



*Profiling the
Ottawa River V*

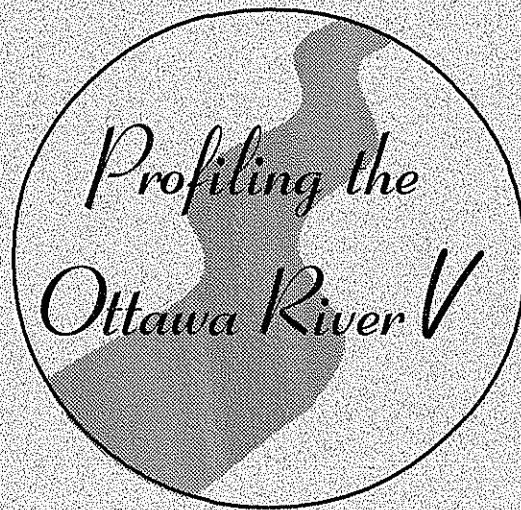
Wednesday, September 25, 2002

6:30PM to 9:30PM

Friendship Park Senior Center

2930 131st Street

Toledo, Ohio



Overview of Maumee RAP and the Ottawa River Action Group

Paul Hotz, Chair, Maumee RAP Committee

Benefits of Low Head Dam Removal

Susan Wells, Fisheries Biologist, U.S. Fish & Wildlife Service

Combined and Sanitary Sewer Overflows on the Ottawa River

Scott Sibley, P.E., Administrator, City of Toledo, Division of Engineering Services

City of Toledo Waste Water Treatment Plant Update

Steve Hallett, P.E., Administrator of Engineering, City of Toledo, Bay View WWTP

Stickney West Industrial Park Project - Phase II

Casey Stephens, Project Manager, City of Toledo, Division of Environmental Services

BREAK

Current Research on the Ottawa River: Land Use Change & Sediment Loadings

Patrick Lawrence, Ph.D., University of Toledo, Department of Geography and Planning

Ottawa River Navigational/Recreational Dredging Project

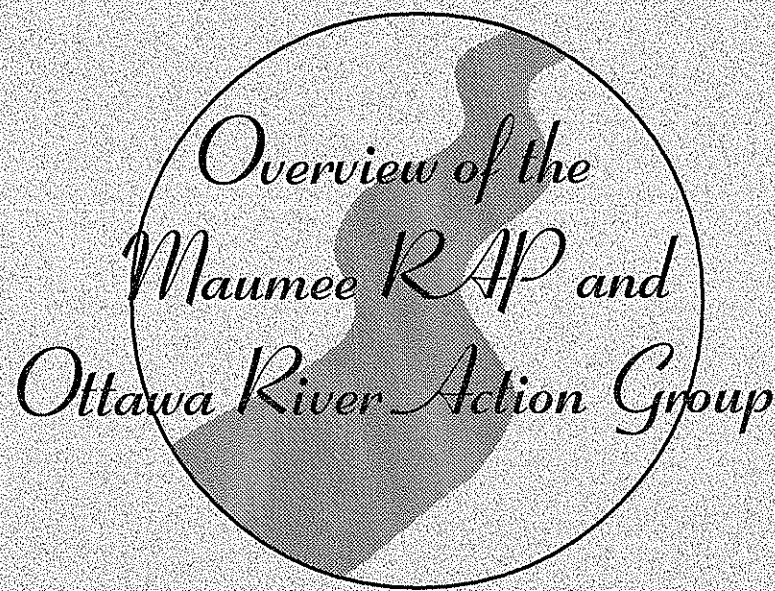
*Dale Rupert, P.E., Sr. Prof. Engineer, City of Toledo Div. of Streets, Bridges and Harbor
Paul Hotz, Project Manager, Hull & Associates, Inc.*

Summary of the Accomplishments and Plans for the Future of the Ottawa River

Ed Hammett, District Chief, Ohio EPA Northwest District Office

Questions and Answers Session

Susan Aman, Public Involvement Coordinator, Ohio EPA

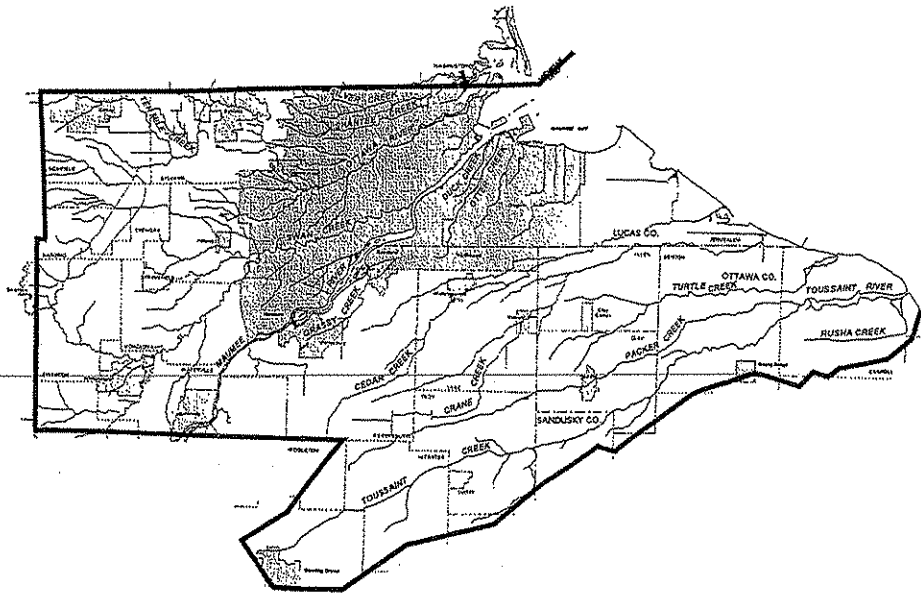


By Paul Hotz, Chair
Maumee RAP Committee

Overview of the Maumee RAP and the Ottawa River Action Group

Paul Hotz
Chair, Maumee RAP Committee

The Maumee RAP, began over fourteen years ago as a community effort to restore the area's waters to "fishable and swimmable" condition. The Maumee "Area of Concern" includes: the Lower Maumee River from the Bowling Green water intake near Waterville to Maumee Bay, as well as other tributaries to Maumee Bay and Lake Erie such as Swan Creek, Ottawa River, Duck Creek, Otter Creek, Crane Creek, and the Toussaint River. The Maumee River RAP covers most of Lucas County, the northern third of Wood County, and the northwest half of Ottawa County.



The Maumee RAP is striving for abundant open space and a high quality natural environment; adequate floodwater storage capacities and flourishing wildlife; citizens who take local ownership in their resources, and river, streams, and lakes that are clean, clear, and safe for recreational use. This will stimulate economic growth, secure jobs, and assure quality of life.

The Maumee RAP is a cooperative effort of citizens, businesses, and industry as well as local, state, and federal governments. This joint venture stems from an agreement between the United States and Canada to clean up our Great Lakes basin. The agreement identified 42 specific Areas of Concern, or AOCs, where there were significant problems. The Maumee Area of Concern was one of the areas identified along with the three other areas in Ohio: Black River, Cuyahoga River, and Ashtabula River.

The Maumee RAP Committee makes the official decisions of the RAP and provides general oversight with regards to policy. The RAP Committee has eight action groups (sub-committees) which are integral to the progress of the Maumee RAP. These groups are identified as Issue Action Groups - which deal with specific issues that affect the AOC; Watershed Action Groups -

Coordinator Contacts

Local Coordinator - TMACOG

Matt Horvat (419)241-9155 ext. 123

State Coordinator - Ohio EPA

Cherie Blair (419)352-8461

Federal Coordinator - U.S. EPA

David Barna (440)250-1700



By Susan Wells,
Fisheries Biologist
U.S. Fish & Wildlife Service



*Combined and Sanitary
Sewer Overflow Projects
on the Ottawa River*

By Scott Sibley, P.E., Administrator,
City of Toledo
Division of Engineering Services

Combined Sewer Overflow and Sanitary Sewer Overflows on the Ottawa River

Scott B. Sibley, Administrator
Division of Engineering Services
City of Toledo

Problem

The Ottawa River is subject to both combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) from the City of Toledo sewer system. Combined sewers, conveying both sanitary wastewater and storm water, serve the central portion of Toledo. This flow is normally conveyed to the Bay View Water Reclamation Plant, but during large storms the flow spills out to local watercourses. Sanitary sewer overflows occur from sewers that are designed to carry only sanitary sewage. These sewers can also become overloaded during storms because of rain water and groundwater entering the sewers from downspouts, inappropriately connected yard drains and catch basins, and leaking mainline and service lateral sewers.

Basement flooding from sanitary wastewater is also a common occurrence in some parts of the City. Operation of the sanitary sewer overflows (SSOs) serves to relieve the sewer system and reduce the number and frequency of basement flooding events.

There are six locations where combined sewers can overflow to the Ottawa River. These are located between Lagrange Street and Monroe Street as follows:

- Lagrange Street at Manhattan Boulevard
- Windermere Boulevard at Manhattan Boulevard
- Detroit Avenue at Phillips Avenue
- Lockwood Avenue at Hillcrest Avenue
- Ayers Avenue at South Cove Boulevard, and
- Monroe Street on the east side of the Ottawa River Bridge.

Sanitary sewers can overflow at two locations on the Ottawa River, both in Point Place: 290th Street at Ottawa River Road and 145th Street at Edgewater Drive. There is also an overflow to Maumee Bay at 129th Street and Edgewater Drive.

Recorded overflow data for 2001 is as follows:

Planned Work

On July 9, 2002, the voters of the City of Toledo authorized the Mayor to sign a Consent Decree with the USEPA that spells out a 15-year, \$400 million program for improving the wastewater system. Part of this program is directed at CSOs and SSOs. Part of these CSOs and SSOs discharge into the Ottawa River.

CSOs

The Consent Decree's plan for CSOs calls for development and implementation of a CSO Long Term Control Plan (LTCP). Because of the complexity of CSOs, it is necessary to perform hydraulic and water quality studies to better understand what types of storms trigger them and what types of impacts they have on receiving waters.

The LTCP will include the following sub-components:

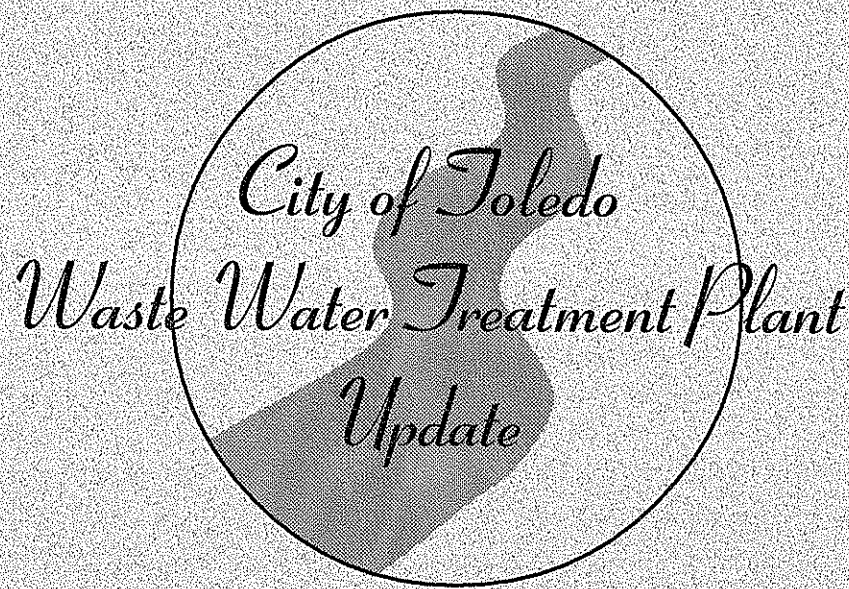
- Public and regulatory agency participation plan
- Flow characterization study
- Water quality study
- Hydraulic model
- Water quality model

The final LTCP is due to the USEPA 30 months after they approve a work plan, or approximately by July 2005. The LTCP will use the results of all of the above studies to assess the costs, effectiveness and water quality benefits of a wide range of alternatives for eliminating or reducing and treating CSOs. These alternatives will include such things as complete or partial sewer separation, construction of storage basins or tunnels, construction of remote treatment facilities, and construction of relief sewers. Public input will be sought through public forums and a public information program. The LTCP will identify and select an alternative or combination of alternatives for implementation and must include as expeditious a schedule as possible for design and construction, but completion of all construction must occur no later than August 31, 2016.

In the Ottawa River basin, one additional CSO is slated for complete sewer separation and removal within the next couple of years. This is the Monroe South CSO which serves an area bounded by Bancroft, Westwood, Nebraska, and Upton. The remaining six CSOs on the Ottawa River will probably be abated by some kind of storage/treatment system estimated to cost in the range of \$40 million. However, until all of the detailed studies of the LTCP are complete, the final recommendation is unknown.

SSOs

The Consent Decree's plan for SSOs closely follows Findings and Orders issued by the Ohio EPA on July 2, 1999. Phase 1 of a two-phased approach, recommended in a 1997 sewer study, is complete. This phase included construction of the Point Place Relief Pump Station in Detwiler



By Steve Hallett, P.E.,
Administrator of Engineering, City of Toledo
Bay View Waste Water Treatment Plant

City of Toledo

Wastewater Treatment Plant Update

Steven J. Hallett, P.E.
Administrator of Engineering, Bay View WWTP

As a result of the recent settlement agreement between the U.S. EPA and the City of Toledo, the Bay View Wastewater Treatment Plant (WWTP) will construct over 170 million dollars in new construction. In addition, over 23 million dollars will be spent to renovate existing facilities. The new construction is designed to reduce the volume of untreated or partially treated wastewater by-passed to the Maumee River. Bypassing of wastewater takes place during severe rain events.

The Plant

The Bay View Wastewater Treatment Plant (WWTP) is the largest wastewater treatment facility in Northwest Ohio. The facility, located near the mouth of the Maumee River, provides treatment services to an area of approximately 100 square miles, with eighty-four percent of the service area located within the City of Toledo. Other areas served by the Bay View WWTP include the City of Rossford, the Villages of Walbridge and Ottawa Hills, and portions of Wood County, Lucas County and the Village of Northwood.

Flows in the wastewater system originate from industrial, domestic, and commercial sources. The WWTP is capable of providing secondary treatment for flows up to 170 million gallons per day (mgd) and primary treatment for flows up to 212 mgd. Normal dry weather flow to the plant averages 75 mgd.

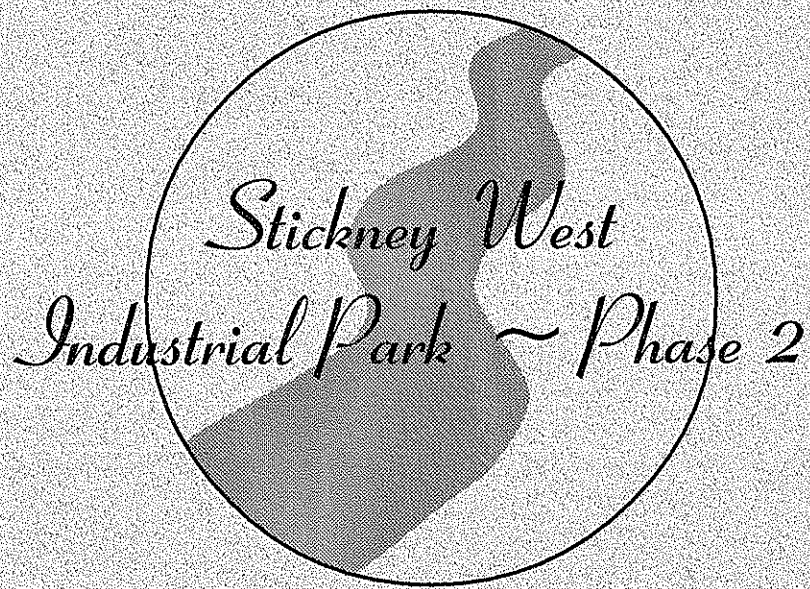
Once wastewater is processed through the Bay View facility, it is ready for discharge to the Maumee River. This treated water (called effluent) must meet State and Federal water quality standards. Effluent from the Bay View WWTP surpasses all standards, and improves the environmental quality of the Maumee River. This dedication to clean water enhances the Maumee River's appeal as a recreational resource and as suitable habitat for a variety of wildlife.

The Bay View wastewater treatment plant operates around the clock, 365 day a year. The plant is regulated by the State of Ohio and the U.S. Environmental Protection Agency and must comply with its National Pollutant Discharge Elimination Systems permit.

Renovated Facilities

From 1995 to present the Bay View plant has upgraded numerous facilities and processes that will take the plant well into the 21st century. The plant has upgraded its computer control systems throughout the plant and large pump stations in the collection system. This control system includes miles of fiber optic cables and wireless communications. The East Side and Bay View Pump Stations have had their entire electrical systems upgraded from 1999 and 2000. Both stations were built in the 1920's and still had portions of the original electrical systems in place.

Once completed these facilities will provide equivalent primary treatment and disinfection to 185 MGD of combined sewage that would normally have been bypassed after receiving only preliminary or primary treatment. The total flow receiving treatment and disinfection will be 380 MGD. All flows exceeding the 380-MGD will be captured in the equalization basin and will receive complete treatment once the rain event has passed and plant flows return to normal.



By Casey Stephens, Project Manager
City of Toledo
Division of Environmental Services

Stickney West Industrial Park Project – Phase II

**Casey Stephens, Project Manager
City of Toledo Division of Environmental Services**

Introduction

For decades, several hundred acres of property just North of I-75 in Toledo was widely recognized as one of Ohio's worst contaminated areas. This location along the Ottawa River was plagued by three municipal solid waste landfills under both Ohio EPA and U.S. EPA enforcement. Two of these landfills were formally designated as U.S. EPA Superfund sites. Nestled between these three closed landfills, the 112-acre Stickney West Industrial Park ("SWIP") site was the former location of the bankrupt Royster fertilizer manufacturer which had abandoned its operations in-place during the late 1980s. Unbelievably, the Property's legacy of contamination grew when Mr. Ronald Gorney acquired the Property from Royster and operated the site as an unlicensed junkyard.

The City of Toledo periodically sued to close Mr. Gorney's illegal operation for nearly ten years. This Property continuously has been a focus of the City of Toledo's neighborhood building code enforcement program, earning Mr. Gorney a place on Toledo's "dirty dozen" list. Environmental issues at the site included almost 75,000 cubic yards of contaminated soil, potential impact from the adjacent Superfund landfill sites, over 300 barrels of unidentified hazardous materials, 250,000 scrap tires, 50,000 railroad ties, numerous above-ground and underground storage tanks, a manufacturing building constructed entirely of transite asbestos, mountains of scrap vehicles and illegally filled wetland areas. Despite these enforcement actions, Mr. Gorney actually expanded his junkyard empire to include a dilapidated former slaughterhouse and trucking operation, which he also converted to a junkyard. This 8.5 acre site, is referred to as Phase II of SWIP, and was the focus of the Clean Ohio Revitalization Fund Application.

Hemisphere Ltd. acquired the right to purchase this 8.5 acre combination of parcels pursuant to a settlement agreement with Mr. Gorney over the first phase of the Stickney West Industrial Park project. Over the past three years, Hemisphere acquired and remediated the first phase of the SWIP site, in a nationally acclaimed brownfield redevelopment which has been acknowledged by U.S. EPA Region 5 representatives publicly as one of "America's best brownfield redevelopments." The SWIP site has been featured at numerous environmental conferences as a model brownfield redevelopment, including, most recently, U.S. EPA's Brownfields 2001 national conference. Hemisphere must soon decide whether to pursue the second phase of the SWIP project by acquiring the last of Mr. Gorney's junkyards, as 2002 is the last remaining year of our option to purchase this Property before our rights to acquire this site revert to Mr. Gorney.

The goal of Phase II of the SWIP project is to definitively end Mr. Gorney's ability to degrade the environmental condition of this rebounding Toledo neighborhood, and, at the same time, complete the first actual development phase of the Stickney West Industrial Park.

developer in the country to take advantage of a new U.S. EPA policy that allows funds from environmental penalties to be used for brownfield projects. Through negotiations with Hemisphere, the U.S. EPA and the U.S. Department of Justice, the City of Toledo was able to secure a \$500,000 Supplemental Environmental Project ("SEP") Grant from a \$1.2 million penalty the U.S. EPA had imposed on the City, in connection with the settlement of a wastewater treatment plant case. The SEP funds are available for use on three parcels, including the SWIP Phase II Property. A portion of this \$500,000 SEP will be used as for the SWIP Phase II project. The balance of the SEP will be used for assessment and remediation of an area near Phase I of the SWIP project.

During the interim, Hemisphere will develop the contiguous closed landfill and non-landfill properties into an industrial park for the new Jeep plant. The industrial park, once fully developed, can accommodate up to 1 million square feet of new commercial/industrial space, bringing significant employment opportunities and new investment to the area. Further, the project will serve as a catalyst to redeveloping this highly distressed section of North Toledo.

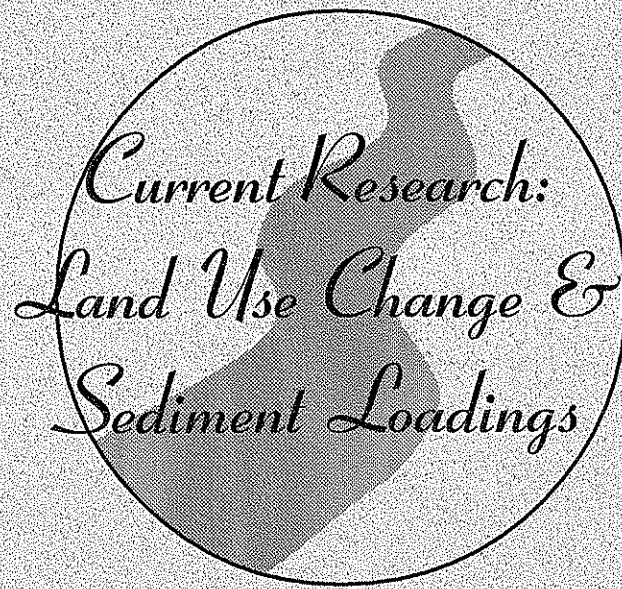
To date, over \$60 million has been invested in both public and private funds to address this area's environmental hazards. Already, as a result of the remediation of the junkyard and fertilizer manufacturing sites, as well as the closure of the municipal landfills, water quality in Sibley Creek and Ottawa River – tributaries to the Maumee River and ultimately Lake Erie – has improved. Hemisphere's removal of scrap tires eliminated a major fire hazard and the risk of a potentially significant release of hazardous materials into the Ottawa River. The momentum created through these significant initial remedial activities is the focus of the next phase of this cleanup and first true phase of the actual industrial development.

Leveraging U.S. EPA's Investment

The City of Toledo and Hemisphere's goal is to leverage funds secured through the U.S. EPA SEP to remove the last significant area of distressed brownfield Property controlled by Mr. Gorney. This Property has been under local enforcement continuously due to Mr. Gorney's former junkyard operations on the Property. Historically, the Property was first used as a slaughterhouse. Only a portion of the slaughterhouse's abandoned shell currently stands. The Property also was dedicated to railroad and automotive salvage operations and contains several abandoned underground storage tanks. Impacts to the Property from former operations include contaminated soil, groundwater above drinking water standards and numerous barrels of abandoned hazardous materials. The Property itself is contiguous to the closed Tyler landfill. Additionally, given U.S. EPA's substantial participation in this project, continuing the project's overwhelming momentum by funding the next phase of this highly publicized redevelopment undoubtedly will attract U.S. EPA Region 5's attention and significant potential federal brownfield funds currently being proposed in connection with the Brownfields Revitalization and Economic Recovery Act of 2001 (the new federal brownfields legislation). Ultimately, Hemisphere intends to continue the outstanding public/private partnership forged between Hemisphere, the City of Toledo, U.S. EPA and Ohio EPA, to transform an area that was both a public nuisance and environmental liability into a tremendous economic asset, offering up to 1 million square feet of just-in-time warehouse/manufacturing space.

surface water, the removal and beneficial reuse of approximately 250,000 scrap tires, the removal and appropriate closure of numerous above-ground and underground storage tanks, the removal of a 60,000 square foot manufacturing building constructed entirely of transite asbestos, and the appropriate disposal of mountains of scrap vehicles, solid waste and debris. Finally, Hemisphere obtained an after-the-fact permit to mitigate illegally filled wetland areas on the SWIP Property.

This next phase of redevelopment will continue the unparalleled environmental improvement initiated in the area, eliminating a final eyesore controlled by Toledo's most notorious environmental outlaw. In reclaiming this junkyard, Hemisphere will demolish a number of abandoned, dilapidated buildings presently visible from I-75 and approximately 200 feet from the nearest residence, remove significant quantities of impacted soil and three abandoned underground storage tanks. The project also will encompass the disposal of numerous barrels of hazardous materials, illegally disposed tires and other solid waste. Most importantly, funding this project will leverage U.S. EPA's substantial and creative investment in one of Ohio's worst brownfield sites.



By Patrick Lawrence, Ph.D.,
University of Toledo
Department of Geography and Planning

Current Research on the Ottawa River: Land Use Changes and Sediment Loading

Dr. Patrick L. Lawrence
Department of Geography and Planning
University of Toledo

Introduction

The purpose of this project is to analyze water quality data along the Ottawa River in Toledo, Ohio to assess related land uses as possible sources of sediment loading. The Ottawa River flows through agricultural areas into residential and finally through urban areas. These various land uses present varying types of non-point source pollution from impervious surface runoff to soil erosion. Total Solids - the measure of combined amounts of suspended solids and dissolved solids in the water - was examined at a series of sample locations. Measurement of turbidity - the amount of suspended material in water - was also recorded. Two sample sets were taken: first in May 2001 after a heavy rainfall and second during a dry spell in July 2001. The 2001 sample data were also compared with a similar study of Ottawa River sediments collected during the summer of 2000. A Landsat 7 remote sensing image from 2000 was used to create a land cover classification along the Ottawa River. The results of a preliminary analysis of the land cover types were compared with the water sediment sample data in order to determine spatial and temporal changes in sediment loading along the Ottawa River as related to adjacent land uses.

Study Area

The Ottawa River, also called Ten Mile Creek drains an area north of the Maumee River in Northwest Ohio. The river flows through three distinct land uses from its origin in Fulton County to its mouth in Maumee Bay. Through its entire course in Fulton County and into western Lucas County, agriculture is the dominant land use. Channelized ditches are prevalent throughout the region. Farming practices such as tilled crop fields and buffer strip farming take place on a smaller scale due to government assistance, but these sites still cause runoff. West of Sylvania, a sharp change from agriculture into new suburban growth occurs. From there, the river flows through quarries, a park, and the subdivisions of Sylvania and Ottawa Hills. Two small dams in this area impede on the river's course and restrict possible fish migrations upstream. Starting with a channelized segment through the University of Toledo, the river channel and banks become more artificial as it enters an urbanized environment. The river is highly modified with inadequate buffer strips, surface water discharges, and combined sewer overflow release resulting in decreased water quality and aquatic life.

The area of study for this project will be along the Ottawa River upstream of the University of Toledo. Downstream the river's course is engineered and highly urbanized where little change can be made to improve the river in the near future. Upstream, it may be possible to denote land use changes and sources of sediment loading. This study will attempt to determine a correlation between sediment loading and land uses is possible in order to determine further research

From site 10A eastward, the general trend was a constant decline in water quality as related to sediments. Site 10B is in Ottawa Hills and sits downstream of Camp Miakonda Boy Scout Reservation and Wildwood Preserve Metropark. The forest cover is generally thick and the river is still in a natural state with sinuous curves and low land wetlands in the park. Site 10B is where the total solids data began to show a large variance between the two 2001 sample sets with the May 29th samples being up to 250 parts per million (ppm) higher. Site 11, upstream of the University of Toledo had that 250 ppm difference. The high value from May 29, 2001 could be from runoff since the areas upstream still has a wide buffer strip. Possibly the small dam upstream may release high amounts of sediments that were backed up during heavy rain events. Another source could be from Hill Ditch, which drains areas along Dorr and Bancroft Street, which is high in impervious surfaces. If Hill Ditch was the main source of the sediment in May, then it may be the reason why the June 31st reading was rather low. Either phenomenon could cause a large discrepancy between values depending on weather conditions.

Conclusions

When compared with the 2000 data, high amounts of total solids and turbidity were found in the Ottawa River. The turbidity values generally increased along the Ottawa River from west to east, from Fulton County into the City of Toledo. The total solids indicated similar results within the City of Toledo. Various types of runoff occurred during the sample period and had varying effects on water quality depending on the amount and duration of rainfall. Runoff from impervious surfaces and untreated storm water increase the flow of the river, which in turn can erode more sediment along the stream banks. Sediments are also washed off adjacent surfaces, including parking lots and residential lots, adding to the problem.

The average measurement of turbidity at all sites suggests that the smaller streams or ditches entering the Ottawa River have a lower turbidity reading than those collected from sample locations along the main channel of the river. In both the 2000 and 2001 data, the turbidity average increases in the urban environment. It is also difficult to determine why the 2000 data shows an increase in total solids near the mouth of the Ottawa River as it enters into Maumee Bay and Lake Erie, while the 2001 data shows no such relationship. More analysis is also needed to determine why the 2001 data had higher Total Solids and Turbidity readings on average compared with the 2000 data. In addition, further research is required in order to assess potential sediment loading along the Ottawa River as a function of variations in stream bank conditions, adjacent land cover types, and land uses which may contribute sediment sources, accelerate soil erosion, or increase surface water runoff.



By Dale Rupert, P.E., Sr. Prof. Engineer,
City of Toledo Div. of Streets, Bridges and Harbor
and
Paul Hotz, Project Manager,
Hull & Associates, Inc.

Ottawa River Navigational/Recreational Dredging Project

Dale Rupert, P.E., Senior Professional Engineer, City of Toledo
Paul Hotz, Project Manager, Hull & Associates, Inc.

The Ottawa River has never been dredged and the siltation problem and shallow water depth has long been a problem for area boaters. This problem is magnified in periods of low Lake Erie levels, and lake levels have been low since the late 1990s.

The dredging of the Ottawa River has been an on again, off again project for some time. There are references to investigations as far back as 1938. In more recent times, studies were conducted by the U.S. Army Corps of Engineers (Corps) in 1976 and 1992 evaluating the benefits of a dredging project. Each report found favorable benefits for the project, however, in both 1976 and 1992, despite the support of many local citizens and businesses, no local governmental sponsors could be secured. Finding a suitable sediment disposal location was also an issue in 1992.

Congresswoman Marcy Kaptur has been a long time supporter of this dredging project. She secured the federal share of funding to dredge the river, but without a local sponsor or matching funds, the project was classified as non-preferred and the federal funding was withdrawn.

The City of Toledo announced their commitment to dredge a channel in the Ottawa River for recreational use in September 2000. The City budgeted \$200,000 in the 2001 CIP (Capital Improvement Project) to further demonstrate their commitment.

The first step to move the project along is the completion of a reevaluation study. This study was originally completed in 1992, but it would need to be updated. The Corps' present dredging policy limits their work to federal/commercial channels, not recreational channels. As a result, they could not conduct the study, directly fund the project, or accept City funding to conduct the study.

It was later determined that the City could conduct the reevaluation study as long as it complied with the Corps' requirements. The City contracted with Hull & Associates, Inc. through the Toledo-Lucas County Port Authority to prepare the Limited Reevaluation Study. By taking the initiative to start the process earlier than the Corps would have been able to, the City saved at least a year of time.

While the study was being conducted, the City asked Congresswoman Kaptur for engineering and design funds and authorization to direct the Corps to once again undertake this project in the 2002 Energy and Water Appropriations Bill. Congresswoman Kaptur secured \$300,000 and the Corps started work in the spring of 2002.

A final draft of the Limited Reevaluation Study is complete and was submitted to the Corps for review and input. The Corps was consulted during the preparation of the study so it is anticipated that the final version will not take long to complete once comments are received.

The cost range for this work is \$2.7 million for the Core project to \$5.9 million for all of the channels. The costs are based on unit rates developed with input from the Corps. All of the options rely on the use of Island 18 for dredge disposal and account for the one-foot over dredge.

The volume of dredging is equally split between Ohio and Michigan waters. There are approximately 2,200 boat docks available in the project area. The Core project channel has 1,650 docks, with 700 of the Core project docks in Michigan. There are 530 docks along Hooper Run and Halfway Creek in Michigan.

Economic Analysis

A key part of the study was the benefit cost analysis that was required to secure federal interest. Three sources of data were used to estimate the economic benefits of the Ottawa River Dredging Project Area:

1. Four separate surveys were conducted in 2001 to obtain current estimates of user values and benefits:
 - a. a survey of 400 Ottawa River Dredging Project Area boaters, the sample of 300 boaters used in the 1998 study supplemented by 100 boaters obtained in 2001;
 - b. a survey of 300 registered boater households from the local demand area of the dredging project, which is defined as the Toledo Metropolitan Area (Lucas, Fulton and Wood Counties, Ohio and Monroe County, Michigan);
 - c. a survey of the approximately 300 households who reside along the Ottawa River; and,
 - d. a survey of 77 businesses considered to have a major stake in the navigability of the Dredging Project Area to include all marinas and yacht clubs, boating service and repair establishments, restaurants, and other businesses that serve Dredging Project Area boaters.
2. A major study of Ottawa River Dredging Project Area boaters was conducted in 1998. This study was based on two similarly defined surveys of boaters and a survey of businesses (Hushak and Bielen, 1999).
3. Selected data from the 1992 Limited Reevaluation Report was used to fill in gaps where evidence could not be developed from the 2001 surveys. The major example is transient boaters because none could be identified in 2001.

The project area is sub-divided into the core project, the Ottawa River to Summit Street and the channel to Lake Erie, plus three sub-project areas, the Summit-Suder section of the Ottawa River, Halfway Creek and Hooper Run. The core project, Halfway Creek, and Hooper Run satisfy the benefit-cost criteria of positive net benefits, or a positive benefit cost ratio in excess of 1.0. Only the Summit-Suder option does not have positive net benefits. For the three components that



*Summary of the
Accomplishments and Plans for
the Future of the Ottawa River*

By Ed Hammett, District Chief
Ohio Environmental Protection Agency
Northwest District Office

Summary of the Accomplishments and Plans for the Future of the Ottawa River

Ed Hammett, District Chief
Ohio Environmental Protection Agency
Northwest District Office

Substantial progress has been made to improve the Maumee Area of Concern, specifically the Ottawa River, since the *Maumee RAP Recommendations Report* was finalized in 1991. That report called upon the community to address the many issues facing the Ottawa River which has been characterized as one of the worst in Ohio. As the Maumee RAP sponsors the fifth *Profiling the Ottawa River*, a review of these biennial reports illustrates our accomplishments since the first one that was held in 1994. It is interesting and instructive to note that this is the first time there is not an item focused on the need for remediation of the wall to wall landfills. This progress can be attributed to many organizations both working with the Maumee RAP and independently. One key group is the Ottawa River Remediation Team.

Ottawa River Remediation Team

The Ottawa River Remediation Team (ORR-Team) was formed in early 1998 at the request of the Maumee RAP Ottawa River Action Group. The agencies and organizations working on the Ottawa have responded by being better organized in order to cooperate and participate in projects to improve the Ottawa River. The ORR-Team is a partnership of environmental professionals, including federal state and local governmental agencies, working with citizens to expedite the restoration of the beneficial uses through strategic watershed planning and coordination. This focus appears to be working.

Member Organizations of the Ottawa River Remediation Team

- Federal Agencies and Organizations
 - ▶ USDA - Natural Resources Conservation Service, US Army Corps of Engineers, US Fish & Wildlife Service, US Environmental Protection Agency
 - State Agencies and Organizations
 - ▶ Ohio Environmental Protection Agency, Ohio Department of Health, Ohio Department of Natural Resources, Michigan Department of Environmental Quality
 - Local Agencies and Organizations
 - ▶ Maumee RAP, City of Toledo, Lucas County, Port Authority, TMACOG, Ottawa River Kleanup Association
-

improvements to assure they are effective. The removal of Sanitary Sewer Overflows in Point Place by November 2006, will be another significant step. Combined Sewer Overflows (CSOs) and urban storm water contributions remain the biggest challenges. CSO problems should be eliminated by the City of Toledo's commitments that are a part of the recent settlement of the lawsuit with US EPA and Ohio EPA. Urban storm water contributions should be reduced through Toledo's storm water program.

Source Elimination and Contaminant Reduction

- | | |
|---|---|
| ■ Dura Avenue Landfill* | ■ North Cove Landfill |
| ■ Stickney Avenue Landfill* | ■ King Road Landfill |
| ■ Tyler Street Landfill* | ■ XXKem* |
| ■ Royster/Incorporated Crafts
(Currently SWIP) | ■ Toledo Tie Treatment Facility |
| ■ AquaBlok™ Demonstration Project | ■ Urban Storm water Runoff |
| ■ Combined Sewer Overflows | ■ Fraleigh Creek*
(Formerly Unnamed Tributary) |
| ■ Agricultural Runoff | ■ Home Septic Systems |

* Completed

Sediment Quality: While the numerous source elimination activities have or are being completed, other work is underway to identify the next steps for the restoration of the Ottawa River. Between 1994 and 2000, Ohio EPA conducted extensive sediment core sampling to identify general areas and depths of contaminants in the lower and middle segments of the river. In 2001 TMACOG, with funding from US EPA's Great Lakes National Program Office, completed the *Human and Ecological Health Risk Assessments* to identify sediment "hot spots" and guide future remediation utilizing Ohio EPA sediment, water quality, fish and macroinvertebrate data. The following were identified as the major sediment hot spots in the Ottawa River.

Ottawa River Hot Spots

- River Segment 3 (RM 4.9-6.5)
 - ▶ RM 5.5 - near Sibley Creek (lead and other metals)
 - ▶ RM 5.9 - Fraleigh Creek (f.k.a. Unnamed Tributary) (PCBs)
 - ▶ RM 4.8 - Stickney Avenue Depositional Zone (PCBs)

 - River Segment 4 (RM 6.5-8.8)
 - ▶ RM 8.3 - near Central Avenue Crossing (PCBs)
-
-

The primary challenge will be to maintain this cooperation and continued funding. They will be essential to finish the job of restoring the uses and condition of the Ottawa River to a fishable and swimmable condition along with the ultimate delisting of the Maumee Area of Concern.

