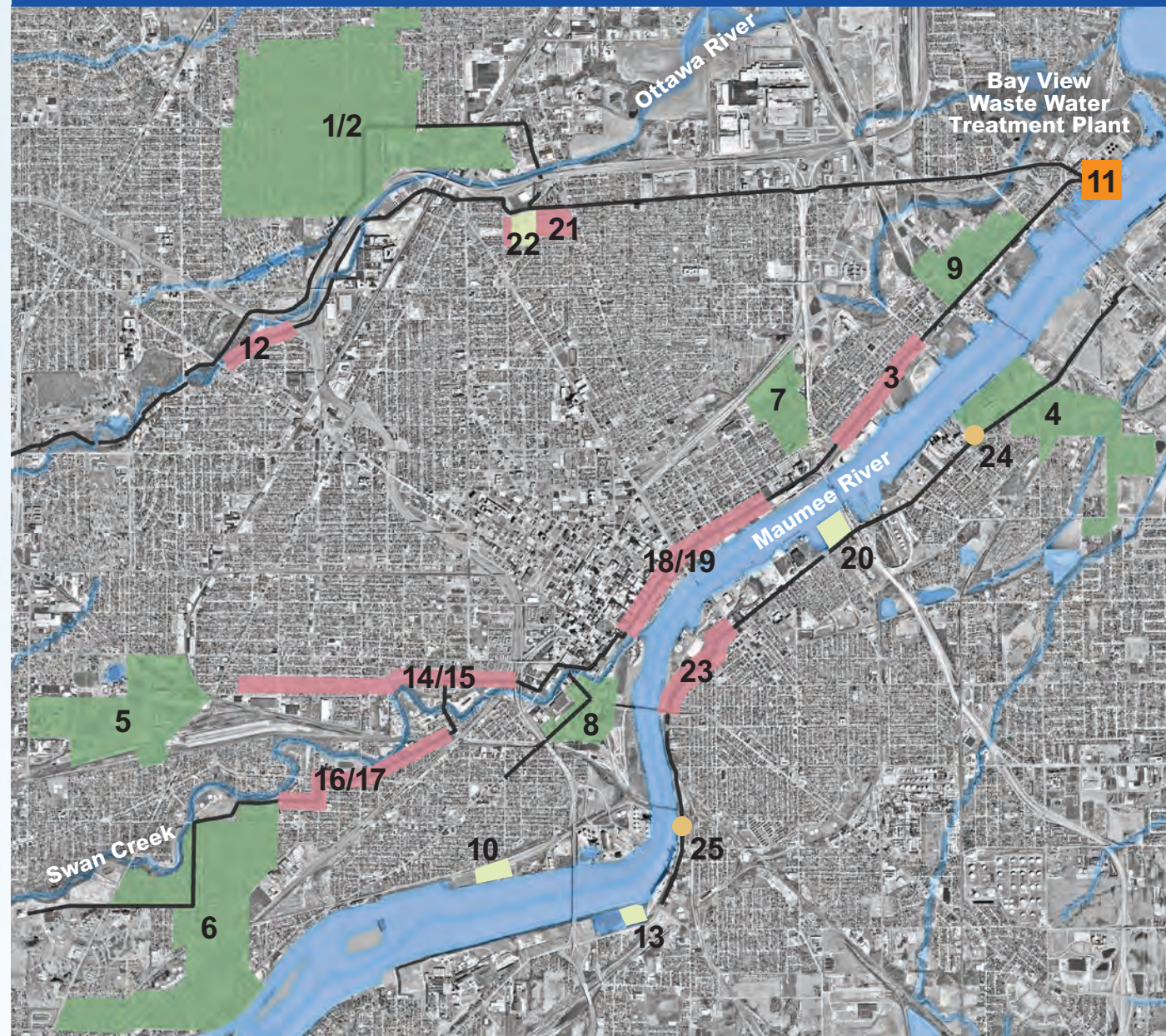


### Toledo Waterways Initiative Phase Two Project Locations



#### Map Legend

Existing Interceptor Sewers	Storage Basin	Pipeline or Tunnel Storage	Sewer Drainage Area	Regulator Location	Grit Facility
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[Map details on back panel >>](#)

### Construction Projects in TWI's Phase Two

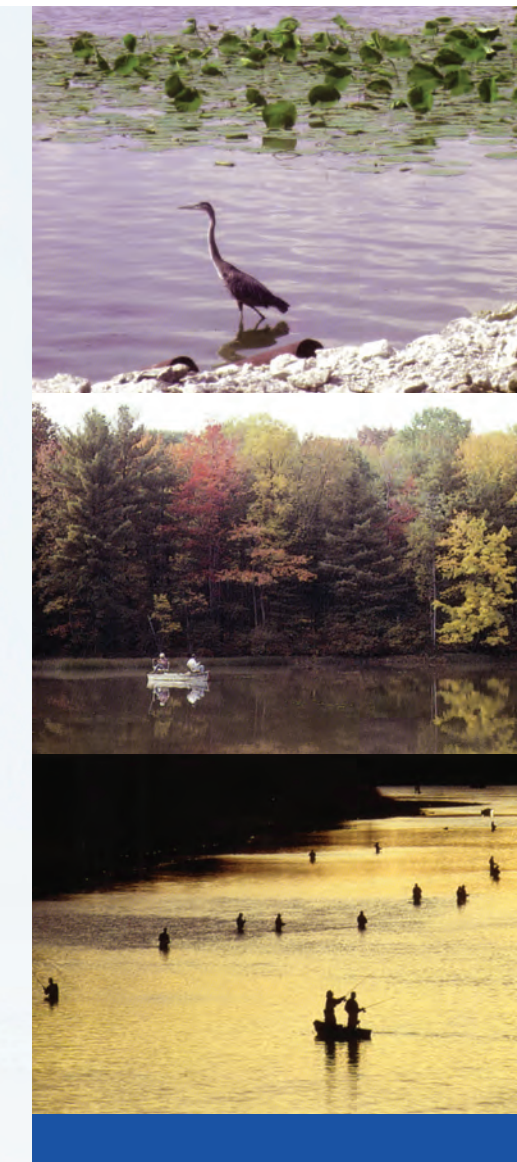
The following table lists the 25 projects outlined in TWI's CSO Long Term Control Plan, as modified in 2009.

Map #	Project ID	Location and Type of Project	Status	Construction (Start)
1	O-1	Lockwood/Devilbiss SSES*	completed	2006-08
2	O-2	Lockwood/Devilbiss Sewer Separation	under construction	2010
3	W-1	Ash-Columbus (Jamie Farr Park) Storage Pipeline	under construction	2010
4	E-6	Wheeling Avenue SSES and Sewer Separation*	under construction	2010
5	S-3	Highland SSES and Sewer Separation*	under construction	2010
6	S-4	Woodsdale SSES & Inflow Reduction*	under construction	2010
7	W-2	Ash Street SSES Sewer Separation*	under construction	2010
8	W-5	Knapp/Williams SSES & Inflow Reduction*	under construction	2010
9	W-7	New York SSES & Inflow Reduction*	under construction	2010
10	W-6	Maumee Avenue Storage Basin	under construction	2011
11	E-7	Bay View Wastewater Treatment Plant Grit Facility	under design	2011
12	O-3	Ayers/Monroe Storage/Conveyance Pipeline	under design	2011
13	E-5	Oakdale Storage Basin	under design	2012
14	S-1A	Swan Creek North Tunnel Optimization	under design	2012
15	S-1B	Swan Creek North Storage Tunnel Extension	future	2016
16	S-2A	Swan Creek South Tunnel Optimization	under design	2012
17	S-2B	Swan Creek South Tunnel In-System Storage	future	2017
18	W-4A	Downtown Tunnel Optimization	under design	2012
19	W-4C	Downtown Tunnel System Storage Basin	future	2017
20	E-2	Dearborn Storage Basin	future	2014
21	O-4A	Ottawa River South Conveyance	future	2014
22	O-4B	Ottawa River South Storage Basin	future	2014
23	E-3	International Park Linear Storage Pipeline	future	2015
24	E-1	Paine Regulator Modifications	future	2018
25	E-4	Fassett Regulator Modifications	future	2018

\* SSES - Sewer System Evaluation Studies

Abbreviations used in the table include the following:

- O - Projects located along the Ottawa River
- E - Projects located along the Maumee River's east side
- W - Projects located along the Maumee River's west side
- S - Projects located along Swan Creek



## Biennial Report of Progress

2009-2010

**Protecting Toledo's Waterways For Future Generations**



420 Madison Ave., Suite 100 | Toledo, Ohio 43604 | 419.720.0929  
www.toledowaterwaysinitiative.com

## Program Origins

The Toledo Waterways Initiative (TWI) is a federally mandated environmental program that traces its origin to the 2002 Consent Decree between the City of Toledo, the United States and the State of Ohio. The program is administered by Toledo's Department of Public Utilities.

The Consent Decree requires the City to complete three major tasks:

1. Eliminate all bypasses of untreated sewage at the Bay View Wastewater Treatment Plant into the Maumee River. These historically occurred during extreme wet-weather events.
2. Eliminate all known discharges of sanitary sewer overflows (SSOs) into area waterways. These also typically were associated with extreme wet-weather events.
3. Significantly reduce the volume of discharge of combined sewage and storm-water runoff from permitted combined sewer overflows (CSOs) into area waterways that occur during wet weather.

The multi-year project began in late 2002, following approval of funding by Toledo voters.

The Toledo Waterways Initiative is the program established to implement the necessary improvements to the Bay

Through the end of Phase One, all deadlines mandated by the U.S. EPA were completed on time and on/or under budget.

## Phase One Activities – 2006-2007

During the Toledo Waterways Initiative's Phase One (2002 to 2007), the capacity of the Bay View Wastewater Treatment Plant to treat peak wet-weather flows was increased, and the City of Toledo worked to eliminate known sanitary sewer overflows (SSOs) that impacted the Maumee and Ottawa Rivers.

The Bay View plant's capacity was increased by constructing a new Wet-Weather Treatment Facility (ballasted-flocculation installation) and a 25 million gallon Retention Basin. The wet-weather facility doubled the plant's capacity from being able to treat up to 195 million gallons per day to about 400 MGD, during heavy rainfalls.

View WWTP and the City's sewer system, as required in the Consent Decree. TWI is a major effort anticipated to last 18 years and cost approximately one-half billion dollars.

The program's Phase One consisted of completing Tasks 1 and 2 listed previously: Elimination of bypasses at the Bay View WWTP and elimination of all known SSOs from sanitary sewers. Phase Two consists of completing Task 3: Reduction of CSO volume from combined sewers to acceptable levels.

Through the end of Phase One, all deadlines mandated by the U.S. EPA were completed on time and on/or under budget.

While the program's goal is to improve water quality in area rivers and streams, TWI also has helped to improve drainage and reduce flooding in Toledo through sewer improvements and by increasing the capacity of the Bay View WWTP.

In addition, the Retention Basin enables Bay View to store increased wet-weather flows until the main plant can further treat the wastewater.

Since the new facilities at the plant went online in 2007, Bay View WWTP has not discharged any untreated wastewater into the Maumee River.

Work to eliminate sanitary sewer overflows was performed in Toledo's Point Place and River Road areas. In Point Place, nearly five miles of new sewers and two new pump stations were installed.

Work in the River Road area included new relief sewers, a new force main sewer and rehabilitation of nearly six and a half miles of sewers. Additionally, an underground storage basin and two new pump stations were added.

Since the new facilities at the plant went online in 2007, Bay View WWTP has not discharged any untreated wastewater into the Maumee River.

## Phase Two Activities – 2008-2010

Planning for the Toledo Waterways Initiative's Phase Two was underway well before Phase One was completed. The Consent Decree required the development of a Combined Sewer Overflow Long Term Control Plan that would lead to a reduction in the occurrence and volume of CSO discharges into area waterways.

During the program's formative days, a total of 25 projects were identified to be studied, designed and constructed during Phase Two. These projects include the separation of combined sanitary and storm sewers in many neighborhoods near Toledo's three major waterways – the Maumee and Ottawa Rivers and Swan Creek. It also includes the construction of numerous short-term storage facilities to handle much of the excess flow until that flow can be treated at the Bay View WWTP. (A table listing the 25 projects and starting dates appears at the end of this report.)

Phase Two activities initiated in late 2008 included several Sewer System Evaluation Studies followed by completion of designs to address the issues identified during these studies.

Major milestones during 2010 included beginning construction on several Phase Two projects and agreement by the U.S. EPA and Ohio EPA to revisions of the Consent Decree leading to formal acceptance of the CSO Long Term Control Plan submitted in 2009. The revisions resulted in a four-year program extension until

The work in Point Place and River Road was completed in 2006.

Phase One's final project was the elimination of an SSO near Delaware Creek Park, discovered during construction of the River Road project. Installation of a pump station and new local sewers in 2009 has eliminated the occurrence of overflow into Delaware Creek, which empties into the Maumee River.

2020 to reduce rate impacts and elimination of projects resulting in a savings of more than \$36 million for the City.

These savings came from eliminating construction of a planned clarifier tank at the Bay View WWTP and accepting the constructed Retention Basin capacity of 25 million gallons, instead of expanding to 60 MG. The City demonstrated these projects were unnecessary due to the success and capabilities of the Wet-Weather Treatment Facility constructed during Phase One.

Another Consent Decree modification included the addition of a Pathogen Study to continue evaluating the treatment effectiveness of the state-of-the-art Wet-Weather Treatment Facility compared to the main plant's secondary treatment processes during wet-weather events.

The first two of TWI's neighborhood construction projects got underway in 2010. The first project was along a portion of Berdan Avenue east of Jackman Road, and the second was in and around Sylvania Avenue between Jackman and Lewis Avenue. Both are part of the Lockwood – Devilbiss Sewer

Separation Project. This effort also included open cut sewer work on side streets in the area, including Branleigh Drive, Lockwood Avenue, Lyman Avenue, Royalton Road and Wallwerth Drive as well as tunneling to install new sewers along Overland Parkway and Dryden Drive.

Construction under the third contract comprising the Lockwood – Devilbiss project is scheduled in the Corbin Road area during late 2011. All work on the Lockwood – Devilbiss project is scheduled to be completed by the end of 2012.

Beginning in late 2010, six additional projects (resulting from the 2008-09 Sewer System Evaluation Studies) initiated construction and are to be completed by the end of 2012. They include sewer separation and inflow and infiltration reduction projects in the Highland Avenue, Wheeling Street and New York Avenue areas and the Ash Street, Williams/Knapp Streets areas; manhole rehabilitation projects in the Wheeling, New York and Highland areas and the Ash, Williams/Knapp and Woodsdale Avenue areas; and a sewer-lining project in the Woodsdale area.

Other construction underway in 2010 included initial work on the Ash – Columbus CSO Storage Pipeline project in a little-used area between the Maumee River

... a total of 25 projects were identified ... for Phase Two ... including separation of combined sanitary and storm sewers ... and the construction of numerous short-term storage facilities ...

## Future

Construction activity during 2011 and 2012 will be at a very high level, as several more projects initiate construction during this two-year period along with those begun in 2010. The last of the TWI projects is slated to begin in 2018 and be finished in 2020.

and the railroad tracks, just east of Jamie Farr Park parallel to Summit Street on Toledo's North Side. This project also is slated to be completed in 2012.

The original cost of TWI was estimated at \$453 M in 2002. Based on the changes agreed to as part of the Consent Decree modifications and costs to date, TWI's total value remains around half a billion dollars; with final costs dependent on inflation over the next 10 years.

TWI is funded by sewer charges appearing on Toledo residential and commercial water bills as well as grants and loans obtained through federal and state governments. No funds from Toledo's General Fund are used.

During 2009-2010, TWI's Community Program Advisory Committee met seven times to hear status updates for the TWI Program and to share public concerns with the TWI Team.

Also during 2010, TWI increased its ability to provide information and communicate with the public and other audiences interested in the program by performing a major overhaul of the program's Web site, [www.toledowaterwaysinitiative.com](http://www.toledowaterwaysinitiative.com). The site contains greatly expanded information and is more interactive than its predecessor.

Residents having questions can call the TWI public information line at 419-720-0929 or visit TWI's Web site, [www.toledowaterwaysinitiative.com](http://www.toledowaterwaysinitiative.com).