



Stormwater Pollution Prevention Initiative (SWPPI)

Michigan General Permit Number: MIG619000

Certificate of Coverage Number: MIG610042

Agency: Oakland County

Address: One Public Works Drive, Bldg 95W, Waterford, MI 48328

Contact Person: James A. Wineka, P.E.

Telephone: 248-858-1901

Title: Environmental Supervisor

Date: April 30, 2020

Authorized Permittee Representative:

Jim Nash

Oakland County Water Resources Commissioner

This page is intentionally blank.

Oakland County Stormwater Pollution Prevention Initiative

Table of Contents

1.0	Introduction	1
2.0	Oakland County’s Watershed Management Planning Goals	2
3.0	Biennial Progress Report	4
4.0	Watershed Plan and SWPPI Revisions	5
5.0	Retention of Records	5
6.0	Public Education Plan	5
7.0	Illicit Discharge Elimination Plan	6
8.0	Construction Stormwater Runoff Control	7
9.0	Post-Construction Stormwater Runoff Control for New Developments and Redevelopment Projects	7
9.1	Flood Control Projects	8
10.0	Pollution Prevention and Good Housekeeping for Municipal Operations	8
10.1	Maintenance Activities for Stormwater Structural Controls	8
10.1.1	Stormwater Systems Maintained and Operated by WRC	9
10.1.2	Stormwater Systems Maintained and Operated by RCOC	9
10.1.3	Stormwater Systems Maintained and Operated by Others	9
10.2	Controls Used for Reducing or Eliminating Discharges of Water and Pollutants from Streets and Maintenance Garages	10
10.3	Disposal of Stormwater Pollutants from the Separate Stormwater Drainage System	10

Oakland County Stormwater Pollution Prevention Initiative

Table of Contents

10.4	Reduction of Landscaping Chemicals	10
11.0	Methods for Evaluating Effectiveness of SWPPI Activities	10
Appendix A – Oakland County SWPPI Action Table		
Appendix B – Oakland County Watershed Management Planning Goals		
Appendix C – Status of Watershed Management Plans in Oakland County		

1.0 Introduction

This document fulfills Oakland County's National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit requirement for a Stormwater Pollution Prevention Initiative (SWPPI). This SWPPI has been designed and will be implemented to reduce, to the maximum extent practicable, the discharge of stormwater pollutants from county-owned or operated Municipal Separate Storm Sewer Systems (MS4s).

Oakland County has chosen the watershed approach to stormwater management, acknowledging that stormwater does not recognize jurisdictional boundaries. Oakland County has been issued certificate of coverage (COC) number MIG610042 under the Michigan General Permit number MIG619000. The COC was issued December 16, 2003 and was modified on April 20, 2005. The COC expired on April 1, 2008; however, since the Michigan Department of Environment, Great Lakes and Energy (EGLE) withdrew the revised 2008 stormwater general permit, the county is currently operating under the 2003 permit.

This document integrates our Illicit Discharge Elimination Plan (IDEP) and our Public Education Plan (PEP) into our SWPPI and includes activities to be implemented consistent with the goals of the Watershed Management Plans developed for the following watersheds and subwatersheds:

- Clinton River Watershed:
 - Clinton Main Subwatershed
 - Red Run Subwatershed
 - Stony/Paint Creek Subwatershed
 - Upper Clinton Subwatershed
 - North Branch Subwatershed

- Flint River Watershed:
 - Middle Flint Subwatershed

- Huron River Watershed:
 - Huron Chain of Lakes Subwatershed
 - Upper Huron/Kent Lake Subwatershed

- Rouge River Watershed

- Shiawassee River Watershed:
 - Upper-2 Shiawassee River Subwatershed

Oakland County is rich in natural resources, especially water resources. It is home to more than 1,400 lakes and contains the headwaters of five river systems including the Clinton, Flint, Huron, Rouge and Shiawassee. Combined, the water resources in Oakland County total more than 900 miles of shoreline. Oakland County covers 910 square miles and is home to an estimated 1.26 million people (2019, U.S. Census Bureau).

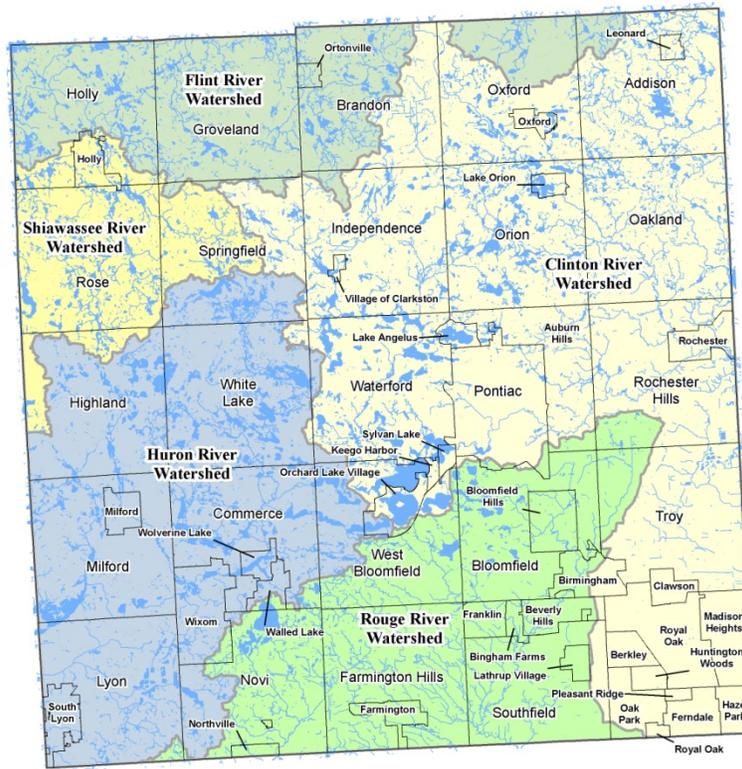


Figure 1 Oakland County’s Watersheds

2.0 Oakland County’s Watershed Management Planning Goals

Oakland County has been a partner in the development of 10 watershed management plans (see **Appendix C** for a summary of the status of these plans). The number of goals, objectives and actions in these plans are summarized below in *Table 1*.

**Table 1
Oakland County Watershed Management Plan Summary**

Watershed Management Plan	Goals	Objectives	Actions in Plan	Oakland County Actions
Rouge River	6	15	68	50
Flint - Middle	5	30	87	15
Huron - Kent Lake	6	17	45	35
Huron - Chain of Lakes	10	40	85	24
Clinton – Main	7	20	31	21
Clinton – Red Run	7	16	57	20
Clinton - Upper	6	22	35	19
Clinton - Stony/Paint	8	21	59	43

Table 1
Oakland County Watershed Management Plan Summary

Watershed Management Plan	Goals	Objectives	Actions in Plan	Oakland County Actions
Clinton – North Branch	9	41	68	64
Shiawassee – Upper	8	34	100	42
Totals	72	256	635	333

In an effort to streamline the numerous goals contained in the 10 separate watershed management plans developed for Oakland County’s watersheds, nine (9) overarching goals for Oakland County have been compiled as summarized below (see also **Appendix B** for a more detailed listing of how each of the sets of goals in the 10 watershed management plans tie into the county’s nine overarching goals):

- Goal 1** - Remove Sources of Pollution that Threaten Public Health (Water Quality)
- Goal 2** - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat)
- Goal 3** - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion)
- Goal 4** - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration)
- Goal 5** - Protect and Enhance Recreational Uses (Recreation)
- Goal 6** - Educate the Public about their Role in Protecting Water Quality (Public Education)
- Goal 7** - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use)
- Goal 8** - Establish Financial and Institutional Arrangements for Watershed Management Programs
- Goal 9** - Protect Open Spaces and Waterfront Areas (Protection)

The Oakland County Water Resources Commissioner’s office (WRC), as the designated representative for Oakland County’s stormwater permit, is dedicated to provide support to all of the Phase II communities within Oakland County. The county will strive to meet all permit requirements and WMP goals, within Oakland County authority, in an effort to protect and restore the watersheds within Oakland County. Within Oakland County, many departments and agencies will share the responsibilities of Phase II permit compliance, including:

- The Water Resources Commissioner’s office (WRC)
- Road Commission for Oakland County (RCOC)
- Economic Development and Community Affairs (EDCA)
- Health Division (OCHD)
- Facilities Maintenance & Operations (OCFM)
- Parks and Recreation Commission (OCPRC)
- Waste Resource Management Division (WRMD)

Oakland Schools (OS), the intermediate school district for Oakland County, is one of two nested jurisdictions under Oakland County’s stormwater permit (the other being the RCOC) and will

also share the responsibilities of implementing the county's stormwater permit. When Oakland County's new permit is issued, OS and RCOC will no longer be nested jurisdictions and will have obtained their own individual MS4 permit.

This SWPPI relies on the implementation of watershed management activities performed by Oakland County, our other watershed partner agencies and communities, watershed councils (Clinton River Watershed Council, Flint River Watershed Coalition, Huron River Watershed Council, Friends of the Rouge and Friends of the Shiawassee River) and other relevant agencies (such as the Southeast Michigan Council of Governments [SEMCOG] and Southeastern Oakland County Water Authority [SOCWA]) to protect and restore the surface waters in the Clinton, Flint, Huron, Rouge and Shiawassee River watersheds.

Further, Oakland County recognizes that by working collectively with others, on a regional and watershed basis, illicit discharge elimination, public education and other water quality management activities can be implemented more effectively and cost-efficiently.

Appendix A lists and describes the specific activities that Oakland County and our partners are undertaking, or will undertake, to implement our SWPPI and comply with our current COC under the Michigan General Stormwater Permit.

The activities in the SWPPI Action Table (**Appendix A**) are organized under the following categories:

1. Public Education Plan
2. Illicit Discharge Elimination Plan
3. Construction Stormwater Runoff Control
4. Post-Construction Stormwater Runoff Control for New Developments and Redevelopment, and
5. Pollution Prevention and Good Housekeeping for Municipal Operations

3.0 Biennial Progress Report

Pursuant to our current COC, a biennial progress report shall be submitted to the District Supervisor, covering the preceding two fiscal years (October 1 – September 30), by November 1st of every other year (this schedule began in FY 2013). The biennial report will describe implementation status and pollution prevention progress, and shall include those items listed in Michigan General Permit Number MIG619000 including, but not limited to:

- documentation of actions taken to eliminate illicit discharges and evaluate program effectiveness. For significant discharges, the pollutant(s) of concern, the estimated volume and load discharged, and location of the discharge into the permittee's separate storm drainage system and into the receiving water shall be provided;
- summary status of program to minimize seepage from sanitary sewers and on-site sewage disposal systems;
- schedules for elimination of illicit connections identified, but not eliminated;
- documentation of the public education effort and evaluation of its effectiveness;

- information on the discovery of new stormwater point sources, and
- description of compliance status of the permittee-specific SWPPI actions and implementation schedules including pollution prevention/good housekeeping and post-construction best management practices (BMPs).

4.0 Watershed Plan and SWPPI Revisions

The SWPPI will be reviewed (and revised, as necessary) pursuant to our current COC. Revisions to date-specific activities listed in **Appendix A** will be made, as necessary, with approval of the Department of Environment, Great Lakes and Energy (EGLE).

5.0 Retention of Records

Oakland County departments will retain the approved SWPPI and its associated records for a minimum of three (3) years after the termination of the permit. If available, these records shall include, but not be limited to:

- Information regarding the effectiveness of these activities,
- Records of analyses performed,
- Calibration and maintenance of instrumentation (*when/if available*), and
- Recordings from continuous monitoring instrumentation (*when/if available*).

6.0 Public Education Plan (PEP)

The PEP section of our SWPPI was developed to promote, publicize and facilitate watershed education in the Clinton, Flint, Huron, Rouge and Shiawassee River watersheds. This PEP combines with and relies on the implementation of public education activities by the county, watershed partner communities, Cranbrook Institute of Science, SEMCOG, SOCWA, MSU-Extension and the watershed councils.

The purpose of the PEP section is to encourage the public within the county to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Pollution prevention is encouraged and a method for determining the effectiveness of the various public education activities is described.

The “Public” is defined to include all persons who potentially could affect the quality of stormwater discharges, including, but not limited to, residents, visitors to the area, businesses, commercial operations and construction activities.

It is our position that the PEP section of **Appendix A** adequately addresses all the required public education elements and audiences as defined in the 2003 Phase II Permit (MIG619000). Specifically, the required elements are:

Required Element #1: Personal Watershed Stewardship

Education of the public about their responsibility and stewardship in their watershed.

Required Element #2: Ultimate Stormwater Discharge Location and Potential Impacts
Education of the public on the location of residential separate stormwater collection system catch basins, the waters of the state where the system discharges, and potential impacts from pollutants from the separate stormwater drainage system.

Required Element #3: Public Reporting of Illicit Discharges
Encouragement of public reporting of the presence of illicit discharges or improper disposal of materials into the permittee's separate stormwater drainage system.

Required Element #4: Personal Actions That Can Impact the Watershed/Common Home and Yard Stormwater Pollutants

Education of the public on the need to minimize the amount of residential, or non-commercial, wastes washed into nearby catch basins (this should include the preferred cleaning materials and procedures for car, pavement, or power washing; the acceptable application and disposal of pesticides and fertilizers; and the effects caused by grass clippings, leaf litter, and animal wastes that get flushed into the waterway).

Required Element #5: Waste Management Assistance

Education of the public on the availability, location and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids.

Required Element #6: Riparian Land Management

Education of the public concerning the management of riparian lands to protect water quality.

7.0 Illicit Discharge Elimination Plan (IDEP)

The IDEP section of our SWPPI was developed to prohibit and effectively eliminate illicit discharges (including the discharge of sanitary wastewater) to the County's separate stormwater drainage system.

"Illicit Connection" means a physical connection to the separate stormwater drainage system that 1) primarily conveys illicit discharges into the system and/or 2) is not authorized or permitted by the local authority (where a local authority requires such authorization or permit).

"Illicit Discharge" means any discharge (or seepage) to the separate stormwater drainage system that is not composed entirely of stormwater or uncontaminated groundwater. Examples of illicit discharges include dumping of motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, or animal wastes, or unauthorized discharges of sewage, industrial waste, restaurant wastes, or any other non-stormwater waste into a separate stormwater drainage system.

The IDEP section of **Appendix A** identifies and describes the activities that will be carried out to address the IDEP elements as specified in the 2003 Phase II Permit (MIG619000). Specifically, the IDEP required elements are:

Required Element #1:

A regulatory mechanism for prohibiting illicit discharges into county-owned or operated MS4's and implementing appropriate enforcement actions;

Required Element #2:

A program to find, prioritize and eliminate illicit discharges and illicit connections during dry weather screening activities;

Required Element #3:

A program to train staff employed by the county who are involved with illicit discharge-related activities or whose field jobs have the potential to witness illicit discharges and connections;

Required Element #4:

A method for determining the effectiveness of the illicit discharge elimination program.

8.0 Construction Stormwater Runoff Control

The impact of soil erosion and sedimentation continues to be of great concern in areas undergoing construction activities. Improper management of these sites can result in pollution to the water resources of Oakland County.

The WRC is responsible for administering the Soil Erosion and Sedimentation Control Act (See [Soil Erosion Act, Part 91 of PA 451 of 1994](#), as amended.) The purpose of the legislation is to minimize erosion and control sedimentation to protect the water resources of the State. The WRC has been designated a County Enforcing Agency (CEA) by the DEQ's Land and Water Management Division to serve the communities in Oakland County that **do not have a local Soil Erosion Control Program**.

This program requires that anyone disturbing soil for construction or other earth disturbance to obtain a permit before work begins. A list of communities covered by the WRC's Soil Erosion Program can be found on the WRC [permit application page](#).

A permit fee system is based upon site classification. Sites are classified by location and the risk of potential erosion problems. Details are available on the WRC's [Soil Erosion and Sedimentation Control Web site](#).

9.0 Post-Construction Stormwater Control for New Developments and Redevelopment Projects

This section discusses the ways in which Oakland County currently protects and will further protect water quality within its boundaries through development and redevelopment projects. These activities are generally referred to as "Best Management Practices" or BMPs. Stormwater BMPs are techniques, structures, or management practices that help to reduce pollutants within stormwater, pre-treat stormwater before it reaches a surface water body (stormwater quality), or

maintain the same amount of flow (stormwater quantity) after development as existed before development.

BMPs are often categorized as non-structural or structural BMPs. Non-structural BMPs are generally activities or management practices that minimize the amount of pollutants that enter stormwater. Examples include land use policies that require pre-treatment of stormwater, educating residents to reduce fertilizer or pesticide use, street sweeping, catch basin cleaning, and the like. Structural BMPs include physical structures that either pre-treat stormwater, such as a wet detention basin, or maintain runoff at pre-development rates, such as infiltration areas. Since each development or re-development site is unique, a distinctive system of BMPs will be required to address stormwater issues presented by that site.

Oakland County's SWPPI includes the BMPs Oakland County implements to protect water quality during development and redevelopment projects. The most widely used tool is the WRC stormwater standards. The standards are applied where the WRC has jurisdiction. Michigan State law, The Drain Code – Act 40 of 1956, as amended, gives the Water Resources Commissioner the powers and responsibilities to govern legally established drainage systems within the County. The County Water Resources Commissioner also has additional statutory responsibilities (Act 342, etc.), along with other responsibilities delegated by the Oakland County Board of Commissioners.

Under the provisions of the State Drain Code, through municipal petition or citizen initiative, storm drain facilities can be established as a County Drain. Once established, the Drain Board manages the construction of all improvements and changes to these systems. New water and sanitary sewer facility construction is likewise managed by WRC staff upon request from the local municipalities. Team members review plans for all new subdivision plats, new mobile home developments, and other parcels within designated drainage districts in Oakland County to ensure that adequate storm drainage facilities have been proposed in the engineering plans for the development.

The Stormwater Standards require the entity responsible for the perpetual maintenance of the storm drainage system be identified. In cases of platted subs and mobile home parks, the maintenance is transferred to the property owners.

9.1 Flood Control Projects

Oakland County has procedures to ensure that flood control projects assess impacts on water quality of the receiving waters. Flood control projects include detention basins, dams, lake level controls, diversions, and other structural controls that direct, assist, or inhibit the flow of water to prevent or reduce flooding.

The WRC operates 36 dams to control flooding and controls the level of 54 lakes.

10.0 Pollution Prevention and Good Housekeeping for Municipal Operations

10.1 Maintenance Activities for Stormwater Structural Controls

The permit requires maintenance schedules and inspection procedures for stormwater structural controls owned by the permittee. The SWPPI includes activities to ensure that structural controls are functioning properly and at optimum efficiency to reduce pollutants discharged from the county's MS4s.

MS4s throughout Oakland County are maintained and operated by several different entities including: WRC, RCOC, cities, villages, townships and private landowners.

10.1.1 Stormwater Systems Maintained and Operated by WRC

WRC maintains and operates County Drain MS4s. A County Drain may be an open ditch, stream, underground pipe, detention pond or swale that conveys stormwater. These drains become designated as County Drains through a process where a local city, village or township petitions the Water Resources Commissioner to establish a County Drain. In some cases, property owners may also file petitions to establish Drains under the County's jurisdiction based upon the Michigan Drain Code of 1956, Act 40.

WRC currently maintains and operates 370 County Drains. These drains are classified as either open water courses or enclosed pipe systems. WRC's maintenance staff inspects all County Drains on a 4-year rotating cycle. Standard inspection sheets are used and the location of the channel and its appurtenances are recorded using a GPS unit. The necessary repairs are documented and a work request form is completed and the work scheduled. A comprehensive GIS-based Computerized Asset Management System (CAMS) is currently being implemented to track maintenance activities. Additional details about the inspection and maintenance program are listed in **Appendix A**.

WRC is responsible for stormwater structural controls constructed on County Drains. These structures include stormwater detention ponds and mechanical stormwater treatment devices. The ponds were primarily constructed as part of Chapter 18 projects in Oakland and West Bloomfield Townships.

10.1.2 Stormwater Systems Maintained and Operated by RCOC

The RCOC maintains roadside drainage systems including ditches, pipes, and culverts under roads that drain state highways and county roads. The Road Commission of Oakland County operates road drainage systems in many communities.

10.1.3 Stormwater Systems Maintained and Operated by Others

The State of Michigan has jurisdiction over waters of the state. The watershed permit language defines "waters of the state" as the Great Lakes and their connecting waters, all inland lakes, rivers, streams, impoundments, open drains and other surface bodies of water within the confines of the state. "Waters of the state" does not include drainage ways and ponds used solely for wastewater conveyance, treatment or control.

Some local municipalities maintain and operate their own storm, water and sewer lines, and have public works departments that handle requests and information about those services. Generally, cities and villages have jurisdiction over drainage for local roads

while in townships that is the responsibility of RCOC. Some communities have passed this responsibility on to the subdivision associations.

Oakland County also recognizes that one of the best ways to keep pollution out of the storm drain system is to have a properly maintained and well operated sanitary sewer system. Action items in **Appendix A** have been identified which capture maintenance activities for the sanitary sewer systems under Oakland County's jurisdiction.

10.2 Controls Used for Reducing or Eliminating Discharges of Water and Pollutants from Streets and Maintenance Garages

The permit requires controls used for reducing or eliminating the discharges of water and pollutants from:

- Streets, roads and highways
- Parking lots
- Maintenance garages
- Storage yards

Appendix A identifies the activities that Oakland County implements to address pollution prevention and good housekeeping activities for municipal operations.

10.3 Disposal of Stormwater Pollutants from the Separate Stormwater Drainage System

The WRC and RCOC dispose of stormwater pollutants from the separate stormwater system in compliance with all applicable regulations. The vector tailings are dumped at the WRC septage unloading facility or other approved disposal facility. The solid debris at the WRC septage unloading facility is allowed to dry on drying beds. The spoils are then hauled to a state licensed landfill by a licensed contractor.

10.4 Reduction of Landscaping Chemicals

Oakland County has procedures to implement controls to reduce discharge of pesticides, herbicides, and fertilizers on County-owned property.

11.0 Methods for Evaluating Effectiveness of SWPPI Activities

Methods for measuring effectiveness of the activities implemented as part of the SWPPI will be accomplished by compiling and evaluating the following information:

1. Completion of Activity
2. Measure of Usage
3. Behavior Change and/or Knowledge Change
4. Changes in Water Quality

This information will be summarized in Oakland County's biennial report due on November 1st of every other year (2021, 2023, etc.).

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Public Education Plan						
Bulletin Boards	6	Bulletin boards in the WRC main lobby are posted with information developed by the Southeast Michigan Partners for Clean Water on the "Seven Simple Steps to Clean Water" topics. Other related information is posted and/or materials are placed on the desk for the public/county employees to take.	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	Annually	-Topics posted are tracked in an excel spreadsheet available upon request -Topics posted will be reported annually
Dirt Doctors Program	6	The Dirt Doctors Program is an interactive program geared towards 4th and 5th grade students and teaches youth about how individual actions affect our waterways. The program focuses on the importance of soil erosion prevention and watershed stewardship.	Audience: General public Key Message(s): PEP Elements #1, #2, #3, #4, #6 (A-C, F, G, I)	WRC	Annually	-Report on the number of students reached -Report on the number of events attended -Report on the number of presentations given -Pre- and post-evaluation survey results
Drain Detectives Program	6	The Drain Detectives Program is an interactive program geared towards 4th through 12th grade students. It 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 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.	Audience: General public Key Message(s): PEP Elements #1, #2, #3, #4, #6 (A-C, H)	WRC	Annually	-Report on the number of students reached -Report on the number of events attended -Report on the number of presentations given -Pre- and post-evaluation survey results
E-newsletter Articles	6	WRC releases an electronic newsletter to the public, CVTs, elected officials and county employees on a quarterly basis (the E-newsletter has taken the place of the WRC Watermark newsletter). This newsletter keeps Oakland County communities informed on the many projects and services provided by the WRC and highlights some of the WRC's ongoing projects and services. It also provides updates about the evolving role of the WRC office. Oakland County's 24-Hour Pollution Hotline is also published in this newsletter.	Audience: General public, CVTs, elected officials, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-C, G, I, J)	WRC	Published quarterly	-Track environmental articles published in the E-newsletter -Report on the number of people that receive the E-newsletter
Enviroscape Watershed Model Program	6	The EnviroScape watershed model 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. The EnviroScape is also made available to the public to borrow for presentations.	Audience: General public Key Message(s): PEP Elements #1, #2, #4, #6 (A-J)	WRC	Annually	-Report on the number of students reached -Report on the number of events attended -Report on the number of presentations given -Pre- and post-evaluation survey results
Electronics Recycling Event	1, 2	Oakland Schools and Oakland County partner to offer an electronics recycling event in an effort to provide a safe way for Oakland County residents to properly dispose of unwanted electronics.	Audience: Residents Key Message(s): PEP Element #5 (G)	OS	Annually	-Report on the types and amount of electronic items recycled
Household Hazardous Waste Information	1, 6	Continue to publicize information on the NO HAZ, Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) and Southeastern Oakland County Resource Recovery Authority (SOCRRRA) programs to citizens and employees of Oakland County on WRMD's Web site (www.oakgov.com/waste/nohaz). NO HAZ, RRRASOC and SOCRRA provide safe disposal of household hazardous waste to Oakland County municipalities to the maximum extent practicable (as budget allows). The WRC will continue to distribute HHW brochures. WRC also provides an ad on household hazardous waste disposal in the Oakland Lakefront magazine and has information in its Waterfront Wisdom publication and on their Web site at www.oakgov.com/riparian .	Audience: Residents Key Message(s): PEP Element #5 (G)	WRMD WRC	Annually	Report annually: -Provide working links to Web sites -Number of Web site hits -Number of brochures distributed -Pounds of waste collected through recycling programs
Inland Lake Natural Shoreline/Education Program	1, 2, 3, 4, 5, 6, 9	The EGLE and MSU-Extension has spearheaded the development of the Michigan Natural Shoreline Partnership (MNSP). Each year, education and outreach is provided to inland lake homeowners and shoreline landscape contractors on the following topics: the importance of natural shoreline landscapes on Michigan's inland lakes, healthy lake ecosystems, understanding the shoreline, shoreline invasive plants, planning a natural shoreline landscape, design ideas for a natural shoreline landscape, plant selection, planting stock and site preparation, natural shoreline success, and Michigan rules and regulations. In Oakland County, a partnership has formed between the WRC, MSU-Extension, OCPRC, Clinton River Watershed Council, Wild Ones, Oakland Conservation District and EGLE to offer programming locally.	Audience: General Public, Riparian Landowners Key Message(s): PEP Elements #1-6 (A-K)	WRC OCPRC MSU-Extension	Annually	Report annually: -Number of programs held -Number of attendees -Workshop partners

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Interpretive Signage	5, 6	Signage at county parks will be installed indicating their location within their watershed and other stewardship and water quality information.	Audience: General public Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-C, I, J)	OCPRC	As funding permits	-Report on signage installed and the content of the signage
Invasive Species Management and Education and Outreach	2, 5	Invasive species management is an important topic in Oakland County - namely in regard to the inland invasive plant, <i>Phragmites australis</i> , and numerous aquatic invasive plants. Often, residents are looking for direction on how to manage these invasive species and these requests are fulfilled in a variety of ways, including printed materials, Web sites and workshops. The Oakland County CISMA is a partnership of county and local governments, non-profit organizations and universities with a focus on managing the spread of numerous invasive species. Information on the Oakland County Cooperative Invasive Species Management Area (CISMA) is available online at: https://www.michiganinvasives.org/occisma/ and at https://www.sixriversrc.org/oakland-county-cisma .	Audience: General Public, Riparian Landowners Key Message(s): PEP Element #1, 6 (A, J)	WRC OCPRC EDCA RCOC OS Other partners in Oakland County: Oakland County CISMA OPIS EGLE	Annually	Report annually: -Invasive species management practices implemented on Oakland County properties -Number of requests for information regarding invasive species management -Working links to Web sites with invasive species information
Kids' Clean Water Calendar Contest	6	The Kids' Clean Water Calendar contest is open to 4th and 5th grade students in all schools within Oakland County. Themes for drawing entries surround the Seven Simple Steps to Clean Water campaign topics developed by SEMCOG. The contest promotes the students to learn about watershed stewardship and how our daily actions impact our waterways.	Audience: General public Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	Annually in October	-Report on the number of student entries -Report on the number of calendars distributed -Report on the number of schools and school districts that participated
Lake Improvement Board Assistance	5, 6	Continue to serve (as required by statute) on Lake Improvement Boards acting as a liaison between the Lake Improvement Board and the WRC for technical expertise and public education opportunities and materials.	Audience: General public Key Message(s): PEP Elements #1, #6 (A, J)	WRC	Annually	-Report on number of lake improvement boards and requests for public education materials
Michigan Green Schools Program	6	This program was signed into law at the state level in 2006. The program encourages public and private schools to participate in energy savings and environmental activities to be designated as "Michigan Green Schools". Information on the program for Oakland County is available on Oakland Schools' Web site at: https://www.oakland.k12.mi.us/school-districts/services/environmental	Audience: K-12th grade students and teachers Key Message(s): PEP Elements #1 (A)	WRMD OS	Annually	-Number of Oakland County schools in program
Natural Resources Education Program	2, 5, 6	Special programs are offered by OCPRC staff throughout the year which provide opportunities for the community to participate in ongoing stewardship efforts. Programs take place at the Oakland County Parks as well as other locations in Southeast Michigan.	Audience: General public, visitors to the area Key Message(s): PEP Elements #1, #6 (A, J)	OCPRC	Annually	-Report on the number and types of events held -Report on the number of participants involved in stewardship activities
Oakland County Environmental Stewardship and Water Resource Web sites	6	WRC, EDCA, OCPRC and MSU-Extension Oakland County maintain environmental stewardship and/or water resource information on their Web sites at: EDCA: https://www.oakgov.com/advantageoakland/planning/environmentalstewardship/Pages/default.aspx WRC: www.oakgov.com/riparian WRC 24-Hour Pollution Hotline: https://www.oakgov.com/water/stormwater/Pages/environmental.aspx OCPRC: https://www.oakgov.com/parks/getinvolved/Pages/Natural-Resource-Management.aspx MSU-Extension: https://www.oakgov.com/msu/programming/Pages/natural-resources.aspx In FY 2018, Oakland County Information Technology developed a Seven Simple Steps to Clean Water Story Map and that is available at: https://oakgov.maps.arcgis.com/apps/Cascade/index.html?appid=1676f95c659d408e94bf73096db93387 ; a link to the Story Map is on WRC's "Seven Simple Steps to Clean Water" website at: https://www.oakgov.com/water/resources/education/Pages/seven-steps.aspx . The page also promotes the 24-Hour Pollution Hotline and viewers can explore land use changes from 1940 vs. 2017 imagery within Oakland County.	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC EDCA OCPRC RCOC MSU-Extension (non-permittee)	Annually	-Provide working links to Web sites

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Oakland County Trail Network (OakRoutes) Mapping	5	Continue to update and distribute the Oakland County Trail Network (OakRoutes) map. A link to the interactive OakRoutes map is available on the Destination Oakland Web site at: https://www.oakgov.com/parks/Resources/OakRoutes%20Trail%20Map.pdf . The Oakland County 24-Hr Pollution Hotline information is on this updated map. The OakRoutes map and additional Regional Trail information is highlighted on an updated website available at: https://www.oakgov.com/parks/parksandtrails/Pages/Trails.aspx .	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #3, (A, C)	OCPRC EDCA	Annually	-Report on updates to OakRoutes map
Oakland Lakefront Lifestyles Magazine Advertisements	6	Public education messages are placed in the Oakland Lakefront magazine. The messages include pet waste management, earth-friendly fertilizers, proper household hazardous waste disposal, earth-friendly landscaping, car care, storm drain awareness and proper onsite septic system care/maintenance. Oakland Lakefront is published monthly and reaches approximately 41,000 readers on 224 inland lakes within Oakland County.	Audience: General public, riparian landowners Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	April through September	-Number and types of ads placed -Expenditures for ads
OCSC Facilitation and Participation	8	The WRC will continue to facilitate the Oakland County Stormwater Committee (OCSC) which was formed to keep OC departments informed of Phase II permit compliance activities and to share permit-related information. OC departments will continue to participate on the OCSC.	-	WRC RCOC OCPRC OCFM OS	Annually	-Report on number of meetings attended -Meeting agendas and handouts available upon request
Onsite Sewage Disposal (Septic System) Maintenance Education	1, 2, 6	Proper onsite sewage disposal system (OSDS) operation and maintenance is a critical part of protecting water quality within Oakland County. There are more than 80,000 households/businesses served by OSDS' within Oakland County.	Audience: General public, riparian landowners Key Message(s): PEP Elements #1, #3, #4, #6 (A, C, H, J)	WRC OCHD	Annually	-Report on number of workshops held -Report on public education ads/information published/distributed
Operation Medicine Cabinet	1, 2, 6	The Oakland County Sheriff's Office launched "Operation Medicine Cabinet" in July of 2009 to provide citizens a venue to properly dispose of expired and/or unused prescriptions at several different locations throughout Oakland County. This program helps to reduce the environmental impacts of prescription drugs in our waterways that can have detrimental effects on fish, frogs and other aquatic life. Additional information is available at: https://www.oakgov.com/sheriff/Community%20Services/domestic/Pages/Operation-Medicine-Cabinet.aspx .	Audience: General public Key Message(s): PEP Element #4 (G)	OC Sheriff's Office and Participating CVTs	Annually	-Report on the number and location of participating CVTs -Provide working link to website -Track number of website hits annually
Presentations and Displays	6	OC partners will provide displays and presentations for water quality-related events upon request and availability of staff time.	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC EDCA OCHD - Environmental Health Services (EHS) OCPRC OS MSU-Extension	Annually	-Number and types of events attended
Publicize Environmental-Related Events	2, 6	Publicize environmental stewardship and other relevant environmental activities to WRC staff and the general public through in-house bulletin boards in WRC lobby.	Audience: General Public, visitors to the area, WRC staff Key Message(s): PEP Elements #1, #4, #5, #6 (A)	WRC	Annually	-Number of events publicized on bulletin board
Recreational Use/Access	5	Continue efforts to provide access to lake, riparian and wetland habitats through universally accessible trails, piers and boardwalks.	-	OCPRC	Annually	-Report on the number and location of new access locations
Recreational Vehicle Waste Dumpsites	1, 2, 5, 6, 9	The WRMD website has a link to RV dumpsites in MI and is available at: https://www.oakgov.com/advantageoakland/planning/Pages/waste-recycling-resources.aspx (under the "Statewide" dropdown, then click on "Recreational Vehicle Dump Stations in Michigan").	Audience: Residents, visitors to the area Key Message(s): PEP Element #5 (G)	WRMD SEMCOG	Annually	-Provide working links to Web sites

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Regional Public Education Efforts	6	Continue to participate in the Southeast Michigan Partners for Clean Water group and support/share the resources available from this group, including: Seven Simple Steps to Clean Water brochures, tip cards and kids activity sheets. Topics include: fertilizer, car care, pet care, household hazardous waste disposal, earth-friendly landscaping, water conservation and storm drain awareness. Materials from the "Our Water. Our Future. Ours to Protect" campaign materials are distributed on an ongoing basis.	<u>Audience:</u> General public <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	Annually	-Track the number and type of materials distributed
Regional Stormwater Summit	6	This annual event, which debuted in 2013, features presentations on stormwater and watershed initiatives in the southeast Michigan and the Great Lakes region that are relevant in helping communities work together and gain insight into addressing the region's stormwater and watershed management challenges.	<u>Audience:</u> General public <u>Key Message(s):</u> PEP Elements #1, #4 (A-C, I, J)	WRC	Annually in the Fall (September/October)	-Date event held and number of participants -Featured speakers and speaker topics
Riparian Information Distribution	1, 2, 3, 4, 6, 9	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) at events, meetings, and through mailings. Maintain WRC's riparian education Web site (www.oakgov.com/riparian)	<u>Audience:</u> General Public, Riparian Landowners <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	Annually	-Number of brochures/other materials distributed -Number of riparian Web site hits
River Day Events	6	Oakland County partners will host and/or participate in River Day events as staff time allows.	<u>Audience:</u> General public, County employees <u>Key Message(s):</u> PEP Elements #1, #4 (A, B, I, J)	WRC EDCA OCPRC	Annually in June	-Number and type of River Day Events held/participated in
School Program - Clinton River Water Festival at Oakland University	6	Participate in the Clinton River Water Festival at Oakland University, providing staff for event planning, registration, volunteer guiding and presentations as funding and staff time permits. This water festival educates students in the Oakland County portion of the Clinton River watershed.	<u>Audience:</u> K-12th grade students, teachers and chaperones <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-J)	WRC OCPRC OCHD EDCA	Annually in May	-Track participation level at event for planning, presentations, volunteer guiding
School Program - Lake St. Clair Water Festival at Macomb Community College	6	Participate in the Lake St. Clair Water Festival, providing staff for presentations as funding and staff time permits. This water festival educates students in the Macomb County portion of the Clinton River watershed.	<u>Audience:</u> K-12th grade students, teachers and chaperones <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-J)	WRC	Annually in May	-Track participation level at event for presentations and volunteer guiding
School Program - Rouge River Water Festival at Cranbrook Institute of Science	6	Participate in the Rouge River Water Festival at Cranbrook, providing staff for event planning, registration, volunteer guiding and presentations as funding and staff time permits. This water festival educates students in the Oakland County portion of the Rouge River watershed.	<u>Audience:</u> K-12th grade students, teachers and chaperones <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-J)	WRC OCPRC OCHD	Annually in September	-Track participation level at event for planning, presentations, volunteer guiding
School Program - U of M Dearborn Water Festival	6	Participate in the U of M - Dearborn Water Festival providing staff for presentations as funding and staff time permits. This water festival educates students within the Wayne County portion of the Rouge River watershed.	<u>Audience:</u> K-12th grade students, teachers and chaperones <u>Key Message(s):</u> PEP Elements #1, #2, #3, #4, #5, #6 (A-J)	WRC	Annually in May	-Track participation level at event for presentations and volunteer guiding
Solid Waste Plan	1	Continue to implement Oakland County's Solid Waste Plan which establishes an enforceable program and processes that when implemented will minimize future adverse impacts upon public health, the environment and the landscape as a result of the generation, handling, processing and disposal of Act 451, Part 115 non-hazardous solid wastes.	<u>Audience:</u> Residents <u>Key Message(s):</u> PEP Element #5 (G)	WRMD	Annually	-Status of Solid Waste Plan update -Provide working link to website -Track number of website hits annually

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Storm Drain Markers/Stenciling Program	6	The WRC has storm drain stencils available for use by community groups, CVT's, etc. The WRC will implement storm drain marker installation at the County complex as staff time allows.	Audience: General public, County employees, CVTs Key Message(s): PEP Elements #1, #2, #4 (A-C)	WRC	Annually	-Number and location of storm drain markers/stencils installed
Subwatershed Advisory Group Participation	8	WRC staff attend subwatershed advisory group (SWAG) meetings in support of local watershed planning and implementation efforts. WRC staff also facilitate the Upper Huron/Kent Lake SWAG. The WRC also pays dues to the Alliance of Rouge Communities (ARC) as part of its membership.	-	WRC	Annually	-Refer to meeting minutes from each SWAG for participation and agenda items addressed -Moneys given in support of the ARC
Technical Support	6	WRC will provide technical support, equipment, information and referrals to water quality-related interest groups, committees and councils - upon request and as staffing time permits.	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC	Annually	-Report on technical support provided
Watershed Council Support	1-9	WRC supports the work of the Huron River Watershed Council, the Clinton River Watershed Council and the Friends of the Rouge by monetarily supporting their organizations and the work that they do to inform and educate the public on watershed stewardship.	-	WRC	Annually	Report on monetary donations to each watershed group
Watershed Signage	6	Watershed signage promotes awareness of the public about the location of local water resources and the watershed that they live in/are visiting. The WRC no longer has a formal signage installation program, but they share information with CVTs regarding the vendor information for sign purchases and will help to coordinate appropriate watershed signage locations, as requested.	Audience: General public, visitors to the area Key Message(s): PEP Elements #1, #2 (A, B)	WRC	Annually	-Number of watershed signs installed to date -Number of requests for watershed signage information
Workshops/Seminars	6	Attend workshops on various water quality/quantity programs, practices and policies. OS will make their facilities available for workshops/seminars as requested and as budget and schedule allow.	Audience: General public, CVTs, county employees Key Message(s): PEP Elements #1, #2, #3, #4, #5, #6 (A-K)	WRC RCOC EDCA OCFM OS	Annually	-Report on workshop/seminars held and attended
Illicit Discharge Elimination Plan						
Adopt-A-Road/Adopt-a-Highway Clean-up Program	1, 2, 9	Continue management and participation in the Adopt-a-Road/Highway cleanup programs. Information on RCOC's Adopt-a-Road Program are online at: http://www.rcocweb.org/218/Adopt-A-Road	-	RCOC WRC	Annually	-Cubic yards of waste collected -Number of volunteer groups -Number of volunteer cleanup days
Beach Monitoring Program	1, 2, 5, 9	The OCHD performs <i>E. coli</i> sampling at various beaches of Oakland County lakes during the bathing beach season.	-	OCHD	During bathing beach season	Report annually: -Number of beaches sampled -Number of sampling events -Number of individual samples -Number of beach closures
Complaint Tracking, Investigation and Notification and Reporting	1, 2, 3, 5, 6, 9	Provide a means for public reporting of environmental complaints via established WRC 24-Hour Pollution Hotline, RCOC complaint line and OCHD complaint reporting mechanisms. Provide for investigations of storm drain, road drain and septic-related complaints. Promote the use of complaint hotline numbers internally to staff and externally to communities and citizens.	IDEPE Elements #1, #2, #4	OCHD RCOC WRC	Annually	Report annually: -Number of complaints received -Number of complaints investigated -Number of illicit discharges discovered -Number of illicit discharges corrected -Number of failed OSDS reported and corrected Include a summary of activities to promote use of complaint numbers and any training / education provided on pollution hotline

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Combined Sewer Overflow (CSO) Retention Treatment Basin (RTB) Operation	1, 2, 5, 6, 9	Continue operation of four CSO RTB's in compliance with NPDES permit. The four facilities include Acacia Park, Bloomfield Village, Birmingham and George W. Kuhn.	-	WRC	Annually	-Report statistics annually
IDEP Investigations	1	Perform investigations to locate sources of illicit discharges found during discharge point surveys, storm drain inventories, facility and property surveys and complaint investigations.	IDEP Elements #2, #4	RCOC WRC OCPRC OCFM OCHD	Annually	Report annually: -Number of illicit discharges discovered -Location of discharges -Type of pollutants -Estimates of amounts of pollutants discharged -Source of discharge (if known) -Agency responsible for investigation -Status of investigation
IDEP Training	6	Provide training of inspectors necessary to perform discharge point surveys, drain inventories, illicit discharge investigations and illicit discharge elimination activities. Provide illicit discharge detection, notification and complaint system training for county staff.	IDEP Element #3	WRC RCOC OCFM OCHD OCPRC	Training for new employees within first year of employment; Training for existing employees at least once every five (5) years	-Report annually on training conducted and persons receiving training
Illicit Connection and Discharge Elimination	1	Perform inspections of Oakland County MS4's, properties and facilities, as necessary, to locate illicit connections and pollutant sources contributing to illicit discharges. Verify status of discharges referred to other local, county and State agencies for follow-up action.	IDEP Elements #2, #4	RCOC WRC OCPRC OCFM OCHD	Annually	Report annually: -Locations of facilities inspected -Number and types of illicit connections discovered -Number of illicit connections eliminated -Enforcing agencies involved -Corrective actions taken -Status of elimination -Estimated amounts of pollutants eliminated
Implement Dry Weather Discharge Screening Procedures and Parameters for Road Drainage and Storm Drainage Systems	1	Dry weather screening procedures and parameters have been established and incorporated into the WRC ISO 9000 and 14000 documents. An update of IDEP procedures occurred in FY 2013. All IDEP Procedures have been completed and are being implemented. The WRC has a procedure in place that outlines how it conducts IDEP investigations, entitled, "EU-1702: Procedures for Illicit Detection and Elimination Program" and is available upon request.	IDEP Element #2	WRC	Annually	-Report changes to procedures annually
MS4 Discharge Point/Outfall Database	1	Work with the WRC, RCOC, OCFM and OCPRC to create a GIS-based database for tracking IDEP progress on Oakland County owned and operated stormwater conveyance systems. The WRC will make the database available to other Oakland County departments and divisions for population.	-	WRC	Updating the database is an ongoing task.	-Report annually on database status.
Oakland Brownfield Initiative	1, 2, 9	Continue facilitating the Oakland Brownfield Initiative which serves to protect the County's natural resources, particularly critical water and waterways, while restoring the environment and urban vitality. Information is available on the WRMD's Web site at: https://www.oakgov.com/advantageoakland/planning/Pages/development-tools.aspx	-	WRMD	Annually	Report annually: -Number of properties in program -Number of properties with environmental assessment work started or completed -Monies leveraged -Cleanup monies leveraged

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Oakland County Facilities with OSDS	1	OSDS' at Oakland County facilities will be properly operated and maintained. The following facilities have an OSDS: RCOC: -Milford - District #1 Garage Facility -Davisburg - District #2 Garage Facility OCPRC: -Independence Oaks -Orion Oaks (Port-a-potty only) -Rose Oaks (Port-a-potty only) WRC: -Groveland Oaks Park (maintained by WRC as of FY2019) -Island Club Condominiums in Commerce Township -Woodbridge Lake Estates in Walled Lake -Belle Ann Falls Estates in Ortonville -Lower Pettibone Lake Community Septic in Highland Township -Addison Oaks Park Lagoon System (maintained by WRC) -Springfield Oaks Park (maintained by WRC)	IDEP Element #2	RCOC OCPRC WRC	Annually	-Report maintenance annually
Oakland County Onsite Sewage Disposal System (OSDS) Program	1	OCHD will continue to authorize issuance of permits for new OSDS and investigate and seek correction for reported failing systems.	IDEP Element #2	OCHD	Annually	-Utilize existing OSDS program databases and quarterly reporting process to the EGLE.
Oakland County Owned and/or Operated Storm Drain Discharge Point/Outfall Surveys	1	Use global positioning system equipment to locate and identify known outfall/discharge points from WRC and RCOC public drain systems within the Phase II permit area of coverage. WRC and RCOC will survey and dry weather screen point source discharges for illicit discharges. Identify Oakland County owned properties and facilities within the Phase II Permit area of coverage with municipal separate storm sewer systems (MS4). Identify and map known outfall/discharge point locations. Dry weather screen outfalls/discharge points for evidence of illicit discharges.	IDEP Element #2	RCOC WRC OCPRC OCFM OS	WRC - 100% complete OCFM - 100% complete OCPRC - 100% complete OS - 100% complete RCOC - 100% complete New point sources will be screened as appropriate	Report annually: -Provide updated list of County drains surveyed -Maps of outfalls/discharge points identified -Survey schedule -Number of outfalls/discharge points screened for each Oakland County facility
Spill/Non-Stormwater Release Response	1	Implement spill response procedures that address pollution discharges impacting surface waters, county drains and facility pollutant spills. The spill response procedure addresses containment, source identification, source removal, notification and reporting. The WRC has the following Procedures in place to deal with pollution incidences: -Surface Water Pollution Response Procedure (P-043): The purpose of this Procedure is to describe how the WRC identifies and responds to Oakland County surface water pollution incidents reported through their 24-hour Pollution Hotline (248-858-0931) and other sources. This document is available upon request. -Notification and Reporting of SSOs and CSOs (P-036): The purpose of this Procedure is to describe how the WRC handles the notification and reporting of sanitary sewer overflows (SSOs), and combined sewer overflows (CSOs) in accordance with Public Act No. 286 of the Public Acts of 2000. This document is available upon request.	PPGH	WRC	Annually	-WRC Spill response procedure (P-043) available upon request

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Update Prioritization and Scheduling of Dry Weather Screening Activities at Known Discharge Point Locations, Road Drainage and Storm Drainage Systems	1	WRC has created a schedule for dry weather screening activities. WRC will update the schedule as needed and share with other departments and divisions.	IDEP Element #2	WRC RCOC - Road/stream crossing surveys and facility inspections	Annually - see schedule spreadsheet for more detailed information (available upon request)	-Report changes to schedule annually
Verify New Connections - Prevent Illicit Connections	1	For new construction and/or reconstruction projects of storm drains and sanitary sewers managed by WRC, proper connections are verified by WRC inspection staff.	PPGH IDEP Element #1	WRC	Annually	-Report number of connections inspected annually
Wastewater Treatment Plant Operation	1, 2, 5, 6, 9	Continue operation of five wastewater treatment plants (WWTPs) in compliance with discharge permits. The five WWTPs include Walled Lake-Novis, Commerce Township, Pontiac, Brandon Schools and Lyon Oaks Golf Center Nibbler System.	-	WRC	Annually	-Report statistics annually
Construction Stormwater Runoff Control						
Soil Erosion Program	1, 2, 3, 5, 6, 9	<p>WRC – The WRC is responsible for Administering the Soil and Sedimentation Control Act, Part 91 of PA 451 of 1994, as amended. The purpose of the legislation is to minimize erosion and control sedimentation to protect the water and air resources. The WRC is a designated County Enforcing Agency by the Michigan DNRE Land and Water Management Division for the communities in Oakland County that do not have local coverage.</p> <p>OCFM – Continue to include soil erosion requirements in project specifications and to direct contractors to the WRC for soil erosion requirements and permits.</p> <p>RCOC – Continue to serve as an Authorized Public Agency for soil erosion and sedimentation. This includes implementation and enforcement of SESC Operating Guidelines and conducting internal SESC inspections and project reviews.</p>	Construction Stormwater Runoff Control	WRC OCFM RCOC	Annually	Report annually: -Number of SESC permits issued
Post-Construction Stormwater Runoff Controls for Development and Redevelopment						
Community Master Plan Review	8	Oakland County is mandated under Michigan law to review all Master Plans and Master Plan amendments prior to adoption. The County also reviews township rezonings where the property abuts a community boundary or County-owned property. The Land Use and Zoning staff reviews these plans and rezonings and submits a recommendation to the Oakland County Coordinating Zoning Committee (CZC).	-	EDCA	Annually	-Report on number of master plans reviewed
Dams	2, 4, 5	WRC operates and maintains 36 dams that control the levels of 54 lakes. WRC has two full time technicians who visit each dam at least weekly to maintain the level to the court-ordered lake level. Each dam is inspected every three (3) years. WRC has emergency action plans for eight (8) of the dams as required by the State's Dam Safety Act. Information on lake levels is available on the WRC Web site at: https://www.oakgov.com/water/stormwater/lakes-watersheds/Pages/lake-level-reports.aspx	-	WRC	Annually	-Report on the number of dams operated -Emergency action plans available upon request
Drainage District Mapping	8	Continue to map all drainage districts in GIS. These will serve as catchments within the subwatersheds that have an established legal entity and apportionment. These legal subwatershed groups can serve as models to other subwatersheds.	-	WRC	Annually	-Report on drainage districts mapped each year
Stormwater Standards	4	<p>To ensure that new projects incorporate water quality protection, the WRC last updated its stormwater standards effective January 1, 2006. The revised standards require detention of the 100 year storm and require a sediment forebay or a stormwater manufactured treatment system. The standards are available on the WRC section of the OC Web site at: www.oakgov.com/water. The WRC employs various staff to review construction plans for mobile home parks, platted subdivisions, any involvement with County Drains or their easements, or drain district enlargements as required by the Drain Code.</p> <p>WRC is currently in the process of obtaining approval of its proposed Stormwater Management Design Standards to meet the most recent Phase II NPDES stormwater general permit requirements and expects to have an approvable standard in FY 2020.</p>	Post-Construction Runoff Control	WRC	Annually	Report annually: - Number of stormwater facilities reviewed and approved by WRC and the number of facilities maintained by WRC (or other applicable Oakland County department)

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only)	Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
USGS Stream Flow Gauges	4	Continue to financially support six (6) USGS stream gauges in Oakland County that monitor stage and flow. The stations include: -Paint Creek at Rochester -Clinton River at Auburn Hills -River Rouge at Southfield -Upper River Rouge at Farmington -River Rouge at Birmingham -Huron River near Milford The data can be accessed from the USGS Web site at: http://waterdata.usgs.gov/mi/nwis/rt .	-	WRC	Annually, as budget allows	-Number of stations financed -Working link to USGS Web site data -Annual expenditures on gage operation	
WRC Projects Under Development, Under Construction and Recently Completed	1-4	The WRC implements any number of projects involving drinking water distribution, wastewater treatment, sanitary sewage systems, and storm drainage systems to protect water quality and ensure a safe drinking water supply for many residents throughout Oakland County. Summaries on all of these projects are provided on the WRC's Web site at: https://www.oakgov.com/water/projects/Pages/default.aspx .	-	WRC	Annually	-Provide working link to project Web site	
Pollution Prevention and Good Housekeeping for Municipal Operations							
Employee/Contractor Training							
Employee/Contractor Training Related to Stormwater Management Activities	6	WRC will coordinate and/or implement a program with other OC departments and its own employees and contractors to address training requirements for staff whose work could impact the quality of stormwater runoff. RCOC will promote the video "Keep and Eye On It" to train highway maintenance staff on proper grading practices at stream crossings and fill requests for the video.	Employee/Contractor Training Related to Stormwater Management Activities	WRC RCOC OCPRC OCFM OS	Existing employees/contractors to receive training once within 5-year permit cycle New employees to receive training within first year of employment	-Number of employees/contractors trained and type of training received -Documentation of pollution prevention language in best management practice detail sheets to protect water quality.	
Pollution Prevention and Good Housekeeping for Municipal Operations							
Maintenance Activities for Stormwater Structural Controls							
Bar Screen Cleanout	1, 2	Bar screens are cleaned to remove debris that would create backups in the storm drain system.	PPGH: Structural Stormwater Control Effectiveness	WRC	Bar screens are cleaned following rain events or as-needed. Annually	Report annually on: -Number of bar screens cleaned	
Catch Basin Cleaning	1, 2, 3	WRC - Catch basins are cleaned as part of drain maintenance following inspection of the storm drainage system or as needed based on issues/complaints. RCOC and OCPRC - Catch basins are cleaned as needed based on issues/complaints with Vectors. OCFM and OS - Follows a program of regular catch basin inspection and cleanout.	PPGH: Structural Stormwater Control Effectiveness	WRC RCOC OCFM	Catch basins are cleaned on an as-needed basis based on inspections	-Report on number of catch basins cleaned annually	
Stormwater Detention Basin Maintenance and Inspections	1, 2, 3, 4, 9	WRC stormwater detention basin maintenance program includes the maintenance of a listing of all Chapter 18 stormwater detention basins under WRC's jurisdiction. Field staff inspect each basins' forebay, inlet, outlet, overflow structure and pond banks. Maintenance needs are identified on the inspection form and work orders are issued to implement the necessary repair.	PPGH: Structural Stormwater Control Effectiveness	WRC	Annually	-Report on number of inspections and maintenance activities performed annually	

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Pump Station Maintenance	1, 2	Approximately 140 storm and sanitary pump stations are operated and maintained by WRC's Pump Maintenance Unit staff to ensure proper operation.	PPGH: Structural Stormwater Control Effectiveness	WRC	-Small pump stations are inspected every 2 weeks -Large pump stations are inspected 3-5 times per week -Wet wells and bar screens are cleaned twice per year -Bar screens are cleaned after each significant rain event	-Report annually on pump maintenance activities
Sanitary Sewer Maintenance and Inspections	1, 2, 9	Perform routine inspections of WRC-owned or operated sanitary sewer systems to ensure proper operation and prevent overflows and/or release of sewage to surface waters.	PPGH	WRC	-Interceptors are inspected on a 3-yr cycle -Laterals are inspected every 5-10 years -Frequencies of inspections are specified in the contract between WRC and the community served by the system	Report annually on: -Number of systems inspected -Number of systems repaired -Reports are available upon request
Storm Drain Maintenance and Inspections	1, 2, 3, 4	Perform routine inspections of WRC-owned or operated storm drains - storm structures are inspected for leaks, illegal connections, root intrusions, evidence of chemicals or oil, deterioration or other repair needed. The downstream line condition is also inspected for needed repairs including settlement, cleaning, surface restoration and others. Open ditches are inspected for evidence of sedimentation, blockage or improper function. Inspectors record findings on field reports and generate repair sheets for any corrective actions required. During maintenance activities, WRC staff comply with proper procedures to protect the drain from erosion, minimize the amount of solids entering the drain, stabilize stream banks and protect aquatic habitat.	PPGH: Structural Stormwater Control Effectiveness	WRC	Inspections conducted on a 4-year cycle	Report annually on: -Number of structures inspected -Number of drains inspected -Number of structural repairs completed -Reports are available upon request
Pollution Prevention and Good Housekeeping for Municipal Operations Controls Used for Reducing or Eliminating Discharges of Water and Pollutants from Streets and Maintenance Garages						

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Dust Control	1, 3	Continue to apply chloride (brine) to gravel roads. The brine is obtained from RCOC-operated mineral wells which are permitted and regulated by the DNRE. The brine produced by these mineral wells is used by RCOC to stabilize the road surface and control dust on public roads within Oakland County. Mineral well brine is applied using a tractor trailer and tanker with an electronic controller, pump and spray bar. The controller has been mathematically programmed which is re-calibrated annually to release a set amount of brine according to vehicle and pump speed. There are set rates for the amount of brine to be applied per mile of road. There are sensors on the controller that alert the driver if there is a failure in the vehicle or pump information. This safeguard allows the driver to manually make corrections and still have the pump apply the correct amount of brine. The drivers inspect their vehicles and equipment daily and report all needed repairs. The brine is applied in an even spray to a dry road surface so it can react with the road gravel, harden and dry before it is exposed to rain. Brine is not applied to a wet road surface, nor is it applied when rain is anticipated.	Roadways, Parking Lots and Bridges	RCOC	Annually	-Report number of gallons of brine applied to roads annually
Fleet Maintenance and Storage Yards	1	Implement SWPPP's, PIPP's and/or SPCC's, as applicable, to prevent pollution from maintenance garages and storage yards. Programs will address: -salt and chemical storage, vehicle washing (minimize pollution from runoff that may contain nutrients, metals, suspended solids and hydrocarbons) and maintenance (vehicle/motorized equipment fluids including used oil recycling, antifreeze recycling, containment and leak pads) and spill response.	Fleet maintenance and storage yards	RCOC WRC OCFM OCPRC	Annually	-Report annually on compliance status of each county department's SWPPP, PIPP and or SPCC documents
Gravel Road Maintenance	1, 3	Protect streams crossed by gravel roads by educating highway maintenance staff on watershed protection and proper grading practices at stream crossings by continuing to use the video "Keep an Eye on It". Each construction project is to have an SESC plan included or have the SESC details depicted on the plans.	Roadways, Parking Lots and Bridges	RCOC	Annually	-Requirement of plans to detail SESC measures
Road and Bridge Maintenance	1, 3	Provide protection to drain inlets and manholes from sediment during road construction projects. Design plans to reflect BMPs from the MDOT Soil Erosion and Sedimentation Control Manual.	Roadways, Parking Lots and Bridges	RCOC	Annually	Requirement of plans to detail SESC measures
Road Salt Application	1	RCOC uses the Southeast Michigan Snow and Ice Management (SEMSIM) system to help reduce the overall amount of salt that is used on roadways. SEMSIM is introducing cutting-edge technologies that will result in safer roads across the region and more efficient use of resources for the partner agencies. The SEMSIM technologies include: <ul style="list-style-type: none"> • Satellite-based global positioning system (GPS) vehicle tracking devices • Air and pavement temperature sensors • Plow sensors • Computerized salt spreaders • In-vehicle dashboard computer displays • A 900 MHz radio system • Customized computer software The radio system is provided by SMART and serves as the communications "backbone" for SEMSIM. The GPS system allows tracking of vehicles in real time so they can see exactly where they are and what they are doing at any time. This allows RCOC to better manage their truck fleets. Each SEMSIM truck is equipped with a number of sensors that record air and pavement temperature and whether the front and 'underbelly' plows are up or down. This data is fed continuously to management computers via the SMART radio system. Additionally, the computerized salt spreaders continuously tell the management computers the amount of salt being spread. SEMSIM will allow RCOC to more efficiently plow and salt their roads. This means improved service for the motorists traveling in Oakland County and reduced costs for RCOC.	Roadways, Parking Lots and Bridges	RCOC OCFM OS	Annually (winter)	Report on the number of trucks equipped with SEMSIM

APPENDIX A

FY2020-2021 Oakland County SWPPI Action Table

Action/Activity (BMP)	<p><u>Oakland County Watershed Management Goal Addressed:</u></p> <p>Legend: 1 - Remove Sources of Pollution that Threaten Public Health (Water Quality) 2 - Improve and Maintain Ecosystems for Fish and Wildlife (Habitat) 3 - Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion) 4 - Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration) 5 - Protect and Enhance Recreational Uses (Recreation) 6 - Educate the Public about their Role in Protecting Water Quality (Public Education) 7 - Integrate Stormwater Management in Planning and Land Use Approval Process (Land Use) 8 - Establish Financial and Institutional Arrangements for Watershed Management Programs 9 - Protect Open Spaces and Waterfront Areas (Protection)</p>	Description/Method of Implementation	Target Audience and Key Messages Addressed (PEP actions only) Permit-Requirement Addressed (as applicable)	Responsible Department: -OCFM -EDCA -OCPRC -OCHD -WRMD -RCOC -WRC -OS	Schedule	Method of Evaluating Effectiveness
Street Sweeping Programs	1, 2, 3, 5	Continue to conduct street sweeping on roads and parking lots under County jurisdiction.	Roadways, Parking Lots and Bridges	RCOC OCFM OS	RCOC: -Primary roads swept four times per year -Local roads swept once per year OCFM: -Campus streets and parking lots swept spring and fall OS: -Parking lots blown off each spring	-Report on number of curb miles swept -Report on acres of parking lot cleaned
Waste Reduction Program	1	Continue Paper, Cardboard and Battery Recycling Programs in the County. Oakland County Facilities Management has been recycling waste office paper generated in County buildings and facilities for over 20 years. For much of that time that waste paper has gone to Royal Oak Recycling, who is one of the largest independent recyclers in the Midwest. Their processing facility in Royal Oak Michigan has one of the largest and fastest shredding and baling machines in the country. Facilities Management has had a successful recycling program because of the commitment of County employees to set aside their office paper waste in special containers provided by Royal Oak Recycling.	-	OCFM OCPRC WRC OS	Annually	-Number of pounds of paper recycled annually -Amount of batteries recycled annually -Description of the different types of materials recycled annually
Pollution Prevention and Good Housekeeping for Municipal Operations						
Managing Vegetated Property						
Fertilizer Use	1, 2, 3, 5, 9	Continue the use of slow-release nitrogen fertilizer and/or low- or no-phosphorus fertilizer. Conduct soil testing to determine nutrient needs of turf.	Managing Vegetated Property	OCFM OCPRC	Annually	Report annually on the types of fertilizer used
Greenbelt Maintenance	1, 2, 3, 5, 9	Maintain a "no-mow" and "fertilizer-free" buffer zone along MS4's.	Managing Vegetated Property	OCFM OCPRC	Annually	-Report on location of no-mow and fertilizer free buffer areas
Irrigation Practices	1	OCFM maintains moisture sensors for the entire 100 acres of irrigated turf on the Oakland County campus. These moisture sensors monitor the relative humidity, temperature and rain amounts, and automatically adjust the system to run according to a preset amount of moisture. The sensors have shown a dramatic cutback on water use since FY2009.	Managing Vegetated Property	OCFM	Annually	-Report on maintenance of moisture sensors
Mowing Practices	1, 2, 3, 5, 9	Follow mowing practices that save energy and maximize infiltration potential.	Managing Vegetated Property	OCFM WRC OCPRC	Annually	Report on mower blade height -Report on location of "no-mow zones"
Pesticide Applications	1, 2, 5, 6, 9	Ensure that staff and contractors are certified pesticide applicators. Practice integrated pest management (IPM) techniques for both indoor and outdoor operations.	Managing Vegetated Property	OCFM OCPRC	Annually; OCFM staff recertified every 3 years	-Report on staff trained as certified pesticide applicators
Roadside Vegetation Maintenance	1, 2, 3	The RCOC does not utilize fertilizer or herbicides to maintain vegetation in right of ways. A licensed herbicide applicator is used for controlling vegetation growth in sight-distance related problem areas.	Managing Vegetated Property	RCOC	Annually	-Documentation of licensed herbicide applicator
Turf Management Training	1, 5, 9	Participate in the Michigan Turf Grass Environmental Stewardship Program (MTESP)	Managing Vegetated Property Employee/Contractor Training	OCPRC	Annually	Report on the number of personnel trained and the number of OC parks certified under the MTESP

APPENDIX B
Watershed Management Plan Goals

Oakland County Goal	WMP	WMP Goal
1 – Remove Sources of Pollution that Threaten Public Health (Water Quality)	ROU 1 FMD 1 CUP 1 CMN 1 CRR 1 HCH 2 HKL 3 NBR 1 SUP 2 SUP 6	Reduce sources of pollution that threaten public health Protect public health Restore and protect water quality in local waterways and lakes Reduce sources of pollution. Protect, restore, and enhance water quality of the subwatershed Reduce non-point source nutrient loading Reduce water quality degradation and address the Kent Lake TMDL (Total Maximum Daily Load) Make progress towards achieving water quality standards for pollutants and parameters that affected the designated, desired and beneficial uses in the subwatershed Protect partial and total body contact recreation Protect the public groundwater drinking water supply
2 – Improve and Maintain Ecosystems for Fish and Wildlife (Habitat)	FMD 5 ROU 4 HCH 5 CUP 5 CMN 3 CRR 4 HCH 8 CSP 4 NBR 3 SUP 1	Restore and protect aquatic life, wildlife, and habitat Protect, restore and/or enhance natural features to maintain/improve river and watershed ecosystems Mitigate loss of natural features for indigenous riparian and aquatic animals and plants Protect and restore quality aquatic and riparian habitats Protect and restore Clinton River fisheries. Appropriately manage suitable habitat for aquatic life, wildlife, and fisheries in the subwatershed Increase monitoring of water quality, water quantity, and biological indicators Protect and restore the Stony/Paint Creek fishery Protect and restore suitable, high-quality habitat to support aquatic life, wildlife and fisheries Protect and improve the warm water fishery and conditions for other indigenous aquatic life and wildlife
3 – Minimize the Amount of Soil Erosion and Sedimentation (Soil Erosion)	CSP 8 HCH 4	Reduce soil erosion and sedimentation Reduce soil erosion and sedimentation
4 – Minimize Flow Variability and Associated Negative Impacts (Detention and Infiltration)	ROU 2 FMD 3 CUP 2 CMN 5 CRR 5 HCH 3 HKL 5 NBR 2 SUP 3	Reduce runoff impacts through sustainable storm water management strategies and programs Reduce impact from peak flow Reduce flow variability Reduce flow variability Reduce runoff impacts through sustainable storm water management Reduce flow variability Improve management of storm water and watershed hydrology Stabilize the hydrology of the subwatershed including both high flow and low flow conditions Reduce storm water runoff quantities to the maximum extent practicable
5 – Protect and Enhance Recreational Uses (Recreation)	FMD 4 ROU 5 CUP 6 CMN 4 CRR 3 HCH 7 HKL 1 CSP 5 NBR 7 SUP 7	Create, restore, and enhance recreational use Maximize community assets related to the watershed Increase opportunities for passive and active recreational uses while at the same time protecting water resources Improve recreational opportunities and access Promote and enhance recreational opportunities in the subwatershed Protect and enhance recreational opportunities Promote and maximize community assets and recreational opportunities related to water resources Implement recreational access and opportunities Preserve and enhance recreational opportunities in the subwatershed for local residents and visitors Increase opportunities for passive and active recreation
6 – Educate the Public about their Role in Protecting Water Quality (Public Education)	HCH 1 ROU 3 FMD 2 CUP 4 CMN 2 CRR 2 HKL 4 CSP 2 NBR 8	Increase public awareness of their role in protecting water resources Inform and educate the public to become watershed stewards Establish a watershed stewardship ethic among the public Increase public understanding of their role in protecting water quality Increase public understanding of their role in protecting and enhancing watershed resources Educate the public on how to protect, restore, and enhance water quality Educate, engage, and empower the public to protect water resources Increase the public's understanding of their role in protecting Stony/Paint Creek Cultivate an aware, informed, engaged and involved public
7 – Integrate Storm Water Management in Planning and Land Use Approval Process (Land Use)	CSP 3 CUP 3 HCH 9	Protect and restore the Stony/Paint Creek subwatershed's water quality, stream channels, riparian corridors, natural areas, wetlands, and unique ecosystems Improve local regulations regarding protection of natural areas and water resources Balance environmental and economic benefits in the subwatershed
8 – Establish Financial and Institutional Arrangements for Watershed Management Programs	ROU 6 HKL 6 CSP 1 CRR 6 SUP 8 HCH 10 NBR 9	Support institutional relationships for the implementation of the management plan Develop resources to address the concerns, goals, and objectives outlined in the subwatershed management plan Establish and sustain a community-based mechanism to administer and implement the Stony/Paint Creek subwatershed plan Seek out opportunities to sustain implementation of the plan Implement the Upper 2 Shiawassee River Watershed Management Plan Attain full plan implementation Institutionalize an informed collaborative planning and implementation approach to achieve goals and objectives
9 – Protect Open Spaces and Waterfront Areas (Protection)	HCH 6 HKL 2 CSP 6 CSP 7 CMN 6 CMN 7 CRR 7 NBR 4 NBR 5 NBR 6 SUP 4 SUP 5	Protect existing open space and agricultural land Enhance and improve protection of open space, greenways, and natural features Protect farmland and reduce agricultural impacts on water quality Protect and interpret the historic character of Stony/Paint Creek Enhance and protect waterfront areas Protect and mitigate loss of natural features and open spaces in the watershed Promote opportunities to preserve, protect, restore, and enhance natural features Protect and enhance existing natural features of the subwatershed Maintain, protect and enhance greenways through riparian buffers and green corridors Preserve the rural character of the subwatershed for local citizens and visitors seeking a 'rural Michigan' experience Ensure sustainable growth and development Preserve the rural character of the area
Previous 2007 SWPPI Goal 2 Omitted: Restore/Maintain Aesthetically Appealing Conditions (Aesthetics)		There were 2 goals associated with the previous Rouge subwatershed management plans in Oakland County that will be omitted in the 2012 WMP update for the Rouge River Watershed

WMP Abbreviation Legend:

ROU	Rouge River
FMD	Flint Middle
HKL	Huron/Kent Lake
HCH	Huron Chain of Lakes
CUP	Upper Clinton
CSP	Stony/Paint Creek
CMN	Clinton Main
CRR	Clinton Red Run
NBR	North Branch Clinton
SUP	Upper-2 Shiawassee

APPENDIX C

Status of Watershed Management Plans in Oakland County

Watershed	Subwatershed	Submittal Date	Approved for Michigan's Phase II Minimum Requirements	Approved for MDEQ CMI Required Elements	Approved for EPA Minimum Elements (319)
Rouge	Rouge River WMP (all subwatersheds combined into one plan in 2012 update - including Main 1-2, Middle-1 and Upper)	Jun-12	Yes	Yes	Yes
Flint	Middle	1-Jun-05	Yes	No	No
Huron	Upper Huron/Kent Lake	April, 2005	Yes	No	No
	Chain of Lakes	1-Nov-05	Yes	Yes	No
Clinton	Upper	1-Nov-05	Yes	No	No
	Stony/Paint Creek	1-Nov-05	Yes	Yes	Yes
	North Branch	23-May-11	Yes	Yes	Yes
	Main	Revised March, 2010	Yes	Yes	Yes
	Red Run	1-Nov-06	Yes	Yes	Yes
Shiawassee	Upper-2	October, 2005	Yes	No	No
	Main	Deferred	n/a	n/a	n/a