

# MUNICIPAL WATER MANAGEMENT IN TOLEDO

Water Resilient Cities Conference  
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# Road Projects Before and After



Before

AFTER



# Porous Pavement Alley's



# Demographics

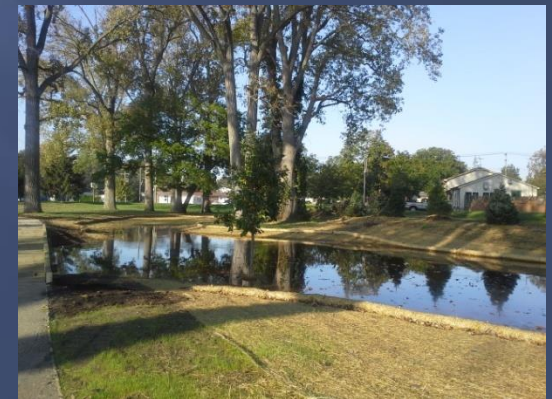
- ▣ Single family residential
- ▣ Median home income  
\$25,384 (average income in  
Toledo \$32,546)
- ▣ 1/12 acre lots (30 by 120-ft)
- ▣ 66 lots (46 with houses)
- ▣ 25% Homeowners\*



\*Based on Lucas County Auditor AREIS Information

# Project Highlights

- ❑ Total Project Area: 9.21 Acres
- ❑ Existing Open Space Area: 8.09 Acres
- ❑ Storm Water from On-Site Paved Areas: 1.2 Acres
- ❑ Storm Water From Off-Site Residential Areas: 5.3 Acres
- ❑ The retention capacity of the vernal pools and other green infrastructure elements installed as part of this project exceeds an estimated 650,000 gallons.



Before



After

# Residential Guidance Documents

- ▣ City of Toledo Guidance for managing rainwater & groundwater on residential properties Prepared By: Department of Public Utilities, Division of Engineering Services May 13, 2009
- ▣ Sustainability tool kit
- ▣ Rain Garden Homeowners manual/brochure
- ▣ Student coloring books
- ▣ Steps to reduce future flooding guide.

## Contents:

- Rainwater in the Yard
- Downspout Discharge
- Sump Pump Discharge
- Infiltration Pits
- Sump Pump Discharge with infiltration pit and above ground overflow route.
- Downspouts to Infiltration Pits
- Where does the rainwater go?
- Connecting to the City Storm Sewer System
- For More Information

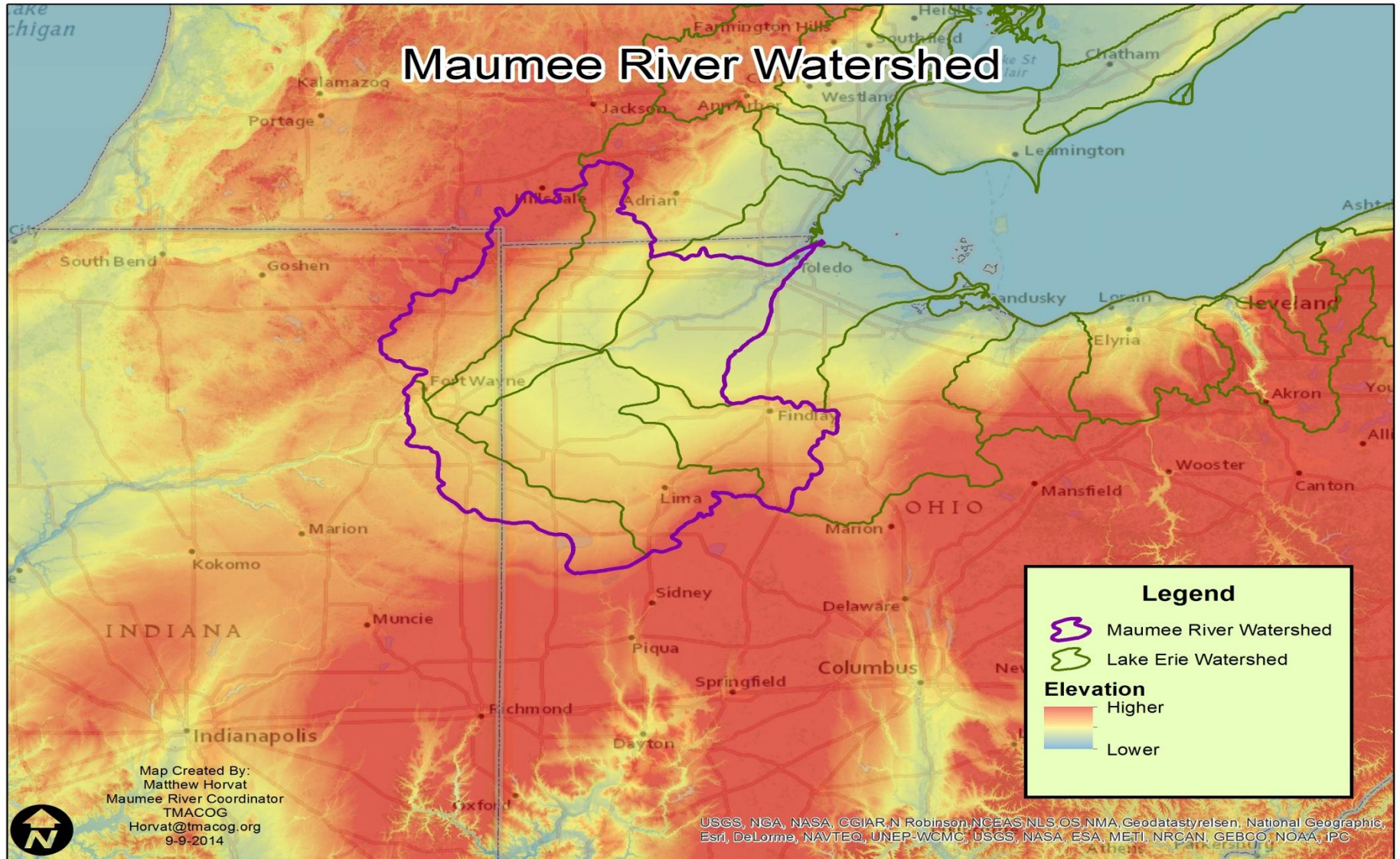
# Collins Park Solar Field

- Installation of 250 kw system with future areas of up to 1 MW
- Tie-In to Generator Building
- Local and American Made Equipment:
- Aggregate base and weed barrier to reduce maintenance



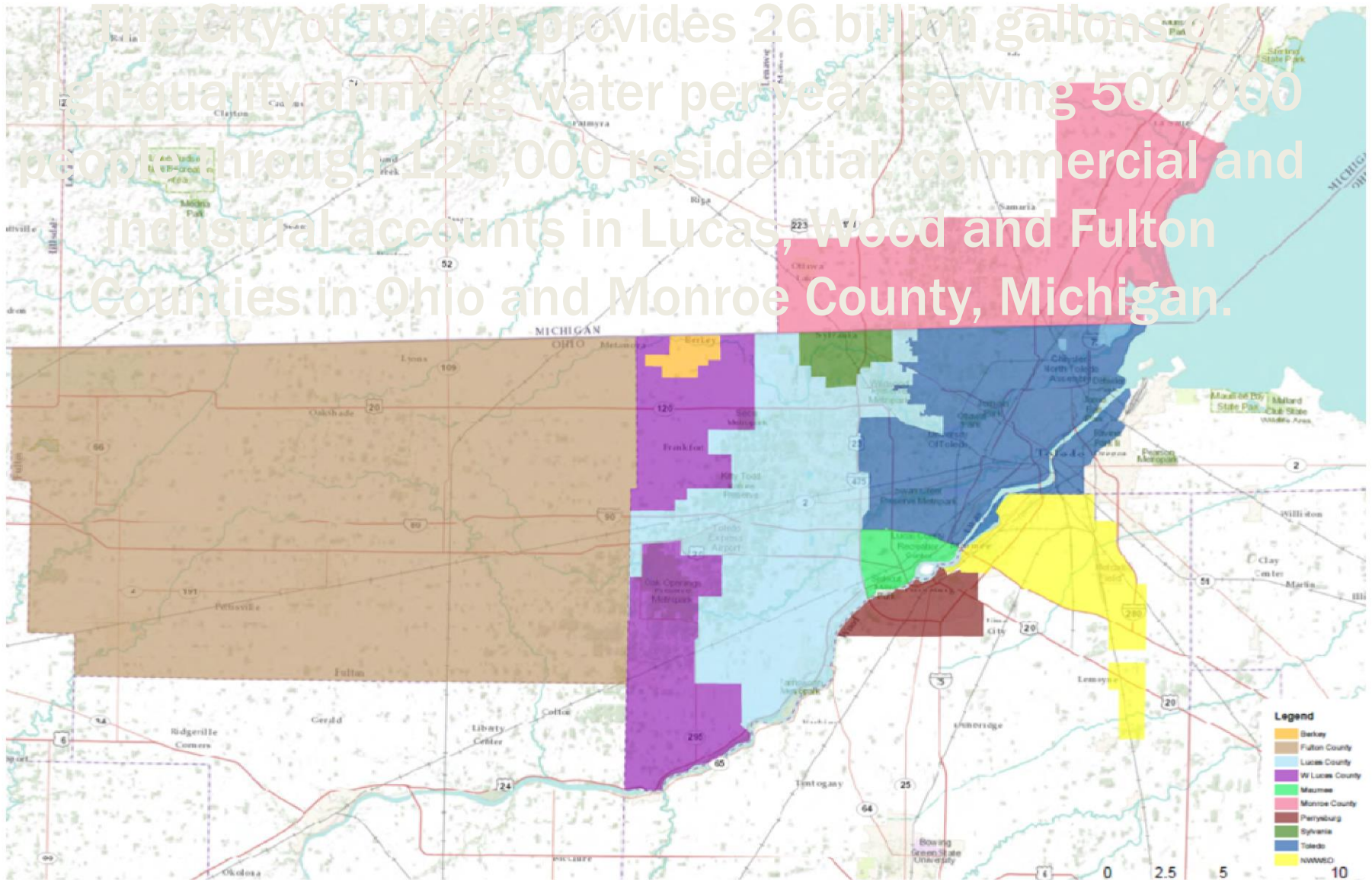


# OUR WATERSHED



# Toledo Water Service Area

The City of Toledo provides 26 billion gallons of high-quality drinking water per year serving 500,000 people through 125,000 residential, commercial and industrial accounts in Lucas, Wood and Fulton Counties in Ohio and Monroe County, Michigan.



# What Happened?

- ▣ Algae bloom directly over water intake
- ▣ Microcystin detected beyond recommended reportable level
- ▣ Regulatory authority recommended issuing “Do Not Drink” advisory
- ▣ Accelerated treatment to reduce toxin
- ▣ Continued testing until water deemed safe to drink

# Emergency operating Plan (EOP)

- ▣ Existing EOP plan expanded to increase notification of external partners
- ▣ Expanded Staff Training (NIMS)
- ▣ Inviting Partners to participate in series of workshops –Nov 20- at UT
  - Expand Emergency Scenarios
  - Communicate clear roles for all parties

# Water Intake Buoy

- ▣ On August 7, 2014, the scientific LimnoTech Toledo Water Intake buoy and monitoring sensors were deployed in the Western Basin of Lake Erie near the intake to assist with gathering real-time environmental data and to monitor harmful algal blooms (HABs). Quick-term response; placement expedited
- ▣ pH level and blue-green algae presence
- ▣ 3 probes relay water conditions
- ▣ The real-time information is collected every 20 minutes from the sensors. Each sensor performs a specific function.

# Water Quality Dashboard

## Water Quality

Toledo tests raw and treated water regularly for the presence of toxins, including microcystin created by algae blooms. See scale below for the current status of drinking water quality according to Ohio EPA guidelines.



- CLEAR** – Non-detect in the intake crib in Lake Erie and non-detect in tap water.
- WATCH** – Detect in the intake crib in Lake Erie and non-detect in tap water.
- CAUTION** – Microcystin has been detected in tap water, but test results do not indicate the need to issue an advisory. Additional testing and sampling is underway and water treatment has been accelerated.
- PRE-SCHOOL ADVISORY** – DO NOT DRINK for children five and younger. Tap water tests greater than 0.3 ppb and not exceeding 1.6 ppb.
- DO NOT DRINK** – DO NOT DRINK. Tap water tests greater than 1.6 ppb.



## Preparing for Emergencies



The City of Toledo is taking aggressive steps to improve the Collins Park Water Treatment Plant to maintain safe, high-quality drinking water for our region.

We are also preparing for all types of emergencies, including source water issues, severe weather, critical power failures, flooding, hazardous spills, etc.

### What we're doing to be prepared:

**Protecting** our drinking water by completing construction of additional chemical treatment facilities at the Collins Park Water Treatment Plant by July 1. Some 20 water quality monitoring buoys in the lake will provide advance warning of conditions conducive to algal activity in 2015. This allows us to anticipate and adjust treatment as needed.

**Preparing** to respond to emergencies of all types, including source water quality issues, in concert with the Ohio EMA, Lucas County EMA, Toledo-Lucas County Health Department, and the Hospital Council of Northwest Ohio, among others.

**Providing** training opportunities and improving communication through the use of the National Incident Management System, designed to help the private and public sectors work together to prevent, respond to, and recover from incidents, regardless of cause, size, location or complexity.

### What you can do to be prepared:

**Read up** on emergency preparedness information on the websites listed below. *(Be-Prepared-Kit\* helps people with health or mobility issues develop emergency plans.)*

**Sign up** to receive emergency text alerts through [www.lucascountyalerts.com](http://www.lucascountyalerts.com). *(Good idea for everyone.)*

**Stock up** and keep a 3 to 7 day supply of the items below on hand. *(Basic list for any emergency.)*

**Listen up** to local television and radio stations for official updates during any emergency event.

La información está disponible en Español en [www.toledo.oh.gov/services/public-utilities](http://www.toledo.oh.gov/services/public-utilities) y en nuestro servicio al cliente 420 Madison, Toledo, Ohio 43604.

### Shopping List:

- Canned fruit, vegetables, meat, tuna, juice
- 1-2 gallons of water per person per day
- Ready to eat snacks, such as crackers
- 2-3 garbage bags per person per day
- Paper towels, toilet paper, tissues
- Paper plates, cups, bowls, plastic utensils
- Soap, alcohol-based hand sanitizer, bleach
- Medicines, medical supplies, toiletries
- Thermometer, aspirin, acetaminophen
- Manual can opener
- Flashlight, batteries, portable radio
- For Babies:** diapers, wipes, baby food, formula
- For Pets:** pet food and supplies

### Helpful Websites:

- [www.lucascountyhealth.com](http://www.lucascountyhealth.com)
- [www.hcno.org](http://www.hcno.org)
- \*[www.disabilityrightsohio.org/sites/default/files/ux/be-prepared-kit.pdf](http://www.disabilityrightsohio.org/sites/default/files/ux/be-prepared-kit.pdf)
- [www.ready.gov](http://www.ready.gov)
- [www.redcross.org/prepare/location/home-family/plan](http://www.redcross.org/prepare/location/home-family/plan)
- [www.lucascountyalerts.com](http://www.lucascountyalerts.com)

Thank You!



## Emergencias



La ciudad de Toledo está tomando medidas necesarias para mejorar la planta de tratamiento de agua llamada Collins Park con el fin de mantener la mejor calidad de agua potable en nuestra región. También nos estamos preparando para todo tipo de emergencias. Por ejemplo, fallas de energía, inundaciones, mal tiempo etc.

### Que estamos haciendo para prepararnos?

Estamos completando la construcción de instalaciones químicas en la planta de tratamiento llamada Collins Park que será finalizada en los primeros días de Julio. 20 boyas que monitorean la calidad de agua en el lago nos indicara las condiciones del agua debido a las algas en el 2015. Esto nos permitira anticipar y ajustar el tratamiento segun sea necesario.

Preparandonos para responder a las emergencias de todo tipo, incluidos los problemas originales de la calidad de agua.

Proporcionar oportunidades de capacitación para mejorar la comunicación a través del uso del Sistema de Gestión de Incidentes, diseñado para ayudar a los sectores público y privado para prevenir, responder y recuperarse de incidentes, independientemente de la causa o el tamaño.

### Lo que usted puede hacer para estar preparado?

Lea sobre la información de como prepararse para emergencias en los sitios web que figuran a continuación.

Regístrese para recibir alertas de texto de emergencia a través de [www.lucascountyalerts.com](http://www.lucascountyalerts.com).

Mantenga un suministro de 3 a 7 días de los siguientes elementos. (Lista básica para cualquier emergencia)

Escuche las estaciones de radio y televisión locales para actualizaciones oficiales durante cualquier evento de emergencia.

### Lista De Compras:

- Frutas, verduras, carne, atún, jugo
- 2.1 galones de agua por persona por día
- 2-3 bolsas de basura por persona por día
- Las toallas de papel, papel higiénico, pañuelos
- Platos de papel, vasos, utensilios de plástico
- Jabón, desinfectante de manos a base de alcohol, blanqueador
- Medicamentos, suministros médicos, artículos de higiene
- Termómetro, aspirina, acetaminofen
- Abrelatas manual
- Linterna, pilas, radio portátil
- Para bebés:** pañales, toallitas, comida para bebés, fórmula
- Para Mascotas:** alimentos para mascotas y suministros

### Sitios de Web útiles:

- [www.lucascountyhealth.com](http://www.lucascountyhealth.com)
- [www.hcno.org](http://www.hcno.org)
- [www.disabilityrightsohio.org/sites/default/files/ux/be-prepared-kit.pdf](http://www.disabilityrightsohio.org/sites/default/files/ux/be-prepared-kit.pdf)
- [www.ready.gov](http://www.ready.gov)
- [www.redcross.org/prepare/location/home-family/plan](http://www.redcross.org/prepare/location/home-family/plan)
- [www.lucascountyalerts.com](http://www.lucascountyalerts.com)

Gracias!



American Red Cross

LUCAS COUNTY EMA



American Red Cross

LUCAS COUNTY EMA





**WE'RE NOT  
THE ONLY ONES  
THANKING YOU.**



Storm water runoff and sewage overflow affect not only the human population in the Toledo area, they affect the vitality of our other "residents," too. And thanks to your support, the Toledo Waterways Initiative has been making great progress in preserving our area's most precious resources. For a more detailed report of our progress, please visit [toledowaterwaysinitiative.com](http://toledowaterwaysinitiative.com).

## THE TOLEDO WATERWAYS INITIATIVE

*Making Our Rivers Cleaner*

The Toledo Waterways Initiative (TWI) was created to improve our sewer system to reduce sewage and pollution flowing to the Maumee, Swan Creek, Ottawa and Lake Erie waterways. These rivers, lakes and streams are enjoyed for their beauty and recreation. They are also home to walleye and many other types of fish and wildlife.

Together, with your support, we have made a lot of progress in our effort to protect, restore and enhance our waterways.

### ENVIRONMENTAL BENEFITS

- At the conclusion of the TWI program, more than 80 percent of sewer overflows will be eliminated, including all that once bypassed the Bay View Wastewater Treatment Plant to Toledo area waterways after heavy rains.
- This reduction equates to 650 million gallons of untreated sewage per year diverted from our waterways.

### ECONOMIC BENEFITS

- Nearly 500 full-time-equivalent jobs are supported each year as a result of this program.
- More than 90 percent of the construction design work has been done within Toledo, contributing highly skilled jobs to the area.

### RECREATIONAL BENEFITS

- The Ottawa River and Maumee Bay once had regularly posted swimming restrictions due to high bacteria levels. These restrictions are becoming less frequent.

### POSITIVE RESIDUAL BENEFITS

- While this program is a pollution control project, reduced basement and street flooding has been an indirect benefit in some areas.
- Through restoration efforts included in the construction work, we have improved parks and streets making our communities more livable.

Since the initiative began in 2002, much has been accomplished. But there's still more work to do. To get involved, visit our website at [toledowaterwaysinitiative.com](http://toledowaterwaysinitiative.com).



# Toledo Waterways Initiative

- ▣ The program encompasses more than 45 separate projects over the course of 18 years, at a total cost of \$521 million.
- ▣ The project is 72% complete.
- ▣ Currently working on \$70M underground basin and pumping station at Joe E. Brown Park.
- ▣ The CSO Long-Term Control Plan (LTCP) calls for elimination of eight out of 32 permitted combined sewer overflow (CSO) discharge points/overflow locations. Currently seven have been eliminated

## MEET CHUCK

Chuck is the TWI "mascot" and represents all of the local fish, wildlife and natural resources that are benefitting from the TWI program. Thanks to ratepayers, TWI is making our waterways cleaner for all to enjoy. To download a PDF of Chuck and a list of benefits, [click here](#).

