Importance of Partnerships

In Establishing Stream Connectivity at Road-Stream Crossings

Bobbi Jo Fischer
WDNR Environmental Analysis Supervisor

Many ways to provide stream connectivity!

Photo Credit: Karen Kalvelage
Lacrosse County Highways

Building Partnerships

- Inventory, Assessment, & Prioritization
- Example Project: STH 21, West Branch of the White River
- Example Project: STH 67, Tributary to Long Lake

Partnerships

Inventory, Assessment, & Prioritization

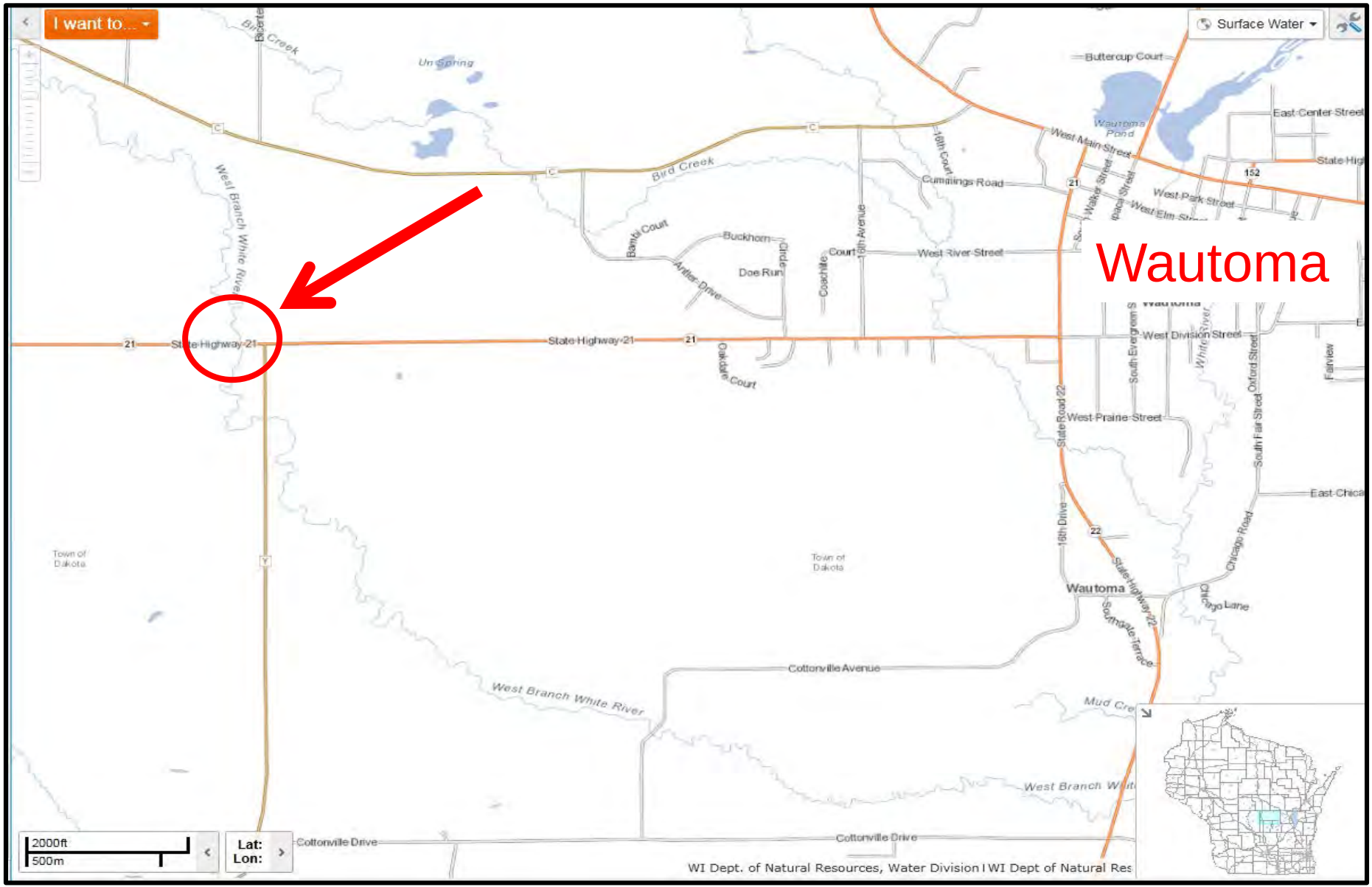
Partnerships

STH 21

&

West Branch of the White River

West of Wautoma



Signs of Connectivity Issues

West Branch of the White River

- 7.8 mile stream reach
- Class I Trout Stream
- Brook, Brown, & Rainbow
- Outstanding Resource Water
- High quality spawning redds upstream of project

2012 Investigation

- Fisheries Staff electro-fished and marked over 500 trout
- Fisheries Staff returned and electro-fished in key habitat upstream
- Only one 9.5” marked brown trout was recaptured

Conclusion:

Likely a barrier to fish of a certain size under high stream flow conditions

Grant

- WisDOT applied for a grant to Federal Highways for *Great Lake Restoration Initiative Grant*

- DNR provided WisDOT with biological information for the grant submittal

Great Lakes Restoration Initiative Grant Total

Design

- $62,050

Construction

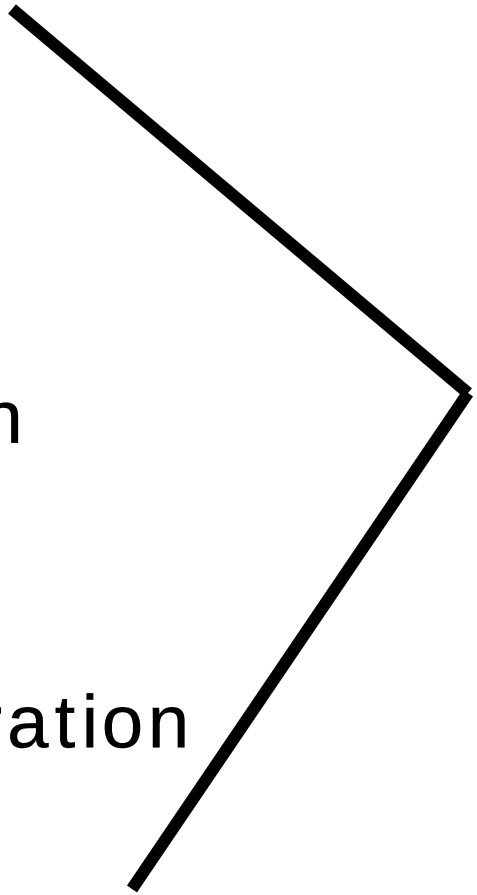
- $857,900

Cost Reduction Incentive

- ($25,800)

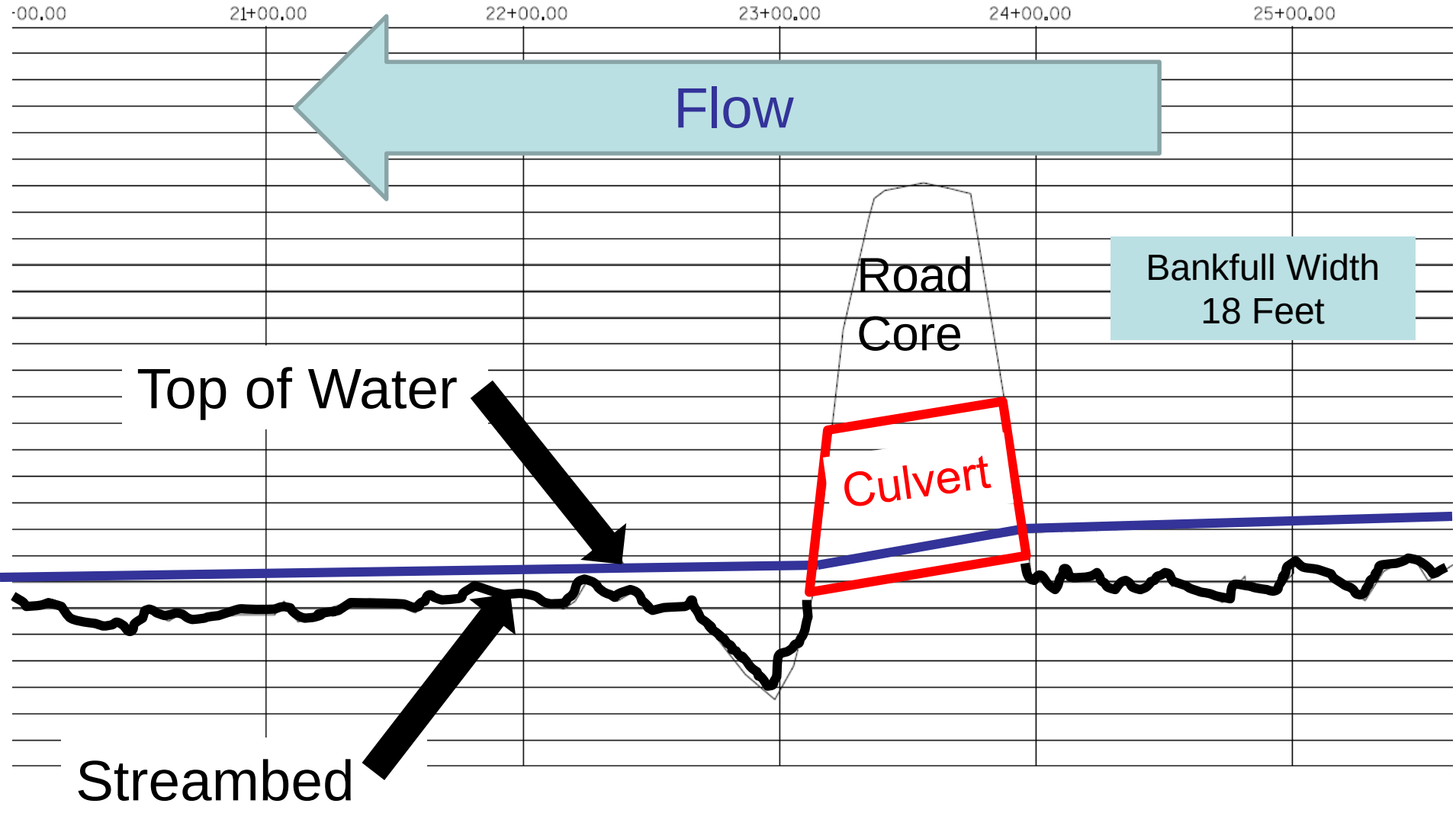
Stream Restoration

- $34,000



Total = $928,150

Stream-Profile Survey



Final Design

- Replace 5 foot round corrugated metal pipe (1949) with 24 foot wide bridge
- Riprap designed for wildlife/human passage
- Riprap installed to create sinuosity
- Stream habitat restoration 2016 (DNR)

Construction 2015

Habitat Improvements Post-Construction

STH 21—West Branch White River

Before

2015 After Construction

STH 21—West Branch White River

2015 “After”

2018 “After”

Upstream

Before

2015 After Construction

Upstream

2015 After Construction

2018 After Construction

Downstream Plunge Pool

Before

2015 After Construction

Downstream Plunge Pool

2015 “After”

2018 “After”

Wildlife Connectivity & Fishing Access

Partners (30+)

- **DNR Lands and Facilities:**
  - Jim Tomasko (retired property manager)
  - Karl Kramer (current property manager)
  - Renee Kerska (Real Estate)

- **DOT Environmental:**
  - Anthony Stakston (Former SWECE and grant application author)
  - Janet Smith (MOU)
  - Ryan Arnold (current SWECE)
  - Jordan Kelbley (Supervisor—elevated MOU for signatures)
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- **DNR Fisheries:**
  - Heidi Nelson (shepherded MOU for DNR signatures and finalized Fish Ops budget)
  - Shawn Sullivan (Fish Ops Supervisor—drew up plan for grant and will complete the stream rehab)
  - Steve DeVitt (Fish Ops—drew up plan for grant app and will complete the stream rehab)
  - Scott Bunde (Fisheries Tech--surveyed fish passage at crossing & interfaced with Fish Ops)
  - Dave Bartz (Fisheries Biologist—surveyed fish for passage at crossing)

- **TU Central Sands Chapter** (Aquatic Connectivity Education Post-construction)

- **DOT Design:**
  - Judy Wilson (OMNNI Associates)
  - Dan Holloway (DOT)
  - Jason Schaeffer (DOT)

- **DOT Construction:**
  - Marin Alekna (MSA Professional Services)
  - Dan Holloway (DOT)
  - Scott Westenberger (Pfeifer Construction)

- **Federal Highways:**
  - Marcel Tchaou (current grant contact)
  - Kimberly Majerus (former grant contact)

- **US Forest Service:**
  - Dale Higgins (Hydrologist--surveyed site and advised)
  - Mark Fedora (Hydrologist Supervisor—advisor)

- **DNR/DOT AOP Team (originally surveyed this site in 2011):**
  - Rodney Taylor (DNR Structure Engineer, now Supervisor)
  - John Voorhees (AECOM)
  - Jon Simonsen (DNR)
  - Steve Schrage (former DNR Lands and Facilities employee)

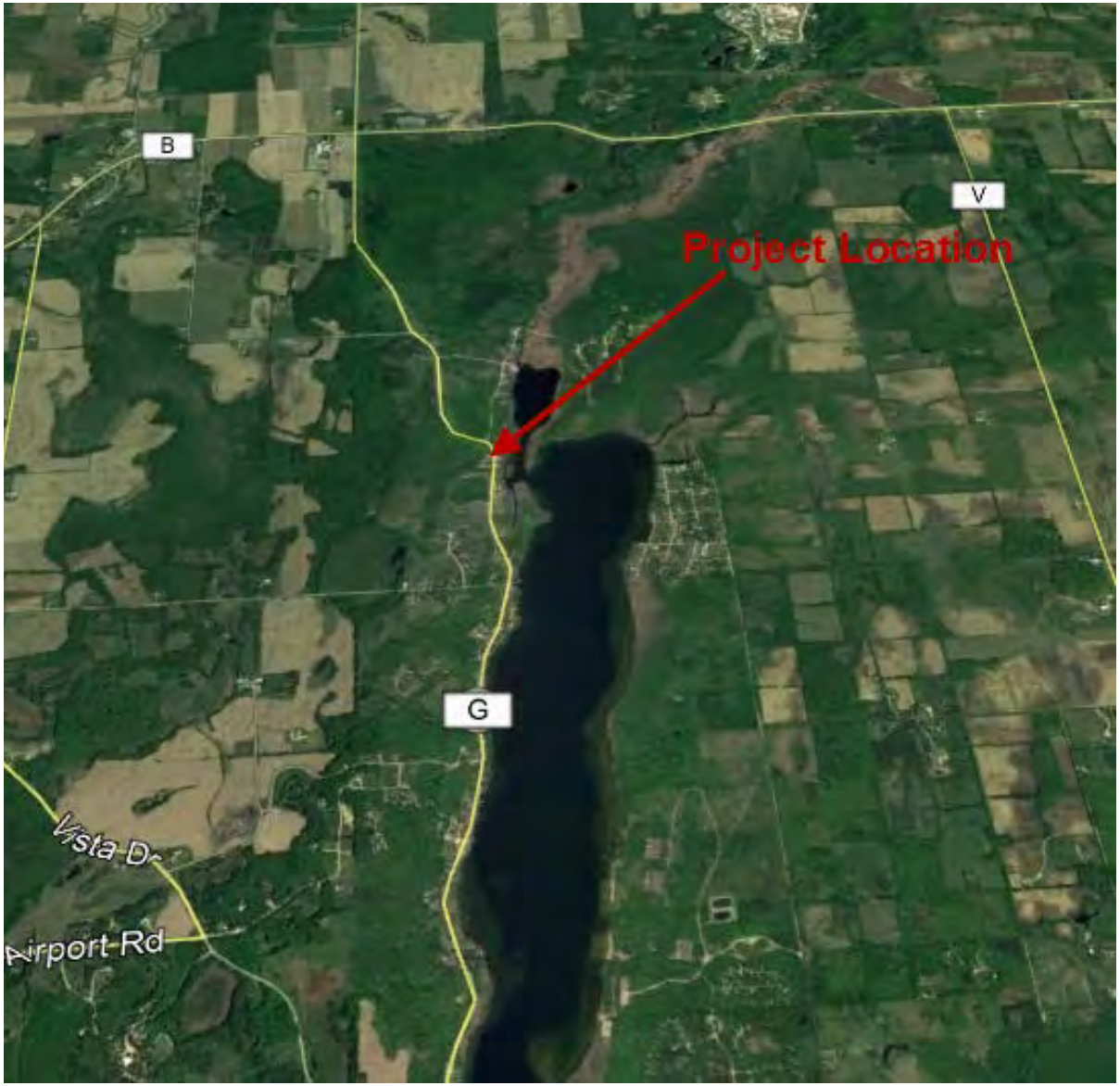
Partnerships

STH 67

&

Tributary to Long Lake

North of Dundee



Signs of Connectivity Issues

Tributary to Long Lake

- DNR and DOT approached by Long Lake Fishing Club about perched culvert
- Historic Walleye Spawning Channel (River Strain)
- In spring, Walleye have been seen in the plunge pool

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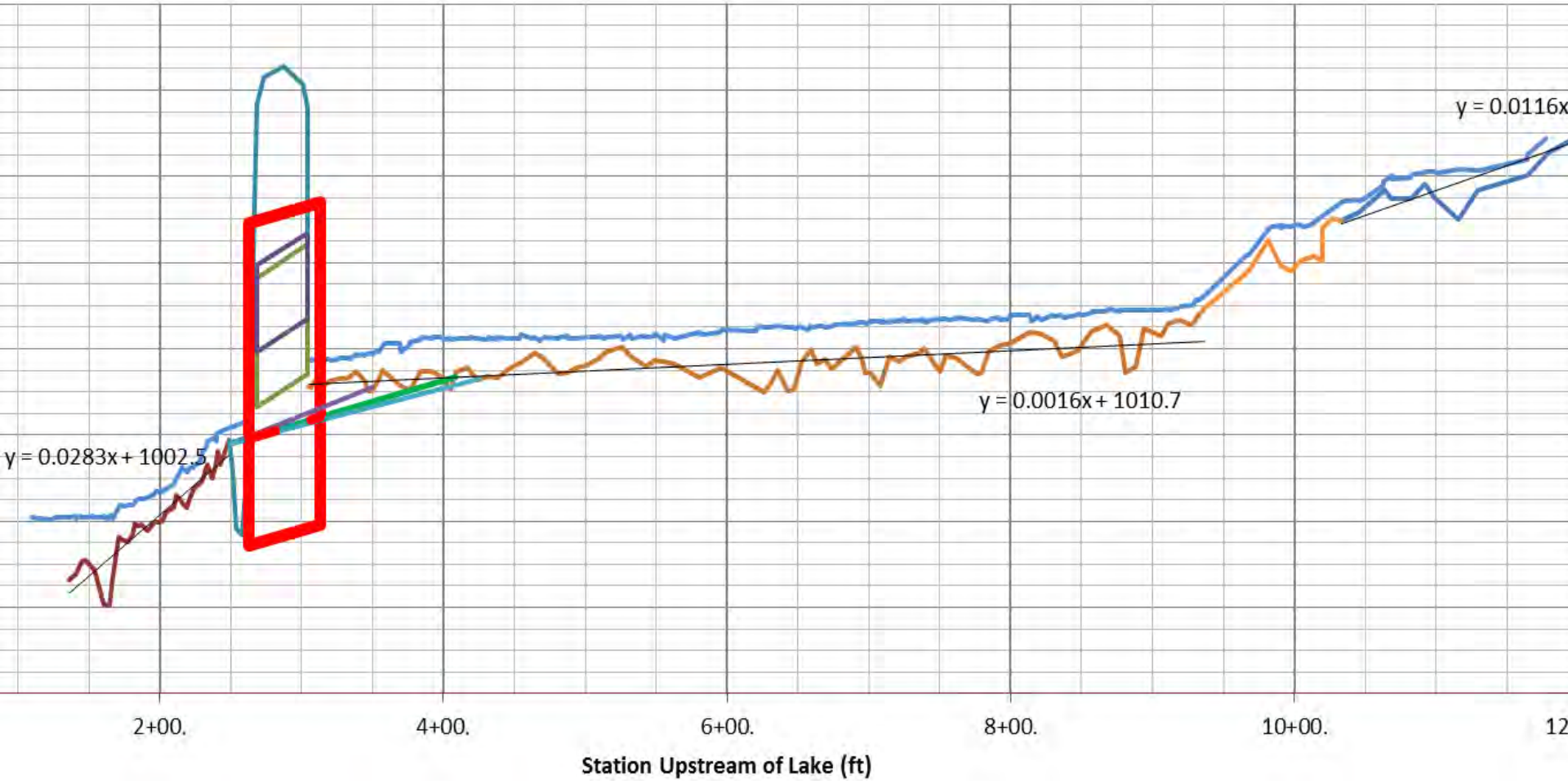
Costs

Construction	$365,000
Construction Oversight	$90,000
Consultant Design	$142,000
Fish monitoring	$32,000
System & Installation	
DOT Design & Construction	$70,000
Construction	
Real Estate	$21,000
Total	**$721,000**

***$700,000 was grant funded

Stream-Profile Survey



Design Details

- “Stream simulation” through structure using HEC-26
- Stream reconstruction upstream
- Rock bands downstream
- Wetland enhancement along stream for spawning habitat
- Ford (barrier) removed upstream
- Fish monitoring system installation

Construction

Wetland Enhancement & Fish Spawning Habitat

Fish Monitoring System

After

Before

Partners (Too Many to Count!)

- **DNR**
  - Lands and Facilities
  - Environmental Analysis
  - Fisheries
  - Parks
  - Water Resources
- **DOT, Consultants, & Contractors**
  - Environmental
  - Central Office Drainage
  - Design
  - Construction
- **Long Lake Fishing Club**
- **Federal Highways**
- **US Forest Service**
- **DNR/DOT AOP Team**

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The End