Habitat Grant Projects
Clinton River Watershed

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Area of Concern (AOC) Designation

Became an AOC in 1988 identifying 8 Beneficial Use Impairments (BUIs)

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae
- Degradation of fish and wildlife populations
- Beach closings
- Degradation of aesthetics
- Degradation of benthos
- Restriction on dredging activities
- Loss of fish and wildlife habitat

Goal is to Delist the BUI’s by 2018
Great Lakes Restoration Initiative Funding

GLRI has funded over $8 million in habitat projects in the Clinton River Watershed

Avon Creek Restoration ........................................... $192,857
Paint Creek Dam Removal ....................................... $732,806
Paint Creek Habitat Restoration .............................. $750,000
Lake Saint Clair Coastal Marsh Restoration .......... $1,492,500
Reducing the Impact of Stormwater at Lake St. Clair Metropark $1,500,000
Black Creek Marsh Design .................................. $221,000
Black Creek Marsh Implementation ...................... $2,000,000
Clinton River Spillway Habitat Enhancement Project Planning $339,500
Wolcott Mill and Cascade Dam Removals ............... $226,570
Restoring Fish Passage in the Red Run Headwaters $985,000

Total GLRI Past Expenditures ................................ $8,440,233
Selection Process

Fundamentals
- Public Advisory Council (PAC) driven
- Supported by the Clinton River Watershed Council
- Engaged local stakeholders
- Vetted by MDEQ and MDNR
- Reviewed by EPA
- Supported by 40+ years of data
- Partnerships and collaboration paramount

Identify
- Various project lists compiled
- Call for project proposals
- Over $70 m received

Evaluate
- PAC, MDEQ, MDNR
- Compare to RAP and other assessments
- 14 Projects - $32 m

Implement
- EPA final selection - $20 m
- Grant documents in process
EPA committed $20 million in GLRI direct funding for 11 habitat projects

- Clinton River Spillway Habitat Enhancement
- Partridge Creek Commons
- McBride Drain
- Red Run Habitat Enhancement Master Plan
- Clinton River Corridor Restoration
- Shelby Township Streambank Stabilization
- Wolcott Mills Metropark Wetland Restoration
- Harley Ensign Coastal Wetland Restoration
- Galloway Creek Fish Passage
- Galloway Wetland Restoration
- Sylvan Glen Golf Course Habitat Restoration
Macomb County

8 projects totaling $18 million

- Clinton River Spillway Habitat Enhancement
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MCPWO Role (Drain Projects)

4 projects totaling $11 million

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Drains and Habitat

**Perception: Drains = Impairments**
- Erosion and sedimentation
- Dissolved oxygen
- Limited habitat options

**Reality: Drains = Restoration Opportunities**
- Property Jurisdiction
- Funding availability
  - Capital
  - Long term maintenance
- Dedicated water professionals
Drain Habitat Restoration
Drain Corridor Restoration
Employing Natural Channel Design

Typical Riffle and Pool Design

Vegetative Cover on Stream Banks: Provides Shade and Cover for Wildlife

Riffles: Spacing Varies by Project

Pool Between Riffles

Grass/Flood Plain Area

Riffle

Vegetative Cover on Stream Banks: Provides Shade and Cover for Wildlife
Drain Habitat Restoration

Existing Conditions:  

Potential Restoration:

Source: Sambo Creek Stabilization, Monroe County, Pennsylvania and Bank Stabilization, Montgomery County, Maryland
Drain Habitat Restoration

Existing Conditions:

Potential Restoration:

Source: Upper Mill Creek, Salt Lake County, Utah and Upper Mill Creek, Salt Lake County, Utah
Project Goals
Project Showcase

MACOMB COUNTY PROJECTS
Grant Recipient:
Macomb County Public Works Office on behalf of the Clinton River Spillway Inter-County Drain Drainage Board

Funding:
$4,000,000

Location:
Mt. Clemens, Clinton Township, Harrison Township
Clinton River Spillway Habitat Restoration

Project Description:

• Creating off-channel spawning habitat

• Gravel substrate augmentation and improvements

• In-channel wood and aquatic vegetation for northern pike and yellow perch

• Improving the density and diversity of native plant growth in submergent, emergent, riparian, and upland areas.
Spillway Outcomes

- 96 acres of Invasive species control
- 2.5 ac. off-channel aquatic habitat
  - Northern Pike spawning
- 4,600 ft of bank stabilization
- 44,250 syd of riffle/glide area
- 17,000 sft marsh enhancement
- 1,500 ft. of armored shoreline softened
- 2 fishing piers to reduce bank erosion
Partridge Creek Commons

**Grant Recipient:**
Macomb County Public Works Office

**Project Partner:**
Clinton Township

**Funding:**
$2,300,000
Project Description:

- This project will restore four parcels of publically owned vacant land that was previously a golf course.

- The existing site consists of aquatic and terrestrial invasive species, eroded bank regions along the Gloede corridor, fragmented wetland areas, and degraded golf cart path obstructions.

- The project aims to diversify habitat through open channel restoration and in-stream habitat restoration.
Partridge Creek Commons Habitat Restoration
Partridge Creek Outcomes

- 52 acres of aquatic and terrestrial habitat restoration
- 5,500 lineal feet of multi-staged open channel restoration and enhancement
- 5 acres of wetland restoration
- Invasive species control
Grant Recipient: Macomb County Public Works Office
Project Partner: Macomb Township
Funding: $2,500,000
Project Description:

- Removal of vegetation, grading and other maintenance activities limited the available habitat for wildlife in this stream corridor.

- The restoration of approximately 20,000 feet of this drain to a more traditional stream.

- Immediate and long-term benefits for diverse wildlife habitat and promote enhanced wildlife populations.

- Improvements may include in-stream structures such as boulder clusters, covered logs, tree cover, cross logs and others.
McBride Drain Outcomes

- 20,000 lineal feet of enhancement and restoration
- 10 acres of plant re-vegetation
- 1,500 feet of shoreline naturalization
- 10 acres of invasive species control
- 10 acres of riparian buffer
Red Run Habitat Enhancement Master Plan

Grant Recipient:
Macomb County Public Works Office on behalf of the Red Run Inter-County Drain Drainage Board

Funding:
$2,000,000

Location:
Red Run Subwatershed
Project Description:

• Publish a comprehensive master plan that supports future restoration within the Red Run Subwatershed.

• The plan will be organized to also include:
  • stormwater management,
  • green infrastructure,
  • streambank stabilization, and
  • other watershed improvements that increase habitat restoration and water quality efforts.

• Several pilot projects will be designed and constructed.
Red Run Habitat Enhancement Master Plan

Existing Conditions:
Master Plan Outcomes

- 1 Habitat Master Plan
- +80 GI Assessments and Concept Plans
- 5 GI Projects throughout the City of Warren
- Habitat Restoration Preliminary Plans
  - Spencer Drain
  - Plumbbrook Drain
  - Bear Creek
  - Big Beaver Creek
Red Run Habitat Restoration
Clinton River Corridor Restoration

**Grant Recipients:**
- City of Sterling Heights
- City of Utica

**Funding:**
$4,500,000
Clinton River Corridor Restoration

Project Description:

- River and corridor restoration of 9 Mile Section of the Clinton River

- Increase in flows, sedimentation, and incision has resulted in:
  - bank erosion
  - mid-channel bars,
  - large wood dams, and
  - water quality degradation

- The project area contains diverse fish communities that utilize this stretch for spawning and migration
Clinton River Corridor Outcomes

- 9 miles of habitat improvement, including aquatic and terrestrial
- Improved floodplain connectivity
- Invasive species control
Shelby Township Streambank Stabilization

Grant Recipients:
U.S. EPA

Project Partner:
Shelby Township

Funding:
$600,000
Shelby Streambank Stabilization Outcomes

- Restore 4 extensive eroded banks in River Bends Park
- Reduce sedimentation in river to improve fish habitat
Wolcott Mills Metropark Wetland Restoration

**Grant Recipients:**
Huron-Clinton Metropolitan Authority

**Funding:**
$335,000

**Location:**
Ray Township
Wolcott Mills Wetland Restoration Outcomes

- 66 acres of wetland restoration
- Invasive species control
- Increased river buffer
- Upland habitat restoration
Harley Ensign Coastal Wetland Restoration

Grant Recipients:
- U.S. Army Corps
- MDNR

Funding:
- $2,000,000

Location:
- Harrison Township
Harley Ensign Restoration Outcomes

- Invasive species control
- Armored shoreline softened
- 50 acres of upland habitat restoration
Total Habitat Impact

- 17 Miles of Clinton River and Tributary Restoration
- 200 Acres of Invasive Species Control
- 300 Acres of Terrestrial and Aquatic Habitat
- 90 Acres of Wetland Creation
- 5 Green Infrastructure Projects
- Design of $14 million future projects
Quality of Life Investment

More than just habitat grant projects

- Local economic development
  - Small business opportunities
  - River centric development
- Environmental stewardship
  - Invasive control
  - Water quality improvement
- Social and cultural enhancement
  - Placemaking
  - Recreation linkages
Other Efforts

• Revised stormwater and drain standards
  • Phase II requirements
  • Preservation and restoration of ecological conditions
  • Linkage to PA 451 Pt 301 changes
• Technical support with assistance from Michigan SeaGrant
  • Usage improvement
  • Streamlined process for design, review, permitting, and construction
• Life after delisting
  • Financial sustainability
  • Maintaining work
  • Celebrating!!
Lessons Learned (So Far)

Success will depend on

• Communication, Communication, Communication!!!
• Partnerships
• Collaboration
• Focusing on stakeholder value
Partnerships and Collaboration

Charter Township of Clinton

Clinton River Area of Concern
Public Advisory Council
QUESTIONS/COMMENTS

Thank You!

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