended	Amendment Request
\$ 100,000	\$ 162,790	\$ 218,290

Original Project Budget Total: \$200,000

New Project Budget Total: \$255,500

# Anchors Way High Water Infrastructure Grant Requests

Wade Trim Fees to add Water & Sewer Design		Total Project Budget Summary	
Sewer Lining	\$3,950.00	Original Budget	\$200,000.00
Replace Water	\$26,000.00	Wade Trim	\$161,735.00
<b>Total Wade Trim Change Order</b>	<b>\$29,950.00</b>	Point Blue	\$44,462.00
		Topo Survey	\$11,000.00
		Geotechnical	\$15,000.00
<b>Point Blue Fees for Soil &amp; GW Investigation</b>		Sub-Total	\$232,197.00
	<b>\$44,462.00</b>	10% Contingency	\$23,219.70
		<b>Amended Total</b>	<b>\$255,500.00</b>
<b>Net Increase this Change Order</b>	<b>\$74,412.00</b>		
<b>Consulting Fees w/Change Order</b>	<b>\$240,197.00</b>		



# Anchors Way High Water Infrastructure Grant Requests

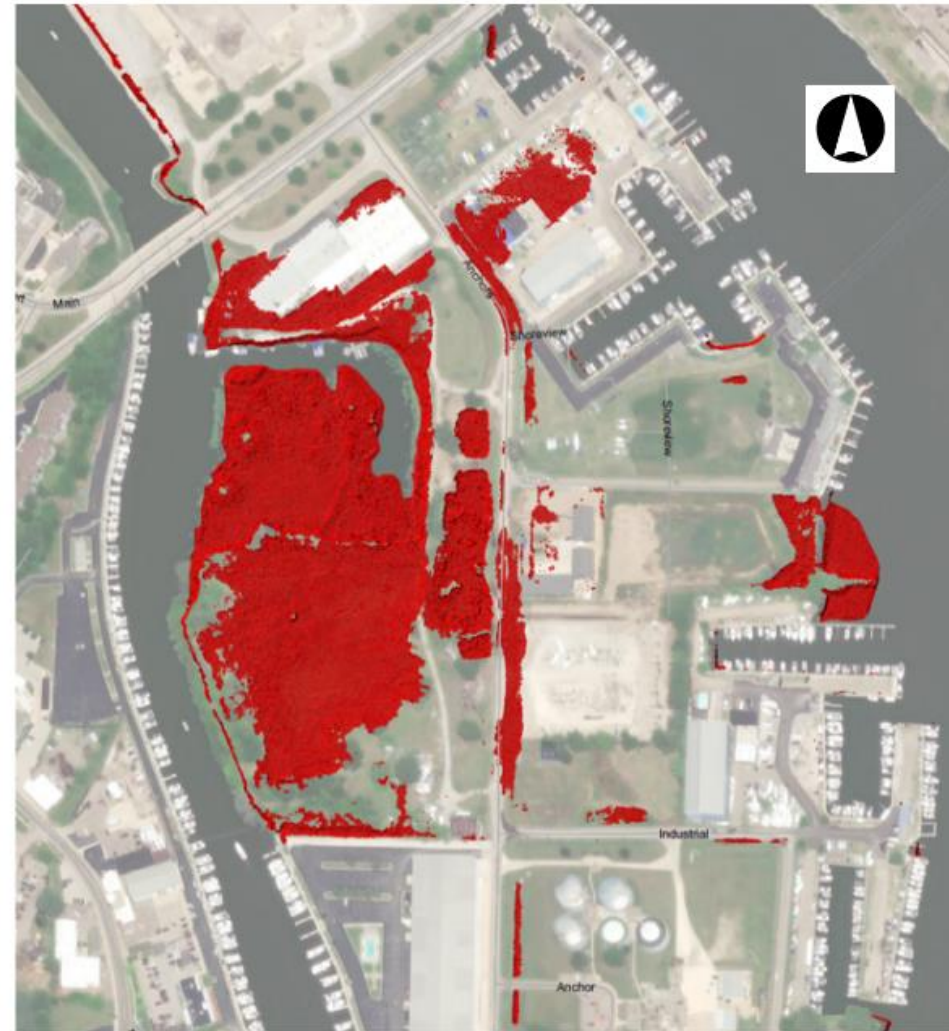
# SUPPLEMENTAL SLIDES

# Anchors Way High Water Infrastructure Grant

## Inundation Map 583.0'

### Lake Level Analysis

- 583.0 does not show a direct connection to lake
- Overland flow cannot cause roadway flooding
- There is no positive drainage for roadway low points during high lake levels

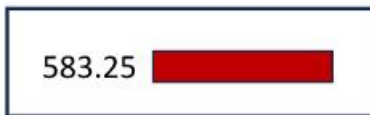


# Anchors Way High Water Infrastructure Grant

## Inundation Map 583.25'

### Lake Level Analysis

- 583.25 does not show overland flow paths to the lake



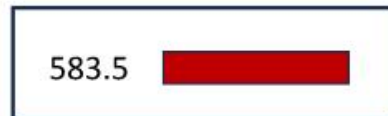


# Anchors Way High Water Infrastructure Grant

## Inundation Map 583.5'

### Lake Level Analysis

- 583.5 shows a direct connection to lake
- There is no positive drainage for roadway low points during high lake levels



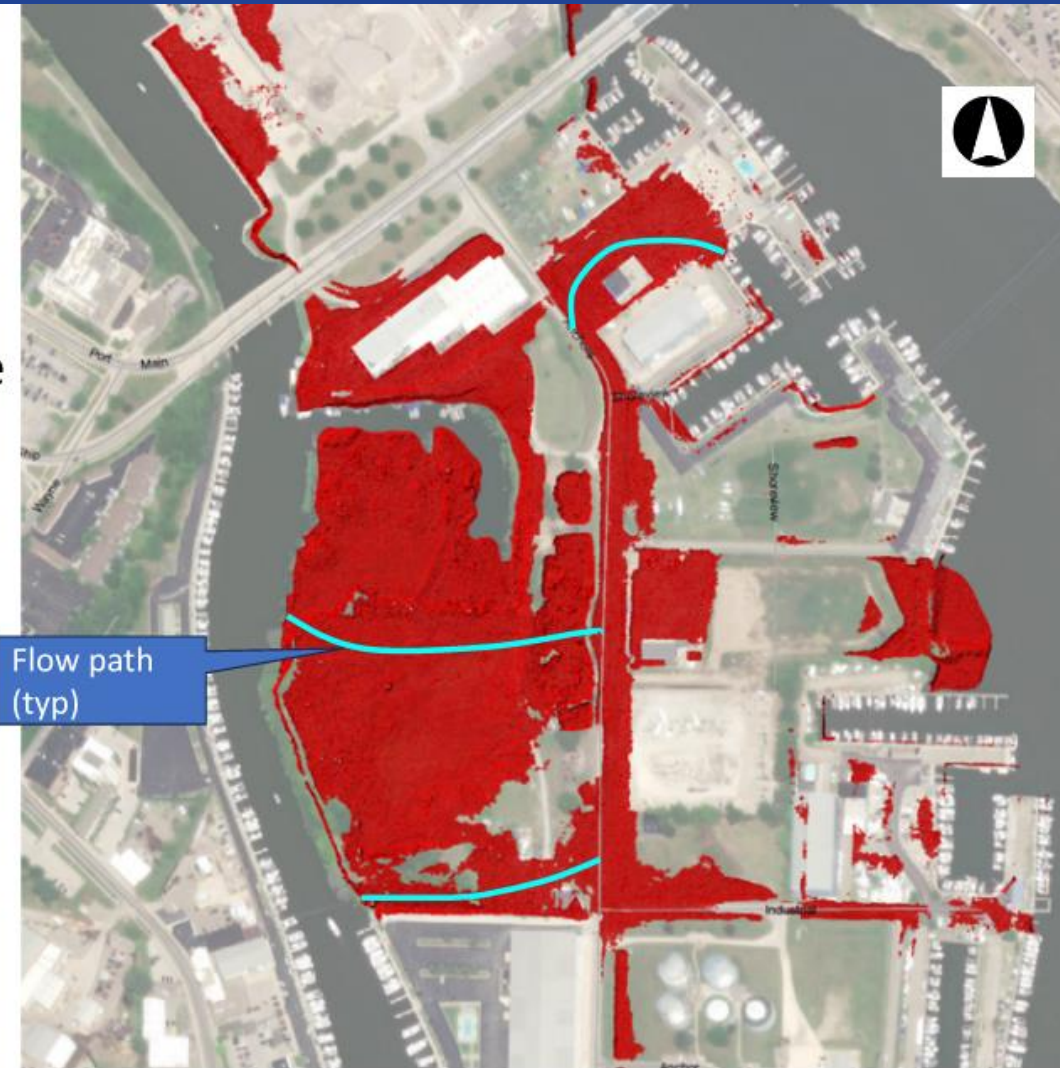
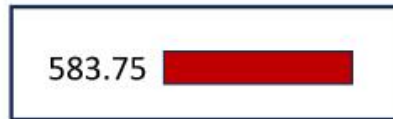


# Anchors Way High Water Infrastructure Grant

## Inundation Map 583.75'

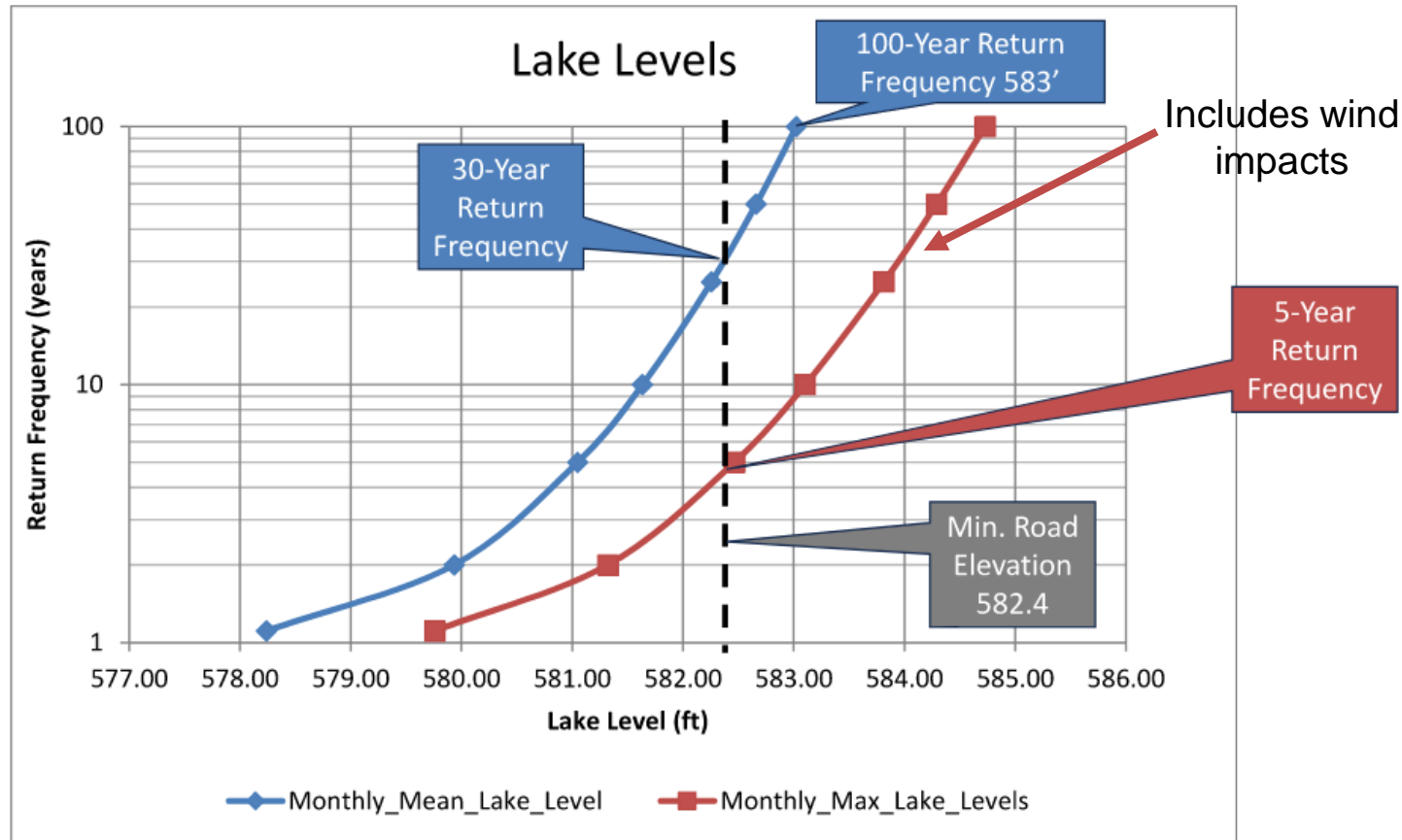
### Lake Level Analysis

- 583.75 shows direct connections to lake
- There is no positive drainage for roadway low points during high lake levels



# Anchors Way High Water Infrastructure Grant

## Lake Michigan Log Pierson Type III Regression Analysis Results

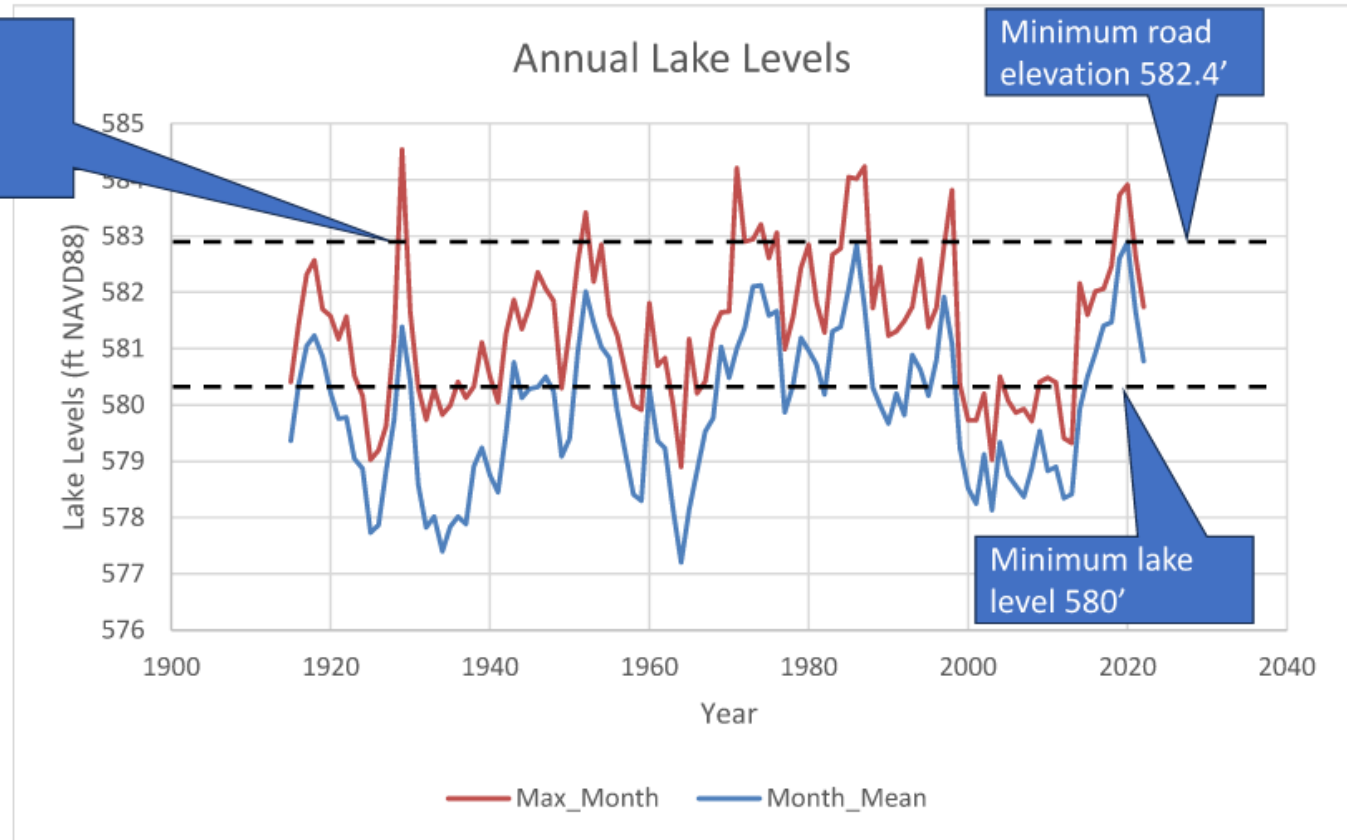


# Anchors Way High Water Infrastructure Grant

## Lake Michigan Long Term Lake Levels (Calumet) Peak Month Level

1929 Example  
Max Month 584.54'  
Max Mean Month 581.39'  
Delta = 3.15'

Maximum month levels assumed to be associated with temporary wind induced increases in lake level



Source: NOAA Tides & Currents

# Anchors Way High Water Infrastructure Grant

## Current Status



Michigan Department of Environment, Great Lakes, and Energy  
 Water Resources Division  
 State High Water Infrastructure Grant Program  
 Financial Status Report  
 Completion is required to obtain payment

Grantee Organization Name: City of St. Joseph  
 Project Name: Anchors Way High Water Mitigation  
 EGLE Tracking Code: 2023-SHWI-017

Period Covered: 7/1/24-9/30/24

Date Submitted: 10/1/24

Column 1 BUDGET CATEGORIES	Column 2 Grant Funds Expended	Column 3 Grant Funds Incurred to	Column 4 Grant Funds in Project	Column 5 Grant Funds Balance to	Column 6 Local Match Earned	Column 7 Local Match Earned to	Column 8 Local Match in Project	Column 9 Local Match Balance to
Staffing	\$ -	\$ -	\$ -	\$ -	\$ 1,779.43	\$ 4,965.88	\$ 10,024.01	\$ 5,024.01
Fringes	\$ -	\$ -	\$ -	\$ -	\$ 711.77	\$ 1,986.37	\$ 4,009.60	\$ 2,009.60
<b>SALARY &amp; FRINGE SUBTOTAL</b>	\$ -	\$ -	\$ -	\$ -	\$ 2,491.20	\$ 6,952.25	\$ 14,033.61	\$ 7,033.61
<b>CONTRACTUAL SERVICES:</b>								
Wade Trim - Alt. and Engineering/Design & Prepare Temporary Access Drawings	\$ 18,325.00	\$ 32,135.00	\$ 118,300.00	\$ 86,165.00	\$ -	\$ 23,400.00	\$ 23,400.00	\$ -
Abonmarche – Topographic Survey	\$ -	\$ -	\$ 11,000.00	\$ 11,000.00	\$ -	\$ -	\$ -	\$ -
SME – Geotechnical	\$ -	\$ -	\$ 15,000.00	\$ 15,000.00	\$ -	\$ -	\$ -	\$ -
TBD - Easement Preparation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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<b>CONTRACTUAL SERVICES SUBTOTAL</b>	\$ 18,325.00	\$ 32,135.00	\$ 144,300.00	\$ 112,165.00	\$ -	\$ 23,400.00	\$ 23,400.00	\$ -
<b>Supplies, Material and Equipment</b>								
<b>Supplies, Materials (Itemize)</b>								
Printing Exepnses	\$ -	\$ -	\$ 500.00	\$ 500.00	\$ -	\$ -	\$ -	\$ -
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<b>SUPPLIES AND MATERIALS SUBTOTAL</b>	\$ -	\$ -	\$ 500.00	\$ 500.00	\$ -	\$ -	\$ -	\$ -
<b>EQUIPMENT (any item over \$5000)</b>								

