



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (SSM-5)

Water resource problem or opportunity: *Ashmun Creek and Bay Ecosystem Restoration, Sault Ste. Marie, Michigan*

The potential project involves ecosystem restoration in the 2,558-acre Ashmun Creek watershed and potentially in the receiving water (Ashmun Bay) along the St. Marys River (see Figure 1). Restoration may involve measures to address erosion, bank failure, and high levels of sedimentation along Ashmun Creek and within the watershed. The degradation is a result of poor land management and storm water management practices in the watershed, extensive land development in the upper portion of the watershed, and stream channel instability in portions of the watershed. The resulting impacts from these problems include loss of stream habitat for fish and wildlife, degraded water quality, and excessive sediment loading to Lake Huron. The potential restoration has strong local support.

It appears that the Corps Section 206 program (Ecosystem Restoration) would be the most appropriate authority under which to study and pursue implementation of the proposed project. The potential partners (listed below) have been requested to submit a letter of interest regarding a potential Section 206 study/project to the US Army Corps of Engineers, Detroit District.

Problem/opportunity category: The project area is within the St. Marys River Area of Concern (AOC). The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and sediment management. The project would also provide important opportunities to forge innovative strategic partnerships and promote environmental education in the community.

County: Chippewa County, Michigan

Watershed: Sault Ste. Marie Area Watershed, Michigan

Significant resources affected: The project would restore important aquatic habitat in the Ashmun Creek watershed and Bay. Despite having the approximately 300-acre Ashmun Creek Bio-reserve in the watershed, much of its habitat value has been lost due to degradation from several causes. Additionally, the project would likely result in significant reduction in sediment loading to Ashmun Bay and St. Marys River. The project would improve conditions and provide habitat benefits in the watershed and in the nearshore areas of Ashmun Bay.

Key stakeholders (other than pertinent Federal/State agencies): Chippewa-Ottawa Resource Authority (CORA) (POC - Mike Ripley, Environmental Coordinator); Chippewa County Health Department (POCs – Christine Daley); City of Sault Ste. Marie (POC – Linda Basista, City Engineer); Dr. Greg Zimmerman (Lake

Superior State University); Chippewa/East Mackinac Conservation District (POC – Dusty King, Director); The Sault Tribe of Chippewa Indians (Kathleen Brosemer, Tribal Environmental Consultant; Bay Mills Indian Community (Amanda Bosak, Aquatic Biologist);

Potential solution(s): Restoration of the Ashmun Creek and Bay ecosystem may involve some or all of the following measures: (1) erosion/sediment reduction and control measures in the channel, (2) sediment removal, (3) features to improve fish habitat and fish passage in Ashmun Creek and tributaries, (4) implementation of BMPs on contiguous lands, (5) habitat improvement/restoration features in Ashmun Bay, and (6) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration study/project. The study/project has strong interest from the City of Sault Ste. Marie, Chippewa County, Chippewa-Ottawa Resource Authority, and academic interests (LSSU). The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: Chippewa Ottawa Resource Authority (CORA) (POC - Mike Ripley, Environmental Coordinator); Chippewa County Health Department (POCs – Christine Daley); City of Sault Ste. Marie (POC – Linda Basista, City Engineer); Chippewa/East Mackinac Conservation District (POC – Dusty King, Director)

Knowledgeable technical stakeholder point(s) of contact (and contact info): Dr. Greg Zimmerman, gzimmerman@lssu.edu; Mike Ripley, mripley@sault.com.

Pertinent reference documents: Sault Ste. Marie Area Watershed Management Plan, and the St. Marys Remedial Action Plan

Ashmun Creek and Bay Watershed project

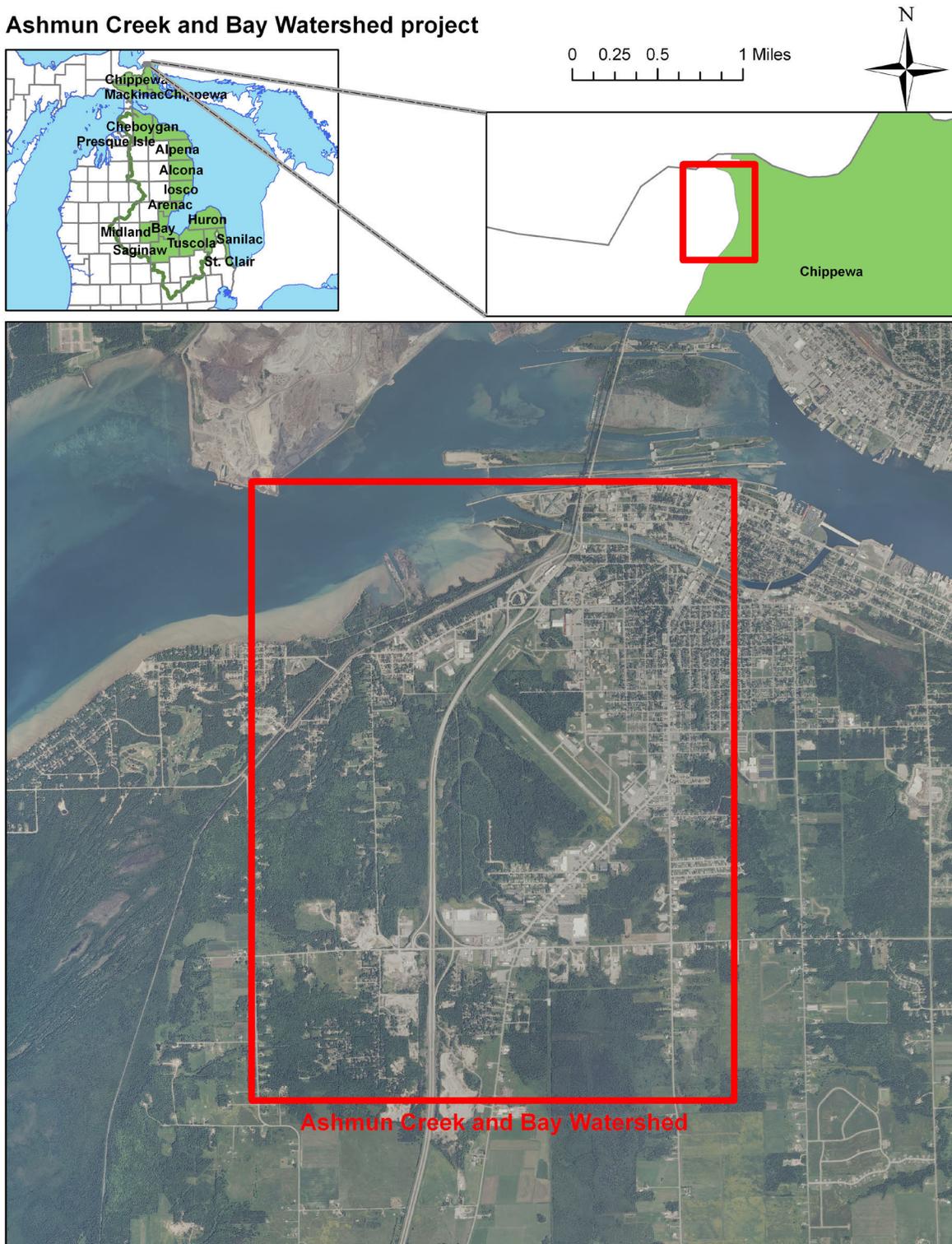


Figure 1. Location of potential Ashmun Creek and Bay watershed ecosystem restoration project



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (Che-2)

Water resource problem or opportunity: *Thunder Bay Watershed, Implementation of Restoration Actions, Alpena, Alcona, Presque Isle County, and Montmorency Counties*

The opportunity involves ecosystem restoration of the Thunder Bay River watershed (see Figure 1), a vast river system well known for its high water quality and aesthetically pleasing scenery. Huron Pines, with the help of project partners and input from resource surveys, has identified opportunities to improve water quality and wildlife habitat (The Mega List: <http://www.huronpines.org/project/99>) in Lake Huron by reducing sedimentation, reconnecting critical habitat and decreasing nutrient loading from the Thunder Bay River watershed. It is estimated that nearly 200 tons of sediment enters the watershed annually from human induced sources such as road/stream crossings and eroding stream banks.

It appears that the Corps Section 206 program (Ecosystem Restoration) could be the most appropriate authority under which to study and pursue implementation of the potential study/project. In addition, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could also potentially be used to address the project opportunity in the areas adjacent to the bay.

Problem/opportunity category: The project area drains directly to Lake Huron and the Thunder Bay National Marine Sanctuary. The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and sediment management and strategic partnerships.

County: Alpena, Alcona, Presque Isle, and Montmorency Counties, Michigan

Watershed: Thunder Bay watershed, Michigan

Significant resources affected: The project would improve habitat within the Thunder Bay watershed, as well as water quality within Thunder Bay itself. The project would likely result in significant reduction in sediment and other pollutant loadings (N, P, metals) to the river, bay and in the Thunder Bay National Marine Sanctuary.

Key stakeholders (other than pertinent Federal/State agencies): Huron Pines (POC – Lisha Ramsdell); local road commissions (POC Montmorency County-Kim Bleech, Alpena County-Larry Orcutt), NEMCOG (POC - Richard Deuell), U.S. Fish & Wildlife Service (POC- Heather Rawlings), Sea Grant (POC-Brandon Schroeder), Montmorency County Conservation Club (POC-Carol Rose) and other local conservation partners.

Potential solution(s): Restoration of the Thunder Bay Watershed may involve some or all of the following measures: (1) erosion/sediment reduction and control measures along streambanks and in channel, (2) sediment removal, (3) features to improve fish habitat, (4) implementation of BMPs on contiguous lands, and (5) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration study/project. The study/project has strong interest from Huron Pines, the local road commissions and Drain Commissioners, and the Northeast Regional Council of Governments (NEMCOG). The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: Huron Pines has expressed interest in potentially serving as the non-Federal sponsor and provided a letter of interest (dated November 14, 2011) to the US Army Corps of Engineers, Detroit District, to initiate the process.

Knowledgeable technical stakeholder point(s) of contact (and contact info): Huron Pines (POC – Lisha Ramsdell); NEMCOG (POC - Richard Deuell)

Pertinent reference documents: Thunder Bay watershed Initiative Phases I & II



Huron Pines

501 Norway Street, Grayling, Michigan 49738

Phone: (989) 344-0753

Website: www.huronpines.org

Email: info@huronpines.org

Conserving the Forests, Lakes and Streams of Northeast Michigan

November 14, 2011

Mr. Terry Long
Plan Formulation Branch
Detroit District
U.S. Army Corps of Engineers

Dear Sir:

Huron Pines, with the help of project partners and input from resource surveys, has identified a potential opportunity to improve water quality and wildlife habitat in Lake Huron by reducing sedimentation, reconnecting critical habitat and decreasing nutrient loading from the Thunder Bay River Watershed. It is estimated that nearly 200 tons of sediment enters the watershed annually from human induced sources such as road/stream crossings and eroding streambanks. In order to protect the unique cultural and ecological features of Thunder Bay, Huron Pines is requesting that the U.S. Corps of Engineers consider a holistic approach to aquatic ecosystem restoration as authorized under Section 206 of the Watershed Resources Development Act of 1996. A multi-phase approach by completing a feasibility study, preparing engineering designs and implementing best management practices at the highest priority sites will go a long way to enhancing the northern Lake Huron basin.

Huron Pines is a nonprofit 501(c)3 organization that for 38 years has worked in northeast Michigan to build private-public relationships in order to implement the highest priority conservation projects in a cost-effective manner. We are currently leading a large-scale restoration project in the Thunder Bay Watershed that will restore ten sites that have been determined to contribute significant amounts of sediment to the river system and which also act as barriers to aquatic passage. These projects will be completed in partnership with local road commissions, National Fish and Wildlife Foundation, U.S. Fish & Wildlife Service and local conservation partners. Momentum provided by this current project in the watershed will lend itself well to a larger partnership with the U.S. Corps of Engineers. By working with the Corps partners in the watershed will be able to address more top priorities helping to ensure the ecological and cultural viability of Thunder Bay and northern Lake Huron.

We understand that a local sponsor will assume costs for land, easements, right-of-ways, relocations and disposal areas (LERRD) and/or assume costs to demonstrate ownership of such. Maintenance of all projects will also be assumed by Huron Pines and/or authorized local entities.

Your consideration of this request will be appreciated. Please feel free to contact me if you should have any questions (989-344-0753 ext. 18).

Sincerely,

Brad Jensen
Executive Director



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (Che-5)

Water resource problem or opportunity: *Trout River Dam Rebuild/Replacement, Presque Isle County, Rogers Township, Michigan*

The Presque Isle County Sportsman's Club constructed the Trout River Dam (see Figure 1) during the 1950s. It nearly washed out in the early 1970s but was rebuilt by the Sportsman's Club at that time. In 1986, the dam was repaired to prevent it from failing. In 1996, the Great Lakes Fishery Commission (GLFC) and Sea Lamprey Control (US Fish & Wildlife Service) funded installation of an iron spillway barrier on the dam to prevent sea lamprey migration upstream along with some strengthening of the east embankment. No further repairs or construction to the dam have occurred since 1996. The Presque Isle Conservation District currently oversees the operation and maintenance of the dam. The dam was evaluated by an engineer in October 2010 and found to be in stable condition. The engineer stated that the dam would need structural strengthening during the next three to five years. There are some problems with leakage around the dam and tree roots that affect the structure, but the issues have not been deemed critical at this time. There are approximately 25 square miles of watershed upstream of the dam.

The Trout River is a designated trout stream under the Michigan Department of Natural Resources regulations and downstream of the dam is excellent trout and salmon habitat. Should the dam fail, it would be likely to release a huge load of sediment that would smother fish spawning habitat (salmon spawn in the river during fall) and possibly result in a large fish kill. A load of silt would smother aquatic insects which fish need for food. Loss of the native food source could result in reduced trout and salmon survival for a long time. Dam failure could pose some potential for structural damage downstream to property owners as the river flows through a residential section of Rogers City.

The USFWS Sea Lamprey Control program under the direction of the GLFC has a vested interest in maintaining the dam and does not want it removed because it would make sea lamprey treatment much more difficult and expensive. Presently, the sea lamprey control program conducts research in the river and treats the river with lampricide every three to four years. A 1997 study estimated that, if the Trout River Dam was removed or failed, the cost to treat the river would more than triple, and the extent of stream requiring treatment would be eight times greater than at present.

There are also other beneficial wildlife considerations to replacing the Trout River Dam. At present, water flows over the top of the dam, draining only the top layer of warm water from the pond. Retrofitting the dam with a structure to release water from a lower level in the pool would allow cooler water to flow downstream. It would also reduce the rate sediment retention in the pond. Having a steadier supply of cool water could increase the populations of trout in the river and enable it to function more closely to pre-dam conditions. Rehabilitation of the Trout River Dam could also include a

water level control mechanism to make the pond more attractive and beneficial to waterfowl. The upstream pool is used by ducks and geese annually. However, because of the huge silt load, the pond is slowly evolving into a marsh habitat which is reducing the open water component for waterfowl. Installing a control structure would allow the pool levels to be manipulated to make the impoundment more usable for waterfowl feeding and nesting. Further, a lamprey-free fish ladder might also be installed on the dam to allow more trout and salmon to move upstream and spawn, thus increasing the fish populations in the river and Lake Huron over time along with fishing opportunities.

It appears that the Corps Section 206 program (Ecosystem Restoration) could be the most appropriate authority under which to study and pursue implementation of the proposed project. In addition, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could potentially be used to address the project opportunity along Trout Creek.

Problem/opportunity category (potential federal interest?): The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and, to a lesser degree, invasive species management. The project would also provide important opportunities to forge innovative partnerships and promote environmental education in the community.

County: *Presque Isle County, Rogers Township, Michigan*

Watershed: Trout River

Significant resources affected: The unstable dam structure poses risk to an important MDNR-designated trout stream. Dam failure would release sediments that would likely smother spawning habitat and native food source (aquatic insects), reducing trout and salmon survival for an extended period of time. Dam failure could also impact and impose increased costs on the ongoing sea lamprey control program in the watershed. Retrofitting the dam outflow could significantly improve downstream trout/salmon habitat conditions. There are also opportunities for improved water level control in the impoundment that could significantly benefit migratory waterfowl.

Key stakeholders (other than pertinent Federal/State agencies): Presque Isle Conservation District, Presque Isle County, Trout Unlimited, Great Lakes Fishery Commission

Potential solution(s): Rehabilitate or replace the Trout River Dam and outflow structure to protect and restore ecosystem function.

Key issues for detailed feasibility-level investigations: Dam ownership, coordination with GLFC and USFWS Sea Lamprey Control Program, non-federal sponsor resources

Potential non-federal partners: Presque Isle Conservation District, 658 S. Bradley Highway, Rogers City, MI 49779, (POC – Ralph Stedman, PCID Administrator, rstedmanPICD@speednetllc.com , (989) 734-4000). PICD has provided a letter of interest (LOI) to the Corps Detroit District dated November 9, 2011.

Knowledgeable technical stakeholder point(s) of contact (and contact info): Ralph Stedman, Presque Isle Conservation District (contact information provided above).

Pertinent reference documents: TBD

Trout River Dam Rebuild Project

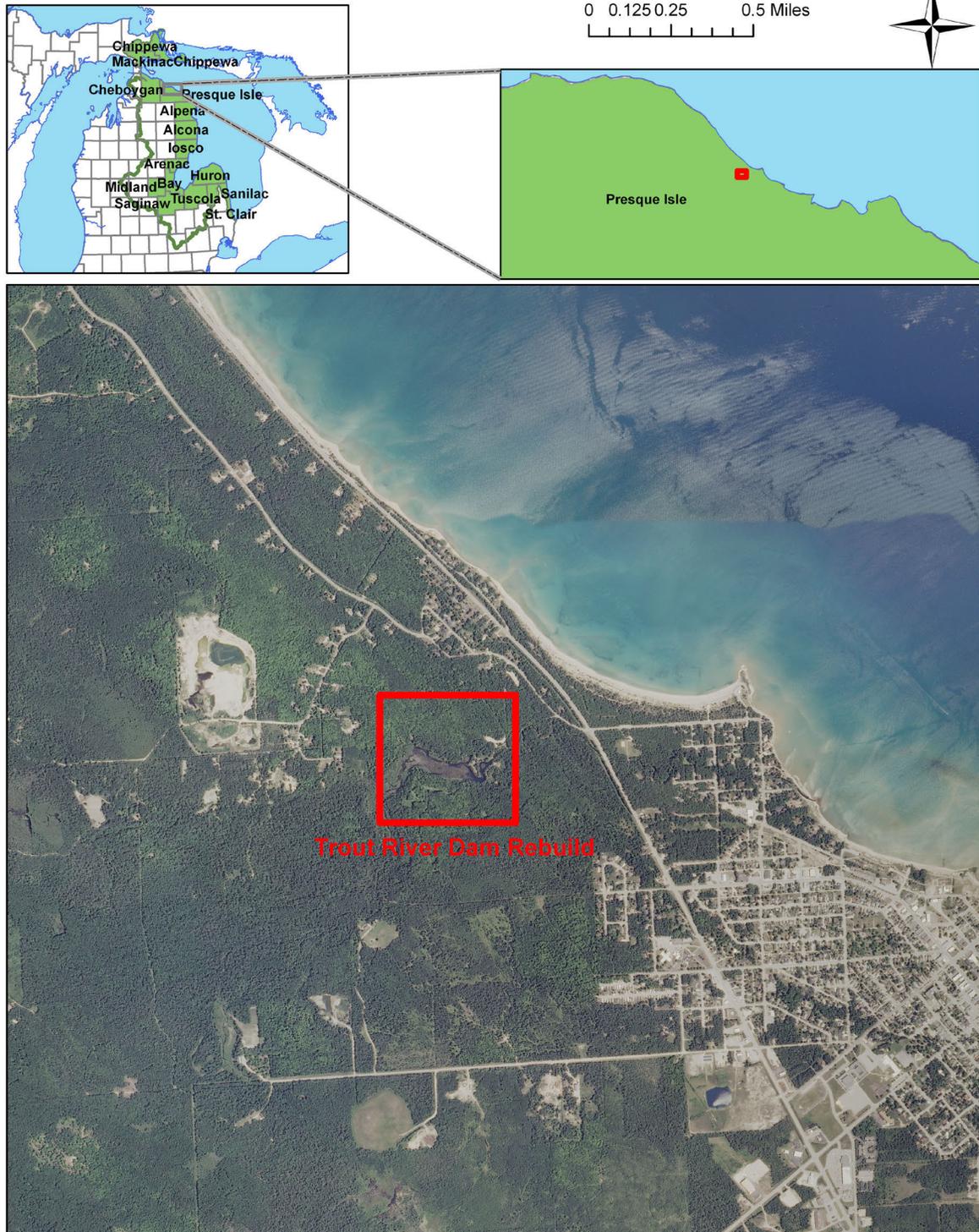


Figure 1. Location of Trout River Dam potential project



Presque Isle Conservation District
658 South Bradley Highway
Rogers City, MI 49779
989-734-4000 phone
989-734-7920 fax

9 November 2011

Mr. Terry Long
US Army Corps of Engineers
Detroit District
477 Michigan Avenue
Detroit, MI 48226-2550

Dear Mr. Long,

The Administrator of the Presque Isle Conservation District has identified a potential opportunity to prevent a sedimentation disaster to a trout stream and nearshore Lake Huron spawning areas as well as improving water quality and waterfowl habitat. This letter seeks the assistance of the US Army Corps of Engineers for the possibility of preparing a feasibility study for replacement of the Trout River Dam in Presque Isle County, Rogers Township (T35N, R5E, S16) under the Aquatic Ecosystem Restoration Program, Section 206 of the Water Resources Development Act of 1996.

The Trout River is a designated trout stream under Michigan DNR regulations and downstream of the dam is excellent trout and salmon habitat. Should the dam fail it would release a huge load of silt (the dam was constructed during the 1950's) that would smother fish spawning habitat (salmon spawn in the river during fall) and possibly result in a large fish kill. A load of silt would smother aquatic insects which fish need for food. Loss of the native food source could result in reduced trout and salmon survival. If the dam burst suddenly it could cause structural damage downstream to property owners as it flows through a residential section of Rogers City.

There are also other beneficial wildlife considerations to replacing the Trout River dam. It is an overspill dam and drains only the top layer of warm water from the pond. Replacing it with an underspill structure would allow cold water to flow downstream and prevent the heavy buildup of sediment in the pond. Having a steady supply of cold water could increase the populations of trout in the river and enable it to function the way it did during the 1950's.

Another enhancement of replacing the Trout River Dam would be to include a control mechanism that would make the pond more attractive and beneficial to waterfowl. Trout River Pond is used by ducks and geese annually but because of the huge silt load the pond is slowly evolving into a marsh habitat and will not have open water for waterfowl. Installing a control structure would allow pond levels to be manipulated to prevent a build up of silt and make it more usable for waterfowl by increasing their feeding and nesting areas.

Lastly, if a lamprey free fish ladder were installed on the dam it would allow more trout and salmon to move upstream and spawn, thus slowly increasing populations of those fishes in the river and Great Lakes and increasing fishing opportunities. The USFWS Sea Lamprey Control program (Great Lakes Fishery Commission) has a vested interest in maintaining the dam and does not want it removed because it would make sea lamprey treatment much more difficult and expensive.

We are aware as local sponsor that we will assume costs for lands, easements, right-of-way, relocations and disposal area (LERRD) and/or assume costs to demonstrate ownership of such. We also will assume responsibility for any operation and maintenance of the project.

Your consideration of this request will be appreciated. Please contact Ralph Stedman, Administrator, Presque Isle Conservation District, 658 S. Bradley Highway, Rogers City, MI 49779, phone 989-734-4000 for further consideration.

Sincerely,

Ralph Stedman
Administrator

Email: rstedmanPICD@speednetllc.com
Office Hours: Tue - Thu 9:30 a.m. to 6:00 p.m.
Mon, Fri - project needs



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (Alp-6)

Water resource problem or opportunity: *Alpena Township Flooding, Alpena, Michigan*

The potential project would involve measures to address flooding problems in Alpena Township, including Fletcher Creek and adjacent watershed areas (see Figure 1). Major flooding events occurred in April 1998 and April 2011, causing damages to residences, businesses, roads, and other infrastructure. The Fletcher Creek watershed itself is relatively small (approximately 654 acres). The lower portion of the watershed is highly developed in residences and businesses. The upper portion of the watershed is principally undeveloped and forested land. However, there is strong evidence that, under larger flood events, water spills over from the Genshaw Drain watershed into the Fletcher Creek watershed and further exacerbates flooding problems. The limestone bedrock geology in the area also complicates flooding conditions. The limestone bedrock conditions impede water infiltration over much of the area while other areas have bedrock cracks at the surface (called swallow holes) that drain large amounts of surface runoff into the subsurface aquifer. According to local officials (Drain Commissioner, Road Commissioner, Alpena Township, Northeast Michigan Council of Governments (NEMCOG)), the total watershed area affected by flooding conditions in Alpena Township watersheds is about 9.5 square miles. A much clearer definition of the source(s) of flooding is needed, and past damages should be more clearly documented.

It appears that flooding problems in Alpena Township (Fletcher Creek watershed and adjacent areas) may be appropriate for investigation under the Corps Continuing Authorities Section 205 program.

Problem/opportunity category: The project area is within the WLHB watershed. The project would address priority category of *flood risk management*. Opportunities may exist, in partnership with the NFS, to address *ecosystem protection and restoration* opportunities in the most upstream portions of the watershed as an integral part of flood risk management project planning (e.g., in development of features such as flood water detention areas, etc.).

County: Alpena County, Michigan

Watershed: Fletcher Creek watershed and adjacent drainage areas, Alpena Township, Michigan

Significant resources affected: Flooding affects residences, businesses, and public infrastructure (roads, culverts, etc.)

Key stakeholders (other than pertinent Federal/State agencies): Alpena Township, City of Alpena, NE Michigan Council of Governments (NEMCOG), Alpena County Drain Commissioner, Alpena County Road Commissioner

Potential solution(s): Channel improvements, detention areas, flood proofing of structures, etc.

Key issues for detailed feasibility-level investigations: Size of watershed (potential policy issues); sufficient damages to structures

Potential non-federal partners: To initiate this study process, a letter of interest (dated November 8, 2011) was sent to the US Army Corps of Engineers, Detroit District, by the Alpena Township Supervisor, Marie Twite. The Township expressed interest in potentially serving as the non-Federal sponsor (NFS). Other partners with the township may include the City of Alpena, Alpena County Drain Commissioner, and Alpena County Road Commissioner.

Knowledgeable technical stakeholder point(s) of contact: Marie Twite, Alpena Township Supervisor (Phone: 989-356-4024); Don Woods, Alpena County Drain Commissioner; Greg Sundin, Director, Planning and Development, City of Alpena (Phone: 989-354-1700; Fax: 989-354-1709; email: gregs@alpena.mi.us); Rich Sullenger, City Engineer, City of Alpena (richs@alpena.mi.us); Richard Deuell, AICP, NEMCOG, (rldeuell@nemcog.org)

Pertinent reference documents: NEMCOG (Northeast Michigan Council of Governments). 2000. *Fletcher Creek Watershed Study*.

Alpena Township Flooding project

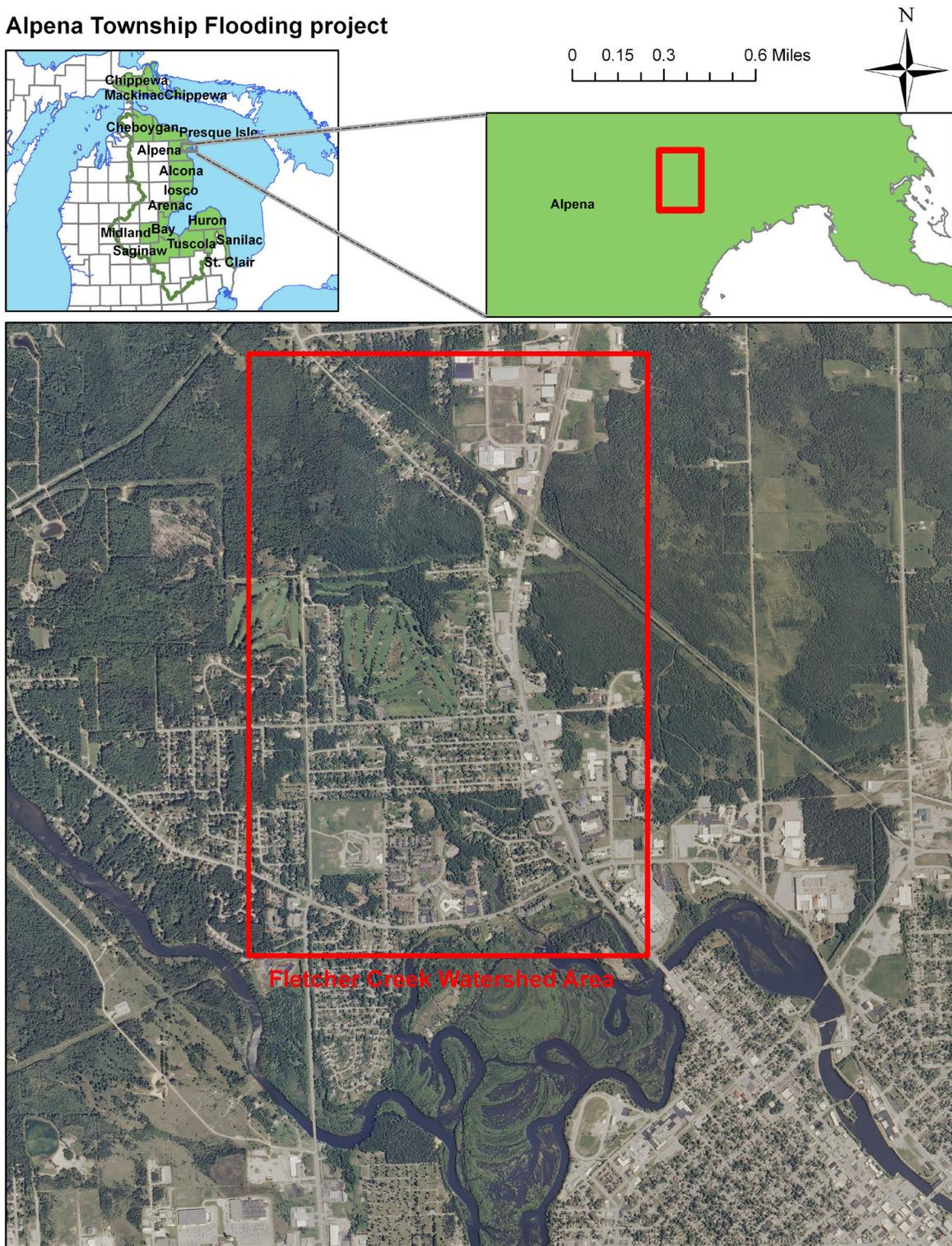


Figure 1. Location of potential project area to address flooding in Alpena Township

Township of Alpena

ALPENA TWP. CIVIC BLDG.
4385 U.S. 23 North
ALPENA, MICHIGAN 49707

Telephone: (989) 356-4024

Email: alpsuper@voyager.net

November 8, 2011

Mr. Terry Long, Chief
Plan Formulation Branch
Detroit District
U.S. Army Corps of Engineers
477 Michigan Avenue
Detroit, MI 48226

Mr. Long,

This is a letter of interest for a Section 205 Flood Protection Project. We have identified several areas of flooding in the Township of Alpena. We have homes and roads that are destroyed in the Bloom, French, Truckey, Hobbs Drive, Princeton, Golf Course, and Genshaw areas. We request that the Corps of Engineers investigate the problem under its Flood Damage Reduction Program (Section 205 of the 1948 Flood Control Act).

We understand that Corps of Engineers will initially investigate the problem to determine whether it meets the requirements for federal participation. We understand that the feasibility study costs could be in excess of \$100,000.00 and the cost share is at 50 percent federal and 50 percent non-federal. We as a community would expect that before any funds could be expended a request would come to the Alpena Township Board of Trustees for approval. We also understand that project implementation costs are shared at 65 percent federal and 35 percent non-federal.

We have requested that the City of Alpena, the Alpena County Drain Commissioner, Alpena County Road Commission Manager and the Alpena County Local Emergency Planning Manager partner with the Township of Alpena on this project.

The Township of Alpena has designated Marie A. Twite as the point of contact on this project. That number is (989) 356-4024.

Sincerely,



Marie A. Twite
Supervisor

CC: Alpena Township Board of Trustees
City of Alpena
Alpena County Drain Commissioner
Alpena County Road Commission Manager
Alpena County Local Emergency Planning Manager



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (Taw-6)

Water resource problem or opportunity: *Rifle River Watershed, Implementation of Restoration Actions, Ogemaw and Arenac Counties*

The opportunity involves ecosystem restoration of the Rifle River watershed, a tributary to the Saginaw Bay (Lake Huron) located in lower northeast Michigan (see Figure 1). Due to its high quality natural resource base, the Rifle River watershed supports a diversity of recreational uses including fishing, hunting, canoeing, trapping, and birding. A number of suspected water quality challenges have been identified within the watershed including: sedimentation from road/stream crossings, eroding streambank segments, impacts transmitted from various agricultural activities, stormwater runoff from developed lands, impacts related to public access needs, excessive localized beaver activity, the tapping of artesian flows, improperly functioning septic systems, industrial and municipal surface water discharges, urban sprawl, thermal pollution, recreational use conflicts and agricultural drainage. Huron Pines, with the help of project partners and input from resource surveys, has identified opportunities to improve water quality and wildlife habitat (The Mega List: <http://www.huronpines.org/project/99>) in Saginaw Bay by reducing sedimentation, reconnecting critical habitat and decreasing nutrient loading from the Rifle River watershed.

It appears that the Corps Section 206 program (Ecosystem Restoration) could be the most appropriate authority under which to study and pursue implementation of the potential study/project. In addition, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could also potentially be used to address the project opportunity in the areas adjacent to the bay.

Problem/opportunity category: The Rifle River feeds into Saginaw Bay, an Area of Concern, and efforts to reduce sediment and nutrient loading will assist in the overall efforts to improve Saginaw Bay. This project also directly ties into several goals outlined in the Great Lakes Regional Collaboration Strategy. The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and sediment management and strategic partnerships.

County: Ogemaw and Arenac Counties, Michigan

Watershed: Rifle River watershed, Michigan

Significant resources affected: The project would improve habitat within the Rifle River watershed, as well as water quality within Saginaw Bay. The project would likely result in significant reduction in sediment and other pollutant loadings (N, P, metals) to the river and bay.

Key stakeholders (other than pertinent Federal/State agencies): Huron Pines (POC – Abigail Ertel); local road commissions and Drain Commissioners, Rifle River Watershed Restoration Committee (POC - Gus Chutorash); Saginaw Bay RC&D, U.S. Fish & Wildlife Service (POC-Andrea Ania), Saginaw Bay Land Conservancy (POC-Valerie Roof), Mershon Chapter of Trout Unlimited (POC-Bob Spence) and other local conservation partners.

Potential solution(s): Restoration of the Rifle River Watershed may involve some or all of the following measures: (1) erosion/sediment reduction and control measures along streambanks and in channel, (2) sediment removal, (3) features to improve fish habitat, (4) implementation of BMPs on contiguous lands, and (5) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration study/project. The study/project has strong interest from Huron Pines, the local road commissions and Drain Commissioners. The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: Huron Pines has expressed interest in potentially serving as the non-Federal sponsor and provided a letter of interest (undated, but submitted on approximately November 14, 2011) to the US Army Corps of Engineers, Detroit District, to initiate the process.

Knowledgeable technical stakeholder point(s) of contact (and contact info): Huron Pines (POC – Lisha Ramsdell)

Pertinent reference documents: Rifle River Non-point Source Pollution Watershed Plan, the Rifle-Au Gres-Tawas Rivers Rapid Watershed Assessment, 2008.

Rifle River project

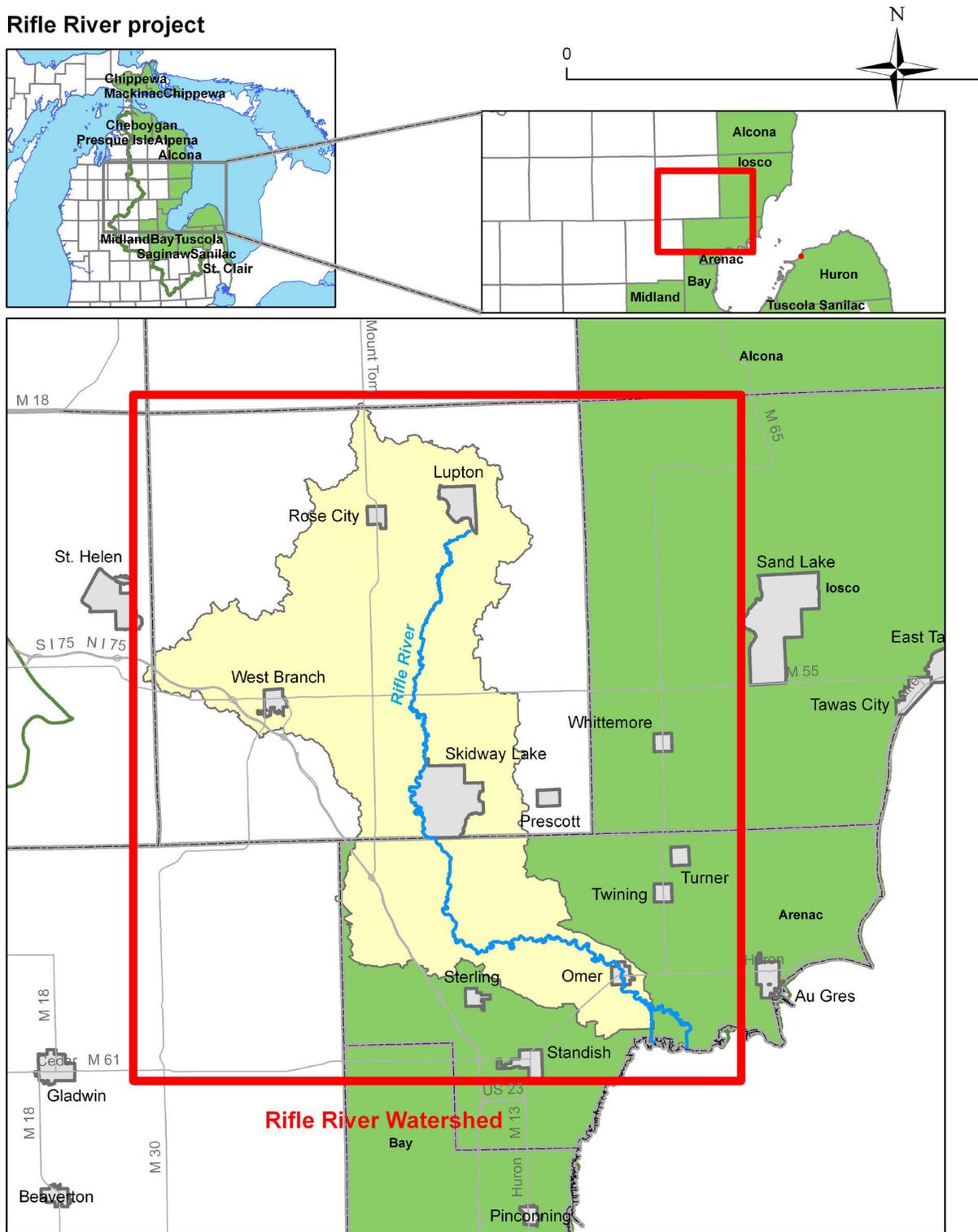


Figure 1. Location of the Rifle River watershed potential project area



Huron Pines

501 Norway Street, Grayling, Michigan 49738

Phone: (989) 344-0753

Website: www.huronpines.org

Email: info@huronpines.org

Conserving the Forests, Lakes and Streams of Northeast Michigan

Mr. Terry Long
Plan Formulation Branch
Detroit District
477 Michigan Avenue
Detroit, MI 48226-2550

Dear Mr. Long,

Huron Pines recently completed a comprehensive resource inventory in the Rifle River Watershed to identify the most current threats to water quality and wildlife habitat. The results of this work will allow Huron Pines to prioritize restoration efforts throughout Ogemaw and Arenac counties effectively addressing the two highest pollutants of concern; sediment and nutrient loading. With the help of key local partners like road commissions, watershed groups, and state and federal agencies streambank, road/stream crossing, stormwater, and permanent land protection best management practices will be implemented at high priority sites having the greatest positive impact on watershed resources as a whole. This letter serves as a request to the US Army Corps of Engineers for assistance under Aquatic Ecosystem Restoration – Section 206 of the Water Resources Act for the Rifle River Watershed Project.

The proposed project is particularly important as the Rifle River has no large dams on the mainstream; draining 396 square miles into Saginaw Bay a US Environmental Protection Agency designated Area of Concern. Efforts to reduce sediment and nutrient loading in the river and its tributaries will have a direct impact on the overall water quality of Saginaw Bay and Western Lake Huron. The project will protect the high quality waters and ecological integrity of the Rifle River Watershed while maintaining the economic and cultural fabric of the communities dependent upon the health of these resources. Huron Pines has a 38 year history of successfully implementing large-scale watershed projects in a very cost effective manner, and by addressing the top threats to watershed integrity collectively cost effectiveness is increased further.

Huron Pines understands that a local sponsor will assume costs for lands, easements, rights-of-way, relocations and disposal areas (LERRD) and/or assume costs to demonstrate ownership of such. They will also assume responsibility for any operation and maintenance of the project. Your consideration of this request is greatly appreciated. Please contact me if you have additional questions on this proposal and I look forward to coordinating with the US Army Corps of Engineers on this project.

Sincerely,

Brad Jensen
Executive Director



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (BC-1)

Water resource problem or opportunity: *Saganing River/Creek Watershed (Arenac County, Michigan)*
Ecosystem Restoration

The potential project would involve actions to restore the aquatic ecosystem in the Saganing River/Creek watershed (see Figure 1). Aquatic habitat quality in the watershed has substantially declined and the system no longer supports a viable fishery. Stream has erosion/sedimentation and potential over drainage.

- No/minimal flow at points in the watershed at times (potential overdrainage)
- High sedimentation (total dissolve solids and total suspended solids)
- Loss of beneficial aquatic plant life
- DO below water quality standards (WQS)
- Proposed development near the shoreline
- No wastewater infrastructure
- Potential septic problems in the area

It appears that the Corps Section 206 program (Ecosystem Restoration) would be the most appropriate authority under which to study and pursue implementation of the potential study/project.

Problem/opportunity category: The project area is within the WLHB watershed and more specifically within the Saginaw River and Bay Area of Concern. The project would address the priority categories of ecosystem restoration, nearshore health and non-point source pollution, sediment management, and strategic partnerships. The project would provide important opportunities to forge a partnership with tribal interests and would promote opportunities for environmental education in the project area.

County: Arenac County, Michigan

Watershed: Saganing Creek/River watershed, Michigan

Significant resources affected: The project would restore an important aquatic habitat throughout the watershed. The watershed has lost much of its habitat value due to a number of contributing factor, including s sedimentation, water quality, flow alterations, and development activities. Additionally, the project would likely result in a reduction in sediment loading to Lake Huron from the watershed. The project would improve conditions and provide habitat benefits in the watershed and in the nearshore areas of Lake Huron in the vicinity of the mouth of the Saganing River.

Key stakeholders: Saginaw Chippewa tribe, Arenac County, Saginaw Bay Land Conservancy

Potential solution(s): Restoration of the Saginaw River/Creek watershed may involve some or all of the following measures: (1) erosion/sediment reduction and control measures in the channel, (2) sediment removal, specific features to improve fish habitat, (4) implementation of BMPs in the watershed, and (5) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration. The project enjoys strong support from the Saginaw Chippewa tribe and others. The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: The Saginaw Chippewa Indian Tribe has expressed interest in potentially partnering with the non-Federal sponsor on the project. The non-Federal sponsor has yet to be identified. The tribe provided a letter of support (dated November 7, 2011) to the US Army Corps of Engineers, Detroit District, for the potential project concept. The possible NFS could be the Office of the Arenac Drain Commissioner, Larry Davis, (989) 846-2011. The Saginaw Bay Land Conservancy (POC – Valerie Roof) could also potentially be a partner.

Knowledgeable technical stakeholder point(s) of contact (and contact info): Ms. Carey Pauquette Schalm (Water Quality Specialist, Saginaw Chippewa Indian Tribe) has served as a local point of contact for the tribal interest in this project. Contact information: cpschalm@sagchip.org, (989) 775-4016, 7070 E. Broadway, Mt. Pleasant, MI 48858.

Pertinent reference documents: TBD

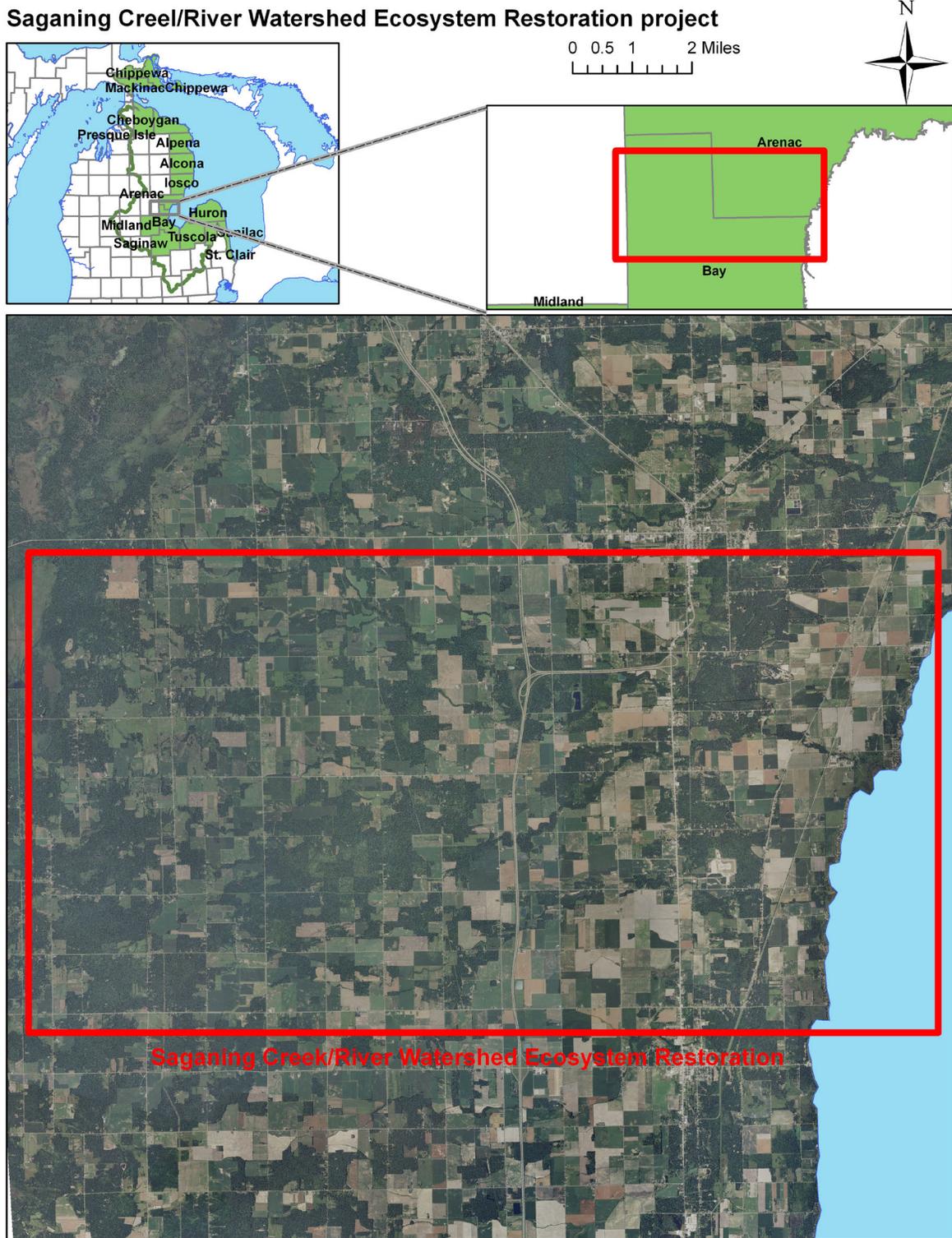


Figure 1. Location of Saganing Creek watershed for potential ecosystem restoration project



The Saginaw Chippewa Indian Tribe Of Michigan

7070 EAST BROADWAY

MT. PLEASANT, MICHIGAN 48858

(989) 775-4005
FAX (989) 775-4131

November 7, 2011

Chief of Planning Office, US Army Corps of Engineers

Detroit District

477 Michigan Avenue

Detroit, MI 48226-2550

Dear Sir:

Please find this as a letter of support on behalf of Tetra Tech, a company seeking support from the US Army Corps of Engineers for funding assistance regarding a potential study on the Saganing Creek on or near the Saganing Reservation in Arenac County, Michigan. This study is a result of problems and opportunities discussed at a stakeholder meeting regarding the Western Lake Huron Basin.

The creek has been altered in some way over the past 20 years but it is unknown how. Local tribal and community members in the area including historical studies show the creek was once a fish nursery for Walleye and other popular sports fish. The creek is now a trickle and full of suspended sediment. It is a low quality stream and cannot support the fish that it once sustained.

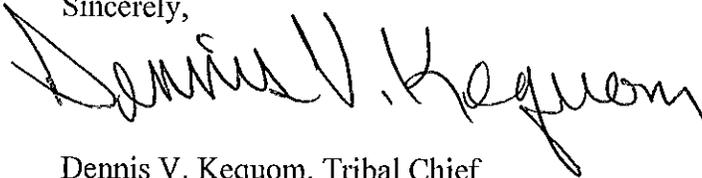
The Saginaw Chippewa Indian Tribe of Michigan is a federally recognized Indian Tribe organized under a Constitution and by-laws ratified by the Tribe on November 4, 1986, pursuant to P.L. 99-346. According to data released by the Tribal Clerk's office there are 3645 enrolled members in the tribe. However, services provided to the local tribal community include descendants and members of other Tribes. There are 3 districts that comprise membership: Isabella (Isabella County), Saganing (Arenac County) and At-Large. Both the Isabella and Saganing reservations are within federal boundaries while the At-Large district members live off the reservation.

The Saginaw Chippewa Indian Tribe of Michigan's Isabella reservation is located in central Michigan's Isabella County approximately 67 miles north of the State's Capitol, Lansing, and is approximately 219 square miles within the Townships of Union, Wise, Denver, Isabella, Chippewa, Nottawa, Deerfield and Denver. The Saganing reservation is located near the bay in Arenac County's Standish Township.

The Tribe is governed by a twelve member council which is democratically elected every two years by the adult membership and includes an executive board consisting of the Tribal Chief, Sub-Chief, Treasurer, Secretary, Sergeant-at-Arms, Chaplains, and six members, two of which each represents the Saganing and At-Large memberships.

The Saginaw Chippewa Indian Tribe of Michigan along with the Tribes' Planning Department supports Tetra Tech in its request for research and funding to study this project.

Sincerely,

A handwritten signature in black ink that reads "Dennis V. Kequom". The signature is written in a cursive style with a large, sweeping initial "D".

Dennis V. Kequom, Tribal Chief

ATTENTION:

TO:

Grants
Public Relations

The following action and/or motion was made concerning your department..
Please keep this documentation for your files and share it with the appropriate concerned staff!

PRINT DATE: Wednesday, November 09, 2011
2:12:10 PM

MEETING: Special Council

ACTION/MOTION:

- V **TETRA TECH LETTER OF SUPPORT/GRANTS:** (Dennis Kequom for Amanda George Dye)
The creek, once an active fisher, is now filled with sediment which the study will find out what has caused the problems. This is a request from Planning to support the letter for the company to submit. This letter of support is for the submittal of the request only. If funding is awarded any future collaboration with the company and the other entities would require future discussion. On a motion duly made by Diana Quigno Grundahl, supported by Sheila Leauteaux, it was moved to approve a letter of support for Tetra Tech for funding assistance support from the US Army Corps of Engineers for a potential study of the Saganing Creek in Saganing, Arenac County. 10 for, motion carried.

Official Signature...

Misty Bailey

Misty Bailey, Executive Transcriptionist
Ruth Straus, Executive Secretary

COUNCIL USE

cc: CFO
Legal
TO Administrator
Accounting
File

SEBD USE

cc: CFO
Legal
CEO
Accounting
File



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (BC-4)

Water resource problem or opportunity: *Kawkawlin River Watershed (Bay County, Michigan)
Ecosystem Restoration*

The Kawkawlin River watershed is approximately 225 square miles with boundaries incorporating portions of Bay, Midland, Gladwin, and Saginaw counties (see Figure 1). The North Branch Kawkawlin River is approximately 36 miles long and drains a heavily forested area in Gladwin and Midland counties. The South Branch Kawkawlin River is approximately 12.9 miles long and drains agricultural and urbanized areas found in Saginaw and Bay counties. At the confluence of the North and South branches, the main stem of the Kawkawlin River then flows approximately 4.63 miles to the Saginaw Bay. The potential project area incorporates the portion of the watershed just above the confluence of the North and South branches at 8 Mile Road downstream to North Euclid Road. The watershed has experienced low flow to dry conditions in the summer and is plagued by excessive sedimentation issues, leading to backwater flooding of private property including agricultural lands during higher flow conditions. Excessive erosion and sedimentation has led to highly degraded wetland and aquatic habitat conditions in the watershed and decline of important fisheries.

The Kawkawlin River Watershed Management Plan (WMP) developed by the Office of the Bay County Drain Commissioner cites excessive sedimentation as a cause for water quality and ecosystem degradation. Both the WMP and a white paper developed by the Kawkawlin River Watershed Property Owners Association (KRWPOA) identify sedimentation as a contributing factor to elevated levels of phosphorus and *e.coli*, as well as low dissolved oxygen. Current research by Dave Karpovich at Saginaw Valley State University (SVSU) in the project area is likely to have findings that support these assumptions. Excessive sedimentation is also identified as a factor in the degradation of fisheries habitat, the spread of invasive species such as phragmites. The clogged natural system in the South Branch Kawkawlin River is also suspected to contribute to flooding during wet weather events. Watershed stakeholders believe that sediment removal in the proposed project area, coupled with implementation of sediment traps, upland sediment control strategies (e.g., greenbelts), and other ecosystem restoration measures, will promote the recovery of the Kawkawlin River ecosystem and decrease flooding events that contribute additional sediment and nutrients to the watershed.

Based on discussion with numerous stakeholders and several potential non-Federal sponsors (NFS) in the area, a study under the Corps General Investigations Program may be appropriate to address these issues. The study may be (1) a “traditional” feasibility report recommending a specific project(s) for congressional authorization and construction or (2) a holistic watershed plan developed in accordance

with Section 729 of the Water Resource Development Act of 1986 to assist state and local interests in determining cost-effective measures and strategies to address problems in the watershed on their own. The direction would be dependent on the objectives and interests of potential NFSs (described below). If these studies would exceed the financial capacity of the NFS(s) for study cost-sharing, a smaller scale ecosystem restoration study/project under Section 206 of the Water Resource Development Act of 1996 may be an option.

Problem/opportunity category: The potential project would address the priority categories of nearshore health and nonpoint source pollution, ecosystem restoration, and invasive species.

County: Bay, Saginaw, Midland Counties (as well as Gladwin County outside the project area boundary)

Watershed: Kawkawlin River Watershed, Michigan

Significant resources affected: Important fish spawning habitat and other wildlife habitat

Key stakeholders (other than pertinent Federal/State agencies): Michigan Department of Environmental Quality (MDEQ), Michigan Department of Agriculture, Bay County Drain Commissioner, Kawkawlin River Watershed Property Owners Association, Delta College, Saginaw Valley State University

Potential solution(s): Implementation of various measures to restore stream channel configuration, reduce erosion and sedimentation in the watershed, and improve wetland and aquatic habitat conditions in order to promote recovery and restoration of ecosystem function and to alleviate backwater flooding.

Key issues for detailed feasibility-level investigations: Identify and confirm a NFS and determine appropriate scope of studies. Non-federal cost sharing limitations are likely to present challenges, and credit for in-kind services will be an important issue to address early in the process. Channel dredging for restoration and long-term maintenance concerns will be important issues to address during the study.

Potential non-federal partners: Bay County Drain Commissioner with support from KRWPOA, SVSU, Delta College and other watershed stakeholders that would provide in-kind contributions toward project match

Knowledgeable technical stakeholder point(s) of contact (and contact info): MDEQ – Charlie Bauer; Bay County Drain Commissioner – Joseph Rivet; Kawkawlin River Watershed Property Owners Association – Dave Bledsoe and John Roszatycki; SVSU – Dave Karpovich

Pertinent reference documents: Kawkawlin River Watershed Management Plan, 2011 Draft, Office of the Bay County Drain Commissioner (cites several other watershed studies conducted at the state and local levels)

Kawkalin River Dredging project

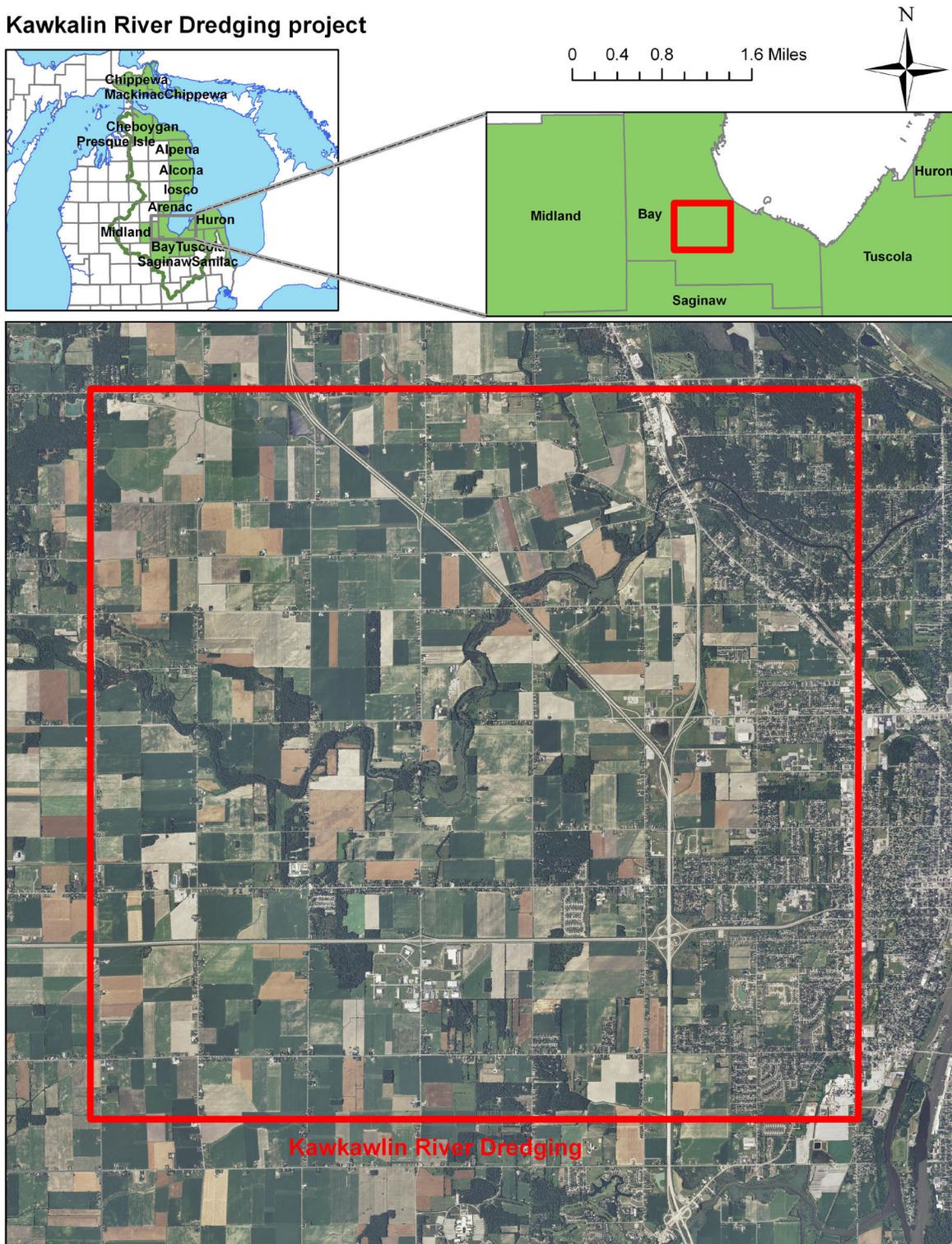


Figure 1. Potential project area for Kawkawlin River watershed sedimentation study



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (PA-4)

Water resource problem or opportunity: *Downtown Caseville Ecosystem Restoration Project*

The potential project involves restoration of an old oxbow of the Pigeon River in downtown Caseville, Michigan, immediately adjacent to the federally authorized Caseville Harbor project (see Figure 1). The oxbow was originally bypassed in the mid-1800's to improve the efficiency of logging operations and to prevent logs and ice from lodging in the curves of the oxbow. Habitat in the old oxbow has become highly degraded over time by erosion and sedimentation, lack of circulation and flow, and the presence of invasive species (i.e., phragmites). The proposed project would involve restoration of several acres of aquatic habitat for spawning and nursery areas, support the baitfish holding capacity of the Caseville Harbor area, improve habitat for other wildlife, and improve public access and use of the restored area. The project would reestablish a healthy freshwater ecosystem, promote natural hydrologic functions, and add to the aesthetic and recreational values in downtown Caseville.

It appears that the Corps Section 206 program (Ecosystem Restoration) could be the most appropriate authority under which to study and pursue implementation of the proposed project. The Corps Section 1135 program may be applicable if impact impacts in the oxbow were exacerbated by construction or operation of the adjacent Caseville Harbor, or if the Caseville Harbor project could be modified in some way to achieve desired environmental benefits in the oxbow area. Further, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could potentially be used to address the project opportunity at Caseville.

The community submitted the proposed restoration for a 2010 GLRI program grant and was unsuccessful in securing an award. The grant application documented significant local and state support for the project. EPA had favorable comments on the proposed project in response to the grant review process, but the project did not rank high enough to receive a grant.

Problem/opportunity category: The project area is within the Saginaw River and Bay Area of Concern (AOC). The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and, to a lesser degree, invasive species management. The project would also provide important opportunities to forge innovative partnerships and promote environmental education in the community.

County: Huron County, Michigan

Watershed: Pigeon River Watershed, Michigan

Significant resources affected: The project would restore an important nursery areas for fish and increase baitfish holding capacity in the project area. The project site has essentially lost all of its habitat value due to sedimentation and invasive species (phragmites). Additionally, the area is in the immediate downtown Caseville area and offers potential for improved public access to important environmental resources and opportunities for public education.

Key stakeholders: The Huron Conservation District, Pigeon River Intercounty Drain Drainage Board, Huron County Building and Zoning Department, and Michigan Sea Grant College Program, and Caseville Downtown Development Authority and Chamber of Commerce have expressed strong support for the proposed project.

Potential solution(s): In order to reestablish healthy, functional conditions in the old Pigeon River oxbow, the proposed restoration project may involve a combination of: (1) erosion/sediment reduction and control measures, (2) measures to increase flow and circulation, (3) sediment removal, (4) invasive species (phragmites) removal, and (5) other pertinent measures.

The proposed project would complement (not overlap or duplicate) a larger ongoing GLRI-funded Pigeon River Corridor Sediment Reduction project, focused upstream of the Caseville project area. The Pigeon River Intercounty Drain Drainage Board is the lead organization for the Pigeon River Corridor project.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration. The project enjoys strong public support from state agencies, various local interests, and citizens of the community. The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: The Village of Caseville, Michigan has expressed interest in potentially serving as the non-Federal sponsor by letter dated November 14, 2011 to the US Army Corps of Engineers, Detroit District. The principal point of contact with the village is Forrest Williams, Town Clerk. Other interests, such as Huron County and other non-government organizations, may play contributing roles.

Knowledgeable technical stakeholder point(s) of contact (and contact info): David Bouck (knowledgeable local businessman and member of the Caseville Downtown Development Authority and Chamber of Commerce) has served as a local point of contact for the project (dbtool@echoicemi.com).

Pertinent reference documents: Village of Caseville Grant Proposal for “*Downtown Caseville, MI Habitat-Ecosystem Restoration Project*” in response to GLRI solicitation EPA-R5-GL2010-1 for Habitat Restoration in Great Lakes Area of Concern.

Downtown Caseville Ecosystem Restoration project

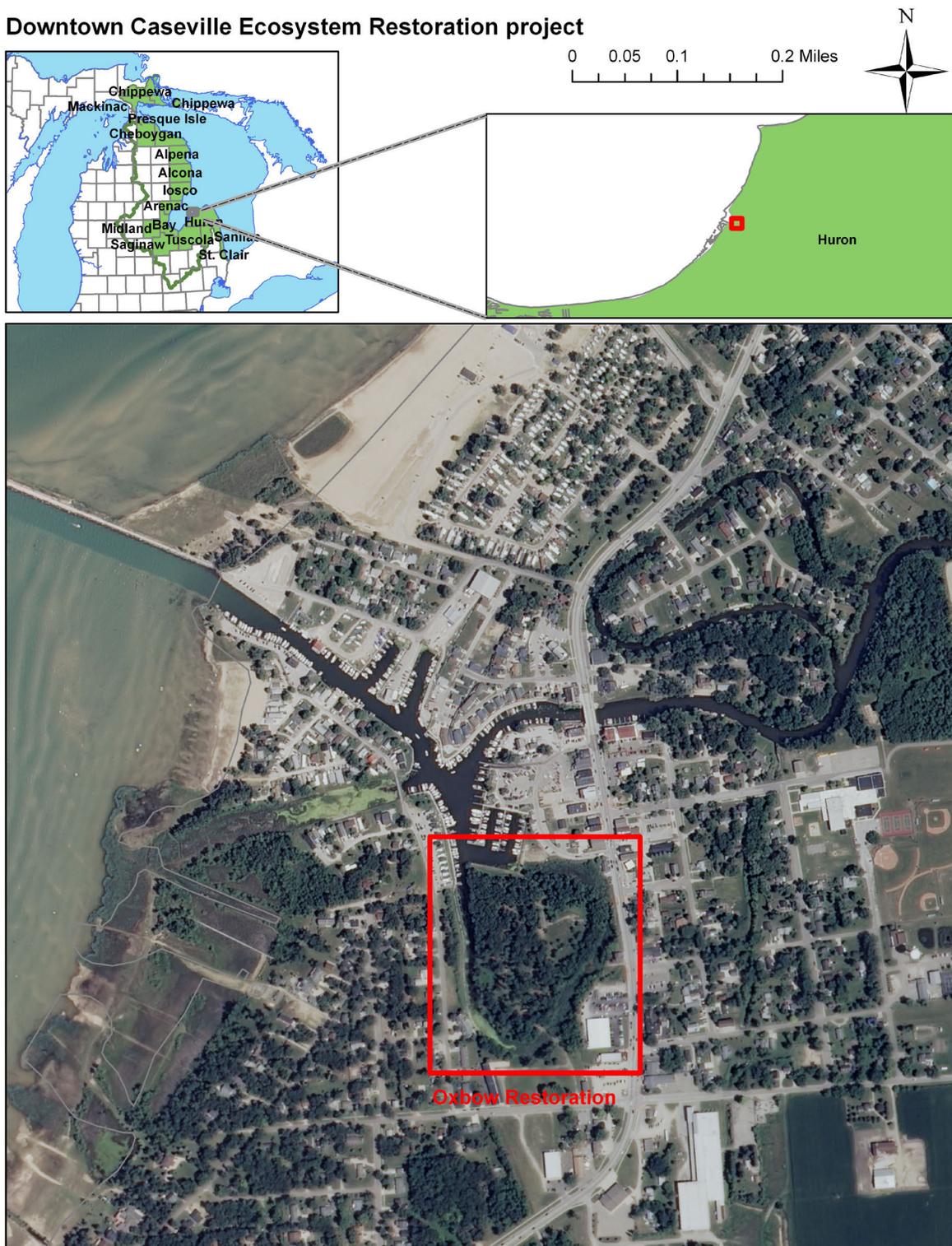


Figure 1. Location of potential oxbow restoration project in Caseville, Michigan



CITY OF CASEVILLE

6767 MAIN STREET

P.O. BOX 1049

CASEVILLE, MICHIGAN 48725-1049

(989) 856-2102 FAX (989) 856-3580 TDD (800) 649-3777

www.caseville-gov.com

Mr. Terry Long
Plan Formulation Branch – Detroit District
US Army Corps of Engineers
477 Michigan Avenue
Detroit, MI 48226

November 14, 2011

Dear Mr. Long:

We have identified a potential opportunity for an ecosystem restoration project in the City of Caseville that will reconnect an old river channel and positively change the habitat of an area in the center of the city. We request that the Corps investigate the possibility of preparing a feasibility study under its Aquatic Ecosystem Restoration Program (Section 206 of the Water Resources Development Act of 1996, as amended) to formulate a restoration plan for the site.

We believe this project would restore an aquatic ecosystem that has been damaged with incorrect past uses and invasion by non-native species. The restoration would enable the revived river to be utilized by native fish species as a spawning area with adequate access to Lake Huron and would greatly improve the quality of the local environment.

We understand that the study will investigate alternative solutions to identify a restoration plan for implementation. We also understand our obligations as local sponsor under the Section 206 Program, including the cost-sharing requirement of 50 percent of the feasibility cost after the first \$100,000 in federal expenditures and 35 percent of the project implementation costs if a feasible plan is identified. We intend to pursue budgetary actions so that funds will be available to meet our cost sharing requirements at the time needed by the Corps of Engineers.

The proposed project area is contiguous to the federally authorized and constructed Caseville Harbor project. Accordingly, we believe that there may be some potential that the proposed restoration project could be studied and constructed under the authority of Section 1135 of the Water Resources Development Act of 1986, as amended. As you initiate investigations for the proposed restoration project, we would appreciate your review and determination regarding which authority would be most appropriate for this project.

The City of Caseville requests that you use Forrest N. Williams, City Clerk as the contact for this request. He can be contacted at 989 856-2102 or fw@caseville-gov.com.

Sincerely,


Patricia DesJardins, Mayor, City of Caseville



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity (PS-1)

Water resource problem or opportunity: *Lexington Harbor Environmental Restoration, Village of Lexington, Michigan*

Local interests identified environmental problems in Lexington Harbor, Michigan (see Figure 1), during community meetings in August 2011 for the WLHB watershed reconnaissance study. These problems were further reviewed and characterized in follow-up discussions with village officials. As identified by community leaders and stakeholders, some of the problems being experienced in the harbor include: sedimentation; poor water quality; poor water circulation and flushing; and invasive species (phragmites and watermilfoil)).

Village officials offered the following characterization of the problems in the harbor:

The build-up of sediment, contaminants, algae and invasive species is evident in the constant need of dredging and the use of frequent chemical applications to keep Lexington Harbor functional. The closing of the south harbor wall has trapped much of the flow, along with sand infiltration from the north wall. Through a Coastal Management Grant, "Ours to Protect" 11D-07.01, the negative impact is evident in the Natural Features Inventory along the harbor shore. Three discharge tubes spill into the harbor, carrying storm water from upland locales. The harbor walls configuration exacerbates this problem.

The community has taken steps to address landside issues related to conditions in the harbor. The Village currently operates under an MS4 Jurisdictional Phase II permit, will participate in the National Flood Plain Program, and is developing a soft shore engineering plan through the Coastal Management Grant identified above. The harbor is an integral part of the municipality and its environmental status is a reflection of the Village's advocacy of Lake Huron resources. The community is acting to address environmental issues above the ordinary high water mark but needs assistance addressing issues within the aquatic environment in the harbor that may be exacerbated by the current project configuration.

Based upon the general characterization of the problems, it appears that they could be related to the harbor features as they were constructed or potentially could be improved by modifying the harbor features in a manner that would not adversely impact the authorized purpose or function of the harbor. If so, the Corps' Section 1135 program may provide an appropriate means by which to investigate those problems further and address them if an appropriate solution can be developed. The program basically allows the Corps to review and modify structures and/or operations of water resource projects constructed by the Corps for the purpose of improving the quality of the environment, when it is

determined that such modifications are feasible. In addition, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could potentially be used to address the project opportunity in the near shore areas of the harbor.

Problem/opportunity category: The potential project would address the priority categories of nearshore health and nonpoint source pollution, ecosystem restoration, and invasive species.

County: Sanilac County, Michigan

Watershed: Lake Huron, Michigan

Significant resources affected: Aquatic habitat, fishery, and water quality impacts; in addition, potential diminished value of important recreational harbor and MDNR facilities ramp and launch facilities

Key stakeholders (other than pertinent Federal/State agencies): Village of Lexington, MDNR Waterways Commission (potential), others TBD

Potential solution(s): Measures to improve circulation and minimize sedimentation in critical areas; sediment removal in selected areas (not related to navigation); removal of invasive species as part of initial restoration action; others

Key issues for detailed feasibility-level investigations: Clarifying and documenting the actual nature and severity of the environmental problems in the harbor; array of potential solutions may be limited

Potential non-federal partners: The Village of Lexington, Michigan has expressed interest in potentially serving as the non-Federal sponsor and provided a letter of interest (dated November 30, 2011) to the US Army Corps of Engineers, Detroit District, to initiate the process.

Knowledgeable technical stakeholder point(s) of contact (and contact info): Village of Lexington (POCs – Jamie McCombs, Chair, Village of Lexington Environmental Committee; Jon Kosht, Village Business Manager, and Bill Oldford, Village Council Member) ; MDNR – Michigan Waterways Commission (village to make contact for regarding potential interest)

Pertinent reference documents: TBD

Lexington Harbor Break wall project

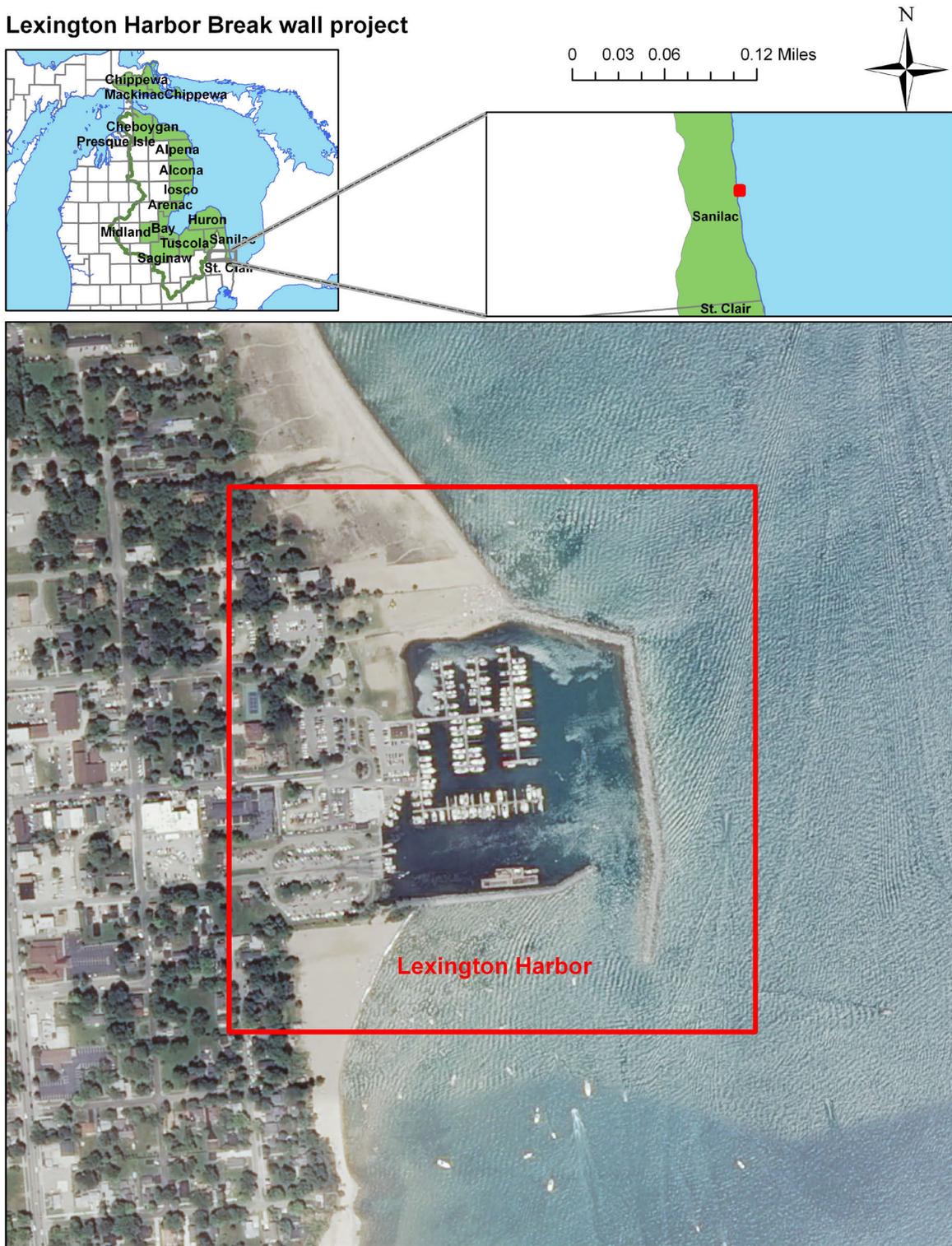


Figure 1. Location of potential Lexington Harbor project



VILLAGE OF LEXINGTON

7227 HURON AVENUE, SUITE 100
LEXINGTON, MICHIGAN 48450
810-359-8631
FAX: 810-359-5622

November 30, 2011

Chief of Planning Office, US Army Corps of Engineers
Detroit District
477 Michigan Avenue
Detroit, Mi. 48226-2550

Dear Sir:

This letter is to seek the assistance of the United States Army Corps of Engineers (USACE), under Sec. 1135 of the Water Resources Development Act of 1986, as amended; and/or Sec. 206 of the Water Resources Development Act of 1996, as amended.

Lexington Harbor is situated in Lake Huron, Village of Lexington, Michigan. Infill of sediments, contaminants and vegetation has damaged the environmental and navigational sustainability of this Western Lake Huron Basin site.

USACE completed the harbor project in 1980. Since the initial design, minor changes were made. There is a constant need of dredging and use of chemical applications to keep the harbor functional. The closing of the south harbor wall has trapped much of the flow, along with sand infiltration through the north wall. Three discharge tubes spill into the harbor, carrying storm water from upland locales. Water quality is poor at best and the overall eco-system suffers. The installation of the harbor created beach sand loss to the south side residents. There is an ongoing obligation by USACE for beach renourishment. The closing of the south harbor wall was perhaps an effort to meet these needs. The north shore of the harbor continues to build sand levels at a rapid pace.

A recommendation of a feasible solution is paramount to the economic and environmental vitality of this Lake Huron community. The Village currently operates under a Jurisdictional Phase II Ms4 permit; is participating in the National Flood Insurance Program; is developing a soft shore engineering plan through a Coastal Management Grant, "OURS TO PROTECT" IID-07.01. [This will include a Natural Features Inventory and GPS mapping of waterfront adjacent public lands in the Village.]

Through the advocacy of a budgeted Environmental Committee and support of the Village Council, this small municipality consistently ups its environmental goals for the betterment of its residents and the protection of the Great Lakes.

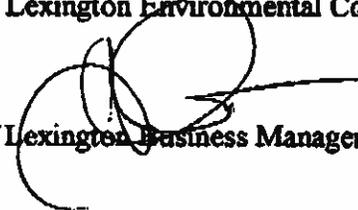
Thank you for any guidance in these concerns.

Respectfully,


Jamie McCombs

Village of Lexington Environmental Committee Chair

Jon Kosht


Village of Lexington Business Manager

CC:

Kevin Kratt

Director, Water Resources Group

Tetra Tech Complex World, Clear Solutions

1468 W. 9th St., Suite 620

Cleveland, OH 44113

Elva Mills

Village of Lexington Council President



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (PS-3)

Water resource problem or opportunity: *Doe Creek Watershed (St. Clair County) Ecosystem Restoration*

The potential project would involve measures to address erosion, bank failure, and high levels of sedimentation along Doe Creek and tributaries in St. Clair County, Michigan (see Figure 1). The degradation is a result of poor land management and storm water management practices in the watershed and stream channel instability. The resulting impacts from these problems include loss of stream habitat for fish and wildlife, damage to roads and culverts, and excessive sediment loading to Lake Huron. The potential project has strong local support a potential non-Federal sponsor.

It appears that the Corps Section 206 program (Ecosystem Restoration) would be the most appropriate authority under which to study and pursue implementation of the proposed project. In addition, the Corps Section 506 (Great Lakes Fishery and Ecosystem Restoration (GLFER)) program could potentially be used to address the project opportunity in the Doe Creek Watershed.

Problem/opportunity category: The project area is within the WLHB watershed. The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and sediment management. The project would also provide important opportunities to forge innovative partnerships and promote environmental education in the community.

County: St. Clair County, Michigan

Watershed: Doe Creek Watershed, Michigan

Significant resources affected: The project would restore an important aquatic habitat in the watershed, particularly in the lower portion of Doe Creek. The project site has lost most of its habitat value due to sedimentation from the watershed, head cutting, and bank sloughing. Additionally, the project would likely result in significant reduction in sediment loading to Lake Huron from the watershed. The project would improve conditions and provide habitat benefits in the watershed and in the nearshore areas of Lake Huron in the vicinity of the mouth of Doe Creek.

Key stakeholders: Thumb Land Conservancy, NRCS District Conservationist (Ben Thelan), MDNR Fisheries (Jim Baker)

Potential solution(s): Restoration of the Doe Creek watershed may involve some or all of the following measures: (1) erosion/sediment reduction and control measures in the channel, (2) sediment removal,

(3) features to improve fish habitat, (4) invasive species (phragmites) removal, (5) implementation of BMPs on contiguous lands, and (6) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration. The project enjoys strong public support. The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: The Office of the Drain Commissioner, St. Clair County, Michigan has expressed interest in potentially serving as the non-Federal sponsor and provided a letter of interest (dated November 9, 2011) to the US Army Corps of Engineers, Detroit District, to initiate the process. The principal points of contact with the Drain Commissioner's Office are Mr. Jim Hartson (Deputy Drain Commissioner, St. Clair County) and Ms. Cheryl Collins (Drain Inspector, Office of the Drain Commissioner, St. Clair County).

Knowledgeable technical stakeholder point(s) of contact (and contact info): Ms. Cheryl Collins (Drain Inspector, Office of the Drain Commissioner, St. Clair County) has served as a local point of contact for the project. Contact information: cacollins@stclaircounty.org, (810) 989-6940.

Pertinent reference documents: Photos, maps, and news articles provided by the Office of the Drain Commissioner

Doe Creek Watershed Ecosystem Restoration Project

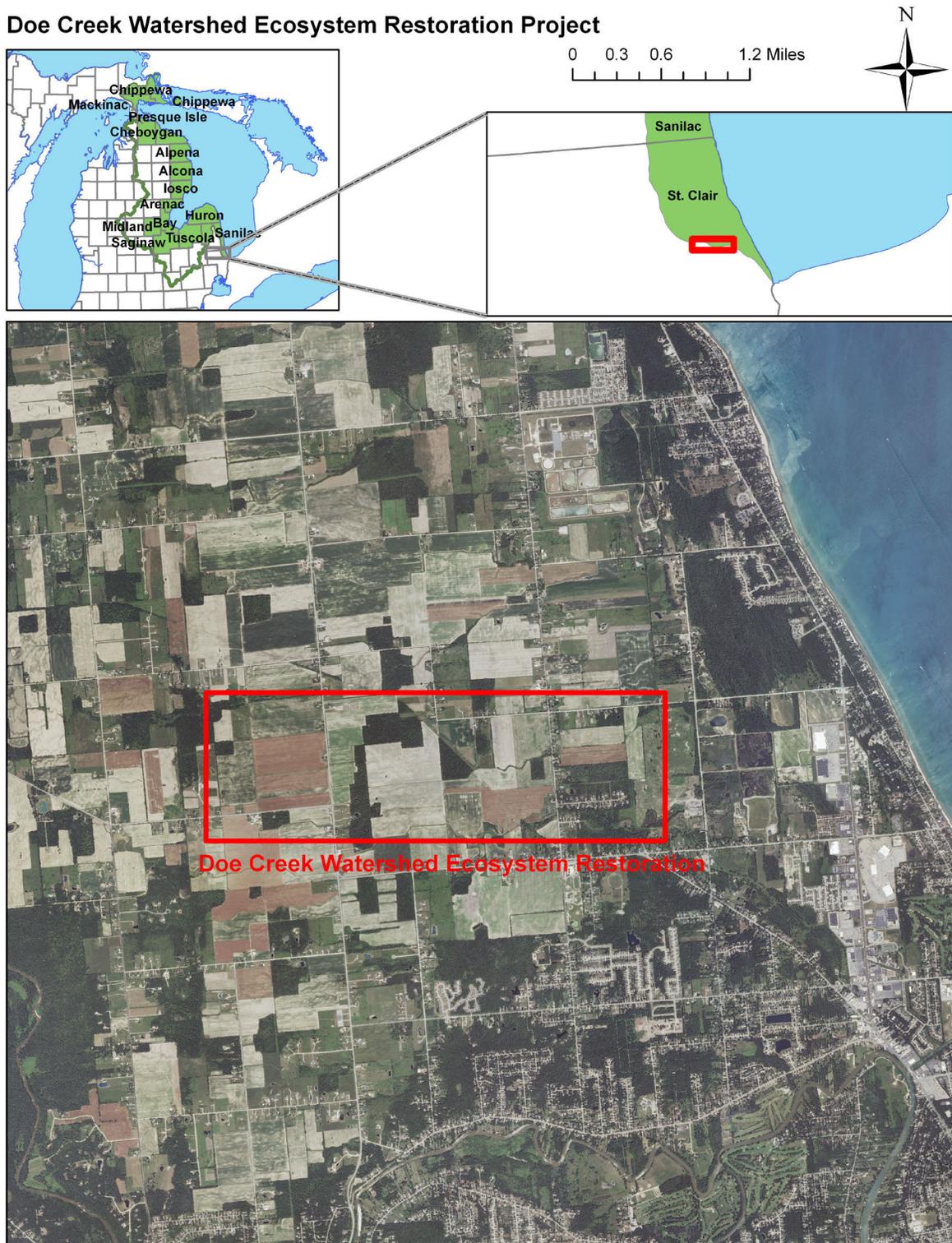


Figure 1. Location of potential Doe Creek watershed ecosystem restoration project



County of St. Clair, Michigan

ROBERT WILEY, DRAIN COMMISSIONER
21 Airport Drive, St. Clair Twp., Michigan 48079

PHONE: (810) 364-5369
FAX: (810) 364-7240

November 09, 2011

Mr. Terry Long
Plan Formulation Branch
Detroit District
US Army Corps of Engineers
477 Michigan Avenue
Detroit, Michigan 48226

Dear Mr. Long,

The St. Clair County Drain Commissioner has identified a potential opportunity to improve the water quality and aquatic ecosystem of Lake Huron and three county drains by reducing soil erosion and sedimentation. The three county drains are Doe Creek, Brace Drain, and the Edie Smiley, all of which are located in Fort Gratiot Township, St. Clair County. Therefore, I request that the Corps investigate the possibility of preparing a feasibility study under its Aquatic Ecosystem Restoration Program (Section 206 of the Water Resources Development Act of 1996, as amended) to formulate a restoration plan for the site.

As Drain Commissioner I believe the amount of soil being discharged to Lake Huron from Doe Creek can be greatly reduced by correcting slumping banks and restoring stability within these three drains. A successful project will not only address immediate impacts to the lake but will also help in avoiding future ecological and physical damages to both Lake Huron and the county drains.

We understand that the study will investigate alternative solutions to identify a restoration plan for implementation. We also understand our obligations as local sponsor under the Section 206 Program, including the cost-sharing requirement of 50 percent of the feasibility cost after the first \$100,000 in federal expenditures and 35 percent of the project implementation costs if a feasible plan is identified. We intend to pursue budgetary actions so that funds will be available to meet our cost sharing requirements at the time needed by the Corps of Engineers.

As the St. Clair County Drain Commissioner I designate Jim Hartson, Deputy Drain Commissioner, 810-989-6985, jhartson@stclaircounty.org or Cheryl Collins, Drain Inspector, 810-989-6940, cacollins@stclaircounty.org as the points of contact for this project.

Sincerely,

Robert Wiley, St. Clair County Drain Commissioner

Email:
rwiley@stclaircounty.org

Office Hours:
Monday through Friday
8:00 a.m. to 4:00 p.m.



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (PS-4)

Water resource problem or opportunity: *Eastern Sanilac County Coastal Watersheds, Michigan*

The Eastern Sanilac County Coastal Watersheds encompass approximately 114,560 acres of predominately agricultural land located on the eastern edge of the "thumb" area of Michigan along about 40 miles of coastline (see Figure 1). The potential project area has a series of small tributaries feeding into Lake Huron. Beaches at the outlets of the watersheds are used by residents and are important for tourism.

There are significant erosion problems along the coast of Lake Huron in the project area. Additionally, these tributary streams are experiencing significant erosion and sedimentation issues as they near the coast. These issues pose a major threat to Michigan Highway 25 and the associated infrastructure along the highway. Erosion is causing loss of fish and wildlife habitat and is resulting in heavy sediment deposition into Lake Huron.

Based on discussion with numerous stakeholders and several potential non-Federal sponsors (NFS) in the area, a feasibility study under the Corps General Investigations Program may be appropriate to address these issues. The study may be a "traditional" feasibility report recommending a specific project(s) for congressional authorization and construction or a holistic watershed plan developed in accordance with Section 729 of the Water Resource Development Act of 1986. The direction would be dependent on the objectives of potential NFS (described below).

Problem/opportunity category: The potential project would address the priority categories of storm damage reduction and coastal erosion, nearshore health and nonpoint source pollution, ecosystem restoration, and potentially invasive species.

County: Sanilac County, Huron County (extreme southern portion), and St. Clair (extreme northern portion), Michigan

Watershed: Eastern Sanilac County Coastal Watersheds, Michigan

Significant resources affected: Important coastal shorelines and bluffs, coastal watersheds and associated habitat, roadside park resources

Key stakeholders (other than pertinent Federal/State agencies): Michigan Department of Transportation (MDOT), Michigan Department of Environmental Quality (MDEQ), Sanilac County Road Commission, Sanilac County Drain Commission, Sanilac County Conservation District

Potential solution(s): Implementation of various measures to reduce coastal and stream erosion to reduce damages to infrastructure and to protect/restore healthy ecosystems.

Key issues for detailed feasibility-level investigations: Identify NFS and determine appropriate scope of studies.

Potential non-federal partners: Michigan Department of Environmental Quality, Michigan Department of Transportation. The Sanilac County Drain Commissioner, Greg Alexander, provided a letter of support to the US Army Corps of Engineers, Detroit District (dated November 21, 2011) for this project. No specific non-federal sponsor has provided a letter of interest to date.

Knowledgeable technical stakeholder point(s) of contact (and contact info): MDEQ – Charlie Bauer; MDOT – Rachel Phillips; Sanilac County road Commission – Rob Falls; Sanilac County Drain Commission – Greg Alexander; Sanilac County Conservation District – Sandy Pritchett

Pertinent reference documents: Sanilac County Lakeshore Watershed, Watershed Management Plan, December 2003

Sanilca County Restoration project

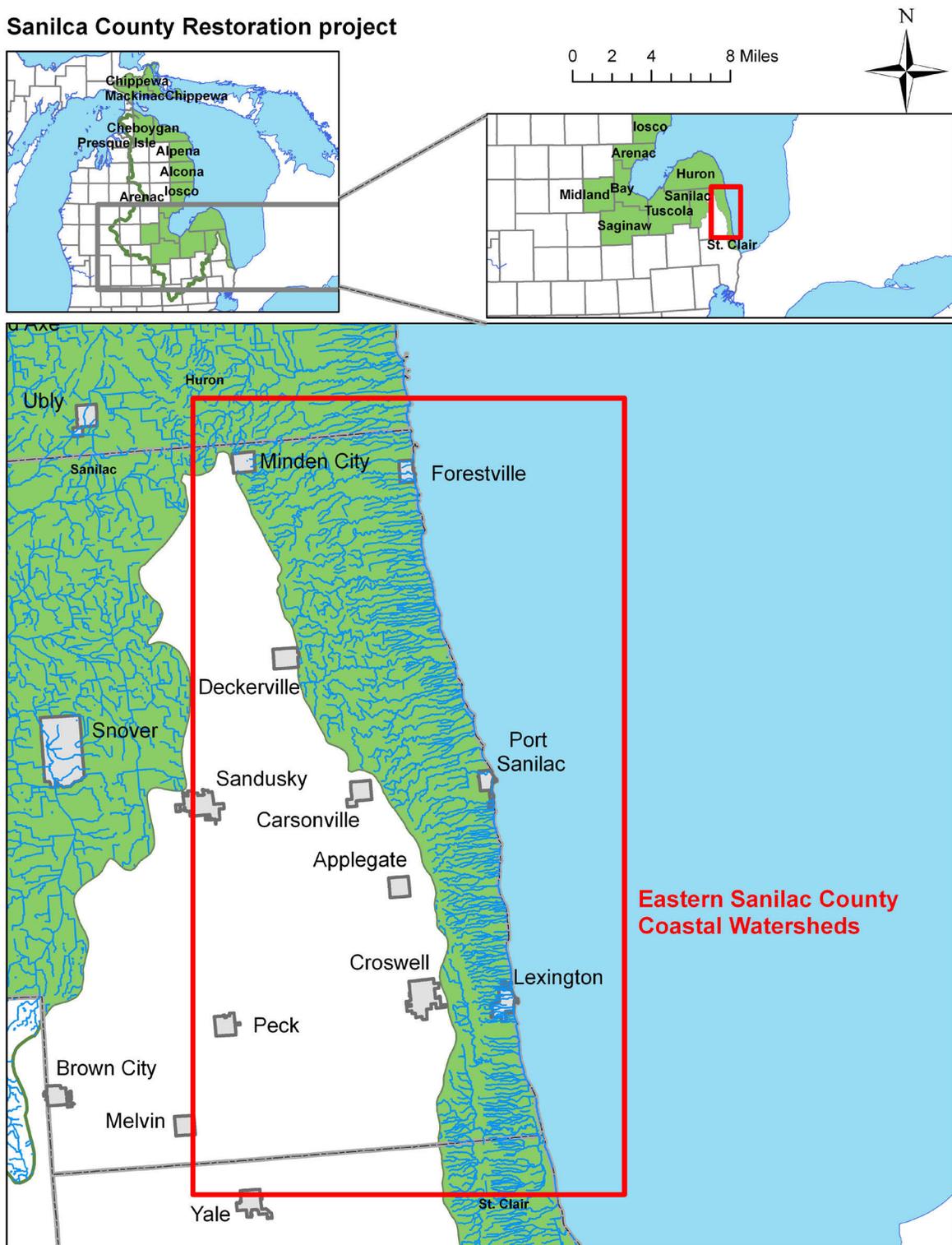


Figure 1. Location of Sanilac County coastal watershed for potential erosion control and drainage study

Gregory L Alexander

SANILAC COUNTY

DRAIN COMMISSIONER

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November 21, 2011

Mr. Terry Long
Plan Formulation Branch
Detroit District
US Army Corps of Engineers
477 Michigan Avenue
Detroit, MI 48226

Dear Mr. Long:

The Western Lake Huron Basin (WLHB) Reconnaissance Study, conducted by the U.S. Army Corps of Engineers under the authority of Section 102 of the River and Harbor Act of 1966, as amended, has identified water resource problems in the area generally described as the Eastern Sanilac Coastal Tributary Watershed that may be appropriate for further detailed feasibility level investigations. The problems in this watershed area involve coastal shoreline erosion and altered conditions in the near coastal watersheds that are threatening the coastal highway infrastructure (M-25) as well as causing high levels of sedimentation, coastal habitat loss, and other related problems.

The Sanilac County Drain Commission strongly supports a proposed watershed-based feasibility study in the Eastern Sanilac Coastal Tributary Watershed that would holistically investigate the erosion and washout issues along the coastline and in the tributary streams along the coast as well as associated ecosystem restoration opportunities in the area. We would be willing to actively participate as a key stakeholder in the study area by sharing relevant and readily available data and information that we may have, helping to identify other local sources of information and available resources, and serving as an advocate for the study with local organizations and agencies, businesses, and the general public.

I will act as the principal point of contact for further discussions regarding this potential study.

Sincerely,



Gregory L Alexander
Sanilac County Drain Commissioner
810-648-4900



Western Lake Huron Basin (WLHB) Watershed Reconnaissance Study

Water Resource Problem/Opportunity Summary (TS-8)

Water resource problem or opportunity: *Ambrose Road and Spaulding Drain, Saginaw County, Michigan*

The opportunity involves stream stabilization and ecosystem restoration of about one-half mile of the Spaulding Drain that parallels Ambrose Road (see Figure 1). Restoration may involve measures to address erosion, bank failure, and high levels of sedimentation along the Spaulding Drain. This section of the drain is immediately upstream of the Shiawassee National Wildlife Refuge (SNWR). The edge of the drain abuts the road along this section, which has contributed to stream channel instability. The impacts from this problem include loss of stream habitat for fish and wildlife, degraded water quality, and excessive sediment loading to the SNWR, Saginaw River, and eventually to Lake Huron. Because of the stream channel instability, the future integrity of Ambrose Road in this reach of stream is questionable. The potential restoration project has strong local support.

It appears that the Corps Section 206 program (Ecosystem Restoration) may be appropriate for this project to achieve the desired habitat restoration. Because of the potential loss of (or damage to) Ambrose Road, the Corps Section 14 program (Emergency Streambank and Shoreline Protection) may be an appropriate authority to consider for those areas of imminent potential impact.

Problem/opportunity category: The project area is within the Saginaw River/Bay Area of Concern (AOC). The project would address priority categories of ecosystem restoration, nearshore health and non-point source pollution, and sediment management.

County: Saginaw County, Michigan

Watershed: Flint River watershed, Michigan

Significant resources affected: The project would improve habitat within the Spaulding Drain and protect important aquatic habitat in the SNWR. The project would likely result in significant reduction in sediment and other pollutant loadings (N, P, metals) to the Refuge and Lake Huron.

Key stakeholders (other than pertinent Federal/State agencies): Saginaw County Drain Commissioner (POC - Mathew Rappley, Drain Commissioner); Saginaw County Road Commission (POC - Brian Wendling, Managing Director); Shiawassee National Wildlife Refuge – (POC – Steve Kahl and Michelle VanderHaar); Saginaw County Conservation District (Patti Copies, Executive Director)

Potential solution(s): Restoration of the Spaulding Drain may involve some or all of the following measures: (1) erosion/sediment reduction and control measures in the channel, (2) sediment removal, (3) features to improve fish habitat, (4) implementation of BMPs on contiguous lands, and (5) other pertinent measures.

Key issues for detailed feasibility-level investigations: There appear to be no significant issues or potential impediments to the proposed restoration study/project. The study/project has strong interest from the Drain Commissioner, Road Commission and the SNWR. The project would be subject to environmental review (NEPA) and full public coordination.

Potential non-federal partners: Saginaw County Drain Commissioner (POC - Mathew Rappley, Drain Commissioner); Saginaw County Road Commission (POC - Brian Wendling, Managing Director)

Knowledgeable technical stakeholder point(s) of contact (and contact info): Matthew D. Rappley, Public Works Commissioner, mrappley@saginawcounty.com; Brian Wendling, Managing Director, wendlingb@scrc-mi.org

Pertinent reference documents: TBD

Ambrose Road and SPaulding Drain project

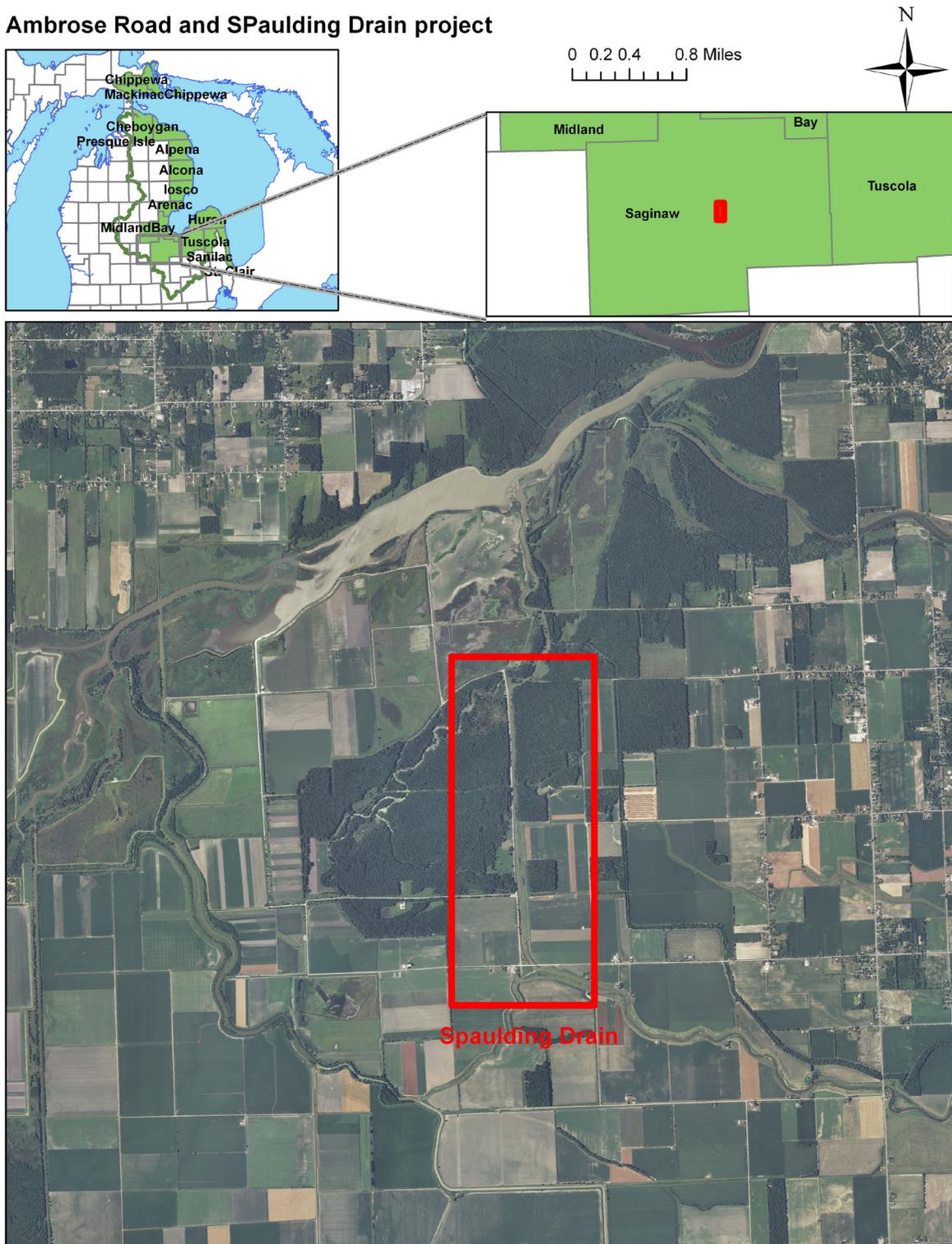


Figure 1. Location of Spaulding Drain potential project area