MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

STORM WATER PERMIT

ILLICIT DISCHARGE ELIMINATION PLAN

FOR THE

CHARTER TOWNSHIP OF WATERFORD

Table of Contents

Section I - Introduction and Background

This document describes the Charter Township of Waterford (hereafter described as the "Township") plan for identifying and eliminating illicit connections and discharges to the Upper Clinton River Subwatershed within its jurisdiction.

This plan has been developed to partially fulfill the requirements for the State of Michigan's NPDES General Permit (MIG619000) for Storm Water Discharges from Separate Storm Water Drainage Systems with Watershed Plans. The Township is participating in the Upper Clinton River Subwatershed Group and the application and plan was developed in collaboration with the subwatershed partners: the Village of Clarkston, the City of Lake Angelus, Independence Township, Orion Township, Springfield Township, and White Lake Township.

Exhibit A is an aerial photograph of the Township with its limits shown in red.

The Township believes there are Nested MS4s within the Township that have a regulated separate storm sewer within the Township's limits. These Nested MS4s include the Waterford School District, Oakland Schools, Oakland Community College (OCC), Oakland County Drain Commissioner (OCDC), Road Commission for Oakland County (RCOC), Michigan Department of Transportation (MDOT), and the Michigan Department of Natural Resources (MDNR). These Nested MS4s will collectively be referred to as MS4s. The Township has not contacted and will not be seeking coverage for the MS4s under its permit.

A. Federal Storm Water Regulations

In the late 1980s, the U. S. Environmental Protection Agency (USEPA) promulgated regulations addressing storm water discharges. These Phase I regulations took effect in 1990 and required separate sewer communities with populations greater than 100,000 to obtain NPDES permits and to implement storm water control practices. On

December 8, 1999, the USEPA published Phase II regulations which apply to smaller communities that are part of a contiguous urban area.

The Phase II regulation specifically identifies Oakland County and all the participating communities in the Upper Clinton River Subwatershed Group as “Incorporated Places and Counties Proposed To Be Automatically Designated Under the Storm Water Phase II Proposed Rule”. The regulation also applies to communities which are not specifically identified but which are contiguous to urban areas and have separate storm sewer systems. Separate storm sewer systems are described in the regulation as conveyances, including open drains, that generally have no dry weather flow (other than those flows allowed under permit) that have the potential to significantly impact water quality.

The Federal regulations require regulated storm water communities to obtain an NPDES permit and to develop plans for implementation and to then implement the “six minimum measures” for storm water management (the six minimum measures are only required in Michigan’s Jurisdictional General Permit). The six minimum measures include an Illicit Discharge Elimination Program (IDEP), a Public Education Program (PEP), a Public Involvement/ Participation Plan (PIP), a Pollution Prevention/Good Housekeeping Plan (PPP), a Construction Stormwater Runoff Control Program and a Post-Construction Stormwater Runoff Control Program. These programs are to be combined into a Storm Water Management Plan (SWMP) that contains schedules, best management practices and measurable goals for each minimum measure (the six minimum measures and the SWMP are only required in Michigan’s Jurisdictional General Permit and not applicable to the Upper Clinton Subwatershed Group communities).

The IDEP is the community’s plan to identify and eliminate illicit connections and discharges. The federal law defines “illicit discharge”, “significant illicit discharge”, and “illicit connection” as follows:

> **Illicit discharge** - the discharge of untreated sanitary wastewater (including industrial and commercial wastewater) or other polluting materials into a river, stream or other water body from:

1. improper sewage connections - such as sources of sanitary sewage which should be connected to the sanitary sewer but are inappropriately connected to the storm sewer.
2. effluent from improperly designed and/or operated septic systems;
3. sanitary sewer overflows.
4. improper disposal of waste products - such as emptying a mobile home holding tank into a catch basin or pouring used motor oil into a catch basin.
5. Other discharges not composed entirely of storm water (except as specified in the permit).

Significant Illicit Discharge - a discharge that shows evidence of impairing water quality in the receiving water.

Illicit connection – an improper physical connection of illicit discharges to the storm water drainage system, or other connections not authorized by the local authority (where required), to the storm water drainage system. Examples of illicit connections are: a) a floor drain in an automobile repair shop that is connected to the storm sewer rather than the sanitary sewer; and b) a septic tank discharge line that has been connected to the storm sewer. An improper connection of a source of storm water to the sanitary sewer would also be considered an illicit connection, for example, a parking lot catch basin that is tapped into the sanitary sewer.

B. Michigan's General Storm Water Permit

To facilitate addressing non-point sources of pollution, the Michigan Department of Environmental Quality (MDEQ) developed a General Wastewater Discharge Permit for Storm Water Discharges from Separate Storm Water Drainage Systems with Watershed Plans (MIG619000). MDEQ's general permit has been approved by EPA as consistent with the Phase II Federal Regulations. The general permit requires permittees to develop and implement an IDEP, PEP and Storm Water Pollution Prevention Initiative (SWPPI) and to participate in the development of a Watershed Plan

(WP). The purpose of the WP is to identify and address water quality and quantity issues within the watershed. The SWPPI details the actions that the permittee will take to meet the goals of the WP and to reduce discharge of pollutants to the maximum extent practicable. While the six minimum measures are not explicitly required by MDEQ's Watershed Option General Permit, the SWPPI is intended to incorporate all measures needed to protect water quality.

C. Overview of the Township's Illicit Discharge Elimination Program

The Township's IDEP will consist of both short-term and long-term efforts that are summarized below. For the purposes of this program "outfall" is defined as a location where the storm water from a separate storm water conveyance under the jurisdiction of Township passes into a natural water body, conveyance, wetland or property under the ownership or jurisdiction of an entity other than the Township.

1. Short-term efforts

Short-term efforts (those initiated within 2 years of implementation) which are detailed in Section III will focus on the following:

- ✓ Appointment of a Permit Coordinator responsible for implementation of the plan and compliance with the General Permit.
- ✓ Dry weather inspections of storm sewers/drains that originate from Township owned property or facilities.
- ✓ Dry weather inspections of all known Township maintained storm water outfalls as identified through review of existing sewer maps.
- ✓ Elimination of illicit discharges from property or facilities owned or operated by the Township.
- ✓ Notification of responsible local units of government and the MDEQ of any illicit discharges that are identified.
- ✓ Eliminating illicit discharges as they are identified through the visual monitoring of known storm outfalls.
- ✓ Training of Township's DPW facilities maintenance staff on illicit discharge and connection awareness as well as naturally occurring phenomena and sources.

- ✓ Implementation of a complaint system for the reporting and tracking of complaints of illicit discharges, failed OSDS, etc.
- ✓ Field observations to identify and verify additional storm outfalls that may not have been identified through review of existing sewer maps and removal from the map any outfalls that could not be verified through field identifications.
- ✓ Wet weather observations of storm water outfalls as needed to detect/verify illicit discharges or connections (spills, sewage overflows, etc.).
- ✓ Notification of the owner of a conveyance of illicit discharges in the conveyance that are observed by staff of Township where the conveyance is not under the jurisdiction of the Township.
- ✓ Inspection of areas with OSDS to identify failures.

2. Long-term efforts

The long-term goal of this program is to eliminate all identified illicit discharges and connections. When the majority of known illicit discharges and connections have been eliminated, a less intensive on-going program will be implemented to prevent future problems. The Township expects its IDEP to evolve over time. The Township will review its program annually to determine if program changes are appropriate. The Township believes adequate public education and resident involvement is essential for protecting and enhancing the natural resources. For an IDEP to be effective there needs to be an ongoing PEP that meets the objectives for the community. The Township plans to coordinate its IDEP with the PEP to develop target audiences and messages. Efforts initiated 2 years or more after implementation, as detailed in Section IV, will focus on the following:

- ✓ Visual inspection of remaining storm outfalls not inspected in the short-term program.
- ✓ Inspecting additional storm outfalls that may be identified through the identification/verification process described in the short-term program.
- ✓ Monitoring/sampling of storm water outfalls and the sewer system to track suspected illicit connections and discharges.
- ✓ Training of all Township officials and field staff on storm sewer awareness and illicit discharges as well as naturally occurring phenomena and sources.

- ✓ Coordination with PEP to provide target groups with information on storm sewer systems and illicit discharges.
- ✓ Continued elimination of illicit discharges as they are identified through outfall inspections.
- ✓ Possible documentation of outfall and catch basin locations using hand-held GPS meters.
- ✓ Adoption of construction specifications that require contractors to identify and report potential illicit discharges as part of the construction permit requirements.
- ✓ Locating, inspecting, evaluating and mapping of all (public and private) storm water retention/detention basins within the Township.
- ✓ Consider adoption of an ordinance that would require the inspection of OSDS at time of sale and every 5 years thereafter, if Oakland County fails to adopt such an ordinance.

Section II - The Storm Sewer System in the Charter Township of Waterford

The Township covers approximately 35.3 square miles and has a total population of 73,150 as determined in the 2000 census. The entire Township is located within the urbanized area. An aerial photograph of the Township is given in Exhibit A. The Township limits are shown in red.

The majority of the land use in the Township is residential and most is zoned R-1A Single Family Residential. For example, nearly 42% of the Township is zoned residential (see Exhibit B, zoning map for the Township located in the appendix). There is also 3.5 square miles of Recreation and Conservation area within the Township.

The separate storm sewer system in the Township consists of storm sewers under the ownership and/or jurisdiction of several different entities, namely, the Road Commission for Oakland County (RCOC), the Oakland County Drain Commissioner (OCDC), Michigan Department of Transportation (MDOT), private entities, and the Township. For example, approximately 18 miles of drainage courses in the Township are under the jurisdiction of the OCDC.

There are approximately 358 miles of roadways within the Township, with 267 miles under RCOC, 15 miles under MDOT and 46 miles under private jurisdiction. Their associated right-of-way drainage systems are under the jurisdiction of the RCOC.

Exhibit A, located at the end of this application, shows the Township's separate storm sewer system and the locations of known storm sewer outfalls and their receiving conveyance. The Township currently knows of 24 outfalls under their jurisdiction. They ultimately discharge to various receiving sites including the Clinton River, several lakes, OCDC Drains, land owned by the Township, land owned by the MS4s and other privately owned property within the Township.

Exhibit D, also located at the end of this document, lists the known storm sewer outfalls under the Township's jurisdiction, their locations, their sizes, the type of area they serve (i.e. residential, commercial, etc.). The information presented in Exhibit A and Exhibit D is based on the Township's records of as-built storm system maps. This information will be verified as the IDEP is implemented.

There are several Nested MS4s within Waterford Township borders that have regulated separate storm sewers. The location of these facilities is shown in Exhibit C. These Nested MS4s include the Waterford School District, Oakland Intermediate School District, Oakland Community College (OCC), Oakland County Drain Commissioner (OCDC), Road Commission for Oakland County (RCOC), Michigan Department of Transportation (MDOT), and the Michigan Department of Natural Resources (MDNR). As of this date, no intergovernmental agreement exists with any of the listed MS4s for coverage under Waterford Townships COC No. MIG610263.

Section III - Short-Term Illicit Connection and Discharge Elimination Program

A. Ordinance Review

The Township must have adequate legal authority and enforcement capability to implement its IDEP within its jurisdiction. The Township will conduct a thorough review of its existing ordinance, and amend it as necessary, to ensure that:

- ✓ The ordinance adequately defines illicit connections and discharges.
- ✓ The ordinance prohibits illicit connections and discharges.
- ✓ The Township, etc. has adequate legal authority to investigate suspected illicit connections and discharges.
- ✓ The Township has adequate legal authority to require elimination of illicit connections and discharges.
- ✓ The Township has adequate enforcement capability.

A review of any existing ordinances will be done in conjunction with the IDEP implementation. If it is determined that the current ordinance does not provide adequate legal authority to remove and disconnect illicit connections, and/or it does not meet the criteria for enforcement contained in the regulations it will be modified. Exhibit E, located in the appendix, is a model ordinance that provides example wording for amendments that would give the Township adequate legal authority and enforcement capability. Similar wording will be considered where applicable in our ordinance.

B. Identifying and Eliminating Illicit Connections and Discharges

1. Verification of Storm Sewer Catchments (Tributary Areas)

Accurate maps of the storm sewer catchment system are essential for investigating illicit connections.

Exhibit C shows the known direct storm water outfalls to water courses as well as storm sewer connections to county drains, etc. within the Township. Exhibit D lists a preliminary summary of known outfalls within the Township. This information is based on the review and revision of existing storm sewer section maps. Field observations will likely identify additional storm outfalls not shown in Exhibit C.

There are several areas within the Township where information regarding the catch basins and storm sewer systems is not available. These areas will be verified at time of field investigations.

Due to the extent, complexity and multi-jurisdictional nature of the storm sewer system, the Township's coordination with all the MS4s located within the township is essential. The Township will complete verification of storm sewer catchments, along with identification of sewer ownership, as part of an on-going process.

2. Storm Sewer Outfall Inspection

Dry weather discharges are often indicative of illicit connections. Dry weather inspections are conducted when no rain/precipitation event has occurred for a minimum of 48 hours. If flow is observed in the sewer at that time, it can usually be attributed to an illicit discharge, such as sewage or cooling water, infiltration from ground water sources, or runoff from potable water sources such as lawn sprinklers. The method for determining the dry weather screening schedule for point discharges involves establishing a dry weather flow (typically 48 hours after last rain event) and setting up inspections of the outfalls two to seven days after the dry weather flow is reached. After reviewing Township data or after receiving a complaint, those outfalls known or suspected to have illicit discharges will carry a higher priority and will be inspected first. The remaining outfalls will be inspected as weather allows within the 24 month period after the implantation of this document.

As part of the IDEP the Township will:

- ✓ Visually inspect each of its known direct stormwater outfalls to the receiving streams and indirect outfalls to county drains within the Township as shown in Exhibit C, during dry weather once within 24 months of initiating the IDEP.
- ✓ Conduct dry weather inspections of storm sewers/drains that originate from Township owned property or facilities within 24 months of initiating the IDEP.

In instances where the storm water outfall is submerged or the outfall is to another enclosed sewer, the Township will visually inspect the nearest upstream manhole or other access point.

All storm outfalls that are inspected and are discharging during dry weather will be investigated further, with sampling and/or other investigation as needed to determine the nature and source of the flow. Investigation of these dry weather discharges will be prioritized based on the number of discharges identified as well as other factors including location, volume of flow, and suspected contaminants based on color, turbidity and/or odor.

The Township may elect to conduct wet weather observations of some outfalls to determine if runoff from certain areas suspect areas is contaminated. For instance, an oil sheen at the outfall may indicate illicit disposal of oils or grease upstream in the service area.

a. Visual Observations

The Township may be able to locate the source of an illicit connection/dischargee solely through visual observation of flow in the storm sewer at manholes. Odor, color, turbidity, bacteria growth, quantity of flow, etc., may lead to the source of a problem without additional sampling.

Simple walk-through visual inspections of commercial, industrial, agricultural, and residential areas and areas with OSDS may lead the Township to sources of illicit discharges such as failed septic OSDS and improper oil, grease, fertilizer and chemical use and disposal.

b. Storm Outfall Sampling

If flow is observed during the dry weather outfall inspections and visual observations do not lead to a source, the Township may decide to sample the flow for pollutant parameters typically found in illicit connections. Sampling can rule out some dry weather discharges such as groundwater.

The choice of sampling parameters will depend on several factors including:

- ✓ Location of the storm outfall (i.e., in residential or commercial area);
- ✓ Turbidity and color of discharge which could distinguish between an illicit discharge from a commercial establishment versus a residence;
- ✓ Odor associated with discharge such as petroleum odor, or raw sewage odor.

The sampling will typically begin at the outfall and continue upstream from manhole to manhole until a source is found.

The Township may choose to analyze the samples for some or all of the following parameters:

Parameters	Found In	Potential Source(s)
Escherichia Coli	Sewage	Human or Animal Waste
Surfactants	Soap, Emulsifiers	Industrial/Commercial/ Residential
Ammonia	Sewage, Fertilizers, Industrial Chemicals	Industrial/Residential/ Agricultural
Nitrates	Sewage, Fertilizers, Industrial Chemicals	Fertilizers/ Industrial/ Residential/Agricultural
Nitrites	Sewage, Fertilizers, Industrial Chemicals	Fertilizers/ Industrial/ Residential/Agricultural
Conductivity	Industrial Waste, Sewage, Salt	Industrial/ Residential/ Agricultural
Total Dissolved Solids	Industrial Waste, Sewage, Salt	Industrial/Residential/ Agricultural
Temperature	Cooling Water, Sewage	Industrial/ Residential
PH	Acids and Bases	Industrial/ Residential

c. Televising

The Township may elect to televise those storm sewers that have suspicious flows to identify pollutant sources that cannot be located through simple visual observation and/or sampling. For example, the Township may determine through visual observation and/or sampling that an illicit connection exists between two specific manholes. Video inspection of the stretch of storm sewer between these two manholes could be used to isolate the exact source of the connection/discharge.

d. As-Built Pipe Schematic Review

Where available, the Township will utilize as built pipe schematic drawings as a tool to determine the source of an illicit connection/discharge.

e. Dye and Smoke Testing

The Township will conduct physical inspection of commercial and/or residential facilities as needed to verify suspected illicit connections that are detected through visual observations/sampling of yards, outfalls and manholes. As necessary, facility inspections will include dye or smoke testing of suspect facility plumbing fixtures to determine if the fixture discharges to the sanitary sewer or to the storm sewer. All facility inspections will be documented.

f. Use of Global Positioning System (GPS)

The Township will explore the use of hand-held GPS monitors during observation/sampling to more accurately map the location of the outfalls and manholes.

3. Owner Notification

Once an illicit connection/discharge has been identified and verified, the Township will notify the owner in writing and direct them to eliminate the illicit connection/discharge within a specified time frame. The notification will require the owner to inform the Township when the connection has been eliminated. If the suspected illicit connection/discharge is not to a conveyance under the jurisdiction of the Township, the Township will notify the proper authority.

The time frame for eliminating the connection/discharge will depend on the type of illicit connection/discharge and how difficult elimination will be. The plan goal is to have most illicit connections/discharges eliminated within 60 days of discovery. Illicit connections/discharges that are more complex may take longer than 60 days to eliminate. If elimination will take longer than 60 days, the Township will notify the owner of the required schedule, in writing.

Furthermore, if there is any question whether a particular discharge needs to be reported under the state statute, staff will contact the Engineering Subunit Supervisor with the Southeast Michigan District Office

4. Follow Up Activities

The Township will follow up with the owner to ensure that the connection/discharge has been eliminated. If the connection has not been eliminated in accordance with the schedule, the Township will enforce its ordinances to obtain compliance. The Township will:

- ✓ Verify storm sewer catchments and create storm sewer maps to be used by investigators within 24 months of implementing the IDEP.
- ✓ Complete dry weather inspections of known direct storm outfalls within 24 months of initiating the IDEP.
- ✓ Reinspect all outfalls every 5 years or develop an alternate method of detection.

C. On-site Sewage Disposal Systems (OSDS)

Well designed, properly operating OSDS provide a viable and acceptable method of treating sanitary sewage and do not contribute to water pollution. In contrast, failing OSDS, i.e., systems that do not adequately treat sanitary sewage due to poor soil conditions, insufficient drainage area or other inadequacies, can cause significant water quality problems. Failing septic systems are considered illicit discharges that must be eliminated.

1. Extent of OSDS in the Township

A majority of the properties within the Township are served by sanitary sewer. Areas of the Township known to have residences using OSDS are shown on Exhibit E.

2. Locating Failing OSDS

Methods the Township will use to locate failing OSDS are as follows:

- ✓ Citizen complaints are the main resource for locating failing OSDSs.
- ✓ Records will be reviewed to determine individuals that are not being billed for sewer services.
- ✓ Township field employees will be trained to identify failed OSDS so in their daily routine they can assist in locating these areas of concern.
- ✓ OSDS failures may be identified as part of the outfall/sewer observations and sampling.

3. Enforcement of Existing Sewer Connection Ordinance

Review of the Township ordinance suggests that the current ordinances specify requirements for connections to the sanitary sewer system. The Township will continue to enforce Ordinance 158, Chapter 17, Water & Sewer, Section 17-118, which requires owners of failing OSDS to connect to the Township sewer system if it is available.

Currently, the Township identifies failing OSDSs through complaints from residents and/or observations made by Township field personnel. When OSDSs are identified, the Township sends notices requiring homeowners to connect to the sanitary sewer (if available) in accordance with the ordinance.

4. Role of the Oakland County Department of Public Health (OCDH)

The Township recognizes the authority and expertise of the OCDH in overseeing issues related to failing septic systems. Currently, all new construction and repairs for OSDS are permitted through the OCDH.

Oakland County is currently pursuing a county-wide OSDS ordinance to require time-of-sale and periodic (every five years) inspections of OSDS. If a local ordinance revision is necessary to require OSDS evaluations, it will be presented to Township council within 12 months after passage of the County-wide ordinance. When a failing OSDS is reported to Oakland county and no action is implemented by either the property owner or the County to correct the failure, the Township will issue a civil infraction citation to the property owner under the International Property Maintenance Code to remedy the problem.

D. Complaint Response and Investigation

Citizens and business owners are often an excellent source of information regarding illicit connections and discharges. The Township will establish a reliable system to receive and investigate citizen reports regarding suspicious discharges from storm water outfalls, failed OSDS, waste dumping, etc. The reporting system will include:

- ✓ Telephone complaint system with emergency number for non-business hours.
- ✓ Complaint documentation and tracking system.
- ✓ Follow-up notification to reporting citizen to inform them what corrective actions have been or are being taken.

When the Township receives complaints regarding illicit discharges, the Township will investigate each suspected connection as outlined above and take appropriate action(s). The Township will establish a citizen reporting and tracking system within 12

months of initiating the IDEP. The Township will investigate the use of a computerized system for this reporting and tracking.

E. Coordination with the Oakland County Drain Commissioner (OCDC)

The OCDC has developed its own illicit connection and discharge elimination program. The OCDC is inspecting and sampling its storm drain outfalls to surface waters. When county sampling and inspection results suggest that illicit connections to county storm drains exist, OCDC will investigate further to determine where the suspected illicit discharge is coming from. OCDC will notify the Township of all illicit connections/discharges suspected to originate in the Township. The Township will investigate each suspected connection and take appropriate action(s) in accordance with the investigative techniques described earlier.

OCDC also maintains a 24-hour, 7-days-per-week complaint telephone "hot" line. OCDC will refer complaints to the Township as appropriate. The Township will investigate all complaints received through the OCDC hot line and take remedial actions as appropriate. The Township will establish adequate notification/coordination procedures with OCDC within 12 months of initiating the IDEP. (Note: this activity is dependent upon OCDC.)

F. Coordination with Michigan Department of Environmental Quality (MDEQ)

The Township will submit a yearly report to the MDEQ summarizing the activities completed and establish notification procedures within 12 months of initiating the IDEP.

G. Monitoring New Construction

The Township will develop a procedure to identify storm outfalls resulting from new construction and incorporate them into the IDEP. Each new storm outfall will be included in the outfall location map (Exhibit C) and outfall listing (Exhibit D). In addition,

new outfalls will be inspected and monitoring procedures will be established within 6 months of initiating the IDEP.

Section IV - Long-Term Illicit Discharge Elimination Program

Section III described the Township's "short term" discharge elimination efforts, focused on known storm outfalls. This Section identifies those efforts that the Township will initiate 2 years or more after program implementation.

Additional time, beyond that estimated in Section III, will be necessary to complete dry weather inspections and sampling (as may be necessary) of those "new" outfalls. Once storm sewer catchment areas are verified (24 months after initiating implementation of the illicit discharge program), the Township will be able to determine how much additional time will be necessary to identify and eliminate any illicits from the "new" outfalls.

The long-term program will include:

- ✓ Training of Township officials and field staff on storm sewer awareness and illicit discharges as part of the PEP within 3 years of implementation.
- ✓ Consider adoption of an ordinance that would require the inspection of OSDS at time of sale and every five years thereafter, if Oakland County does not adopt such an ordinance.
- ✓ Adoption of construction specifications that require contractors to identify and report potential illicit discharges as part of the construction permit requirements.
- ✓ The Township's IDEP will be reviewed annually at the time of the annual report to the MDEQ to determine if modifications are needed.
- ✓ On an as-needed basis, the Township will televise those separate storm sewers under its jurisdiction to determine if illicit connections, which were not detected during outfall inspections/sampling exist. This also allows the Township to detect any structural defects that may exist.
- ✓ The Waterford Township Department of Public Works provides for the safe and efficient collection and transport of all wastewater from properties connected to the sewer system through the use of hundreds of miles of sanitary sewer line and 63 pumping stations. The Township has modeled the existing sanitary sewer system and continues

to monitor flows in the sewer with the use of flow meters and a SCADA system located at each pumping station. This technology allows staff to better develop historical trends that are used to determine how well the system is functioning and helps reveal capacity and integrity problems. To which, there is a maintenance program that includes replacing old sewer lines, increasing sewer capacities, and eliminating illicit connections and minimizing inflow. Staff is currently administering active contracts to implement this rehab work. In addition, the Township routinely televises the gravity sewer as well as inspects sanitary sewer manholes with the use digital cameras with audio components for future reference. This information is tied into the Township's GIS system were it becomes available for quick analysis. In short, Waterford Township is committed to having a proactive approach towards operating and maintaining the sanitary sewer.

- ✓ Establish schedule for completing dry weather inspections of currently unidentified storm outfalls within 30 months of initiating the IDEP. This is 6 months after completing storm sewer catchment verification.
- ✓ Annual review of the program beginning 1 year after implementation.
- ✓ Visual reinspection of outfalls every 5 years or use of an approved alternate follow-up.

Section V - Monitoring Progress/Annual Report

The Township will establish a tracking system to monitor progress in implementing the IDEP and on an annual basis as established in the COC, the Township will prepare and submit a report summarizing its illicit discharge elimination efforts to MDEQ. The report will summarize the following:

- ✓ Illicit connections/discharges identified through citizen complaints, OCDC referral, inspections, sampling and/or sewer television and the corrective actions taken, including follow up inspections and sampling.
- ✓ Results of inspections and sampling (including pollutant and estimated volume and load for significant illicit discharges).
- ✓ Dry/wet weather storm water outfall inspections conducted.
- ✓ OSDS found to be improperly functioning and the actions taken to correct the problems.
- ✓ Schedules for the elimination of unresolved problems/discharges.
- ✓ Storm sewers televised in the past year as well as the findings.
- ✓ Corrective actions taken as a result of storm sewer televising.
- ✓ Sanitary sewers televised in the past year as well as the findings.
- ✓ Corrective actions taken as a result of sanitary sewer televising.

The Township will establish tracking system within 12 months of initiating the IDEP (determined by COC) and submit yearly reports to the MDEQ as required under the Certifiacte of Coverage MIG610263.

Section VI -Summary Table of Program Goals and Measurables

Task	Schedule*	Goal	Measure
Investigate use of GPS during inspections	6 Months	Locate outfalls, catch basins for easy mapping	Decision made
Procedure to identify outfalls from new construction	6 Months	Accurate map of system & List of outfalls	Procedure implemented; # of New outfalls Identified
Annual review of program	12 Months	Progress of IDEP	Review outfalls completed
Ordinance review	12 Months	Legal authority to implement and enforce	Review completed; recommendations made
Implement citizen complaint response & tracking	12 Months	Correction of problems	Records of phone calls, complaints and follow-ups; # of complaints received vs # corrected
Coordinate with OCDC	12 Months	Address cross-jurisdictional problems	Implement procedure; Number of referrals regarding illicits
Coordinate with MDEQ	12 Months	Meet regulatory requirements	Implement procedure; Number of referrals regarding illicits
Annual report	12 Months (COC driven)	Meet requirement	Date report sent
Visual inspection of known outfalls	24 Months	Verification of map, Identify problems	# inspected vs # known
Task	**Schedule***	**Goal**	**Measure**

Ordinance Review	24 Months	Legal authority to implement and enforce	Ordinance revised
Compete investigation of suspect discharges	24 Months	Identify all illicits	# of illicits found
Complete investigation of known & unknown outfalls	24 Months	Accurate map and outfall table	# of outfalls added / omitted
Eliminate illicits within 1 year of identification	12 to 36 Months	Eliminate all illicts	# eliminated vs # found; Average time to eliminate; Improved quality of water
Reinspect all outfalls or alternate system	60 Months	Continue to Identify illicts	Reinspection completed

* After implementation of IDEP

Section VII - References

- ECT's draft illicit connection program for OCDC, dated May 20, 1998.
- Rouge Program Office (RPO). 1995. *Illicit Connection Control Program: Field Inspection Procedures.* Detroit, MI. Standard Operating Procedure RPO/RPO-FLD0301
- Charter Township of Waterford , Ordinance 158, Chapter 17, Water & Sewer, Section 17-118.
- USEPA. 1993. Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems. Office of Research and Development, Washington, D.C. EPA/600/R-92/238.
- Township of Bloomfield, 1998. *Draft Illicit Connection and Discharge Elimination Plan.*
- The City of Southfield, 1998. *Draft Illicit Connection and Discharge Elimination Plan.*

Staff Contact: Douglas Bradley, PE
Title: Director, Building and Engineering Department
Telephone: 248-674-6231
Fax: 248-674-4097