City Hall Mill Race Dam

Plainwell #2 Dam Fish Passage and Habitat Restoration

Today's Presenters:

-Erik Wilson, City of Plainwell
-Ryan Darnton, National Oceanic and Atmospheric Administration (NOAA)
-Matt Diana, Michigan Department of Natural Resources (MDNR)
-Walt Pochron, GHD Services Inc.

March 23, 2023

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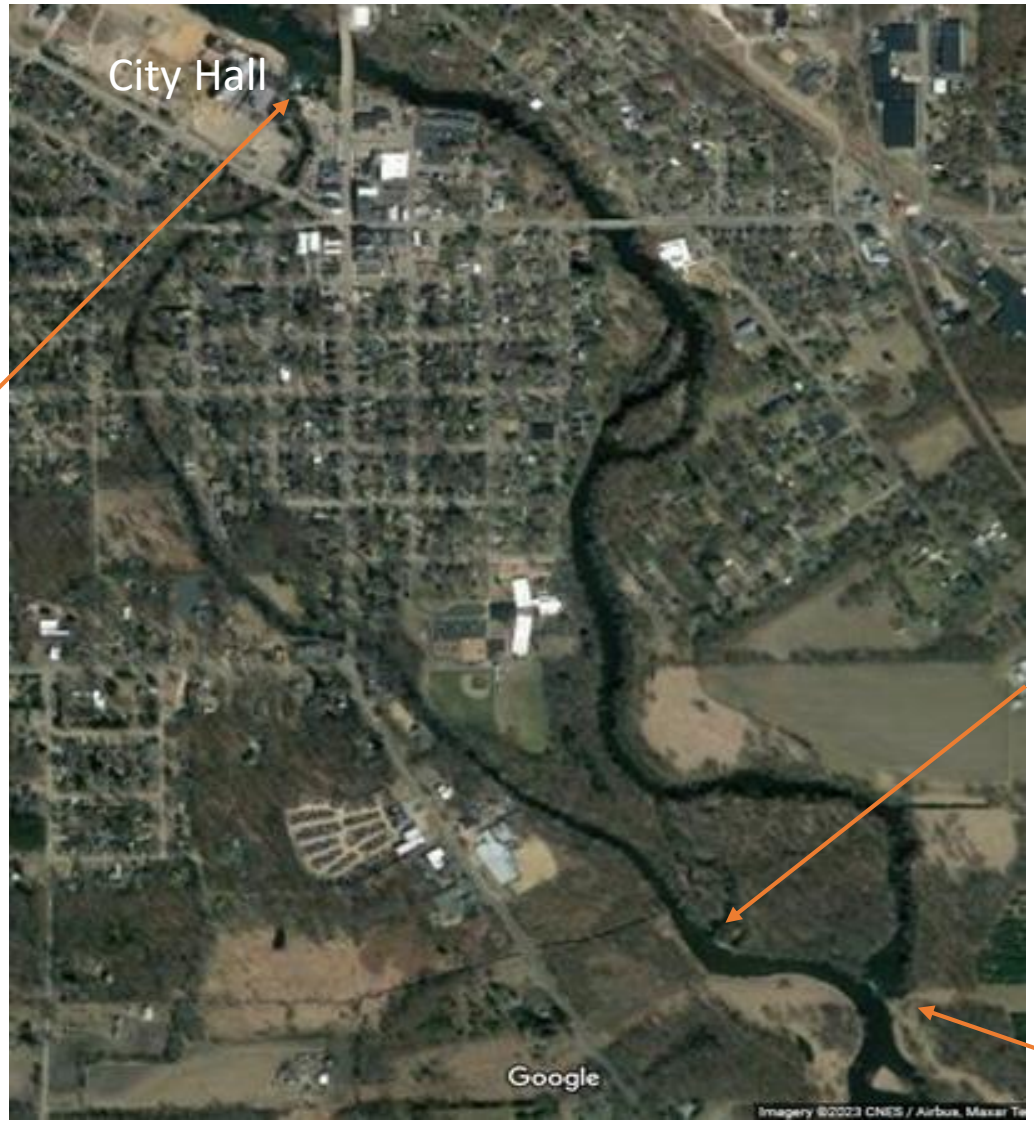
Why Did The City of Plainwell Apply For Funds?

- Physical condition of structures
- Erosion of banks
- Improve recreation and fishing opportunities

Structures

Mill Spillway



Secondary Diversion Dam

Primary Diversion Dam

Physical Condition of Structures

Primary Diversion
Secondary Diversion

Potential failure of these dams negatively affects Mill Race flow, the environment, and community

No requirement for inspections
No maintenance required

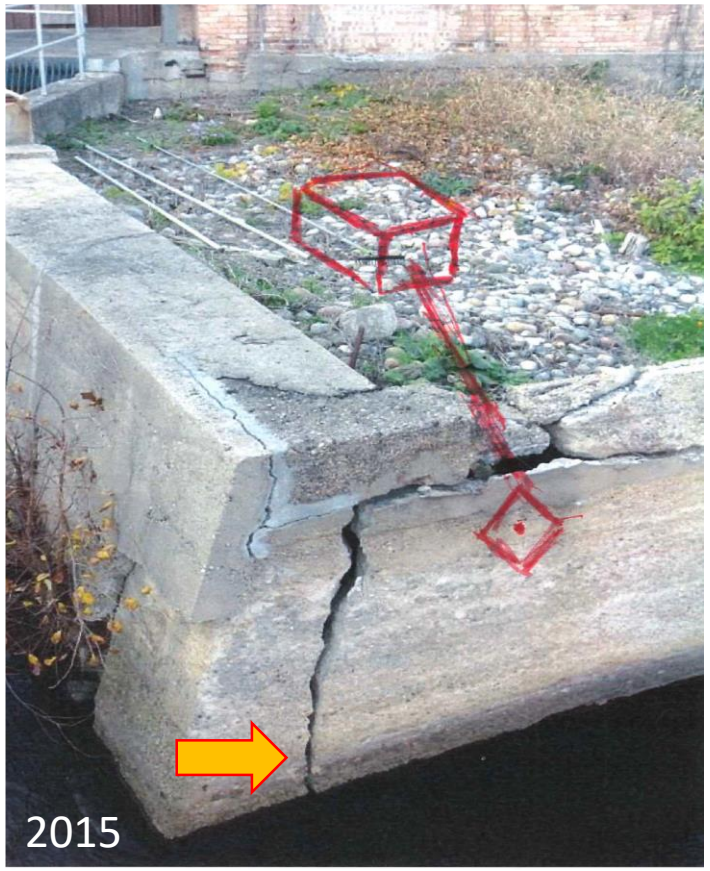
View of both Diversion Structures – South of City limits

Physical Condition of Structures

Mill Spillway

Physical Condition of Structures

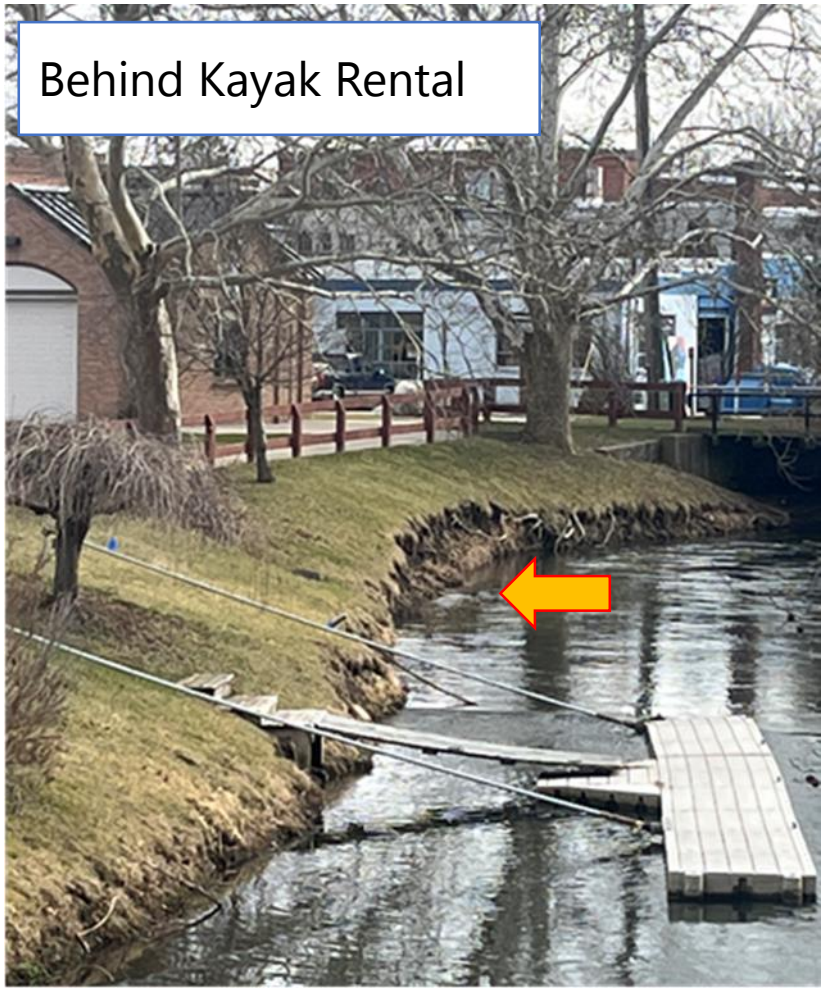
Mill Spillway – Along City Hall



Physical Condition of Structures

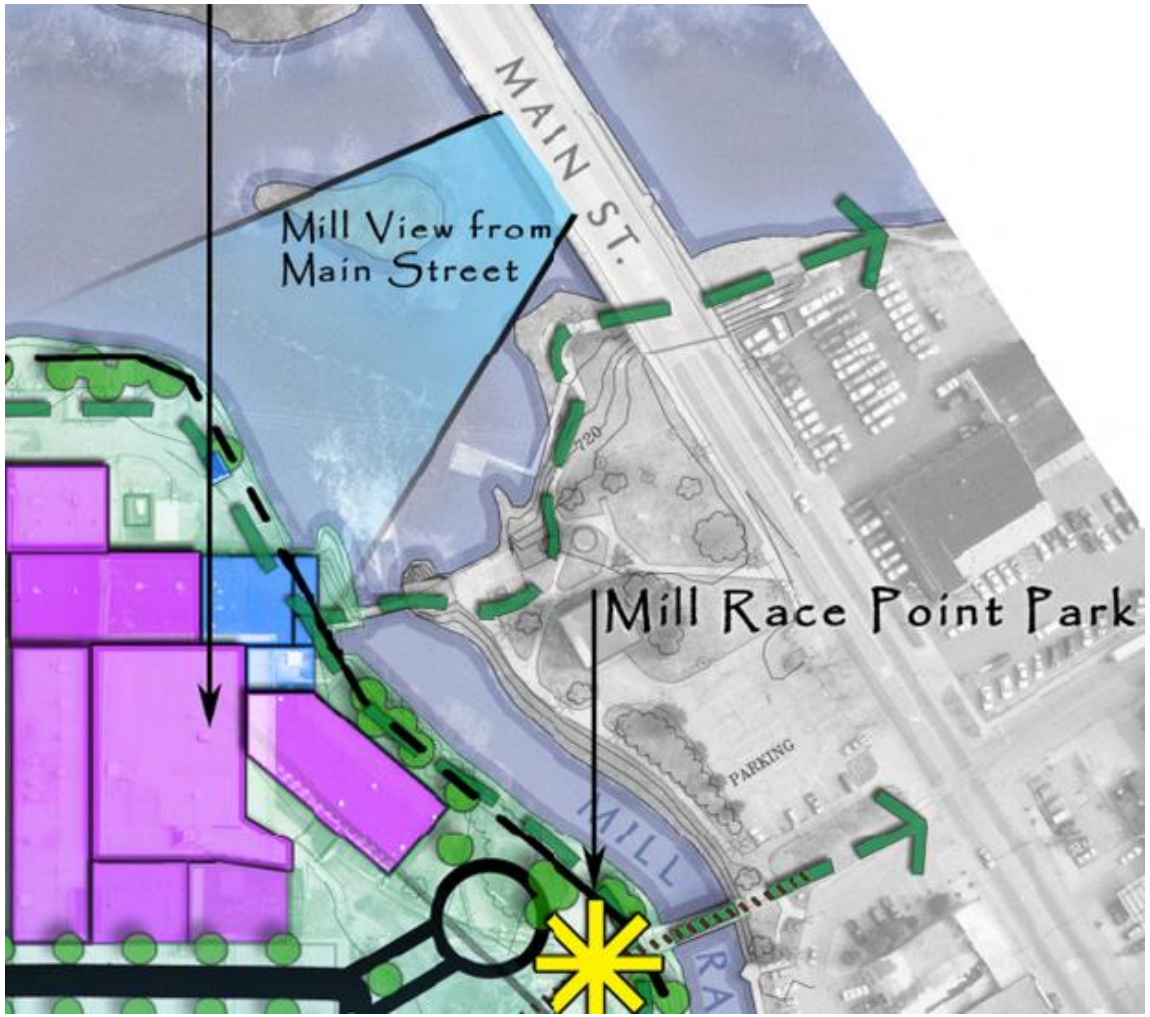
Mill Spillway - Gate

Erosion of Banks



Future Riverwalk

While not part of this project, construction will enhance the City's ability to potentially expand the Riverwalk in the future.

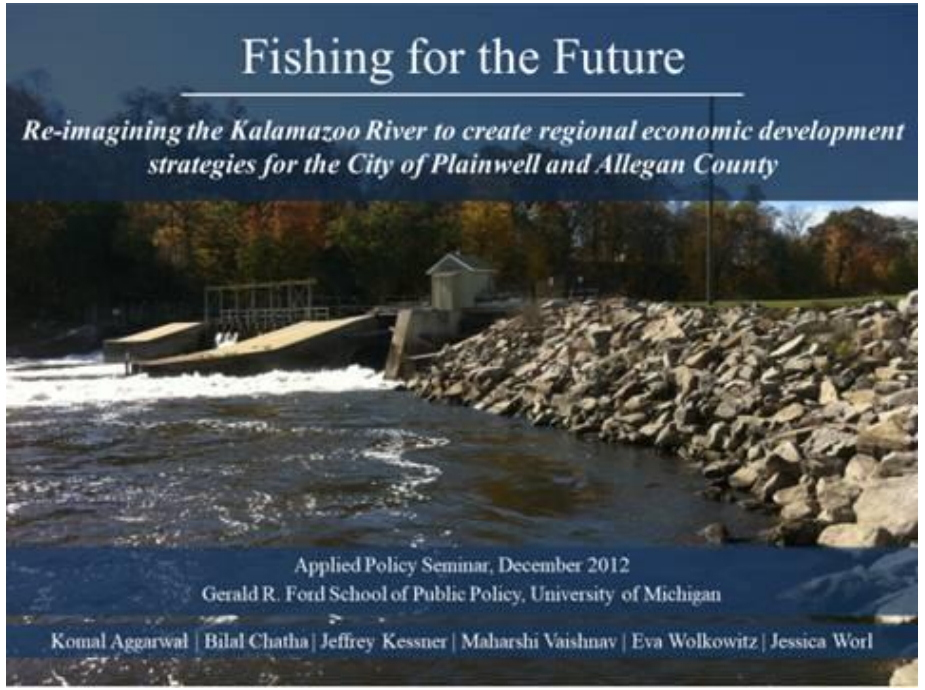


Potential Economic Benefits

City commissioned a study conducted by University of Michigan

Fishery improvements will benefit communities along the Kalamazoo River including Plainwell

Recreational fishing provides significant economic benefits to Plainwell.



Study report available for download:
plainwell.org/Government/City-Projects

City's Goal For Project

- Replace/Eliminate dilapidated structures; make safe
- Address erosion of banks along Mill Race
- Improve recreation and fishing opportunities

.....while preserving the flow, values, and historic significance of the Mill Race

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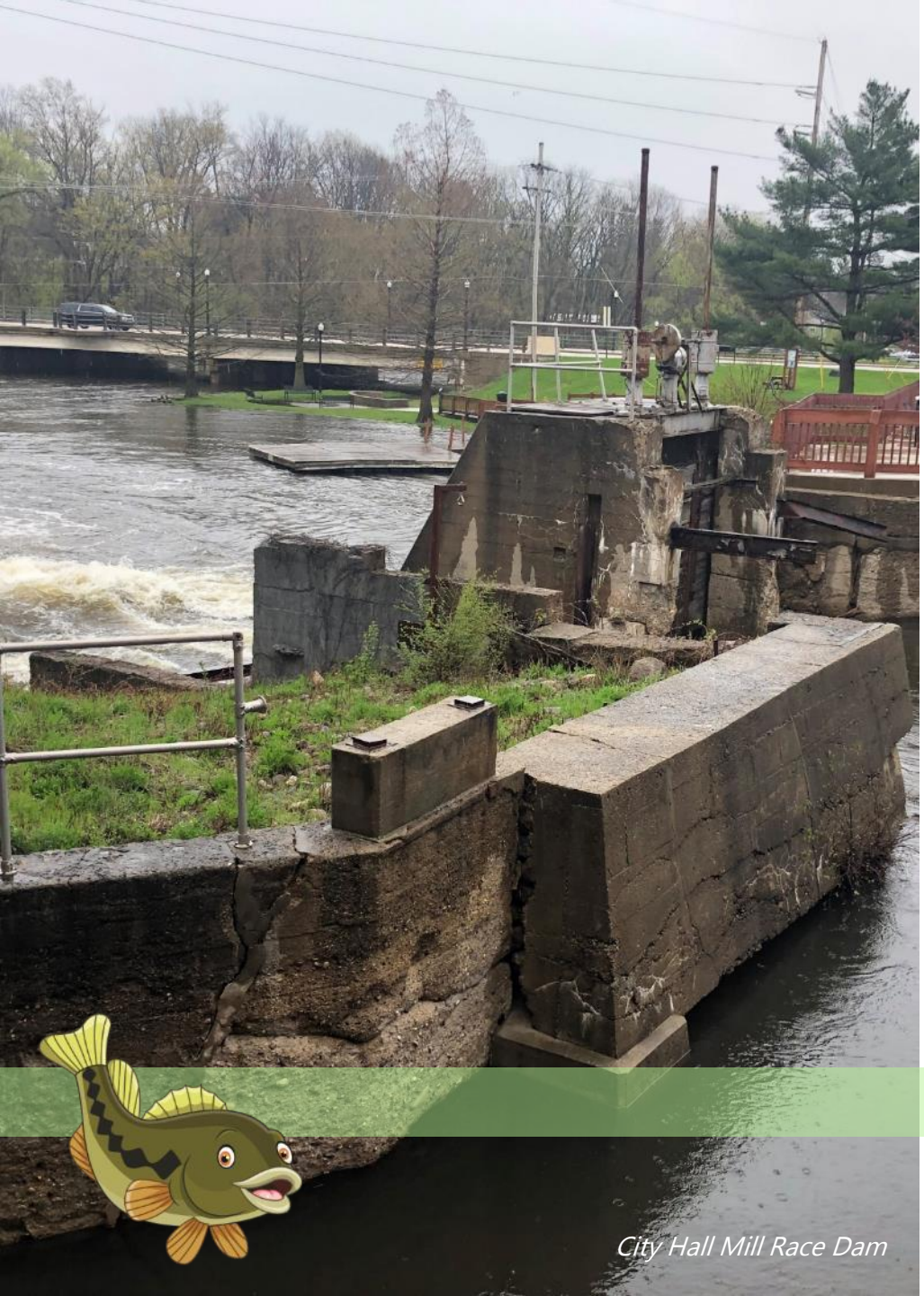

NRDA Program and Funding

Ryan Darnton

National Oceanic and Atmospheric Administration (NOAA)

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Who are the Members of the Kalamazoo River Natural Resource Trustee Council?

- **The Natural Resource Trustee Council consists of agencies acting under federal and state law to seek environmental restoration:**
  - Michigan Department of Natural Resources (MDNR)
  - Michigan Department of Environment, Great Lakes, and Energy (EGLE)
  - Michigan Department of Attorney General (MDAG)
  - U.S. Fish and Wildlife Service (USFWS)
  - National Oceanic and Atmospheric Administration (NOAA)

How Does the NRDA Relate to Superfund Cleanup and the AOC Program?

- Release of hazardous substances is the trigger for both cleanup and NRDA restoration

Cleanup	NRDA Restoration
• Led by EPA and the State • Based on risk to humans and the environment • Removals and remediation	• Led by Trustee Council • Addresses injuries over time • Restoration to baseline and to compensate

- NRDA restoration is coordinated with cleanup
- AOC Restoration is also related, but can have different standards/criteria

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NRDA Settlements

- Bankruptcy settlement with Plainwell Inc. and Plainwell Holding Co. in 2005: $890,000
- Bankruptcy settlement with Lyondell in 2009: $2M for Portage Creek and $1.38 M for entire site
- Settlement with NCR Corporation in late 2019: $25M plus $2M past costs

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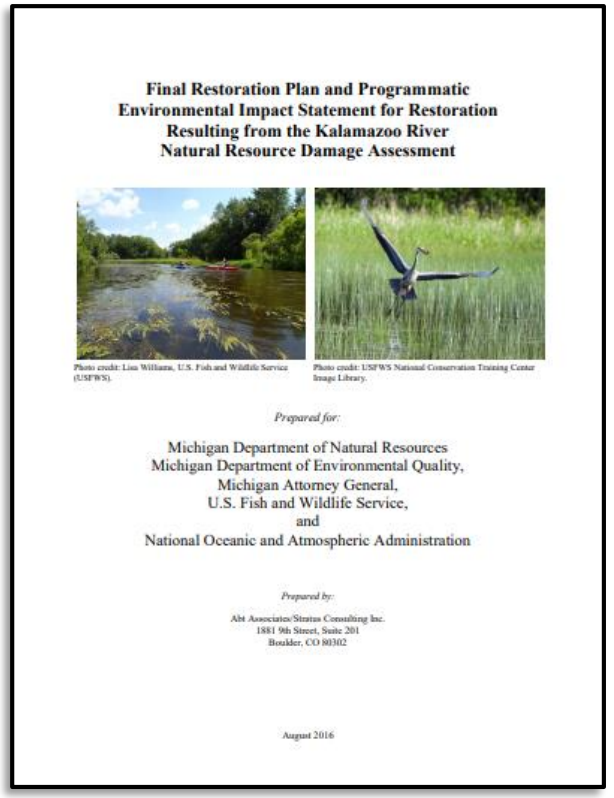
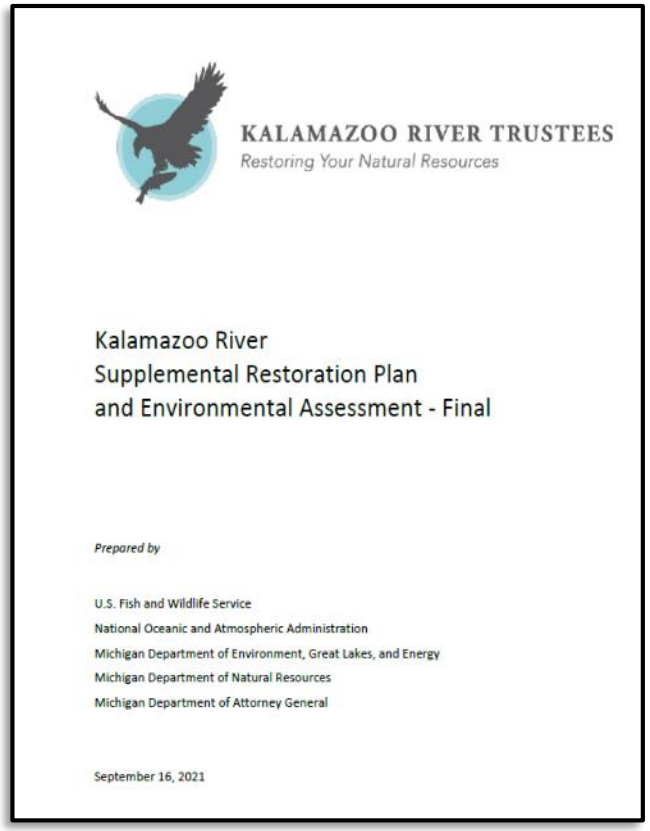
Guiding Documents for Restoration

- 2016 Restoration Plan and Programmatic Environmental Impact Statement (RP/PEIS)
  - Guides the Trustees in selection of potential restoration projects
  - Helps with coordination with proposed remedial actions
- 2021 Supplemental Restoration Plan and Environmental Assessment
  - Trustees selected 14 projects
  - Using ~$12.4 M of available funds



Final Restoration Plan and Programmatic Environmental Impact Statement for Restoration Resulting from the Kalamazoo River Natural Resource Damage Assessment



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Kalamazoo River
Supplemental Restoration Plan
and Environmental Assessment - Final

Prepared by

U.S. Fish and Wildlife Service
National Oceanic and Atmospheric Administration
Michigan Department of Environment, Great Lakes, and Energy
Michigan Department of Natural Resources
Michigan Department of Attorney General

September 16, 2021

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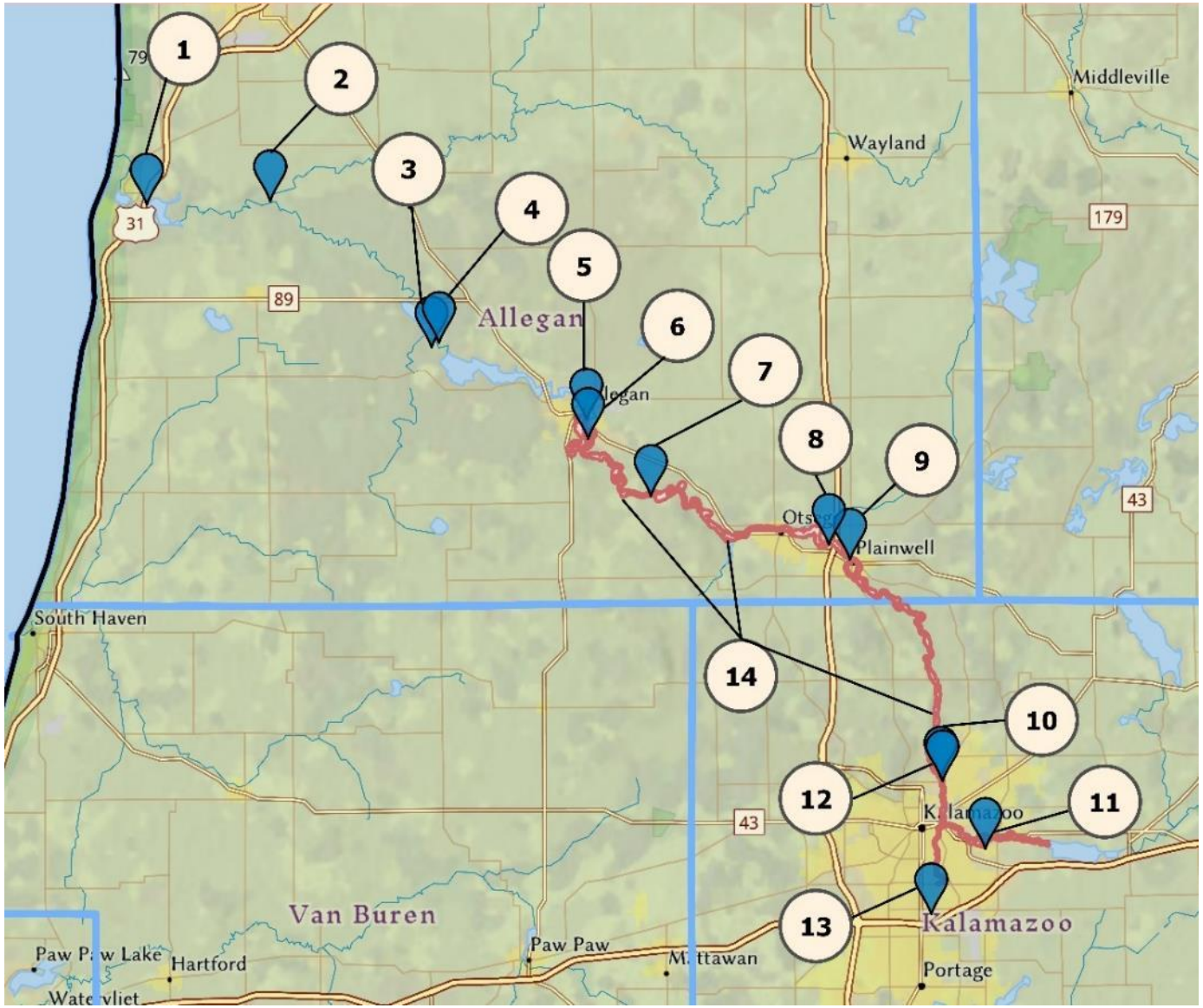
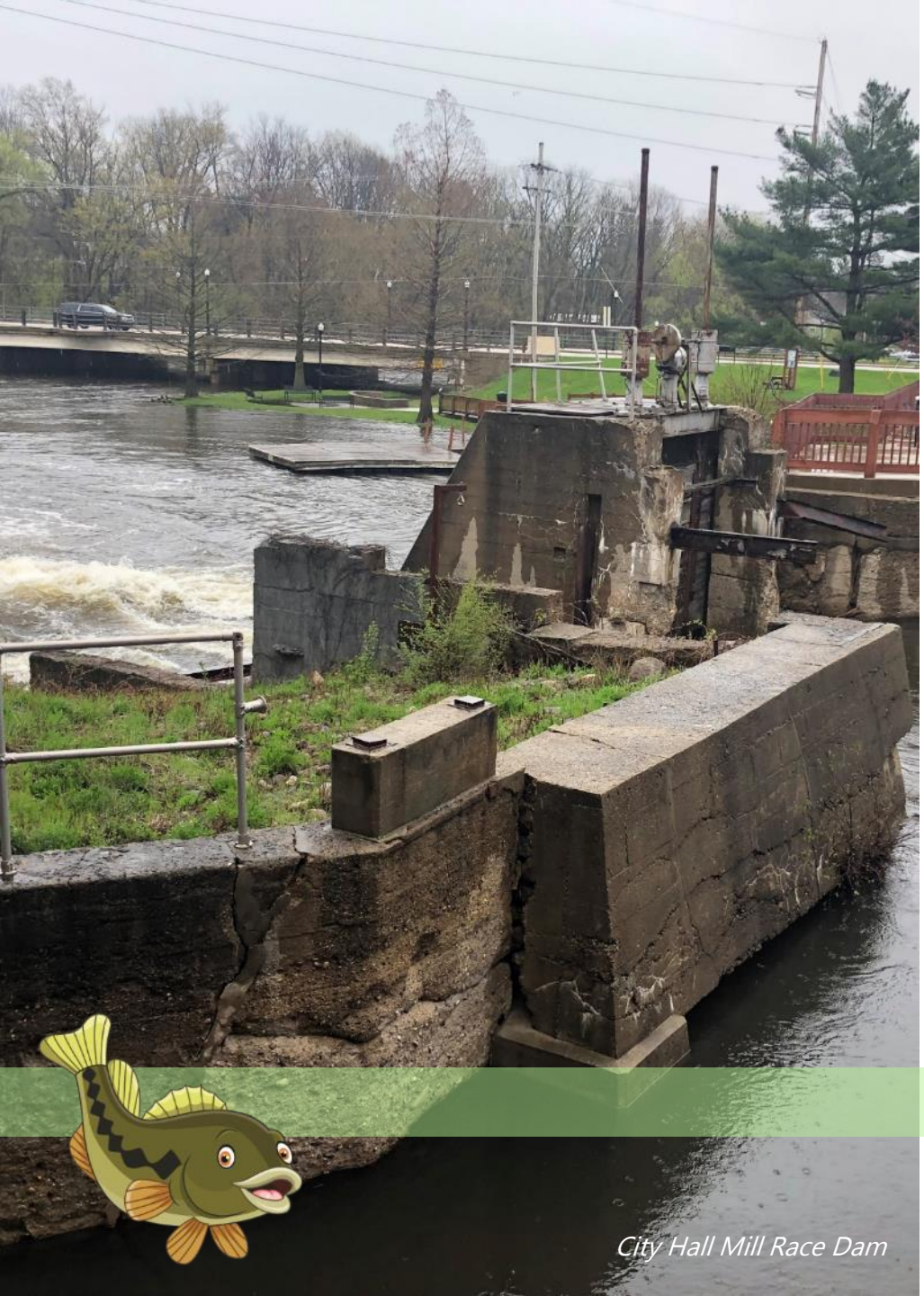


Map #	Restoration Plan Project Title
1	River Bluff Park Shoreline Restoration
2	Manlius Township Land Protection
3	Koopman Marsh Restoration
4	Kalamazoo River Shoreline Frontage and Acreage near Calkins Dam
5	Allegan City Dam Removal
6	Nature Preserve along Kalamazoo River in Allegan
7	Trowbridge Township Restoration and Access
8	Plainwell Dam Area Restoration
9	Plainwell Diversion Dam and Mill Race Removal and Channel Restoration
10	Commerce Lane Railroad Trestle Removal and Bank Restoration
11	Davis-Olmsted Drain Improvements
12	Parchment Restoration Plan/Urban Wildlife Corridor
13	Reed Court Floodplain and Stormwater Improvements
14	Mussel Translocation and Riffle Success Evaluation

Priority Project Types for NRDA

- **Priority types of projects in the Kalamazoo River watershed that benefit injured natural resources:**
  - Instream habitat restoration - adding natural structure and reducing channelization
  - Stream bank restoration and increasing floodplain habitat areas
  - Removing barriers to fish passage from undersized culverts and dams
  - Enhancing native plant species and controlling invasive species
  - Preserving, enhancing, or restoring riparian and wetland habitats
  - Restoring habitat that also benefits recreational uses like fishing, wildlife viewing, paddling



Benefits of Dam Removal

Matt Diana

Michigan Department of Natural Resources (MDNR)

March 23, 2023

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Dams and Natural Resources


Plainwell Diversion Dam

- **Dams are barrier**
  - Fish
  - Sediment
  - Wood
- **Water quality**
- **Aging Infrastructure**
  - NID 91,468 high hazard dams in United States
  - Over 2,500 dams in Michigan


Fisheries.NOAA.gov

Protecting the River

- Environmental permitting
- Designing for fish passage and recreation
- Monitoring
- Planning
- Safety

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Restoration

- River Function
- Restore Banks
- Fish Passage and Community
- Navigation/Recreation

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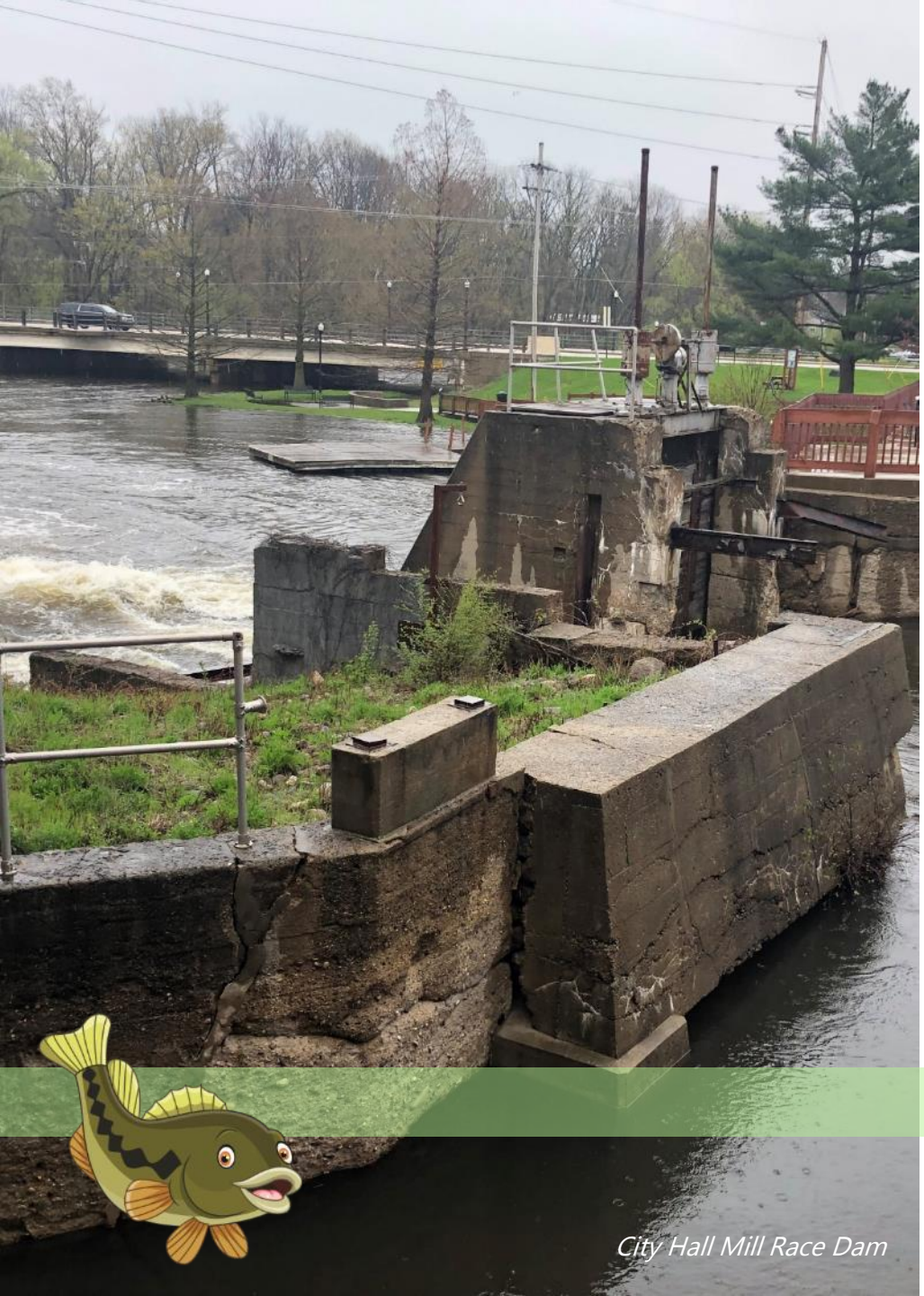

Design

Walt Pochron

GHD Services Inc.

March 23, 2023

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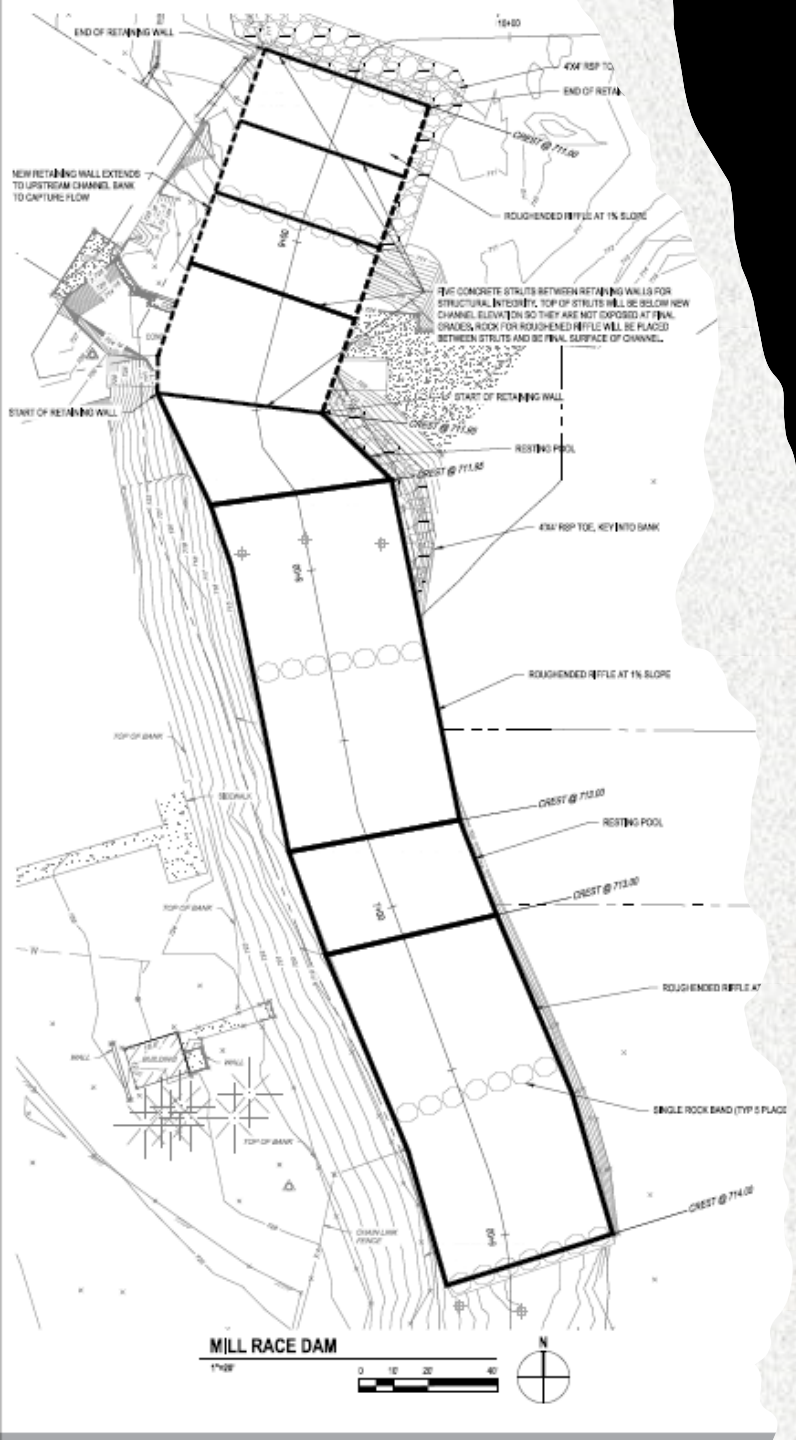
Structure Locations

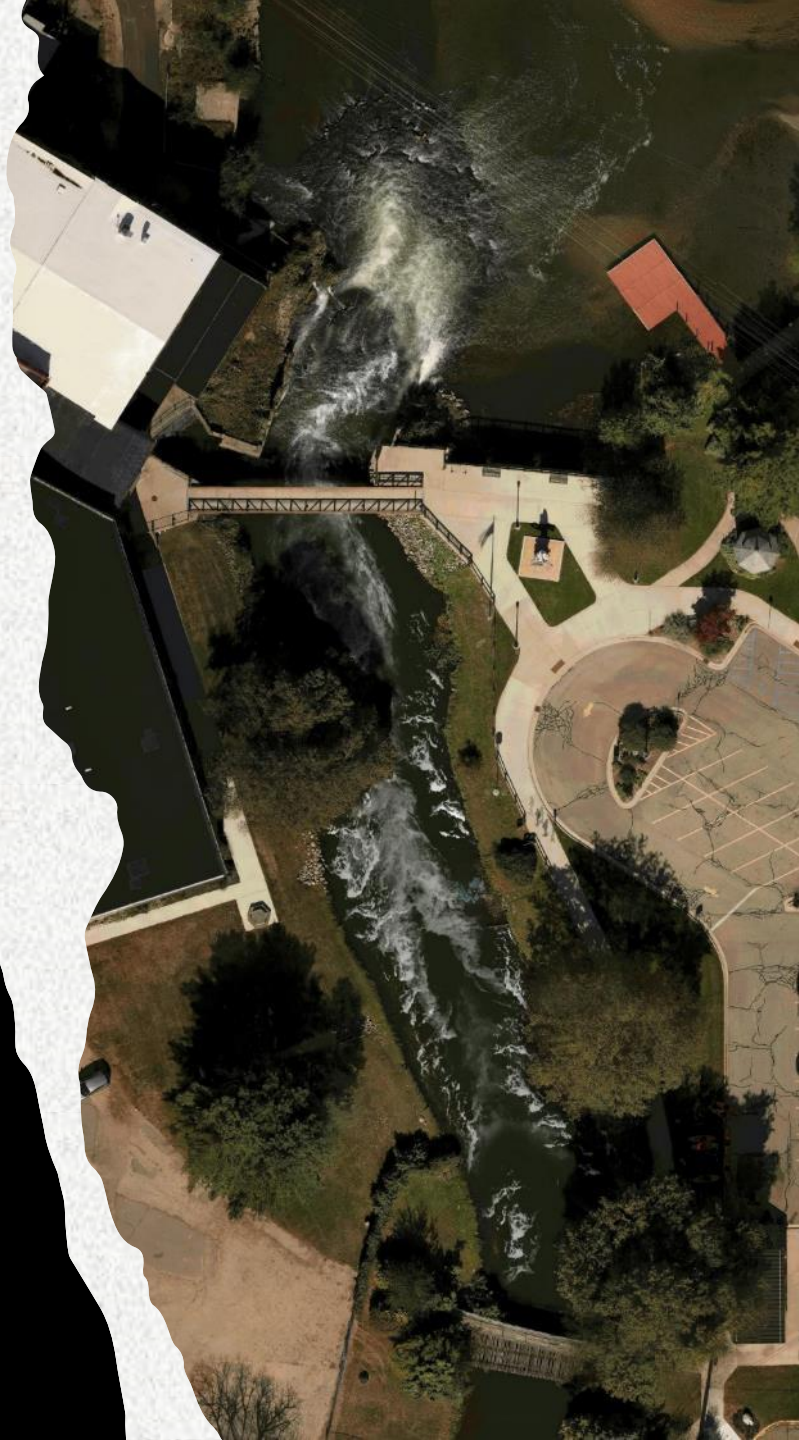
Design Objectives

- Maintain Similar Flow In Mill Race
- Minimize Sediment Mobilization
- Low Maintenance
- Support Fish Passage/Habitat Restoration
- Support Small Watercraft Passage
- Increase Recreational Use

Mill Race Structure

Mill Race Structure



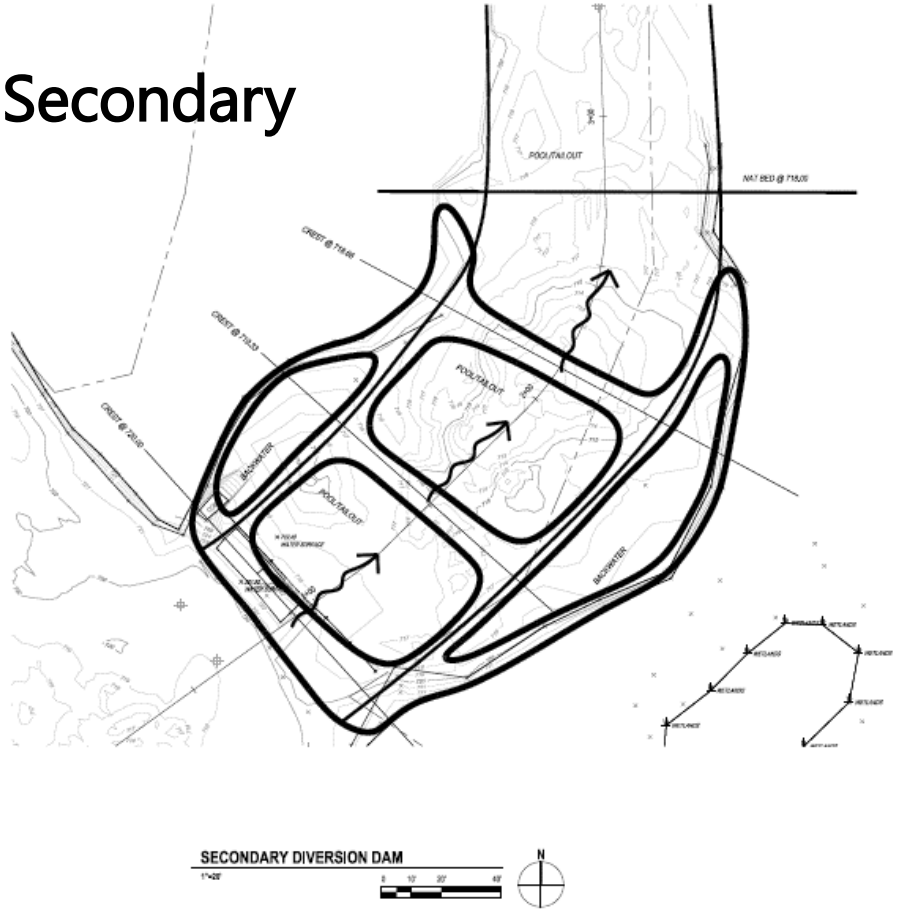


Secondary Structure

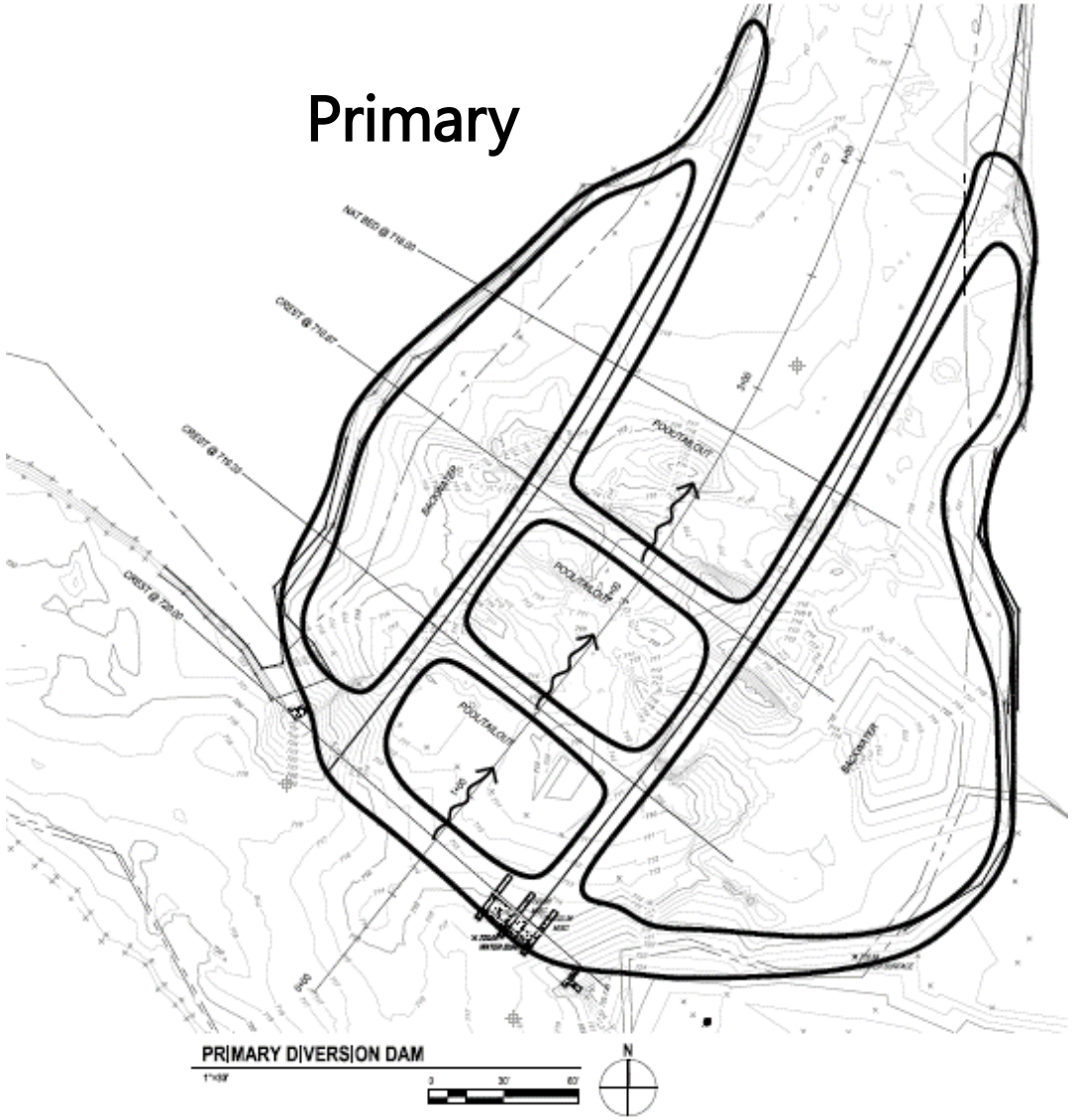
Primary Structure

Design Drawings

Secondary



Primary



Questions?

Presentation Available on Plainwell's Website:
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