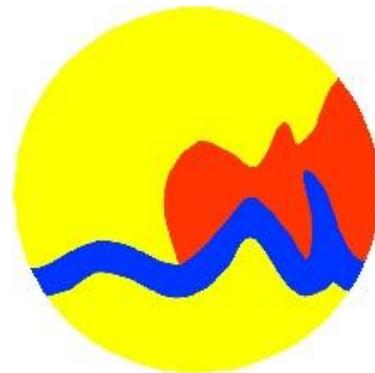




# GRAND RAPIDS RESTORATION

*RETURNING THE RAPIDS TO THE GRAND*





# GRAND RAPIDS, MI TODAY



# GRAND RAPIDS, MI 1868



# 1913 GRAND RAPIDS PROGRESS:

*“..compare it with the rapids at Sault Ste. Marie”*

## Why This Place is Called Grand Rapids

Many people living in Grand Rapids have given little thought to the origin of the name of their home city. There is nothing in the present aspect of the river itself to suggest any rapids, to say nothing of any grand rapids. In the very early days the river presented a much different aspect than it does now. Then there were some very grand rapids—rushing waters that extended from near Sixth Street to Wealthy Street. To give one an idea of the great decline or fall in the river bed, we have only to compare it with the rapids at Sault Ste. Marie.

The Soo Rapids have a fall of 20.6 feet in approximately three miles, and the rushing waters near the International Bridge are a source of interest to the many visitors that go to that part of Michigan.

The fall in the river bed at Grand Rapids from Sixth Street to Wealthy Street is 17.4 feet, or only an approximate of four feet less than the fall that covers three miles and more at Sault Ste. Marie.

This sharp fall or decline in the river bed at Grand Rapids is disguised because of the power canals on each side of the river which take up the water and carry it through many factories and out through numerous tail races, so that the name “Grand Rapids” is not suggested any more by the present appearance of the river.

Saint Mary's Rapids

# SAINT MARY'S RIVER RAPIDS





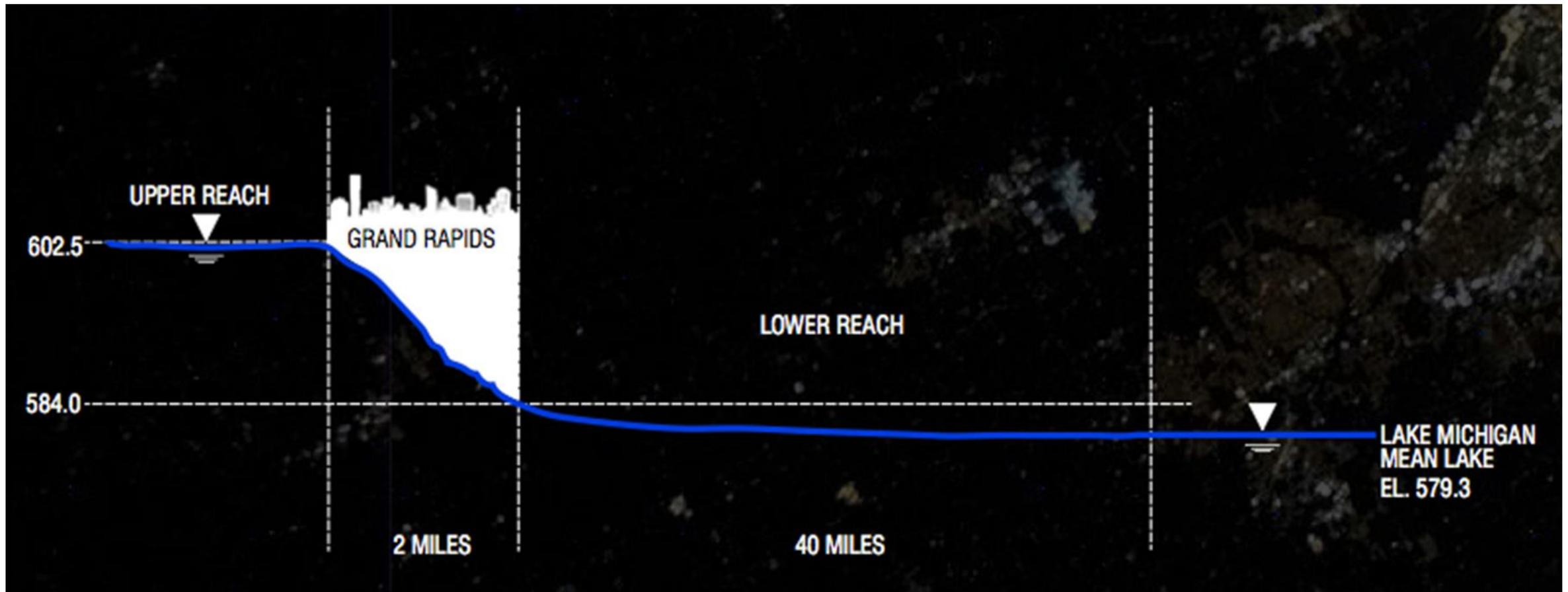
# LAKE SUPERIOR

← 2007

2017



# THE RAPIDS



# HOW DID IT START?



Chip Richards (Left) & Chris Muller (Right)  
Photo Credit: Sally Finneran | MLive

# RIVER CORRIDOR AND DOWNTOWN WORKING VISION AND GOALS

Downtown Grand Rapids is the region's downtown and civic heart of West Michigan. It will reflect an attainable and inclusive urbanism welcoming to downtown residents, nearby neighbors and visitors. Together, the Downtown and the River will provide an experience that can't be found in Western Michigan and strengthen the City's brand as progressive, healthy and vibrant. To accomplish this we need to:

- Create a true downtown neighborhood
- Restore the River as the Draw
- Strengthen connections between places and across barriers
- Ensure continued vitality of the local economy
- Re-orient your view
- Reinvest in public spaces

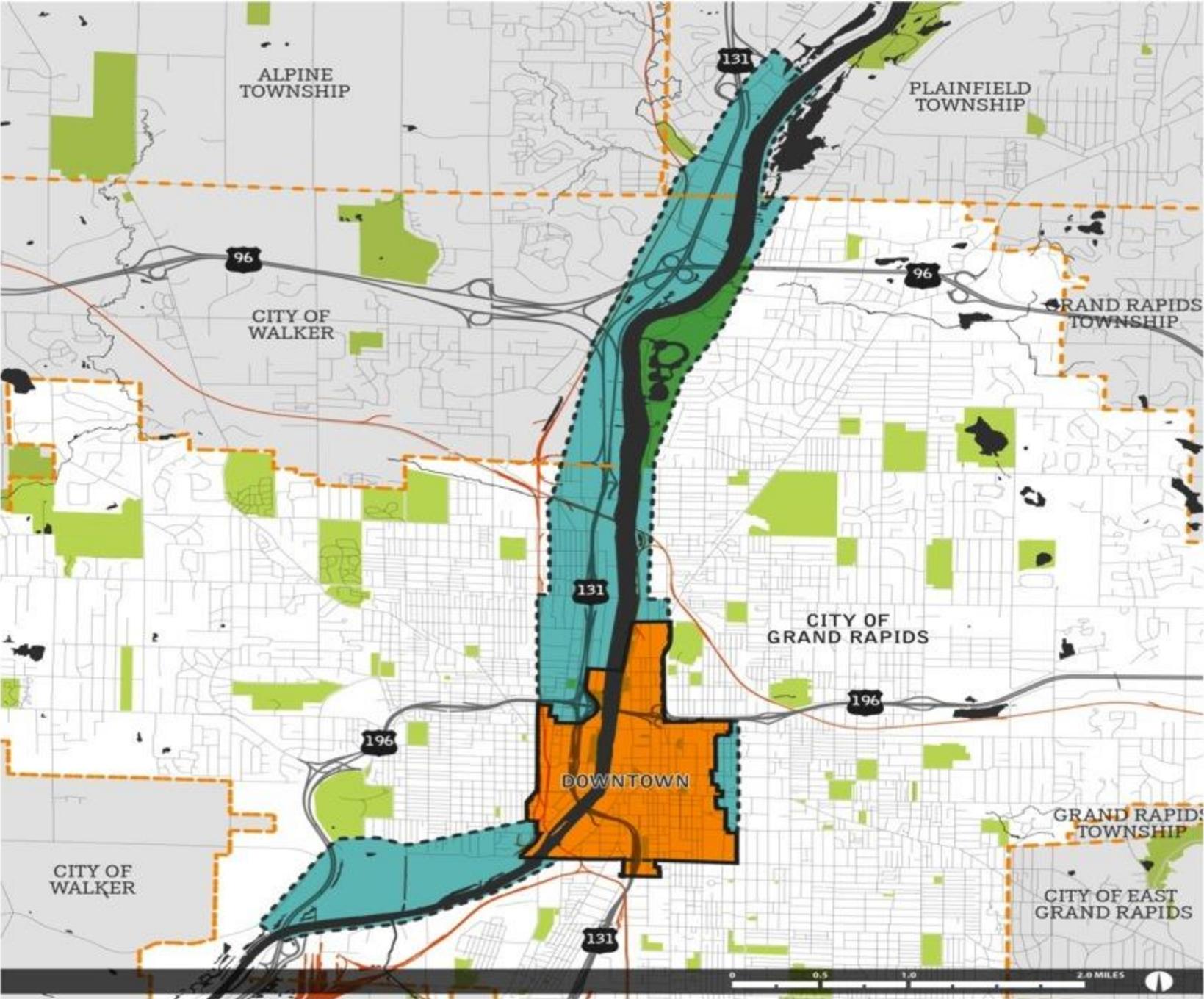


# RIVER CORRIDOR PLAN STEERING COMMITTEE AND PLANNING PROCESS

- City endorsement of vision, pursuing community engagement, planning process
- Community tradition of cross-sector support for big ideas
- City has eliminated combined sewer overflows.
- Master Planning Process:
  - River Corridor
  - Downtown
  - Connections to the River
  - Trail Connections
  - Program development adjacent to River
  - Site planning



# CONTEXT MAP



- RAIL
- HIGHWAY
- STREETS
- CITY / TOWN BORDER
- RIVER STUDY AREA
- DOWNTOWN STUDY AREA

### Downtown Committee

- Public participation strategies
- Ensure comprehensive stakeholder engagement
- Participate in developing plan recommendations that will contribute to project deliverables.

SUPPORTING STAFF: DGRI, GRForward Consultants

### River Corridor Committee

- Public participation strategies
- Ensure comprehensive stakeholder engagement
- Participate in developing plan recommendations that will contribute to project deliverables.

SUPPORTING STAFF: Planning Department, GRForward Consultants

### River Restoration Committee

- Explore potential organizational models and processes for the long-term operation, management and programming of river improvements
- Cultivate and inspire widespread participation and support of the project
- Advocate for resources on the Local, Federal, State and Regional levels

SUPPORTING STAFF: Planning Department, GRWW River Restoration Org.



## DOWNTOWN AND RIVER PROCESS DIAGRAM (DRAFT)

### PLANNING COMMISSION

- Public hearings
- Plan review
- Make recommendations to the City Commission

### GRAND RAPIDS CITY COMMISSION

- Public hearings
- Final plan adoption
- Final permit application approval

# RIVER CORRIDOR ACCESS

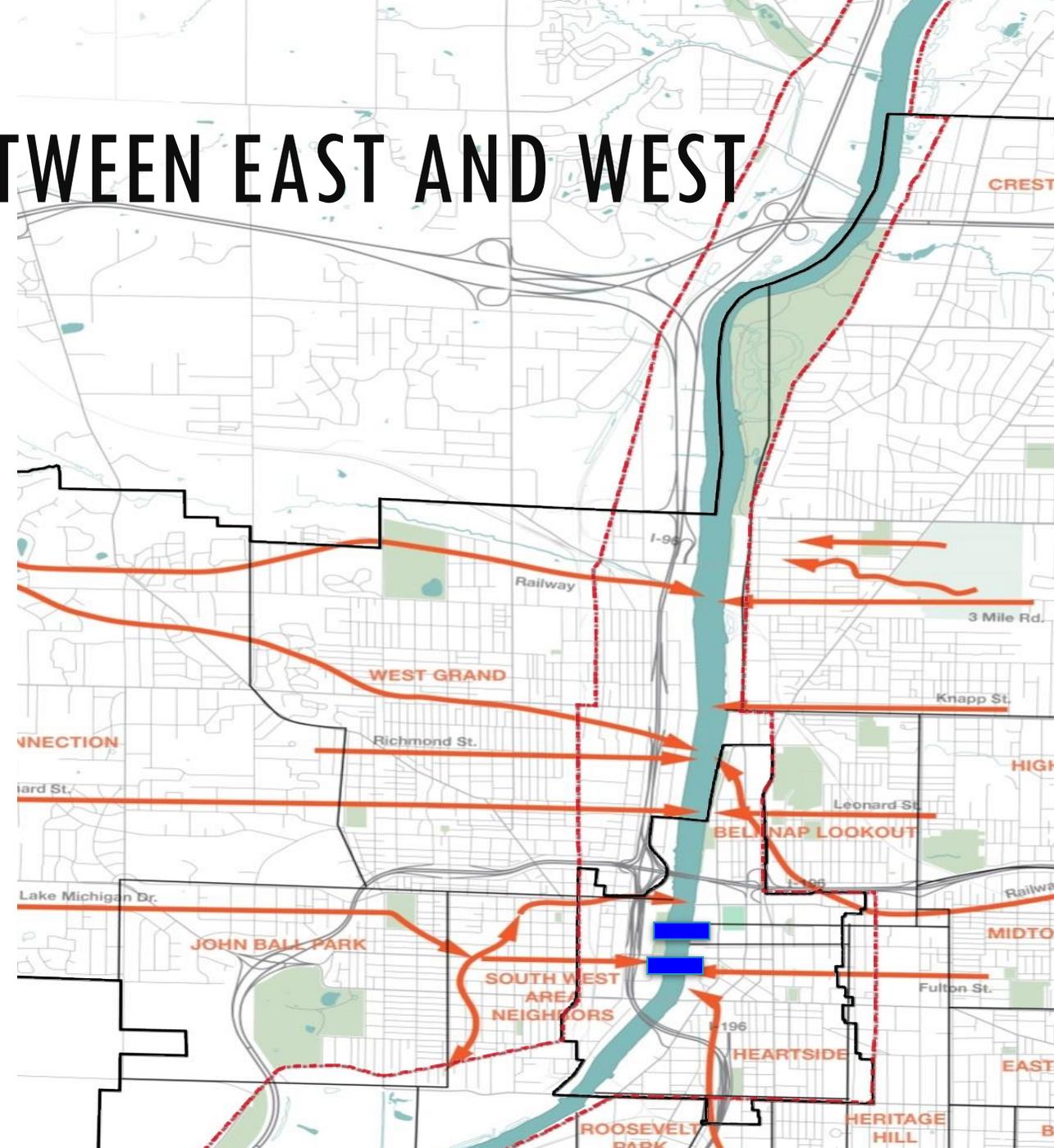
- Good access
- No access
- Seasonal access
- Restricted bandwidth
- Trail interruption



# CREATE CONNECTIONS BETWEEN EAST AND WEST NEIGHBORHOODS

- Improve access to the river.
- Improve access to parks.
- Improve access between east and west sides of the river.
- Only two pedestrian-only crossings of the river.
- Increase access to parks and the river, specifically on the west side where lacking.

 Pedestrian river crossing



# PUBLIC OUTREACH STRATEGIES

- GR Forward Open House
- Hosting events
- Surveys
- Conducting focus groups
- Speaker Series
- Social Media
- Interactive mapping
- Meeting with neighborhoods, business associations, regional partners, and many more!

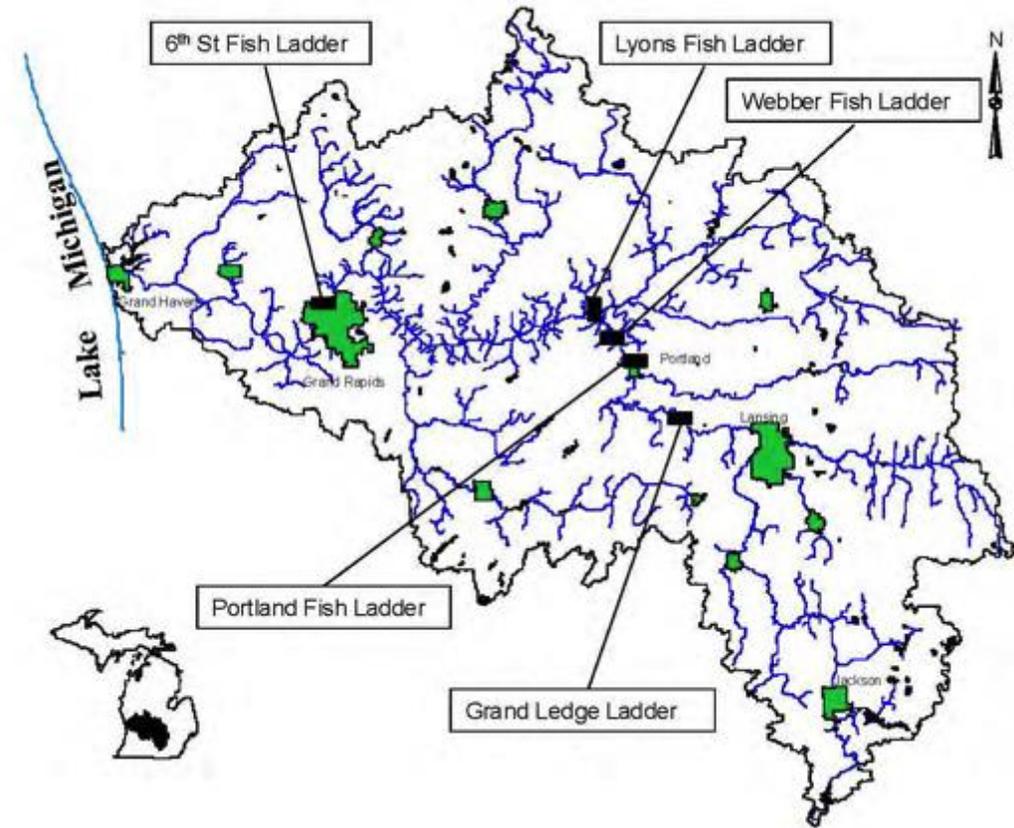


# OPPORTUNITIES FOR LOCAL TRAILS



# GRAND RIVER

- Longest river in Michigan
- 6<sup>th</sup> Street dam is first major barrier to upstream migration
- 18' drop as river passes through Grand Rapids
- Rapids are only 1% of the rivers in the lower Michigan peninsula
- Over 1 mile of the rarest Bayport Limestone bedrock outcrop drowned by the dam.



# THE GRAND RIVER



# RAPIDS RESTORATION PROJECT TO DATE

- Concept Plan Developed
- Stakeholder Outreach, including with Feds, Native American Tribes, State & Local Gov'ts
- Endorsement by City of Grand Rapids
- Support by Governor
- Designated as Urban Waters Federal Partnership
- Analysis and Investigations:
  - River Sediment Hazardous Materials Testing
  - Mussel Study
  - Sturgeon Study
  - Sea Lamprey Study
  - Geomorphic Analysis
  - Bathymetric Survey
  - Economic Impacts Study
  - Alternatives Analysis
- Appointment of Steering Committee & GR Forward Process



# PROJECT GOALS

- Restore the rapids to the Grand River for everyone, with enhanced access and recreational opportunities
- Improve habitat and connectivity, water quality, riparian functions and aesthetics
- Create economic opportunities, enhance underserved communities and instill stewardship ethic



# SIXTH STREET DAM



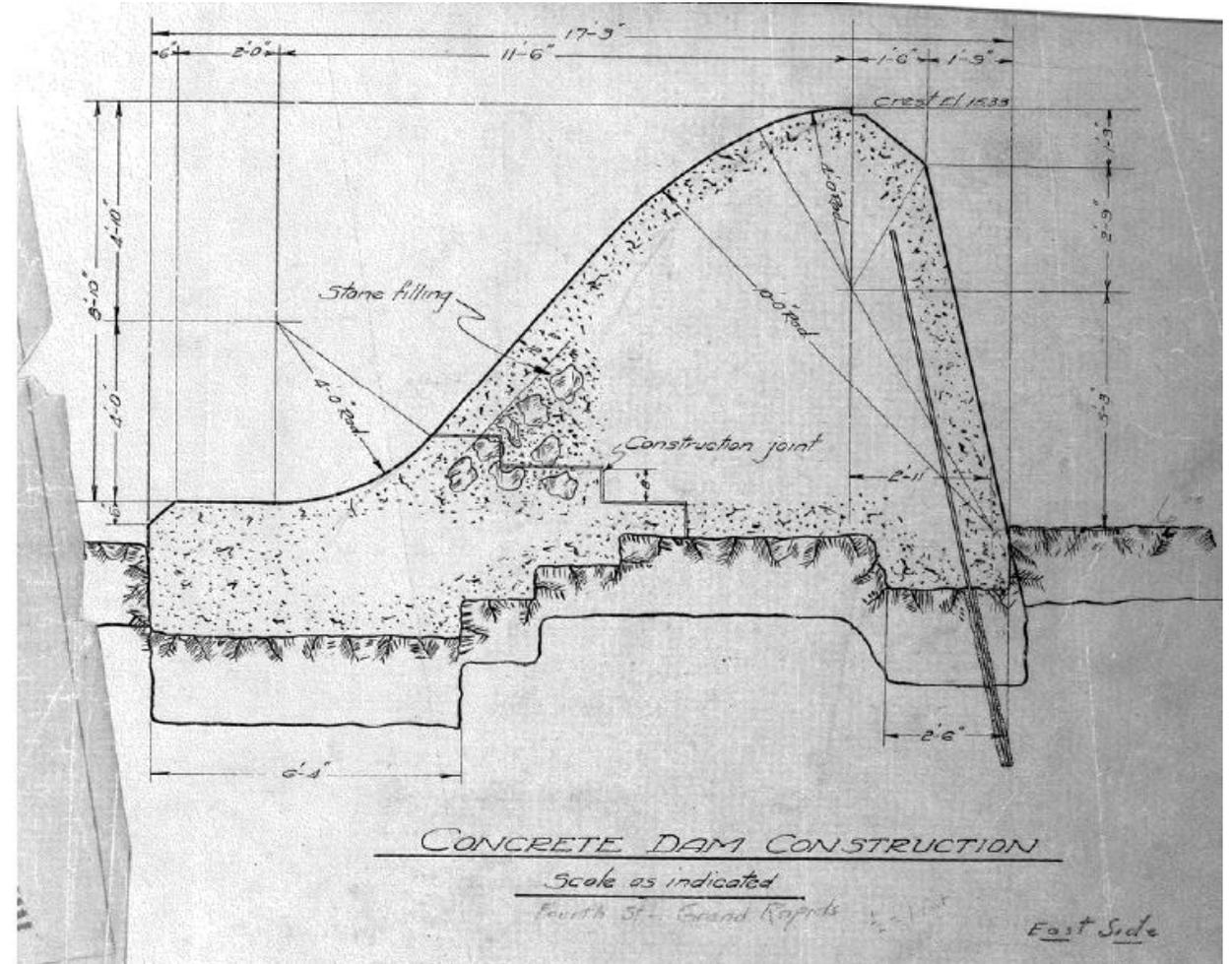
1866



Today

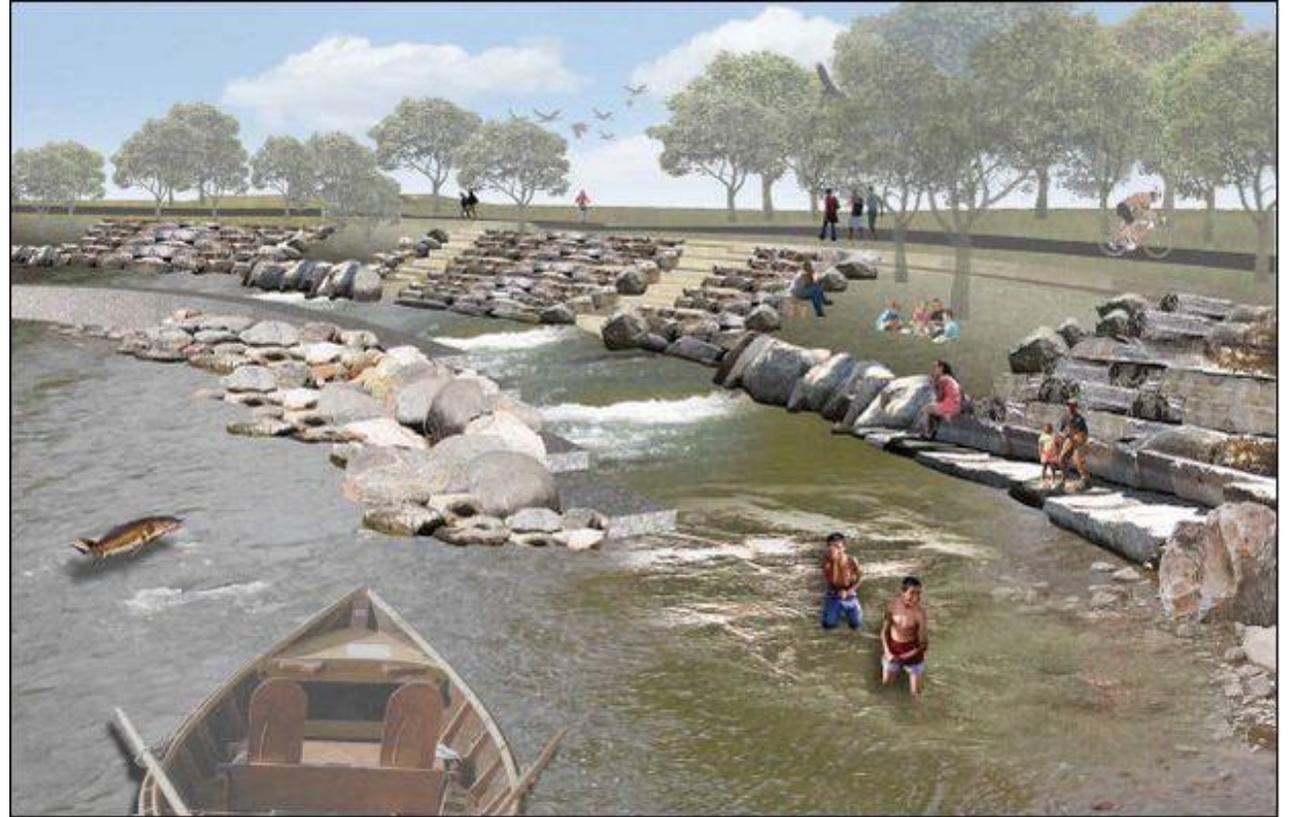
# LATEST REMODEL, 1927

- Design section for the 1927 repair of the main (6<sup>th</sup> Street) Dam
- Deteriorating infrastructure beyond its service life



# FLOODWALLS

- Replace current floodwalls with stepped embankments
- Give people access to the river



# PROJECT CONSTRAINTS

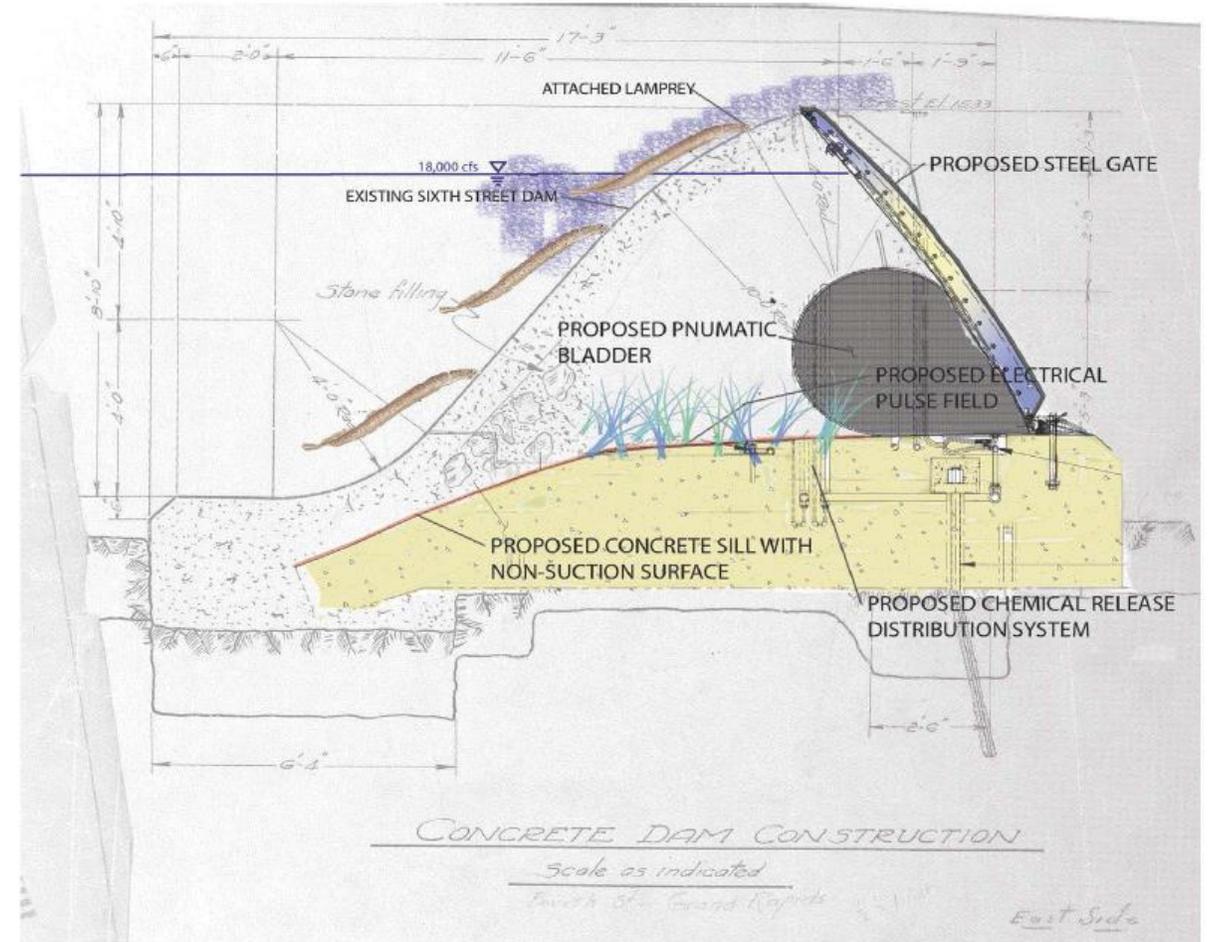
- Sea Lamprey Control
- Snuffbox Mussel Relocation
- Lake Sturgeon
- Flood Control and Public Safety
- Riparian Land Ownership/Easements
- Permitting
- Funding
- Multiple agencies involved



# SEA LAMPREY BARRIER



- Preventing sea lamprey from migrating upstream is a critical goal of the project
- Proposed Barrier 1 mile upstream
- Within the City floodwalls
- No tributary connections



# SNUFFBOX MUSSELS

- Added to the federal endangered list in 2012
- The mussels attach its eggs to the gills of perch so its offspring can be dispersed along the rocks in a riverbed.
- Must relocate 77,000 before the Sixth Street Dam can be removed
- Mussels were believed to be extinct after button makers in the 20<sup>th</sup> Century harvested them from the river



M C Barnhart

# LAKE STURGEON

- Great Lakes sturgeons are protected in Michigan. It is illegal to keep them when caught
- Discovered an underwater bedrock shelf located between Leonard and Ann Streets believed to be the historic spawning grounds for sturgeon
- Bedrock shelf is 88 acres
- Re-exposing this rare bedrock should recreate a habitat for the lake sturgeon to make a comeback



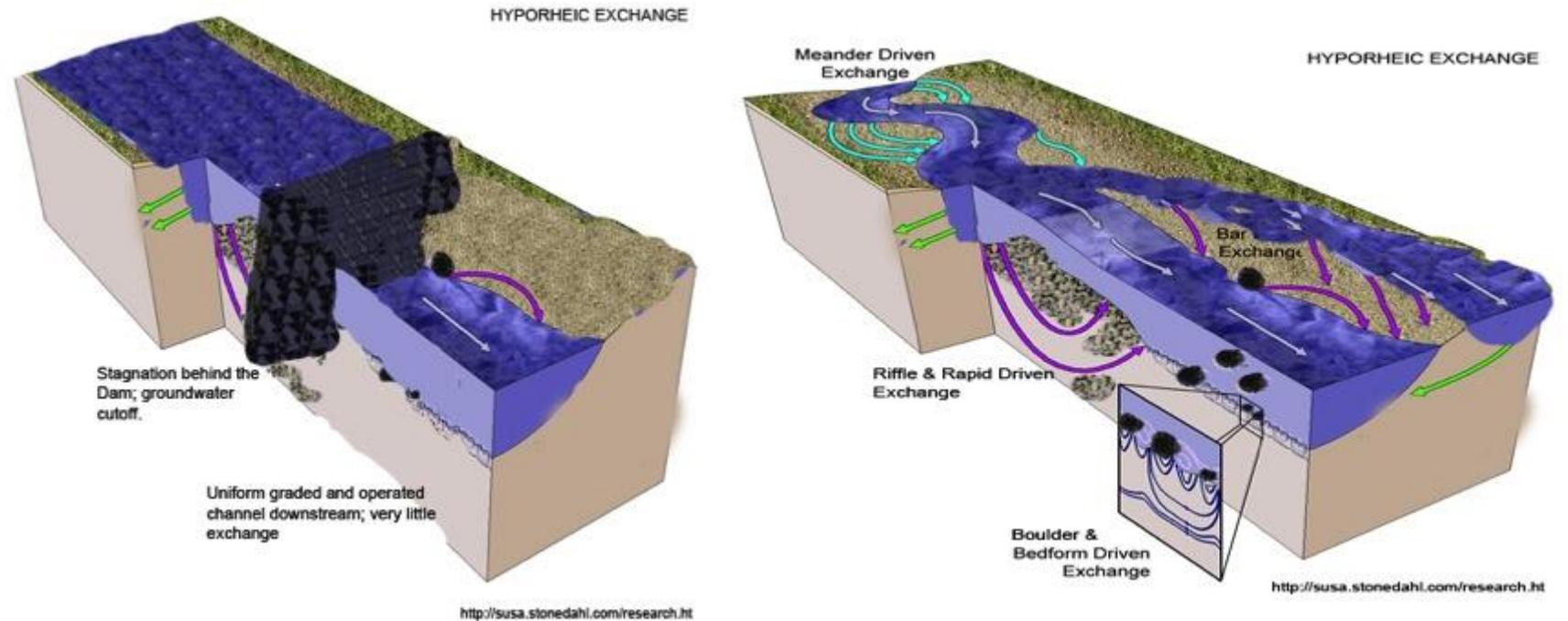
# ECONOMIC IMPACT STUDY

- Ecological, economic, recreational, and community benefits
- Expanded recreational use estimates net new economic impact of \$15.9 M to \$19.1 M per year
- Includes recreational activity such as kayaking, fly-fishing, rafting, SUP and other forms of water and riverfront recreation
- Improved riverfront property utilization and taxable values could increase by \$117.7 M
- Additional economic benefits to be identified through GR Forward process



# BALANCING CONNECTIVITY AND MANAGEMENT

- Site specific evaluation of risks and benefits
- Barrier placement
- Barrier design
- Technical teams







# FIRST SIX CITY PROPERTIES TO BE COMPLETED



201 Market



I-96 North



Canal St Park



Leonard to Ann St trail



Water Dept Storage Yard



Public Museum

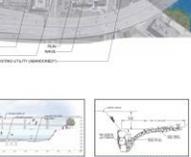
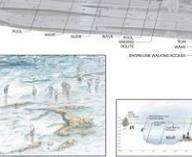
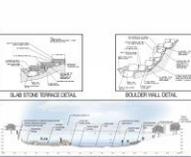
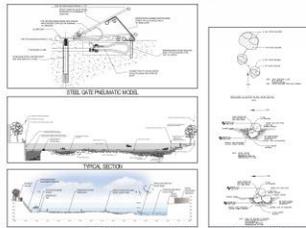
# MOVING FORWARD

- Engineering Design
- Permits
- Fundraising
- Coordination
- Long Term Management



# PROJECT OVERVIEW

GRAND RAPIDS RESTORATION

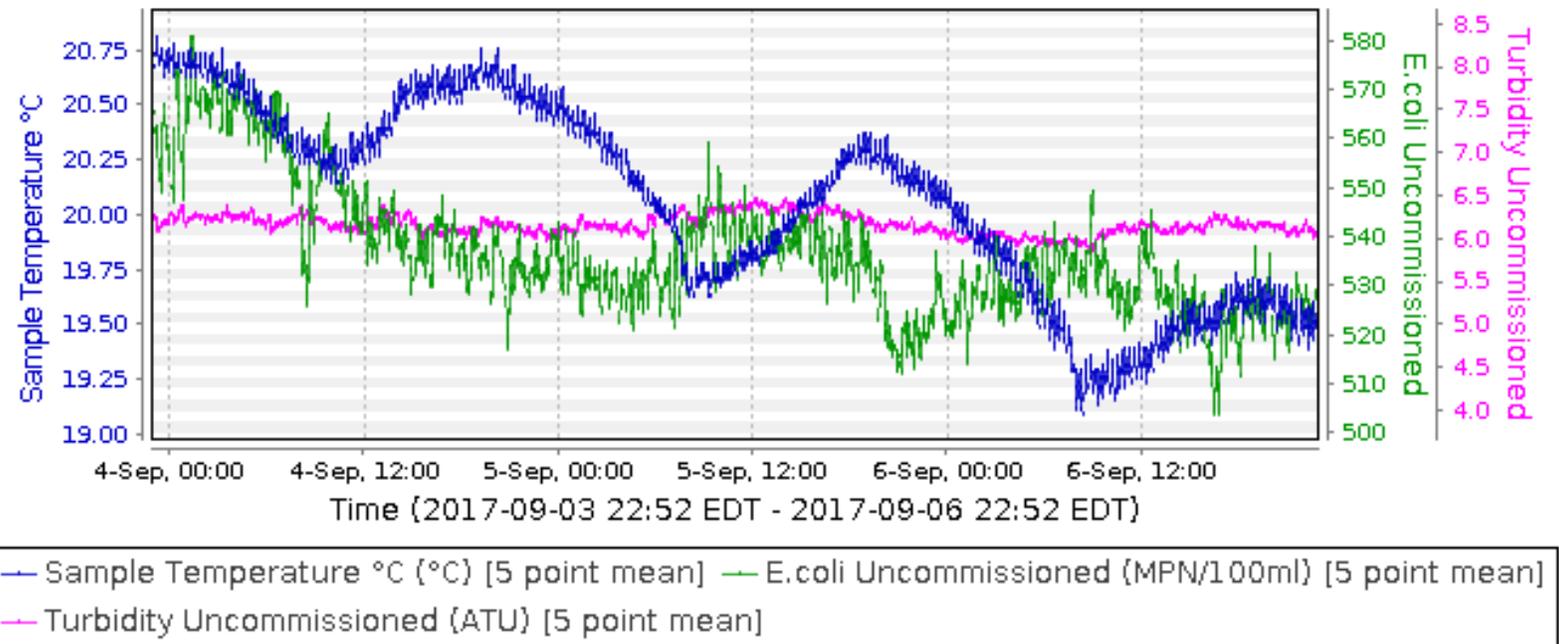


OCTOBER 2013

# CONNECTING PEOPLE

- Water Vision
- WRRF Model
- Collection System Model
- Stormwater System Model
- Grand River WQ Model
- Air Quality Model

## GR Riverside Park Sample





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