

## **Oakland County Phase II Storm Water Annual Progress Report Summary for Community Use**

**Prepared by the Oakland County Water Resources Commissioner's Office  
October 1, 2010 – September 30, 2011**

The Oakland County Water Resources Commissioner's Office (WRC) has prepared the following summary to assist Oakland County communities in preparing their Phase II Storm Water Annual Progress Report. The following items represent projects implemented by Oakland County during fiscal year 2011 (FY 2011) to protect and restore water resources throughout Oakland County. A complete copy of Oakland County's 2011 Storm Water Annual Progress Report will be available on the Oakland County Web site: [www.oakgov.com/water](http://www.oakgov.com/water), after November 1, 2011. For additional information on the programs listed below or other environmental programs offered by the WRC, please contact our Environmental Team at 248-858-0958 or [envreq@oakgov.com](mailto:envreq@oakgov.com).

### **Environmental Program Highlights**

#### **Combined Sewer Overflow Retention Treatment Basin (RTB) Operation**

The WRC operates and maintains the Acacia Park, Birmingham, Bloomfield Village and George W. Kuhn RTBs. For FY 2011, approximately 2,496 million gallons of *treated* combined sewage was discharged from the four RTBs during 24 overflow events. During this period, two discharges were not in compliance with permit limitations. The WRC remains committed to continued water resource protection and preservation.

#### **Household Hazardous Waste Recycling**

The Oakland County Waste Resource Management Division sponsored four household hazardous waste disposal days in FY2011: October 2, 2010 at the General Motors Orion Twp Assembly Plant, May 21, 2011 at Oakland University in Rochester, June 4, 2011 at Oxford Middle School in Oxford, and Sept. 17, 2011 at the Wildwood Amphitheatre in Orion Township. More than 380,000 pounds of waste was collected during the four collection events. Over the past eight years, residents of more than 20,000 households have disposed of 2.2 million pounds of hazardous materials which have been recycled or disposed of properly.

Information on household hazardous waste disposal in Oakland County is available online at: [www.nohaz.com](http://www.nohaz.com).

#### **Michigan Green Schools Program**

The Michigan Green Schools program assists all Michigan schools – public and private – in achieving environmental goals. These goals include protecting the air, land, water and animals of our state along with world outreach through good ecological practices and the teaching of educational stewardship. Students from pre-kindergarten through high school seniors are targeted. In FY 2011, 191 Oakland County schools have earned the Michigan Green School designation. Sixty-four of the schools also received the special designation of Emerald Schools and 91 schools earned the Evergreen Schools status. An award ceremony was held on May 25, 2011 to honor the schools. Information on the program for Oakland County is available on Oakland Schools' [Web site](#).

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#### **Sample Water Quality and Natural Resource Protection Ordinances**

Oakland County Planning and Economic Development Services (OCPEDs) has compiled a list of sample ordinances for municipalities to utilize to protect water quality and resource protection. They are available on the Oakland County Web site at: [www.oakgov.com/es](http://www.oakgov.com/es). This service was made available to communities participating in the Green Infrastructure Planning Process in 2008.

## **Public Education Program Highlights**

#### **Riparian Education**

In June 2008, the WRC completed the development of riparian education materials entitled, "Waterfront Wisdom-Healthy Habits for Clean Water." The materials consist of a comprehensive booklet, as well as individual pamphlets on each of the seven "Healthy Habits for Clean Water." These materials can be viewed and downloaded at: [www.oakgov.com/riparian](http://www.oakgov.com/riparian). As of September 30, 2011, more than 13,500 booklets have been distributed throughout southeast Michigan. There are still more than 6,000 copies available free of charge upon request.

#### **Oakland Lakefront Magazine Advertisements**

Public education messages were placed in the April to September issues of Oakland Lakefront magazine. The messages included pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, car care and storm drain awareness. Oakland Lakefront is published monthly and reaches approximately 17,000 homeowners on the waterways of Oakland County.

#### **Kids' Clean Water Calendar Contest**

The WRC received more than 1,400 entries from fourth and fifth grade students in 40 different schools representing 15 school districts throughout Oakland County for the 2011 Calendar Contest. Winning entries were included in 7,000 calendars that were distributed to homeowners, municipalities, businesses and schools throughout Oakland County.

#### **Oakland County *Dirt Doctors* Program**

The Dirt Doctors program is designed to teach children how individual actions affect our waterways. It explains the connections between vegetation, soil erosion and water quality in a fun-filled, interactive way. During FY 2011, the WRC Dirt Doctors educated nearly 1,100 students through 41 presentations at 7 events located in Bloomfield Hills, Lake Orion, Macomb, Rochester Hills, and Royal Oak.

Pre- and post-surveys showed that there was an increase in awareness regarding the principles taught by the program. Of particular note is that the students gained a 46 percent increase (from 18% to 64%) in awareness that the greatest source of water pollution is from soil erosion and sedimentation, as well as a 55% increase (from 32% to 87%) in awareness that they live in a watershed.

#### **Oakland County *Drain Detectives* Program**

The Drain Detectives program teaches students how pollution can get into our waterways, what to look for, how to detect it and how to trace the source of the pollution. Students learn

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how they can help prevent pollution and how to report pollution incidents through Oakland County's 24-Hour Pollution Hotline. Students also learn how water and pollution travel through the watershed. During FY 2011, the Drain Detectives educated more than 900 students in 40 different presentations at 5 different events located in Bloomfield Hills, Holly, Rochester, Rochester Hills and Walled Lake.

Pre-and post-surveys showed that in general, an increase in awareness was shown regarding the principles taught by the program. Of particular note is that the students gained a 77 percent increase (from 15% to 92%) in awareness that the greatest source of water pollution is from soil erosion and sedimentation.

#### **Oakland County *Enviroscape*<sup>™</sup> Watershed Model Program**

The WRC *Enviroscape*<sup>™</sup> Watershed Model program teaches students about watersheds and how individual actions affect our waterways, as well as how pollution moves throughout a watershed. Students are taught how to prevent pollution through everyday actions. During FY 2011, more than 1,500 students in 60 different presentations at 14 different events located in Auburn Hills, Birmingham, Bloomfield Hills, Bloomfield Twp, Clarkston, Dearborn, Holly, Lake Orion, Macomb, Rochester Hills, Troy and West Bloomfield were reached.

#### **Environmental/Natural Resource-Related Web Sites**

The WRC continues to enhance and maintain its Web site: [www.oakgov.com/water](http://www.oakgov.com/water) with county residents in mind. A separate e-mail address is used for handling environmental questions, requests for services and materials at: [envreq@oakgov.com](mailto:envreq@oakgov.com). OCPEDS continues to host and update the Oakland County Environmental Stewardship Web site: [www.oakgov.com/es](http://www.oakgov.com/es). The WRC also maintains a Web link to its riparian education information at [www.oakgov.com/riparian](http://www.oakgov.com/riparian). The Oakland County Parks and Recreation Commission also hosts a comprehensive Web site: [www.destinationoakland.com](http://www.destinationoakland.com) which features a calendar of events, stewardship opportunities, links to countywide parks and trails and other natural resource-related information for Oakland County.

#### **Clinton River Review**

On October 1, 2010, approximately 97 people were on hand at Oakland University to hear presentations related to the protection and restoration of the Clinton River Watershed. Presentations covered several topics including the importance of bi-national protection of the Great Lakes watershed, Clinton River sources and behavior of contaminants and, keynote speaker, Dr. Robert Glennon, spoke about his book, "Unquenchable: America's Water Crisis and What to do About It".

On September 30, 2011, approximately 114 people attended the 2011 Clinton River Review at Oakland University. This year's Review featured presentations about invasive species in the Clinton River watershed and Great Lakes basin, highlights of the Paint Creek dam removal in Oakland Township and the 500-acre wetland restoration project in Harrison Township, and an EPA representative discussed the importance of how the Great Lakes Restoration Initiative funding is helping to address Beneficial Use Impairments and Area's of Concern within the Great Lakes basin.

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#### **Clinton River Water Festival**

The WRC was part of the planning committee to present the fifth annual Clinton River Water Festival at Oakland University in Rochester on May 20, 2011. The Water Festival reached 1,192 fifth grade students from 16 schools in 12 different school districts in the Clinton River watershed.

#### **Rouge River Water Festival**

The WRC partnered with the Cranbrook Institute of Science to present the Water Festival for the Oakland County portion of the Rouge River Watershed. The eighth annual Cranbrook Water Festival provided an educational and enjoyable learning experience that supports the objectives of school science programs for fourth and fifth grade students. The 2011 Water Festival reached more than 1,700 participants from 24 elementary schools in 11 different Oakland County Rouge Communities, including Beverly Hills, Bingham Farms, Birmingham, Bloomfield Hills, Commerce Twp., Farmington, Farmington Hills, Southfield, Troy, West Bloomfield and Walled Lake.

#### **Rouge Oakland Public Service Announcements Project (RXB-07)**

The WRC broadcast public service announcements (PSAs) on television and radio. The topics of the PSAs were storm drain awareness and how our local waterways are connected to the Great Lakes. The PSAs were targeted to reach homeowners working on typical weekend home projects such as lawn mowing and cleaning the garage. The cable channels were selected to target the weekend do-it-yourselfer. In August 2011, approximately 115 30-second spots were broadcast on cable television shown to the following communities: Auburn Hills, Berkley, Beverly Hills, Bingham Farms, Birmingham, Bloomfield Township, Bloomfield Hills, Clawson, Franklin, Farmington, Farmington Hills, Huntington Woods, Lathrup Village, Livonia, Novi, Oak Park, Orchard Lake, Pontiac, Redford, Rochester, Rochester Hills, Royal Oak, Southfield, Troy and West Bloomfield. Additionally, approximately 35 spots were broadcast on two local radio stations that span much of southeastern Michigan.

### **Illicit Discharge Elimination Program (IDEP) Summary**

#### **Oakland County 24-Hour Pollution Hotline**

The WRC continues to staff the 24-hour Pollution Hotline (248-858-0931) where residents, municipalities and others can call to report surface water pollution in Oakland County.

Oakland County created this Pollution Hotline to address Phase II Storm Water Permit requirements and because individuals and municipalities wanting to report surface water pollution often were unclear about how to do so. This Hotline provides a clearinghouse for surface water pollution complaints resulting in consistent 24-hour response, or referral.

Complaints are logged in a database and referred to the appropriate agency for action. Oakland County received 27 complaints from 15 communities in FY 2011. Investigation of these complaints resulted in the identification and elimination of 14 illicit discharge sources. An illicit discharge is pollution draining to surface water or the dumping of polluting material that can impact surface water.

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A summary of complaint investigations is provided in the table below.

#### Summary of WRC Pollution Hotline Complaint Investigations

Community	Number of			Source of Discharge
	Com-plaints	Illicit Discharges	Illicit Discharges Corrected	
Beverly Hills Village	1	0	0	N/A
Bloomfield Township	1	1	1	Vehicle Accident- Diesel Fuel
Clarkston Village	2	0	0	N/A
Commerce Township	2	0	0	N/A
Farmington Hills	3	2	2	Illegal Dumping- Residential CB –Oil / Commercial - Restaurant Grease
Hazel Park	1	1	1	Vehicle Accident - Diesel Fuel
Holly Township	2	1	1	Illegal Dumping - Commercial Property- Drums -Trash - Const. Debris
Independence Twp	1	1	1	Residential Vehicle - Oil Leak
Milford Twp	1	0	0	N/A
Oakland Twp	2	1	1	Parks Maintenance Garage - Misconnected Mop Sink
Rochester Hills	2	1	1	Leaky Dumpster - Grocery Store
Southfield	1	1	1	Cemetery Ret. Pond - Algaecide
Troy	2	1	1	School Warehouse Bldg. - Misconnected Bathroom
W. Bloomfield	2	1	1	Hydraulic Fluid Leak - Weed Harvester
Waterford Township	4	3	3	Outside Equipment Washing- Restaurant / Used Oil Spill - Auto repair facility / Illegal Dumping - Wood and Const. Debris
<b>Totals: 15 Communities</b>	<b>27</b>	<b>14</b>	<b>14</b>	

#### Discharge Point Surveys and Illicit Discharge Investigations

WRC continues to conduct storm water discharge point surveys and follow-up investigations to locate and eliminate pollution from our waterways. A discharge point survey consists of GPS point location and illicit discharge screening, which includes visual inspection and sampling.

Surveys were conducted at 29 discharge points located along 21 County Drains in 10 communities within the Rouge River and Clinton River watersheds. Discharge point surveys and investigations were conducted as part of WRC's ongoing Phase II Storm Water Permit compliance requirements and in conjunction with the following projects and IDEP partnerships:

- Follow-up to “Rouge-Oakland IDEP Activities Project (RVIIB-06)”:**  
 WRC continued to conduct additional sampling and investigations in the Rouge River Watershed on county and local drainage systems in Farmington Hills. Investigations are being conducted with funding from the Assembly of Rouge Communities (ARC) as follow-up to an IDEP study conducted on four (4) County drains in 2008-2009 under a Rouge Program Office grant. Smoke testing of the storm drain and sanitary sewer systems were conducted in order to confirm illicit connections from failed or misconnected OSDS during FY 2011. During this period, 31 suspect properties were examined. Of these properties, nine (9) were found to be properly connected to the sanitary sewer system and three (3) properties have been found to have illicit connections to the storm drain system.

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Continuation of dye testing of the remaining 17 properties and correction of the three (3) properties with illicit connections will occur in FY 2012. WRC will work with Farmington Hills, the OCHD and the property owners to correct the illicit discharges.

- **Follow-up to Environmental Protection Agency Grant - “Urban Wet Weather IDEP Project”:**

WRC conducted IDEP investigations as follow-up to dry weather and wet weather sampling conducted along portions of the Clark and Leonard Drains in Addison Twp. and the Village of Leonard in the Clinton River Watershed in FY 2010. Investigation of local storm drain systems within the vicinity of downtown Leonard Village identified one property with an illicit grey water connection. This property was referred to OCHD and has been corrected in FY 2011. WRC is partnering with OCHD and the local community to utilize information collected in the 2009-2010 study and follow-up sampling and investigations to schedule additional testing along local drainage system to identify additional properties with failed and misconnected OSDS in FY 2012.

Below is a summary of all of the WRC County Drain Inspections by community and watershed, and it is indicated whether or not a suspected discharge was found and if the illicit discharge was corrected.

WRC DRAIN NAME	No. of MS4 Discharge Points	Community	Watershed	Suspected Discharges	IDEP Investigation	Discharges Discovered	Discharges Corrected	Source
Addison-Dryden Drain	1	Addison Twp	Clinton	NO	NO	0	0	NA
Axford Drain	1	Orion Twp	Clinton	NO	NO	0	0	NA
Clarenceville Drain	0	Farmington Hills	Rouge	YES	YES	1	0	Residential Sanitary
Clark Drain (1)	0	Leonard Village	Clinton	YES	YES	1	1	Residential Misconnected Septic
Cranberry Lake Drain	1	Independence Twp	Clinton	NO	NO	0	0	NA
Drayton Plains Drain	3	Waterford	Clinton	NO	NO	0	0	NA
Ferry Drain	1	Rochester Hills	Clinton	NO	NO	0	0	NA
Fetterly Drain	1	Troy	Clinton	NO	NO	0	0	NA
GWK North (2)	0	Madison Heights	Clinton	YES	YES	1	1	SSO Connection
Hazel Drain (3)	0	Farmington Hills	Rouge	YES	YES	1	0	Residential Misconnected Sanitary
Kelly Drain	1	Independence Twp	Clinton	NO	NO	0	0	NA
M-15 Drain	3	Independence Twp	Clinton	NO	NO	0	0	NA
McConnell Drain	1	Troy	Clinton	NO	NO	0	0	NA
Oaks Drain	1	Pontiac	Clinton	NO	NO	0	0	NA
Osgood Drain	1	Oxford Twp	Clinton	NO	NO	0	0	NA
Oxford Ave Drain	0	Farmington Hills	Rouge	YES	YES	0	0	NA
Palmer Drain	2	Pontiac	Clinton	NO	NO	0	0	NA
Paint Creek Drain	6	Brandon /Orion Twp	Clinton	NO	NO	0	0	NA
Pearl St. Drain (3)	0	Farmington Hills	Rouge	YES	YES	1	0	Residential Misconnected Sanitary

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WRC DRAIN NAME	No. of MS4 Discharge Points	Community	Watershed	Suspected Discharges	IDEP Investigation	Discharges Discovered	Discharges Corrected	Source
Perry Drain	1	Oxford Twp	Clinton	NO	NO	0	0	NA
Wilmington Drain	5	Waterford	Clinton	NO	NO	0	0	NA
<b>Drains Surveyed</b>	<b>Discharge Points Screened</b>	<b>Communities</b>	<b>Watersheds</b>	<b>Suspect Drains</b>	<b>Drains Investigated</b>	<b>Illicit Discharges Discovered</b>	<b>Illicit Discharges Corrected</b>	
<b>21</b>	<b>29</b>	<b>10</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>2</b>	

(1) Ongoing investigation of Clark and Leonard Drains for failed / misconnected OSDS in Leonard Village and Addison Twp.

(2) Illicit discharges reported in 2009-2010 and corrected in 2010-2011

(3) Ongoing investigation of suspected sanitary misconnections to Clarenceville, Oxford Ave, Hazel and Pearl St. Drains in Farmington Hills

**In summary, during FY 2011, 19 illicit discharges were discovered by WRC during complaint investigations, discharge point surveys and follow-up investigations. Of these, a total of 16 illicit discharges were corrected with the identified sources being eliminated. The remaining three (3) illicit discharges continue to be investigated for ultimate removal, or are in the process of being corrected through enforcement actions.**

**The following pollutants were removed through the County's IDEP in FY 2011:**

Pollutant	Source	Rouge River Watershed		Clinton River Watershed		Shiawassee River Watershed		Total
		No.	estimated amt.	No.	estimated amt.	No.	estimated amt.	
Sewage	Failed/Misconnected Septic Systems			1	54,750 gal/yr			1,952,750 gal
	Misconnected Sanitary	1	78,000 gal/yr					
	Sewer Overflows			1	1,820,000 gal/yr			
Fuels, Oils & Grease	Spills	1	30	3	301 gal			356 gal
	Illegal Dumping	2	25					
	Industrial Discharge							
<b>OTHER MATERIALS</b>								
Soaps / Detergents	Illegal Dumping			1	20 gal			20 gal
Hydraulic Fluid	Spill	1	20 gal					20 gal
Algaecide	Spill	1	30 gal					30 gal
Paint / Paint Thinner	Illicit Connection			1	1 gal			1 gal
Trash / Debris	Illegal Dumping			2	Not Estimated	1	Not Estimated	Not Estimated

**No illicit discharges were discovered in the Huron River or Flint River Watersheds in FY 2011.**