City of Mount Clemens

Storm Water Management Plan (SWMP)

Prepared for

City of Mount Clemens

One Crocker Boulevard
Mt. Clemens, Michigan 48043

January 2019
(Revised April 4, 2023)
(Previously Revised May 20, 2019)

AEW Project No. 0220-0113

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Section I Introduction and Permit Information

The National Pollutant Discharge Elimination System (NPDES) Program protects the surface waters of the state by assuring that discharges of wastewater comply with state and federal regulations. Anyone discharging or proposing to discharge wastewater to the surface waters of the State of Michigan must make an application for and obtain a valid NPDES permit prior to the wastewater discharge.

NPDES permits are required under Section 402 of the Federal Clean Water Act (the Federal Act), as amended (33 U.S.C. 1251 et seq., P.L. 92-500, 95-217), and under Part 31, Water Resources Protection, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (the Michigan Act). Part 31 of the Michigan Act also provides authority for the State to issue NPDES permits. The Michigan Department of Environmental Quality (MDEQ) administers the NPDES permit program for the State of Michigan.

Any public body that owns or operates a regulated Municipal Separate Storm Sewer System (MS4) may be eligible for permit coverage including, but not limited to, the United States, the State of Michigan, a city, village, township, county, public school district, public college or university, a single purpose governmental agency, or any other governing body which is created by federal or state statute or law.

Section II Contact Information

The City of Mount Clemens owns and operates the City's regulated MS4 system. The City personnel responsible for the operation, maintenance and MS4 permit compliance are listed with their contact information in the Table on page 1 of the Storm Water Discharge Permit Application provided with this Storm Water Management Plan (SWMP).

Section III Permit Action

The City of Mount Clemens is located within the Clinton River East Watershed (CREW) and the North Branch Clinton River Watershed. The CREW covers the final stretch of the

Clinton River, from its discharge point in Harrison Township upstream to Shelby Township (where the Clinton River enters Macomb County). The CREW is a 132 square mile, Michigan Department of Environmental Quality (MDEQ)-approved basin that also incorporates the entire drainage area of the Middle Branch of the Clinton River.

The North Branch Clinton River Watershed covers approximately 200 square miles in Lapeer, Oakland, Macomb and St. Clair Counties. The North Branch of the Clinton River is a 43-mile long major tributary to the Clinton River that extends from its northern headwaters in Bruce and Almont Townships south to its confluence with the Clinton River – near Mt. Clemens. Primary land uses within the North Branch Clinton River Watershed is 60% agriculture, 17% wooded, and 15% residential.

A Watershed Management Plan (WMP) has been developed by the CREW and North Branch Subwatershed Advisory Groups (SWAG) to: 1) fulfill the National Pollutant Discharge Elimination System (NPDES) Phase II requirements (MDEQ's General Permit No. MIG619000 for Coverage of Storm Water Discharges for Municipal Separate Storm Sewer Systems Subject to Watershed Plan Requirements) for non-Phase I governmental units in the urbanized area; and 2) make all of the entities represented in the subwatershed eligible for various grant funding opportunities to implement actions for watershed improvement.

The City recognized that by working collectively with the other stakeholders on a regional and watershed basis, illicit discharge elimination, public education and other water management activities could be implemented more effectively and cost-efficiently. Subsequent to the further implementation and expansion of the NPDES Phase II requirements based on the 2010 Urbanized Areas Maps, the City applied for an individual jurisdictional permit as a Small MS4 on April 1, 2015.

Section IV Regulated Area

The MS4 Program requires a permit to discharge from an MS4 located in an urbanized area with a qualifying population. Mt. Clemens has a 2010 qualifying population of 16,314 and covers an area of 2,688 acres or 4.20 square miles. There are over 3.6 miles of public roads under the jurisdiction of the Macomb County Department of Roads (MCDR), 6.6

miles of public highways under the jurisdiction of the Michigan Department of Transportation (MDOT), 17.1 miles of City owned major roads, and 36.3 miles of City owned local roads. While Mt. Clemens holds a jurisdictional permit, the City will continue to work collectively with these agencies, and other stakeholders on a regional and watershed basis for illicit discharge elimination, public education and other water management activities that can be implemented more effectively and cost-efficiently.

An urbanized area map within the jurisdictional boundary as defined by the 2010 Census is included in Appendix A.

Section V Discharge Point Source Location and Mapping

The City owns or operates a total of 49 known discharge points from its facilities into the Clinton River, Macomb County Drainage System or other Municipal Separate Storm Sewer System. These discharge point sources are identified in Appendix A on Maps A-21 through A-26. The discharge point sources are also tabulated in Appendix A, Table 1 with the corresponding receiving Waters of the State or system operated by another public body, and the latitude and longitude of each is identified accordingly.

The City's consultant engineer, Anderson, Eckstein and Westrick, Inc. (AEW) maintains electronic digital copies and hardcopies of the City's MS4 infrastructure. The City's maps and referenced table are a product of the City's Geographic Information System (GIS). Any revisions to the City's separate storm sewer system are typically made within 30 days of receiving the updated information. The maps and tables are available for reference and updating by City personnel including field applications via field notes.

The City of Mount Clemens currently owns and operates the City's storm water system with a limited funding source. The City's system is primarily a separated sewer system (sanitary and storm) with approximately 10% being combined, refer to Appendix A.22. The condition of the combined and sanitary sewers is readily known and documented from the 2018 SAW Investigation and other miscellaneous projects. In 2023, the city is closed-circuit televising all priority sanitary and combined sewers from the findings of the 2018 SAW investigation. The condition of some storm sewers is known, but for most of them is not documented.

Newly Constructed or Identified Outfalls

In order to seek authorization for discharge, for any discharge point that is identified, constructed or installed after the latest correspondence with MDEQ, the City will provide an updated outfall map clearly showing the location of the discharge point, its identifying number, the latitude and longitude of the discharge point, and the receiving Macomb County Drain or Waters of the State.

MS4 Discharge Point Labeling

The City will provide permanent identification for all of its outfalls/discharge points as required under the permit.

Section VI Nested Jurisdictions

The City of Mount Clemens currently does not have any nested jurisdictions. The Mount Clemens Community Schools are nested under the Macomb Intermediate School District (MISD) as Macomb Intermediate Schools.

Section VII Storm Water Management Plan (SWMP)

This Storm Water Management Program (SWMP) document is a compilation of several plans, programs, procedures, and policies, such as the City's Action Plan, Illicit Discharge Elimination Plan (IDEP), and Public Education Plan (PEP). Combined, these documents constitute the City's permit obligations and commitments aimed at reducing the discharge of pollutants from the drainage system to the Maximum Extent Possible (MEP). This includes implementing Best Management Practices (BMPs) to comply with the six minimum control measures (40 CFR 123.34(b)) and documenting the effectiveness of the BMPs. Documentation required under the City's individual jurisdictional permit shall be included in the required Biennial Progress Reports to be submitted to the MDEQ every two years of the permit cycle.

Section VII.a. Enforcement Response Procedures

The City's facilities within its MS4 are generally under the control of City personnel, violations related to the City's MS4 in these cases are avoided via employee training and supervision. For the broader drainage system including the City's Act 51 administered roadways specific ordinances provide the necessary enforcement mechanism.

The City has various codes and ordinances that are applicable to stormwater issues in coordination with the Macomb County Public Works Office (MCPWO), the Macomb County Department of Roads (MCDR), and State of Michigan and Federal Regulatory agencies. Enforcement Response Procedures (ERP) may vary slightly dependent on the specific code or ordinance in question. The ERP for the SWMP is adopted as Policy S2 included in Appendix D. The general procedures for suspected or actual code of ordinance violations are provided in Section III of the policy.

Section VII.b. Public Participation/Involvement Program

The City of Mount Clemens Municipal Separate Storm Sewer System Public Participation/Involvement Program (PPP) has been adopted by the City as Policy S1 which is provided in Appendix D – Policy, Ordinances and Regulations of this SWMP. Section III of the Policy articulates the required procedures to make the SWMP available for inspection and comment and to invite public involvement in the implementation and review of the plan.

Section VII.c. Public Education Plan

The City's Public Education Plan (PEP) has been developed and implemented jointly in a collaborative effort with the members of the Clinton River Watershed Council (CRWC). According to the MS4 permit application, the following eleven (11) topics were assessed and prioritized based on community requirements:

A. Personal Watershed Stewardship
B. Ultimate Storm water Discharge Locations and Potential Impact
C. Public Reporting of Illicit Discharges
D. Procedure for Car, Pavement , and Power Washing

E. Pesticides, Herbicides and Fertilizers Education

F. Grass Clippings, Leaf Litter , and Animal wastes Disposal

G. Waste Management Assistances

H. Septic System Maintenance

I. Benefits of Green Infrastructure and Low Impact Development (LID)

J. Management of Riparian Lands

K. Commercial, Industrial, and Institutional Education

Prioritization procedure for communities within the Clinton River East Sub-watershed is described in Appendix B. In addition MDEQ reviewed and approved (January 8, 2013) PEP letter and Table 2 (updated September 26, 2014) included in Appendix B.

The PEP is included as part of the storm water management program (SWMP). The SWMP will be posted on the City's website for review and comment by the public when the application is approved by the MDEQ. This information will include the contact information of the storm water manager to forward comments. The storm water manager will compile and track comments from the public including: commenter name, date, and comment. The SWMP will be posted here:

HTTP://WWW.CITYOFMOUNTCLEMENS.COM/

The City's website is used to explain the program and opportunities for the public to participate and provide input.

Section VII.d. Illicit Discharge Elimination Program (IDEP)

Overview

The purpose of the IDEP section of the SWMP is to effectively eliminate illicit discharges (including the discharge of sanitary wastewater) into to the separate storm water sewer system that is under the City's jurisdiction. The City owns or operates a total of 68 known outfalls or discharge points that outlet into Waters of the State or other MS4s. Maps detailing the City's MS4 facilities are available for viewing in electronic digital and/or hardcopy form by contacting the City's Engineering Division. Maps A-1 through A- 26 identify the City's discharge points. Table 1 in Appendix A provides further information

regarding these discharge points. The City's IDEP program is detailed in Appendix C – IDEP.

By right of ownership, the City maintains the authority to inspect, investigate, and monitor suspected illicit discharges to the City's MS4, which include facilities located on City owned and operated property and the City's Act 51 administered roads within the urbanized area.

Section VII.e. Construction Storm Water Runoff Control

Qualifying Local Soil Erosion & Sedimentation Control Programs

The City is a Part 91 Authorized Public Agency (APA) for soil erosion and sedimentation control compliance for its own projects regardless of size. Soil Erosion & Sedimentation Control for all other development within the City is regulated by MCPWO. Even though the City acts as an APA for its own projects, site plans still must meet the requirements of the MCPWO. During construction, contractors are advised of the necessary soil erosion and sedimentation control measures that must be implemented for the project in question. City consultant construction inspectors ensure that all measures are established and remain in place throughout the construction phases of the project.

Application for Part 91 permits for non-City owned construction projects involving earth disturbances one acre greater in size are required to be made to MCPWO regulations. Compliance with MCPWO's rules and regulations is required as a prerequisite to site plan approval under the terms of City of Mount Clemens Code of Ordinances, Zoning Ordinance, **15.030 - ARTICLE 3: SITE PLAN REVIEW AND APPROVAL** and The City of Mount Clemens revised Stormwater Runoff Engineering and Construction Standards – Section 3.G. In addition, the City's revised Stormwater Runoff Engineering and Construction Standards incorporates specific requirements in the City of Mount Clemens standard detail sheet for Soil Erosion and Sedimentation Control Design.

Construction Storm Water Runoff Control

City construction or redevelopment projects are implemented in manner such that runoff from the site is reduced to the greatest extent possible. Measures utilized may include

holding basins, diverting water through grassed swales, etc. Waste such as building materials, concrete washout, chemicals, litter, and sanitary waste is controlled to prevent infiltration into the MS4. Consideration is given to phasing projects to limit the amount of exposed soils. Interim soils stabilization methods such as temporary seeding, mulching, etc. may be utilized as applicable.

Trained inspectors or MCPWO officials visit City construction project sites on a frequent basis to enforce required Soil Erosion and Sedimentation Control measures, ensuring that discharges into the MS4 do not occur. All contractors are provided with contact information for the City's inspectors. Should a soil, sediment, or pollutant discharge occur, the contractors are required to contact a City inspector notifying him/her of the event so that remedial action can be prescribed and implemented in an expedient manner. In the event of a discharge into a connecting MS4, the applicable jurisdiction will be notified by the City inspectors. For projects not conducted by the City, the MCPWO is the regulating authority.

Should spill or release of pollutants such as pesticides, petroleum derivatives, construction chemicals or solid waste into the MS4, the MDEQ's Southeast Michigan District Office will be contacted at 586-753-3700. Or, if after regular business hours, by calling the MDEQ's 24-Hour Pollution Emergency Alerting System at 800-292-4706.

Complaints regarding City construction activities will be relayed to the on-site inspector for investigation, employing the procedures set forth in Section III of Policy S3. Complaints involving connecting MS4s will be addressed using these same procedures.

The City is the landowner or recorded easement holder in the case of its own construction projects and is cognizant of the State of Michigan Permit by Rule (Rule 323.2190).

Section VII.f. Post-Construction Storm Water Control for New Developments and Redevelopment

Regulatory Mechanisms

MCPWO is the regulating and enforcing authority for post-construction storm water control for all new developments and redevelopment projects within the City, including the City's own construction projects. Any improvements to the City's facilities, or any new

facilities, would have to be reviewed and approved by the MCPWO which would include post-construction quality and quantity controls. This is the case for all projects throughout the City; and would apply to projects that disturb one or more acres, including projects less than an acre that are part of a larger development. The City's new projects, along with private development projects, are subject to the site plan review process specified in the City of Mount Clemens Code of Ordinances, Zoning Ordinance, **15.030 - ARTICLE 3: SITE PLAN REVIEW AND APPROVAL** and The City of Mount Clemens revised Stormwater Runoff Engineering and Construction Standards – Section 3.

In designing storm water management systems, the City considers all relevant and appropriate factors, such as:

- Public health, safety, welfare, and the environment
- The long-term impact of storm water runoff on, from, and beyond the property boundaries
- The natural drainage pattern of the land
- The impact of construction activity on affected watersheds
- The extent of downstream improvements necessary for proper storm water drainage

The City has identified and determined appropriate structural and non-structural controls to reduce water runoff volume and improve water quality. Whenever possible, the City has strived to minimize the use of paved surfaces, preserve natural vegetation, and use grassy swales or other natural vegetation to slow and/or absorb runoff and increase nutrient and water uptake.

Water Quality Treatment Performance Standard

The City of Mount Clemens' revised Stormwater Runoff Engineering and Construction Standards provides specific water quality treatment performance standards and design standards for Stormwater Management Systems. These standards are incorporated by reference into the City's ordinance. The Stormwater Runoff Engineering and Construction Standards also addresses exemptions from these storm water treatment standards.

Channel Protection Performance Standard

MCPWO is the regulating and enforcing authority for post-construction channel protection associated with all new developments and redevelopment projects within the City, including the City's own construction projects which discharge directly into open County drains. The City of Mount Clemens's revised Stormwater Runoff Engineering and Construction Standards provides Channel Protection performance standards in Section 4. Design Standards for Stormwater Management Systems, paragraph 4.B. Channel Protection**.**

Site Specific Requirements

As MCPWO is the enforcing authority, all new development and redevelopment, be it a private or City initiative, must comply with the standards contained in the MCPWO, Procedures and Design Standards for Storm Water Management. Also, the City's revised Stormwater Runoff Engineering and Construction Standards describes site specific requirements. The City Standards has numerous rules and procedures addressing proposed projects in areas of soil or groundwater contamination and potential hotspots. The City does not expect to construct any City facilities with the potential to be a hot spot during the term of the current permit.

Site Plan Review

The City's development or redevelopment projects, along with private development projects, are subject to the site plan review process which are specified in the City of Mount Clemens Code of Ordinances, Zoning Ordinance, **15.030 - ARTICLE 3: SITE PLAN REVIEW AND APPROVAL** and The City of Mount Clemens revised Stormwater Runoff Engineering and Construction Standards – Section 3.

Long-Term Operation & Maintenance of BMPs

MCPWO is the regulating and enforcing authority for long-term maintenance of BMPs associated with all new developments and redevelopment projects within the City, including the City's own construction projects. The City of Mount Clemens revised Stormwater Runoff Engineering and Construction Standards – Section 6. Stormwater

Management Maintenance Plans, paragraph B requires a private maintenance agreement for structural and vegetative BMPs.

Section VII.g. Pollution Prevention/Good Housekeeping for Municipal Operations

Municipal Facility & Structural Storm Water Control Inventory

An inventory of the City's owned and operated facilities appear in Appendix A, Table 1A.

Facility-Specific Storm Water Management

The City has implemented a procedure for assessing each of its facilities within the regulated defined urbanized area for the potential to discharge pollutants to surface waters of the State.

Each facility will be evaluated based on the following criteria:

1. Amount of urban pollutants stored at the site (i.e. sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash bacteria, or other site-specific pollutants
2. Identification of improperly stored materials
3. Potential for polluting activities to be conducted outside (i.e. vehicle washing)
4. Proximity to waterbodies
5. Poor housekeeping practices
6. Discharge of pollutants of concern to impaired waters

Based on these criteria, the potential for each facility to discharge pollutants to the waters of the state will be rated high, medium, or low. For low facilities where no assessment factors are present, catch basin cleaning and street sweeping will be performed as indicated in the applicable procedures for these activities. For medium facilities, appropriate BMPs are considered based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the state.

The assessment will typically be updated/revised at minimum of 30 days prior to discharging storm water from a new facility and within 30 days of determining a need to update/revise the facility assessment.

Poor housekeeping practices discovered during an assessment will be corrected as soon as practical or based on the SWMP quarterly review.

Appendix A, Table 1A lists the City's facilities currently located within the regulated defined urbanized area and classifies the potential pollutant risk from each as high, medium, or low.

City DPS Streets Department Garage for the City is located in the combined sewer area of the City so it does not present a high potential pollutant risk for the MS4. The City's wastewater treatment plant (WWTP) abuts the separated storm sewer area however it is separately permitted under NPDES permit MI0023647. A storm water pollution prevention plan (SWPPP) has been submitted for the WWTP however a No Exposure Certification was separately submitted December 5, 2018. The City's standard operating procedures (SOPs) are included as Appendix E and Best Management Practices (BMPs) implementation activities are listed in the Action Plan as Appendix F.

Structural Stormwater Control Operation & Maintenance Activities

Appendix A, Table 1 lists the Structural Controls at each City owned and operated facility. The City maintains a total of 2,583 catch basins within the City owned major and local roads.

Catch Basin Inspection, Maintenance, and Cleaning:

No priority is assigned on the maintenance and cleaning of Catch Basins (CBs). Instead, the CBs are inspected and cleaned once every five (5) years by dividing the city into 5 sectors. Results of the activities are logged in the city's GIS application as they are completed.

Catch basins are visually inspected during normal work activities. A visual inspection of the structure will document any structural defects which may include collapse, cracking, frame damage, pipe collapse, blockage, etc.

If cleaning is deemed necessary, it is conducted using the City's vactor truck. The vactor truck is operated according to Manufacturer's operating instructions. All solids and liquids will be removed from the structure to the permissible extent possible. Collected sediment and water will not be discharged back into the structure at any time during the cleaning process.

Repairs will be conducted on an as needed basis based on the results of the visual assessments conducted by the City.

Collected material is transported to the City's Wastewater Treatment Plant where it is offloaded into a designated area for dewatering. The designated dewatering area is located at the septic dumping station, with the absence of any drainage into storm structures. Once the material has been dewatered, the City disposes of the material through a licensed disposal company.

Other Storm Water Control Structures Inspection and Maintenance:

Other storm water control structures inspection and maintenance procedures and schedule list in City of Mount Clemens's revised Stormwater Runoff Engineering and Construction Standards Section 6.E Infiltration, Section 4.F Retention and Detention Systems and Section 4.F.7 Underground Storage

Municipal Operations & Maintenance Activities

The City owns the municipal parking lots of their MS4. Repairs to parking lots or other municipal maintenance activities are done on an as needed basis by either the City DPS or a licensed contractor. A City representative is on site to oversee the work and ensure that left over material and other associated pollutants are disposed of, or stored properly at the DPS facility.

City of Mount Clemens streets are not prioritized based on the potential to discharge pollutants to surface water of the state thus street sweeping is done for every street in the

City of Mount Clemens six times per year, including twice in the spring and fall seasons. Collection of leaves during the fall to keep them out of the sewer system and at the spring to collect garbage and coarser sediment left behind during snow melt. City of Mount Clemens uses Global street sweeper. All waste material is hauled from certified contractors.

Mount Clemens DPS conducts leaf collection programs every fall for bagged leaves from residential or commercial properties. In addition, two scheduled city-wide street sweeping programs are conducted during the fall to collect leaves which would otherwise accumulate in the street.

A snow emergency will likely be called if 3" or more inches of snow is forecasted over a 24 to 48 hour period. If there is snow or ice on the ground the Department of Public Services is responsible to salt and plow the streets as needed. The City of Mount Clemens does not use any other deicing agents. If snow piling is needed, then snow will be stored in the parking lot of the Mt. Clemens Ice Arena and/or Farmer's Market, see Appendices A.10 and A.11.

City of Mount Clemens municipal operation and maintenance activities are conducted according to the SOP's described in Appendix E.

Managing Vegetated Properties

The City of Mount Clemens currently does not apply any chemicals and does not contract anyone to apply pesticide, herbicide and fertilizers. Should the city begin application, the SWMP will be updated within 30 days of making the decision..

Employee Training

Maintenance staff have been trained on storm water pollution prevention and good housekeeping at least once per permit cycle. New employees have been trained within the first year of employment. Employees have been trained using MDEQ storm water on-demand training videos that are found on their website and required topics will be covered along with Monthly Safety Briefings. All topics related to storm water pollution

prevention/good housekeeping of municipal facilities and activities will be covered during the training.

Contractor Requirements & Oversight

Contractors hired by the City to perform municipal operation and maintenance are contractually required to comply with all pollution prevention and good housekeeping BMPs as are applicable to the activities performed. City staff/inspectors are on-site daily to ensure contractual obligations have been met.

Section VII.h. Total Maximum Daily Load (TMDL)

Total Maximum Daily Load (TMDL) is defined as a study or analysis that calculates the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL establishes a pollutant budget and then allocates portions of the overall budget to the pollutant's sources.

TMDLs are developed by the states for water bodies that are not meeting water quality standards. TMDL development is required by "Section 303(d) of the federal Clean Water Act and the United States Environmental Protection Agency's (USEPA's) Water Quality Planning and Management Regulations (Title 40 of the Code of Federal Regulations [CFR], Part 130)".

The TMDL process sets the allowable levels of pollutants for a body of water, and provides the states with a basis for determining the pollution reductions necessary to restore and maintain the quality of their water resources.

Escherichia coli (E. coli) is a type of bacteria (single cell organism) that is used by the State of Michigan as a water quality indicator. When E. coli is found in surface waters, it means that there has been fecal contamination. While E. coli itself may be harmful to human health, other disease causing organisms might also be present. Once these pathogens are in a stream or lake, they can infect humans through ingestion or skin contact, resulting in diseases such as gastroenteritis (diarrhea), giardia, hepatitis, or cholera.

For the water bodies impacted or potentially impacted by Mount Clemens' MS4, the following TMDL's have been established:

E. coli Clinton River	TMDL	ID-91
E. coli Lake St. Clair & Metropolitan and Memorial Beaches	TMDL	ID-72

Appendix A, Table 1, Table 1A, Facilities Storm Sewer Maps and City of Mount Clemens Quadrant Maps display the TMDL Monitoring location and BMPs. Wet weather sampling program (TMDL Monitoring) will be conducted after at least 0.25 inch of rain has fallen in the last 24 hours and are scheduled to be completed twice during the permit cycle typically during the growth season or as a necessary progression from dry weather screening. Wet weather sampling will be conducted within 30 to 60 minutes of the start of a wet weather event in order to capture the first flush. A wet weather event is defined as a precipitation event that produces at least 0.25" of rain over a 24-hour period. Appendix C provides the IDEP and TMDL plan with procedures for evaluating and prioritizing BMPs. The highlighted BMP's in Table 1 are intended to address the E.coli TMDL.

Monitoring / Sampling will be performed at the discharge point or outfall. If due to practical considerations this is not possible (i.e. "blind tap", etc.), the monitoring will be performed at the first upstream manhole relative to the actual discharge point.

The BMP's provided in Appendix F, Action Plan provide for the City to minimize the impact of the storm water discharges from the City MS4 to the Maximum Extent Possible (MEP). Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the Michigan Act, and related regulations and rules is required under the permit. All instances of noncompliance shall be reported as follows:

a. 24-hours reporting - Any noncompliance which may endanger health or the environment (including maximum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.

b. Other reporting - The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance. Written reporting shall include:

1) A description of the discharge and cause of noncompliance; and:
2) The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

Section VII.i. Action Plan

Phase II communities are required to develop and implement a storm water management plan with the following six minimum control measures:

- **Public Education and Outreach** - Distributing educational materials and performing outreach to inform citizens about the impacts polluted storm water runoff discharges can have on water quality.
- **Public Involvement and Participation** - Providing opportunities for citizens to participate in program development, implementation, and review, including effectively publicizing public hearings or participation.
- **Illicit Discharge Detection and Elimination** - Developing and implementing a plan to detect and eliminate illicit discharges to the storm drain system including illicit connections and illegal dumping.
- **Construction Site Runoff Control** - Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land.
- **Pollution Prevention / Good Housekeeping for Municipal Operations** - Developing and implementing a program to prevent or reduce pollutant runoff from municipal operations.
- **Post-Construction Storm Water Management in New Development and Redevelopment** - Developing, implementing, and enforcing a program to address discharges of storm water runoff from new and redevelopment areas.

The action plan and Table 3 in Appendix F – Action Plan summarizes the implementation activities necessary for the City to meet these measures.

City of Mount Clemens

Storm Water Management Program (SWMP)

Appendix A

Maps and Tables

Revised April 4, 2023
Previous Revision May 20, 2019

Table 1 — City of Mount Clemens MS4 Outfall and Discharge Points

No.	Quadrant Map	Outfall/Discharge Point	End Section Name	Connection Type (Outfall/Blind Tap/Manhole)	Base Map 1st Ups. Structure Number	IDEP Sampling Date	Base Map Panel Number	Latitude	Longitude	Responsible Sampling Party	Outfall/Discharge Points MS4	Drain or Waterbody	Sub-Watershed	Priority Level	Group Number	BMPs
1	Northwest	MTC-G-010	GD-18	Outfall	GD-18-1		1	42.61407031	-82.89843322	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	See Note Above
2	Northwest	MTC-G-025	GD-13	Outfall	GD-13-1		1	42.61419313	-82.89502007	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
3	Northwest	MTC-G-030	GD-14	Outfall	GD-14-1		1	42.61414714	-82.89502463	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
4	Northwest	MTC-G-050	GD-11	Outfall	GD-11-1		1	42.61415795	-82.89307585	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
5	Northwest	MTC-G-120	GD-5A	Outfall	GD-5A-1		6	42.61171247	-82.89119094	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
6	Northwest	CT-G-001	GT-20	Outfall	GT-20-5		1	42.61752446	-82.89728295	Local Municipality	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
7	Southeast	MTC-R-020	CR-3	Outfall	CR-3-1		23	42.59306797	-82.86497047	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
8	Southeast	MTC-R-030	CR-5	Outfall	CR-5-1		18	42.59491644	-82.86470217	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
9	Southeast	MTC-R-050	CR-10	Outfall	CR-10-1		18	42.59786971	-82.86305544	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
10	Southeast	MTC-R-053	CR-10A	Outfall	CR-10A-1		18	42.59788349	-82.86305716	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
11	Southeast	MTC-R-055	CR-11	Outfall	CR-11-1		18	42.59818784	-82.86439633	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
12	Southeast	MTC-R-065	CR-13	Outfall	CR-13-1		18	42.59828009	-82.86532698	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
13	Southeast	Outfall 3 (RTB)	CR-15	Outfall	N/A		18	42.59762032	-82.86597825	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	WWTP-NPDES	
14	Southeast	MTC-R-080	CR-16	Outfall	CR-16-1		18	42.5976743	-82.86746034	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
15	Southeast	MTC-R-090	CR-17	Outfall	CR-17-1		18	42.59763109	-82.86749235	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
16	Southeast	MTC-R-100	CR-19	Outfall	Junction Chamber #3	9/27/2022	18	42.59745881	-82.86897513	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
17	Southeast	MTC-R-110	CR-20	Outfall	CR-20-1		18	42.59685851	-82.86915692	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
18	Southeast	MTC-R-115	CR-20A	Outfall	TPA-1		18	42.59684735	-82.86918688	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
19	Southeast	MTC-R-120	CR-21	Outfall	CR-21-1	10/4/2022	18	42.59736755	-82.87099192	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
20	Southeast	MTC-R-130	CR-22	Outfall	CR-22-1	9/27/2022	18	42.59754271	-82.8723427	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	3	
21	Southeast	MTC-R-140	CR-23	Outfall	CR-23-1A	9/27/2022	17	42.59768713	-82.87330253	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	3	
22	Southeast	MTC-R-150	CR-25	Outfall	CR-25-1		17	42.59742286	-82.87435101	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
23	Southeast	MTC-D-010	I94-2	Outfall	I94-2-1		24	42.59286595	-82.85984755	Local Municipality	MDOT - I94	MDOT	Clinton River East Sub-Watershed	Low	3	
24	Southeast	MTC-R-170	CR-26	Outfall	CR-26-1	9/27/2022	17	42.59776992	-82.87501145	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
25	Southeast	MTC-R-180	CR-28	Outfall	N/A		17	42.59737514	-82.87501147	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
26	Southeast	MTC-R-195	CR-29	Outfall	CR-29-1		17	42.59719709	-82.87543889	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
27	Southeast	MTC-R-200	CR-30	Outfall	CR-30-1		17	42.59689068	-82.87590929	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
28	Southeast	MTC-R-215	CR-32	Outfall	CR-32-1		17	42.59487308	-82.87714679	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
29	Southeast	MTC-R-220	CR-33	Outfall	CR-33-1	9/27/2022	17	42.59400189	-82.87664526	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
30	Southeast	MTC-R-230	CR-34	Outfall	TP26A	9/27/2022	22	42.59282625	-82.87692286	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
31	Southeast	MTC-R-240	CR-35	Outfall	CR-35-1	9/27/2022	22	42.59182046	-82.87691519	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
32	Southeast	MTC-R-250	CR-36	Outfall	CR-36-1	9/27/2022	22	42.59135386	-82.87600137	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
33	Southeast	MTC-R-260	CR-37	Outfall	CR-37-1	9/27/2022	22	42.59146329	-82.87509252	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
34	Southeast	MTC-R-270	CR-38	Outfall	CR-38-1	8/19/2021	22	42.58849902	-82.87239515	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
35	Southeast	MTC-R-280	CR-39	Outfall	CR-39-1	8/19/2021	22	42.58820087	-82.87285113	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
36	Southeast	MTC-R-290	CR-40	Outfall	CR-40-1	8/19/2021	27	42.58661672	-82.87345843	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
37	Southeast	MTC-R-300	CR-41	Outfall	CR-41-1	8/19/2021	27	42.58650131	-82.87380089	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
38	Southeast	MTC-R-310	CR-42	Outfall	CR-42-1	10/15/2020	27	42.58568434	-82.87341002	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	4	
39	Southeast	MTC-R-320	CR-42A	Outfall	CR-42A-1	8/19/2021	27	42.5841693	-82.87434041	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
40	Southwest	MTC-R-330	CR-43	Outfall	CR-43-1	8/19/2021	27	42.58254744	-82.88033148	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
41	Southwest	MTC-R-340	CR-44	Outfall	CR-44-1	8/19/2021	27	42.58318029	-82.88108773	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
42	Southwest	MTC-R-360	CR-46	Outfall	CR-46-1	8/19/2021	27	42.58430004	-82.88230807	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
43	Southwest	MTC-R-395	CR-49	Outfall	GR1	8/19/2021	26	42.5847851	-82.88388379	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
44	Southwest	MTC-R-400	CR-50	Outfall	CR-50-1	8/19/2021	26	42.5849605	-82.88406795	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
45	Southwest	MTC-R-410	CR-52	Outfall	CR-52-1	10/14/2020	26	42.58635329	-82.88526429	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	High	2	
46	Southwest	MTC-R-420	CR-53	Outfall	N/A	9/27/2022	26	42.58715229	-82.88796332	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
47	Southwest	MTC-R-430	CR-54	Outfall	CR-54-1	12/10/2020	26	42.58717625	-82.88968294	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
48	Southwest	MTC-R-440	CR-55	Outfall	CR-55-1	10/14/2020	21	42.58783033	-82.89093219	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
49	Southwest	MTC-R-450	CR-56	Outfall	CR-56-1	10/15/2020	21	42.58901538	-82.89237178	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
50	Southwest	MTC-R-460	CR-57	Outfall	CR-57-1	8/19/2021	21	42.58906308	-82.89239279	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
51	Southwest	MTC-R-470	CR-58	Outfall	CR-58-1	8/19/2021	20	42.58897792	-82.89448936	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
52	Southwest	MTC-R-500	CR-62	Outfall	CR-62-1	10/14/2020	20	42.59056883	-82.89904243	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
53	Southwest	MTC-R-510	CR-61	Outfall	CR-61-1	10/14/2020	20	42.59075057	-82.90041452	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
54	Northeast	MTC-C-010	CR-22-25	Catch Basin	CR-22-26		8	42.61192164	-82.8712823	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
55	Northeast	MTC-C-020	CR-22-23-1	Manhole	CR-22-23-2		8	42.6110519	-82.87158554	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
56	Northeast	MTC-C-030	CR-22-22-1	Manhole	CR-22-22-2		7	42.61021228	-82.87236807	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
57	Northeast	MTC-C-040	CR-22-21-1	Manhole	CR-22-21-2		7	42.60928909	-82.87265648	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
58	Northeast	MTC-C-070	CR-47-26-7	Catch Basin	CR-47-26-8		12	42.60315708	-82.87651296	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
59	Northeast	MTC-C-080	CR-47-26-3-3	Catch Basin	CR-47-26-3-4		12	42.60230759	-82.87782983	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
60	Northeast	MTC-C-090	CR-47-27	Manhole	CR-47-28		12	42.60114763	-82.88028806	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
61	Northeast	MTC-C-100	CR-47-22A	Catch Basin	CR-47-22A-1		17	42.59894172	-82.88042139	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	

Table 1 — City of Mount Clemens MS4 Outfall and Discharge Points

No.	Quadrant Map	Outfall/Discharge Point	End Section Name	Connection Type (Outfall/Blind Tap/Manhole)	Base Map 1st Ups. Structure Number	IDEP Sampling Date	Base Map Panel Number	Latitude	Longitude	Responsible Sampling Party	Outfall/Discharge Points MS4	Drain or Waterbody	Sub-Watershed	Priority Level	Group Number	BMPs
62	Northeast, Southeast	MTC-C-110	CR-47-21-1	Catch Basin	CR-47-21-2		17	42.59818317	-82.88043582	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
63	Southeast	LM-001	CR-47-18E	Catch Basin	N/A		17	42.59634703	-82.88057268	Local Municipality	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
64	Northeast, Southeast	LM-003	CR-26-6-3	Manhole	CR-26-6-4		17	42.6004098	-82.87719161	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	5	
65	Northeast, Southeast	LM-004	CR-26-12	Manhole	CR-26-12N		17	42.60062676	-82.87678957	Local Municipality	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	5	
66	Northwest, Southwest	MTC-G-999	N/A	N/A	N/A		15	42.60003759	-82.89961528	Local Municipality	N/A	N/A	Clinton River East Sub-Watershed	Low	1	
67	Northeast, Southeast	001	N/A	Manhole	CA1		18	42.60070445	-82.86532421	Local Municipality	N/A	N/A	Clinton River East Sub-Watershed	Low	WWTP-NPDES	
68	Northeast, Southeast	002	N/A	Manhole	001		18	42.60063057	-82.86530215	Local Municipality	N/A	N/A	Clinton River East Sub-Watershed	Low	WWTP-NPDES	

Note:
* Outfall/Discharge Point labels from previously submitted permit application COC Number - MIG610311
** City of Mt. Clemens conducts city wide pollution prevention and good housekeeping activities including the following:
1. MS4 system cleaning (catch basins, storm manholes, outfalls, and storm sewers)
2. Street sweeping
3. Parking lot sweeping
4. Regular pickup of waste materials
5. Pet waste management

TABLE 1A - City of Mount Clemens MS4 Owned Facilities and TMDL Locations

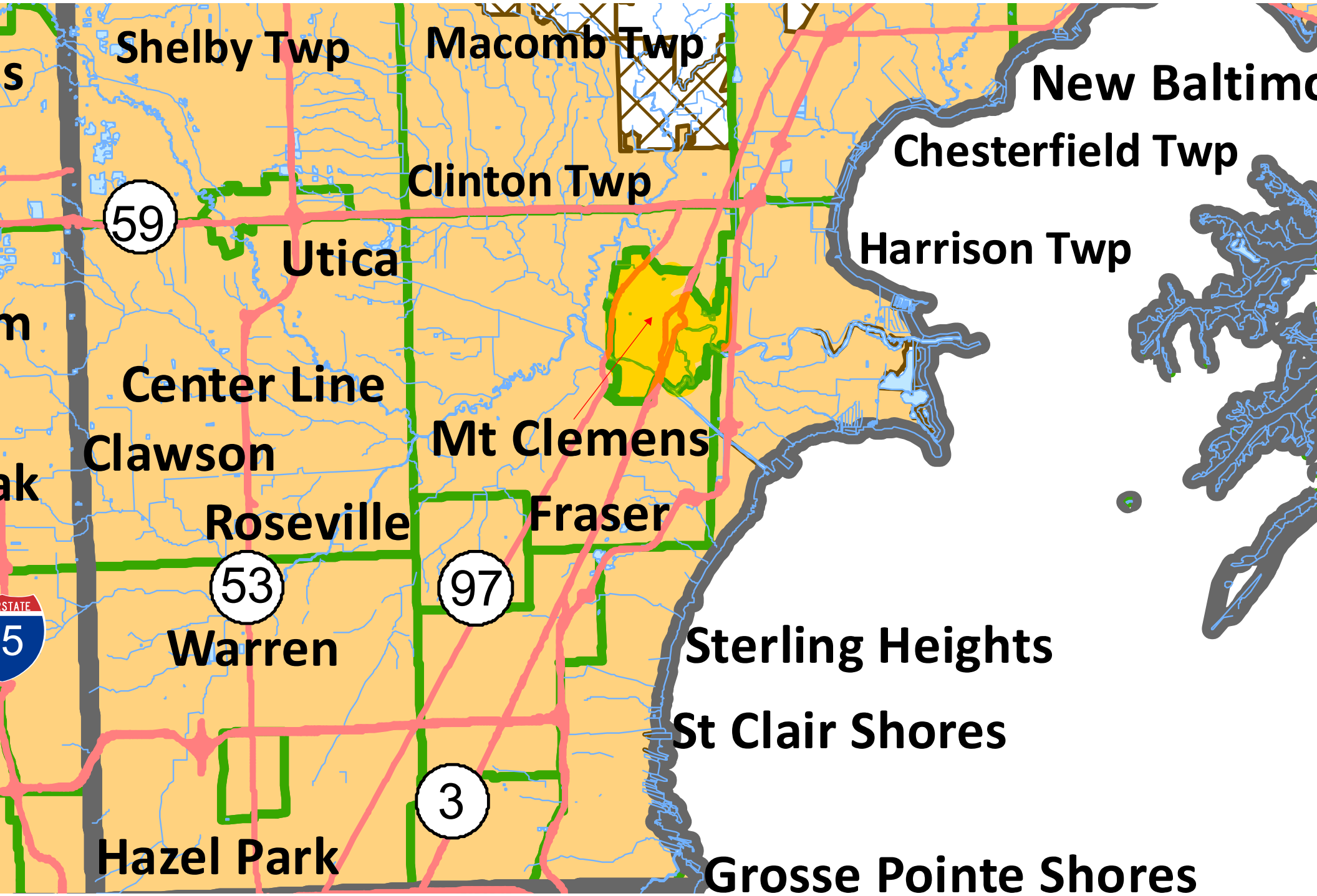
Map No.	Quadrant Map	Facility Name	Address	C.B.	Outfall/Discharge Point	Connection Type (Outfall/Blind Tap/Manhole	Base Map 1st Ups. Structure No.	Y	X	Outfall/Discharge Points MS4	Drain or Waterbody	Sub-Watershed	BMPs	TMDL Monitoring Point	Priority Level	Schedule
1	Northeast, Southeast	Rotary Park	47 N. Main St, Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Parking lot sweeping, trash bin maintenance		Low	
2	Northwest	Train Museum	200 Grand Ave., Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance		Low	
3	Northeast, Southeast, Southwest	wne Square Municipal Parking (Yellow L	ellow Parking Lot (Cass Ave. & S. Walnut St., Mt. Clemens, MI 48043	11	LM-001	Manhole	N/A	42.596347	-82.8805727	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, E. Coli monitoring.	LM-0001	Low	
4	Southeast	Sleepy Hollow Nature Preserve	Riverside Dr., North of Harper Ave., Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	No existing BMPs for Nature Preserve		Low	
5	Southeast	Shadyside Park	155 Shadyside Dr., Mt. Clemens, MI 48043	9	MTC-R-330	Outfall	CR-43-1	42.5825474	-82.8803315	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring	MTC-R-330	Low	
6	Northwest	Department of Public Works	95 Eldredge St., Mt. Clemens, MI 48043	3	453 Sanitary Sewer	Blind Tap	P5-1-1-12-2-12A-	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, maintaining clean dry surfaces, waste pickup, equipment maintenance, routine inspection of leaks and spills, proper material storage. (Combined sewer area)		N/A	
7	Northwest	Inion Street Municipal Parking (Purple Lo	urple Parking Lot (Union St & SB Gratiot Ave., Mt. Clemens, MI 4804	5	TP5-1-24-2	Combined Manhol	TP5-1-24-2-1	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance. (Combined sewer area)		Low	
8	Northeast, Southeast	Roskopp Parking Lot (Red Lot)	Red Parking Lot, 125 Macomb Pl., Mt. Clemens, MI 48043	23	MTC-C-100	Manhole	CR-47-22B	42.5989417	-82.8804214	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring		Low	
					MTC-C-110	Manhole	CR-47-21-2	42.5981832	-82.8804358	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed		MTC-C-110		
9	Northeast, Southeast	City Hall	One Crocker Blvd., Mt. Clemens, MI 48043	10	MTC-R-195	12" Outfall	CR-29-1	42.5971971	-82.8754389	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring	MTC-R-200	Low	
					MTC-R-200	12" Outfall	CR-30-1	42.5968907	-82.8759093	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed				
		Fire Hall	One Crocker Blvd., Mt. Clemens, MI 48043	0	MTC-R-180	CMP Outfall	N/A	42.5973751	-82.8750115	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring		Low	
		Clinton River Park	One Crocker Blvd., Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring		Low	
10	Northwest	Mt. Clemens Ice Arena	300 N. Groesbeck Hwy., Mt. Clemens, MI 48043	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance (Combined sewer area)		N/A	
		emorial Park (Community Center/Dog Pa	300 N. Groesbeck Hwy., Mt. Clemens, MI 48043	6	MTC-G-120	12" Outfall	GD-5A-1	42.6117125	-82.8911909	MDOT - Groesbeck	Greiner Drain	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, animal waste signage and pet waste stations, E.Coli monitoring	MTC-G-120	Low	
11	Northeast, Southeast	Mt. Clemens Farmer's Market	141 N. River Rd., Mt. Clemens, MI 48043	10	MTC-R-080	27" Outfall	CR-16-1	42.5976743	-82.8674603	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring	MTC-R-080	Low	
					MTC-R-090	12" Outfall	CR-17-1	42.5976311	-82.8674924	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed			Low	
12	Northeast, Southeast	Market St. Municipal Parking (Green Lot)	Green Parking Lot (North side of Market St., Opposite of Pine St., Mt Clemens, MI 48043	11	LM-003	Manhole	CR-26-6-4	42.6004098	-82.8771916	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring	LM-003	Low	
					LM-004	Manhole	CR-26-12N	42.6006268	-82.8767896	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance		Low	
13	Northeast	New Street Municipal Parking (Blue Lot)	Blue Parking Lot (Pine St. & New St., Mt. Clemens, MI 48043	2	Combined Sewer	Manhole	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance (Combined sewer area)		N/A	
14	Southwest	Olsen Park	850 Harrington St., Mt. Clemens, MI 48043	0	MTC-R-440	Land	N/A	N/A	N/A	N/A	N/A	N/A	Parking lot sweeping, trash bin maintenance		Low	
15	Southeast	Lawndale Park	awndale Park (Lawndale St. & Dickinson St., Mt. Clemens, MI 4804	0	MTC-R-020	Land	N/A	N/A	N/A	N/A	N/A	N/A	Trash bin maintenance, animal waste signage and pet waste stations, "No littering" signage		Low	
16	Northwest, Southwest	Kirkum Memorial Park (Mount Clemens Wilson Recreation Center)	58 S. Wilson Blvd., Mt. Clemens, MI 48043	1	LM-002	Manhole/Land	CR-57-13SW	42.5956851	-82.8903722	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Catch basin cleaning, parking lot sweeping, trash bin maintenance, E.Coli monitoring	LM-002	Low	
17	Northeast	Jermaine Jackson Community Center (Caimes Community Center)	58 Orchard St., Mt. Clemens, MI 48043	2	Combined Sewer	Manhole/Land	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, train bin maintenance (Combined sewer area)		N/A	
18	Northwest	Dorothea-Leonore Park	Dorothea-Leonore Park (Lenore St. & Dorothea St., Mt. Clemens, MI 48043)	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Trash bin maintenance, pet waste stations		Low	
19	Northeast	Clemens Park	Clemens Park (NB Gratiot Ave. & N. Main St., Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Trash bin maintenance		Low	
20	Northeast, Southeast	MacArthur Park	96 N. River Rd., Mt. Clemens, MI 48043	0	N/A	Land	N/A	N/A	N/A	N/A	N/A	N/A	Catch basin cleaning, parking lot sweeping, trash bin maintenance		Low	

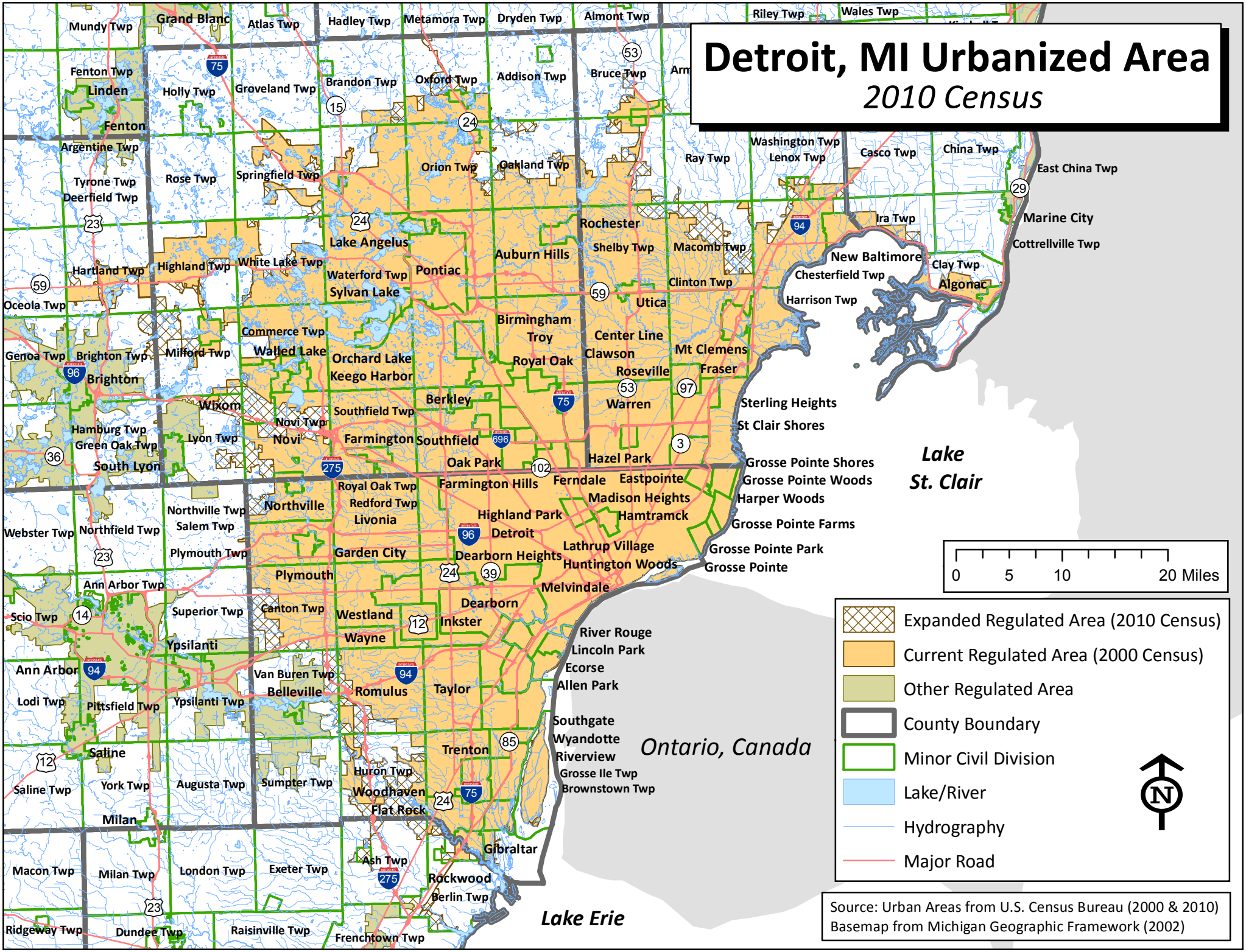
Table 1B — Macomb County and MDOT MS4 Outfalls and Discharge Points

No.	Quadrant Map	Outfall/ Discharge Point	Outfall/Discharge Point New Name	Connection Type (Outfall/Blind Tap/Manhole)	Base Map 1st Ups. Structure Number	IDEP Sampling Date	Base Map Panel Number	Latitude	Longitude	Responsible Sampling Party	Outfall/Discharge Points MS4	Drain or Waterbody	Sub-Watershed	Priority Level	Group Number	BMPs
1	Northwest	MTC-G-075	GD-2	Outfall	GD-2-1		2	42.61511	-82.88771	Macomb County Public Works Office	Macomb County MS4 -	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
2	Northwest	MTC-G-080	GD-1	Outfall	GD-1-1		2	42.61541	-82.88668	Macomb County Public Works Office	Macomb County MS4 -	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
3	Southeast	CT-R-005	CR-1A	Outfall	CR-1A-1		23	42.59233	-82.86447	Macomb County Public Works Office	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	See Note Above
4	Southeast	MTC-R-190	CR-27	Outfall	CR-27-1	9/27/2022	17	42.59763	-82.87532	Macomb County Public Works Office	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
5	Southeast	MTC-R-210	CR-31	Outfall	CR-31-1A	9/27/2022	17	42.59574	-82.87732	Macomb County Public Works Office	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
6	Southeast	MTC-R-070	CR-14	Outfall	CR-14-2		18	42.59811	-82.86619	Macomb County Public Works Office	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
7	Northwest	MTC-G-070	GD-6	Outfall	GD-6-1		6	42.61281	-82.89058	Michigan Department of Transportation	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
8	Northwest	MTC-G-140	M-97-2	Outfall	M-97-2-1		10	42.60679	-82.89743	Michigan Department of Transportation	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
9	Southwest	MTC-R-350	CR-45	Outfall	CR-45-1	8/19/2021	27	42.58368	-82.8825	Michigan Department of Transportation	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
10	Southwest	MTC-R-370	CR-47	Outfall	CR-47-1	10/15/2020	27	42.58431	-82.88233	Michigan Department of Transportation	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	See Note Above
11	Southwest	MTC-R-380	CR-48	Outfall	CR-48-1	8/19/2021	26	42.58464	-82.88359	Michigan Department of Transportation	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
12	Southwest	MTC-R-390	CR-51	Outfall	CR-51-1	8/19/2021	26	42.58523	-82.88334	Michigan Department of Transportation	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
13	Southwest	CT-R-520	CR-64	Outfall	CR-64-1	9/27/2022	20	42.59221	-82.90437	Michigan Department of Transportation	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
14	Northeast	MTC-C-050	CR-22-19NW	Catch Basin	CR-22-19NWW		7	42.60731	-82.87351	Michigan Department of Transportation	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	
15	Northeast	MTC-C-060	CR-22-19SW	Catch Basin	CR-22-19SWW		7	42.60712	-82.8736	Michigan Department of Transportation	MDOT - Gratiot	MDOT	Clinton River East Sub-Watershed	Low	5	

Table 1C — Private MS4 Outfall and Discharge Points

No.	Quadrant Map	Outfall/Discharge Point	Outfall/Discharge Point New Name	Connection Type (Outfall/Blind Tap/Manhole)	Base Map 1st Ups. Structure Number	IDEP Sampling Date	Base Map Panel Number	Latitude	Longitude	Responsible Sampling Party	Outfall/Discharge Points MS4	Drain or Waterbody	Sub-Watershed	Priority Level	Group Number	BMPs
1	Northwest	MTC-G-015	GD-17	Outfall	GD-17-1		1	42.61406	-82.897836	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	See Note Above
2	Northwest	MTC-G-015A	GD-16	Outfall	GD-16-1		1	42.61408	-82.897029	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
3	Northwest	MTC-G-020	GD-15	Outfall	GD-15-1		1	42.61412	-82.89554	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
4	Northwest	MTC-G-040	GD-12	Outfall	GD-12-1		1	42.61426	-82.893381	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
5	Northwest	MTC-G-055	GD-10	Outfall	GD-10-1		2	42.61423	-82.892743	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
6	Northwest	MTC-G-060	GD-9	Outfall	GD-9-1		2	42.61426	-82.892218	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
7	Northwest	MTC-G-063	GD-8	Outfall	GD-8-1		6	42.61291	-82.891734	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
8	Northwest	MTC-G-065	GD-7	Outfall	GD-7-1		6	42.61282	-82.890889	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
9	Northwest	MTC-G-090	GD-3	Outfall	N/A		2	42.61473	-82.88736	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
10	Northwest	MTC-G-100	GD-4	Outfall	N/A		6	42.61271	-82.88982	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
11	Northwest	MTC-G-110	GD-5	Outfall	GD-5-1		6	42.61247	-82.890211	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
12	Northwest	MTC-G-130	M-97-1	Outfall	M-97-1-1		5	42.60687	-82.897386	Private	Macomb County MS4 - Greiner Drain	Greiner Drain	Clinton River East Sub-Watershed	Low	1	
13	thwest, Southv	LM-002	CR-57-13NW	CR-57-13NW	CR-57-13SW		16	42.59569	-82.890372	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
14	Southeast	P-R-001	CR-1	Outfall	CR-1-1		23	42.59221	-82.862943	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
15	Southeast	MTC-R-010	CR-2	Outfall	CR-2-1		23	42.59278	-82.864726	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
16	Southeast	P-R-025	CR-4	Outfall	CR-4-1		23	42.59356	-82.864539	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
17	Southeast	P-R-033	CR-6	Outfall	CR-6-1		18	42.5952	-82.863724	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
18	Southeast	P-R-035	CR-7	Outfall	CR-7-1		18	42.59609	-82.862983	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
19	Southeast	P-R-037	CR-8	Outfall	CR-8-1		18	42.59655	-82.862579	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
20	Southeast	MTC-R-040	CR-9	Outfall	CR-9-1		18	42.59759	-82.862757	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
21	Southeast	MTC-R-060	CR-12	Outfall	CR-12-1		18	42.59827	-82.865287	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	3	
22	Northeast	P-D-050	I94-1	Outfall	I94-1-1		14	42.60287	-82.85705	Private	MDOT - I94	MDOT	Clinton River East Sub-Watershed	Low	3	
23	Southeast	MTC-R-160	CR-24	Outfall	CR-24-1A	9/27/2022	17	42.59782	-82.8745	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	4	
24	Southwest	CT-R-375	CR-47A	Outfall	CR-47A-1	9/27/2022	26	42.58436	-82.883187	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Med	2	
25	Southwest	MTC-R-480	CR-59	Outfall	CR-59-1	10/14/2020	20	42.58906	-82.896344	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
26	Southwest	MTC-R-490	CR-60	Outfall	CR-60-2	8/19/2021	20	42.58887	-82.899523	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	
27	Southwest	MTC-R-505	CR-63	Outfall	CR-63-1	10/17/2021	20	42.59127	-82.89991	Private	EGLE - Clinton River	Clinton River	Clinton River East Sub-Watershed	Low	2	


Shelby Twp
Macomb Twp
New Baltimo
Chesterfield Twp
Clinton Twp
59
Utica
Harrison Twp
Center Line
Clawson
Mt Clemens
Roseville
Fraser
53
97
Warren
Sterling Heights
St Clair Shores
3
Hazel Park
Grosse Pointe Shores


Detroit, MI Urbanized Area
2010 Census
Mundy Twp
Grand Blanc
Atlas Twp
Hadley Twp
Metamora Twp
Dryden Twp
Almont Twp
Riley Twp
Wales Twp
Fenton Twp
Linden
Holly Twp
Groveland Twp
Brandon Twp
Oxford Twp
Addison Twp
Bruce Twp
Fenton
Argentine Twp
Tyrone Twp
Deerfield Twp
Rose Twp
Springfield Twp
Orion Twp
Oakland Twp
Ray Twp
Washington Twp
Lenox Twp
Casco Twp
China Twp
East China Twp
Marine City
Cottrellville Twp
Ira Twp
Rochester
Shelby Twp
Macomb Twp
Lake Angelus
Auburn Hills
New Baltimore
Clay Twp
Chesterfield Twp
Algonac
Harrison Twp
Clinton Twp
Utica
Hartland Twp
Highland Twp
White Lake Twp
Waterford Twp
Pontiac
Sylvan Lake
Oceola Twp
Commerce Twp
Walled Lake
Orchard Lake
Keego Harbor
Birmingham
Troy
Royal Oak
Center Line
Clawson
Roseville
Warren
Mt Clemens
Fraser
Sterling Heights
St Clair Shores
Genoa Twp
Brighton Twp
Brighton
Milford Twp
Wixom
Berkley
Southfield Twp
Novi Twp
Novi
Farmington
Southfield
Hamburg Twp
Green Oak Twp
Lyon Twp
South Lyon
Oak Park
Hazel Park
Grosse Pointe Shores
Grosse Pointe Woods
Harper Woods
Grosse Pointe Farms
Grosse Pointe Park
Grosse Pointe
Lake
St. Clair
Royal Oak Twp
Farmington Hills
Ferndale
Eastpointe
Madison Heights
Hamtramck
Highland Park
Detroit
Northville
Redford Twp
Livonia
Northville Twp
Salem Twp
Webster Twp
Northfield Twp
Plymouth Twp
Garden City
Dearborn Heights
Lathrup Village
Huntington Woods
Plymouth
Melvindale
Ann Arbor Twp
Dearborn
Scio Twp
Superior Twp
Canton Twp
Westland
Inkster
Wayne
River Rouge
Lincoln Park
Ecorse
Allen Park
Ypsilanti
Ann Arbor
Van Buren Twp
Belleville
Romulus
Taylor
Lodi Twp
Pittsfield Twp
Ypsilanti Twp
Southgate
Wyandotte
Riverview
Grosse Ile Twp
Brownstown Twp
Ontario, Canada
Saline
Saline Twp
York Twp
Augusta Twp
Sumpter Twp
Trenton
Huron Twp
Woodhaven
Flat Rock
Milan
Gibraltar
Macon Twp
Milan Twp
London Twp
Exeter Twp
Ash Twp
Rockwood
Berlin Twp
Ridgeway Twp
Dundee Twp
Raisinville Twp
Frenchtown Twp
Lake Erie
0 5 10 20 Miles
Expanded Regulated Area (2010 Census)
Current Regulated Area (2000 Census)
Other Regulated Area
County Boundary
Minor Civil Division
Lake/River
Hydrography
Major Road
N
Source: Urban Areas from U.S. Census Bureau (2000 & 2010)
Basemap from Michigan Geographic Framework (2002)

Lot (Blue Lot)

N

TP5-1-1-12-2-1NW
TP5-1-1-12-2-1
TP5-1-1-12-2-1-1
TP5-1-1-12-2-1-2-2
TP5-1-1-12-2-1-2-1
TP5-1-1-12-2-1-2
TP5-1-1-12-2-1-2S
TP5-1-1-12-2-1-3
TP5-1-1-12-2-1-4
TP5-1-14-5B-1
TP5-1-14-5B-1S
TP5-1-14-5ANE
TP5-1-14-5B-1A
TP5-1-14-5AE
TP5-1-14-5B-1AS
TP5-1-14-5
TP5-1-14-5W
TP5-1-14-5E
TP5-1-14-4
TP5-1-14-4NW
TP5-1-14-4SW
TP5-1-14-3
TP5-1-1-12-2-1A-1NE
TP5-1-1-12-2-1A-1N
TP5-1-1-12-2-1A-1
TP5-1-1-12-2-1A
TP5-1-1-12-2-1A-1SW
TP5-1-1-12-2-1A-2
TP5-1-1-12-2-1A-3
TP5-1-1-12-2-1A-4
TP5-1-1-11C
TP5-1-1-12-1NW
TP5-1-1-12-1
TP5-1-1-12-1SE
CR-26-5-3
CR-26-5-4
CR-27-6NW
5123
5122
5121
310
309
305
4910
6157
4630
306
311

New St
N Walnut St
N Main St
Macomb Pl

8"
10"
12"
15"
18"
24"
610
608
606
604
602
600
612

Legend

- Catch Basin
- Storm Manhole
- Combined Manhole

Ownership

- Mt Clemens
- Abandonded CSO
- Bulkheaded
- By Others
- TMDL
- Storm Sewer
- Combined Sewer
- Contours (2')
- City Facility/Property

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Rotary Park
47 N. Main St.

PANEL NUMBER: A.01

CAUTION

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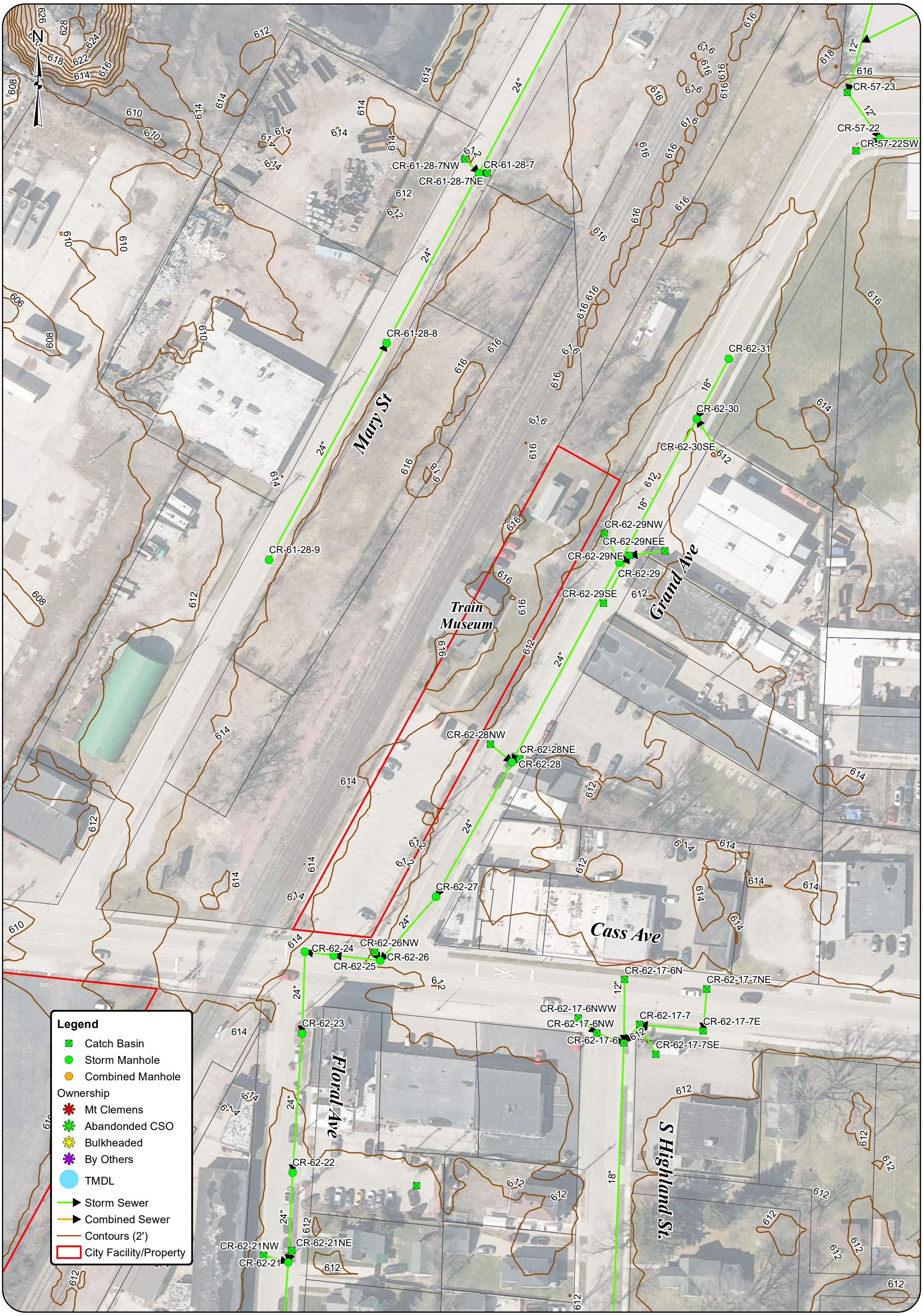

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City of Mount Clemens

Train Museum
200 Grand Ave.

PANEL NUMBER: A.02

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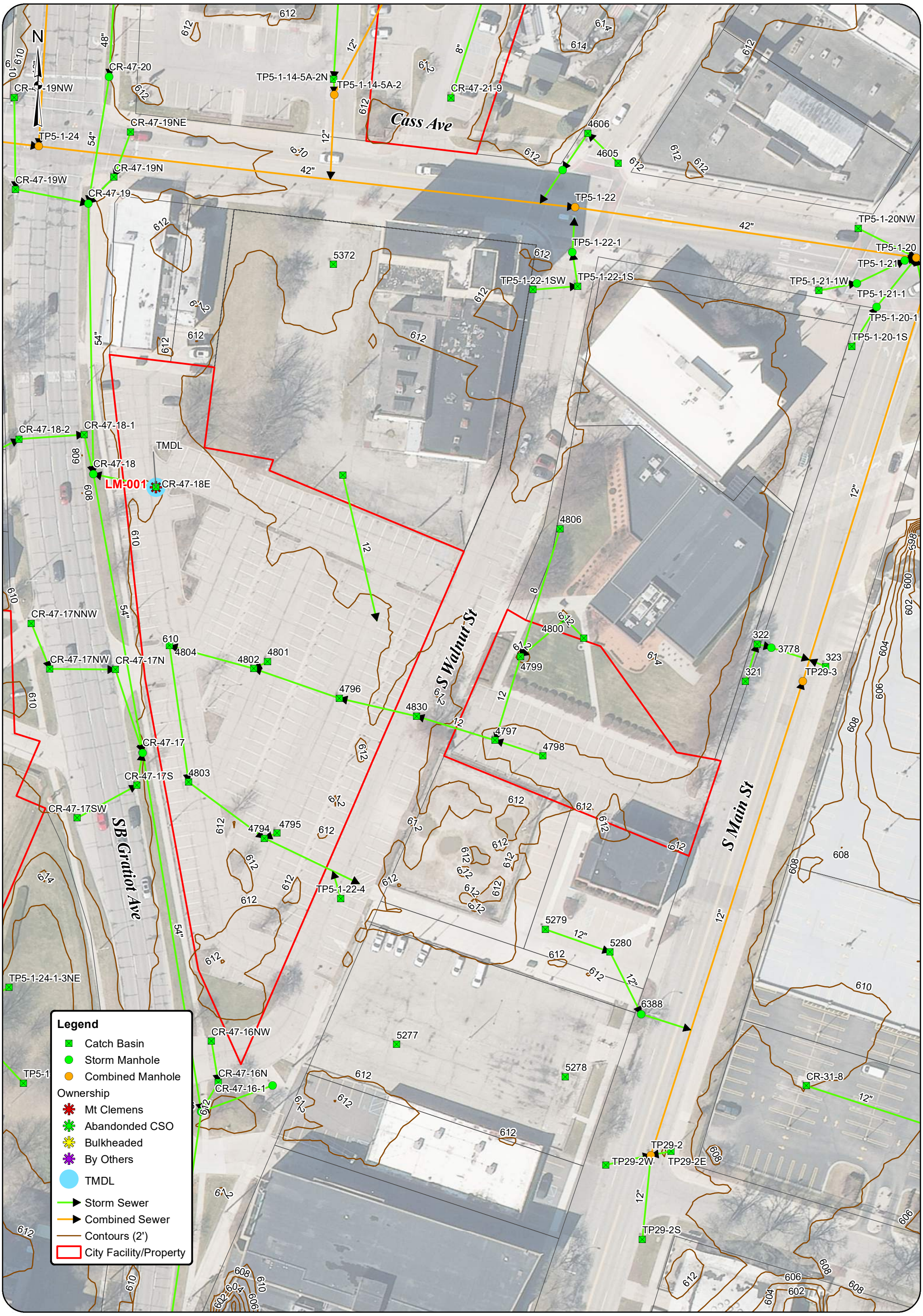

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Towne Square Municipal Parking
Yellow Lot

PANEL NUMBER: A.03

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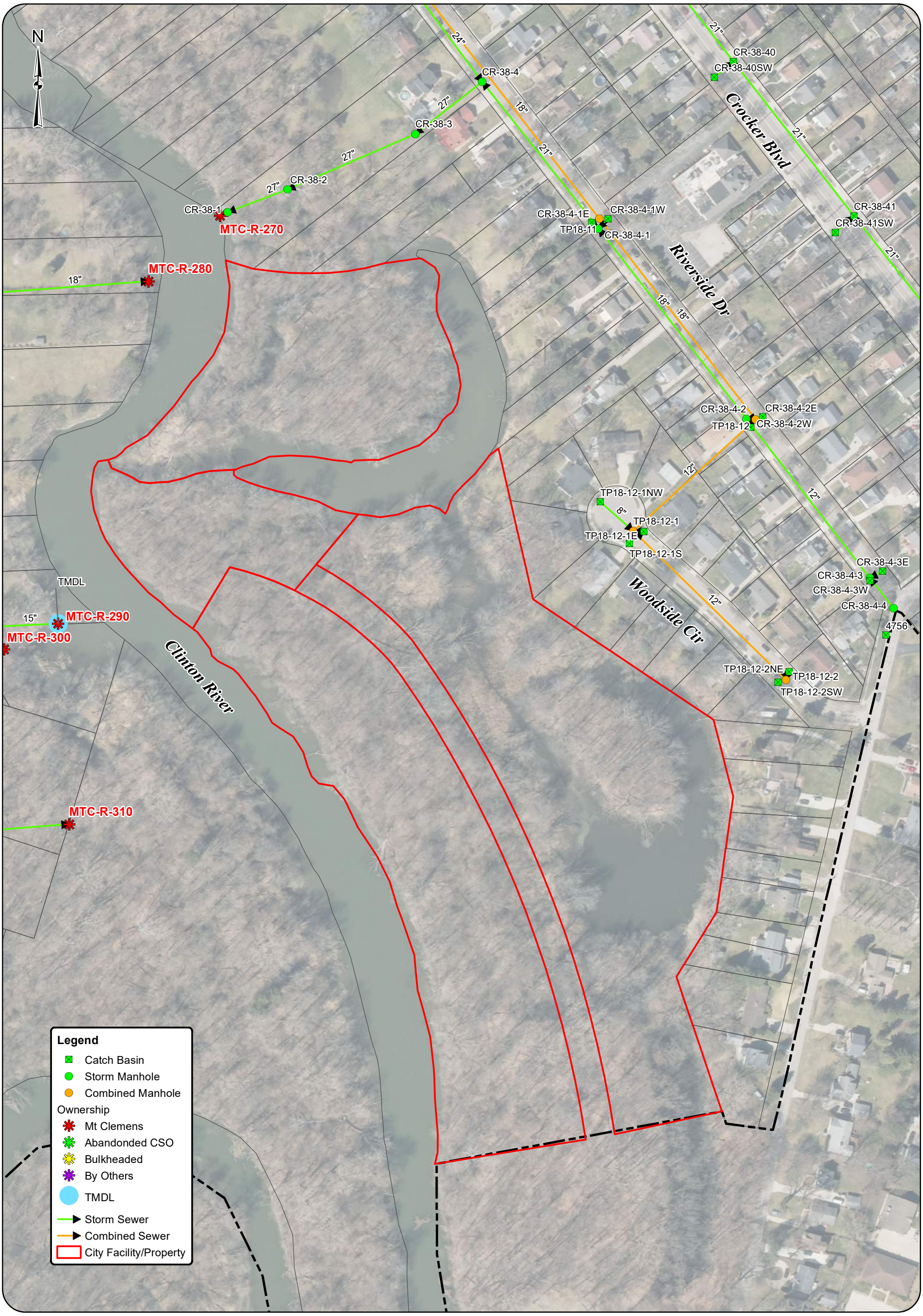

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Sleepy Hollow Nature Preserve
Riverside Dr. N. of Harper Ave.

PANEL NUMBER: A.04

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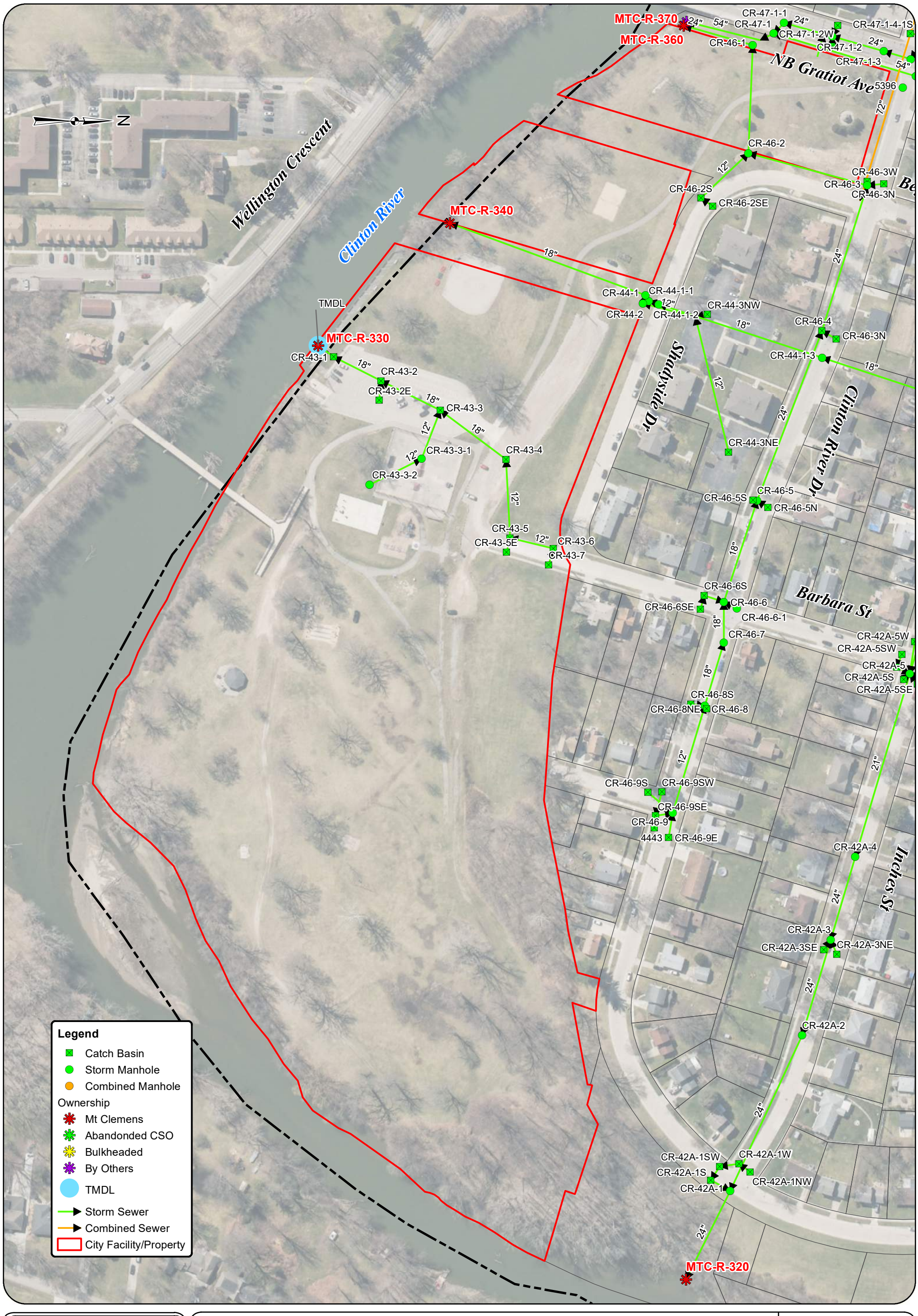

Legend

- Catch Basin
- Storm Manhole
- Combined Manhole

Ownership

- Mt Clemens
- Abandonded CSO
- Bulkheaded
- By Others
- TMDL
- Storm Sewer
- Combined Sewer
- City Facility/Property

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Shadyside Park
155 Shadyside Dr.

PANEL NUMBER: A.05

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Streets Dept. Garage
95 Eldredge St.

PANEL NUMBER: A.06

CAUTION

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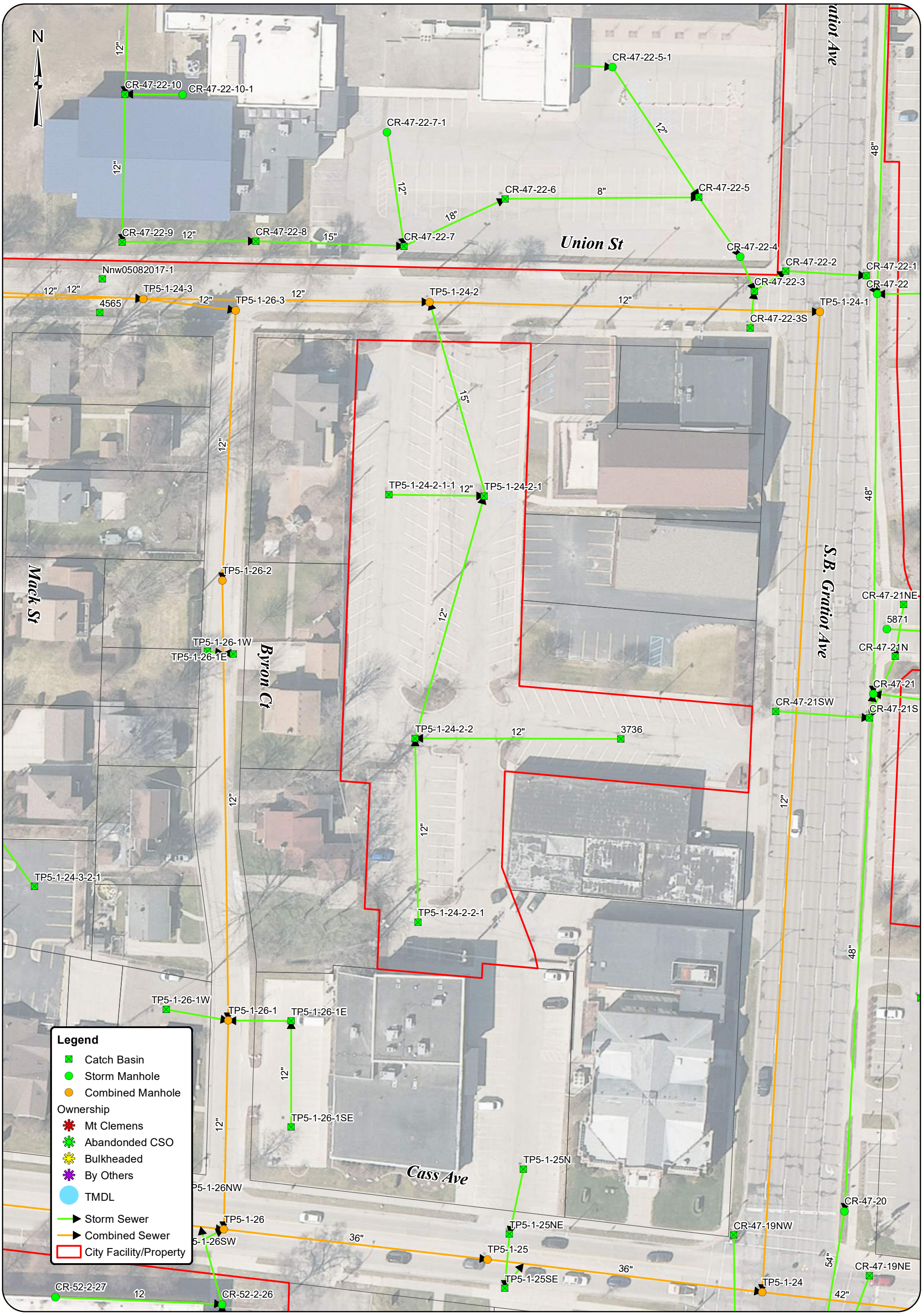

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Union St. Municipal Parking Purple Lot

PANEL NUMBER: A.07

CAUTION

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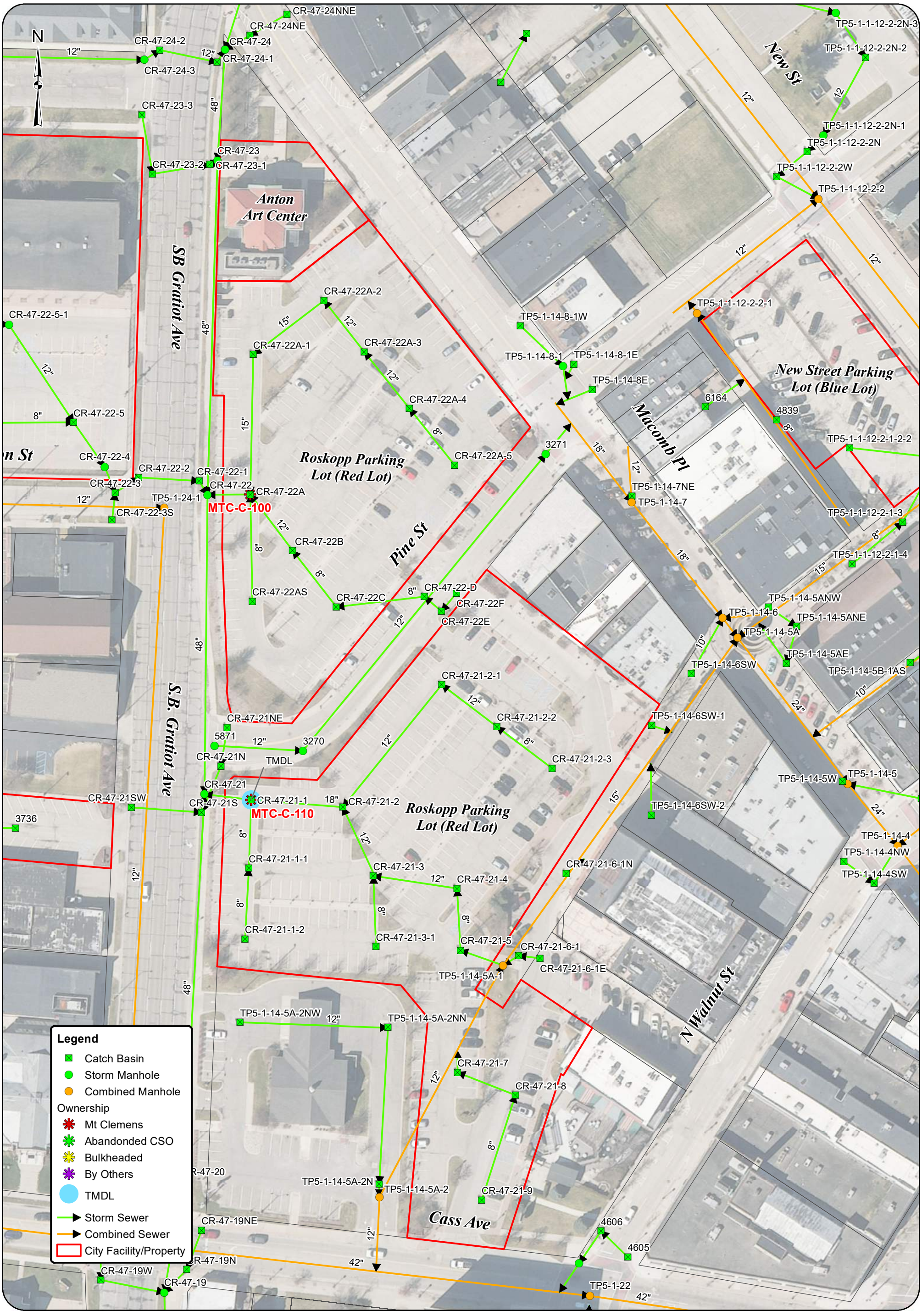

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REVISIONS	
DATE	REMARKS

City of Mount Clemens

Art Center/Roskopp Parking Lot
125 Macomb Place

PANEL NUMBER: A.08

CAUTION

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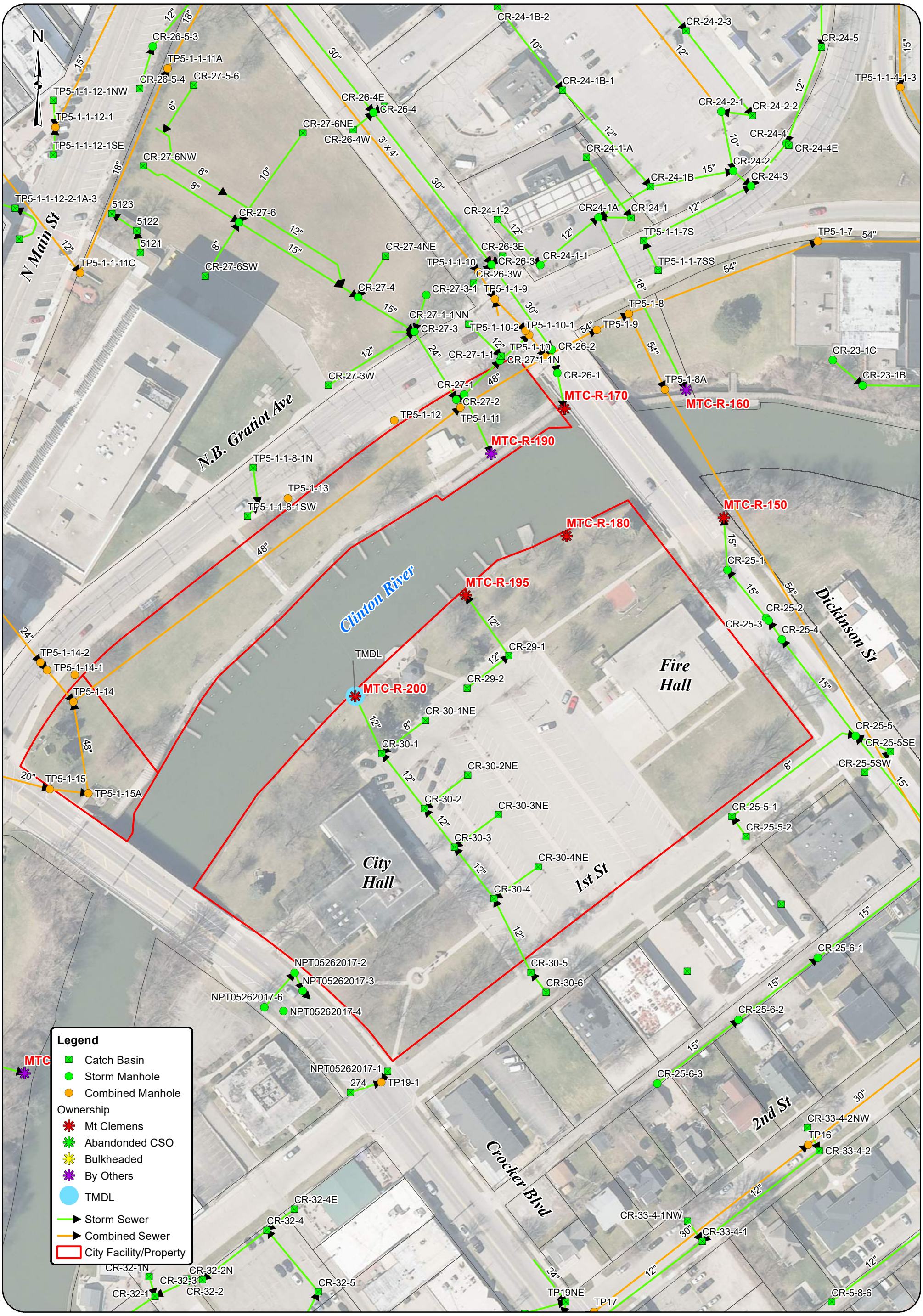

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REVISIONS

DATE	REMARKS

City of Mount Clemens

City Hall, Fire Hall, Clinton River Park
1 Crocker Blvd.

PANEL NUMBER: A.09

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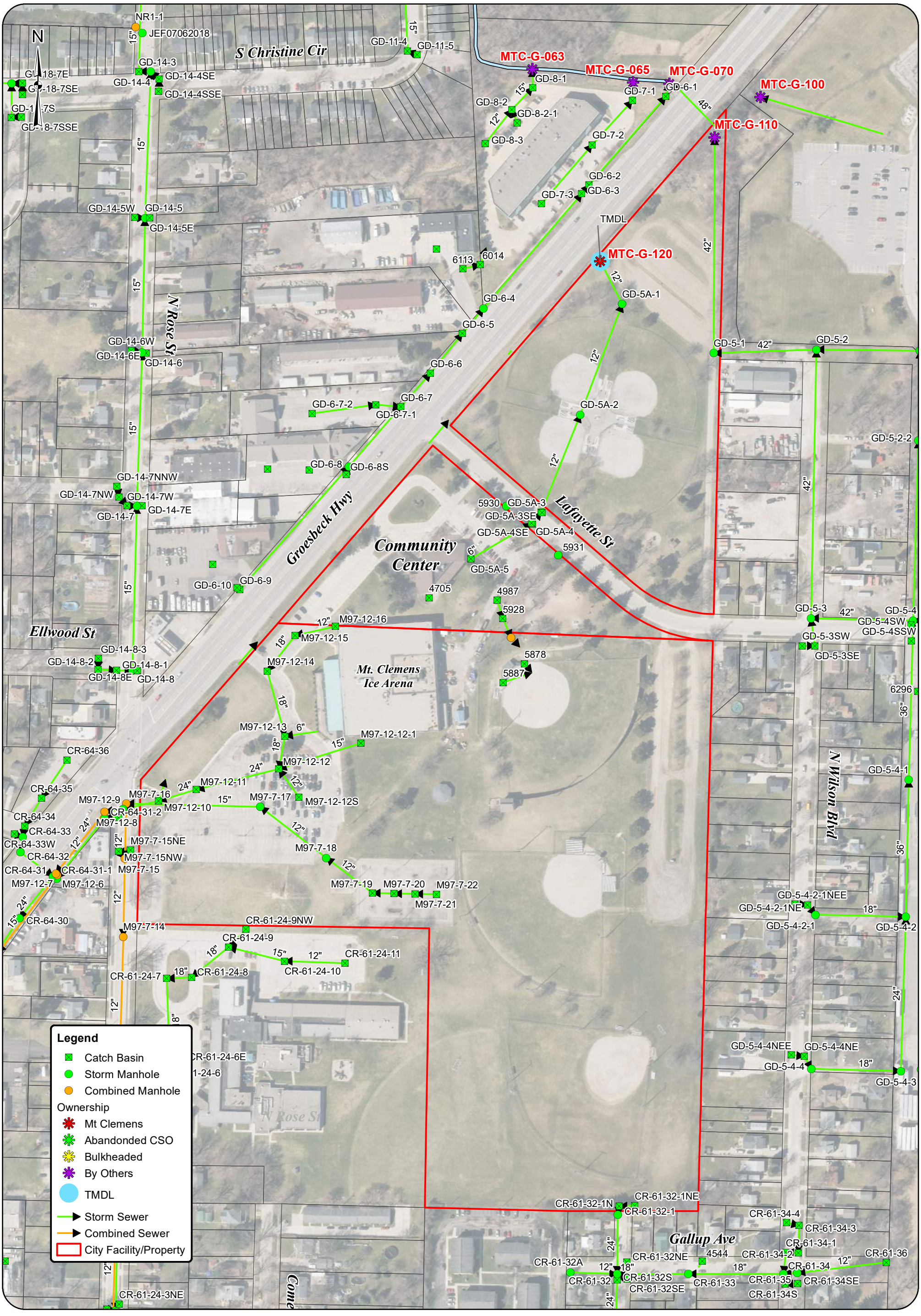

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PROJECT NO: 0220-0113	CREATED BY: AWD	CHECKED BY: CBR

REVISIONS

DATE	REMARKS

City of Mount Clemens

Community Center/Ice Rink/Dog Park
300 N. Groesbeck Hwy.

PANEL NUMBER: A.10

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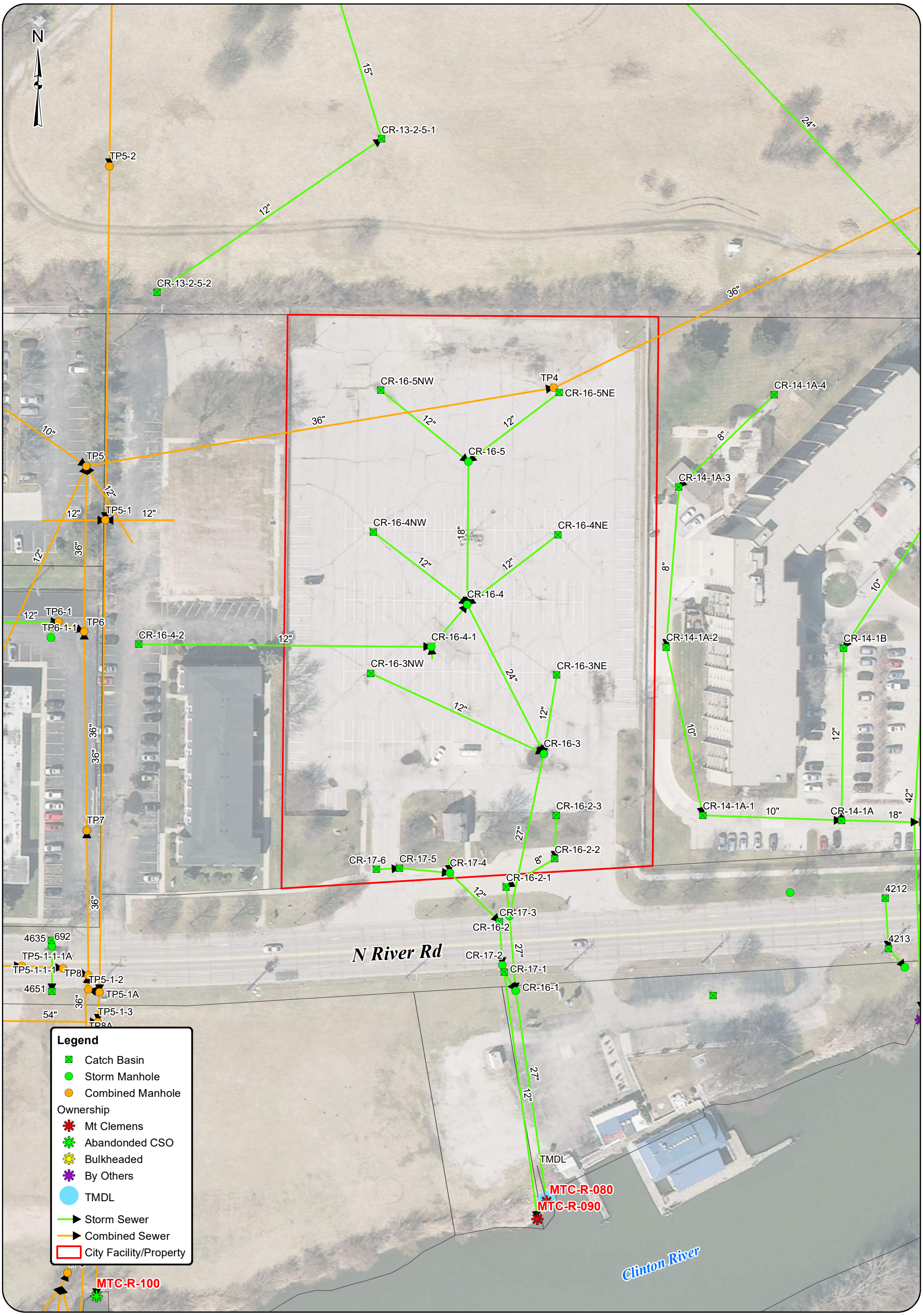

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Farmer's Market
141 N. River Rd.

PANEL NUMBER: A.11

CAUTION

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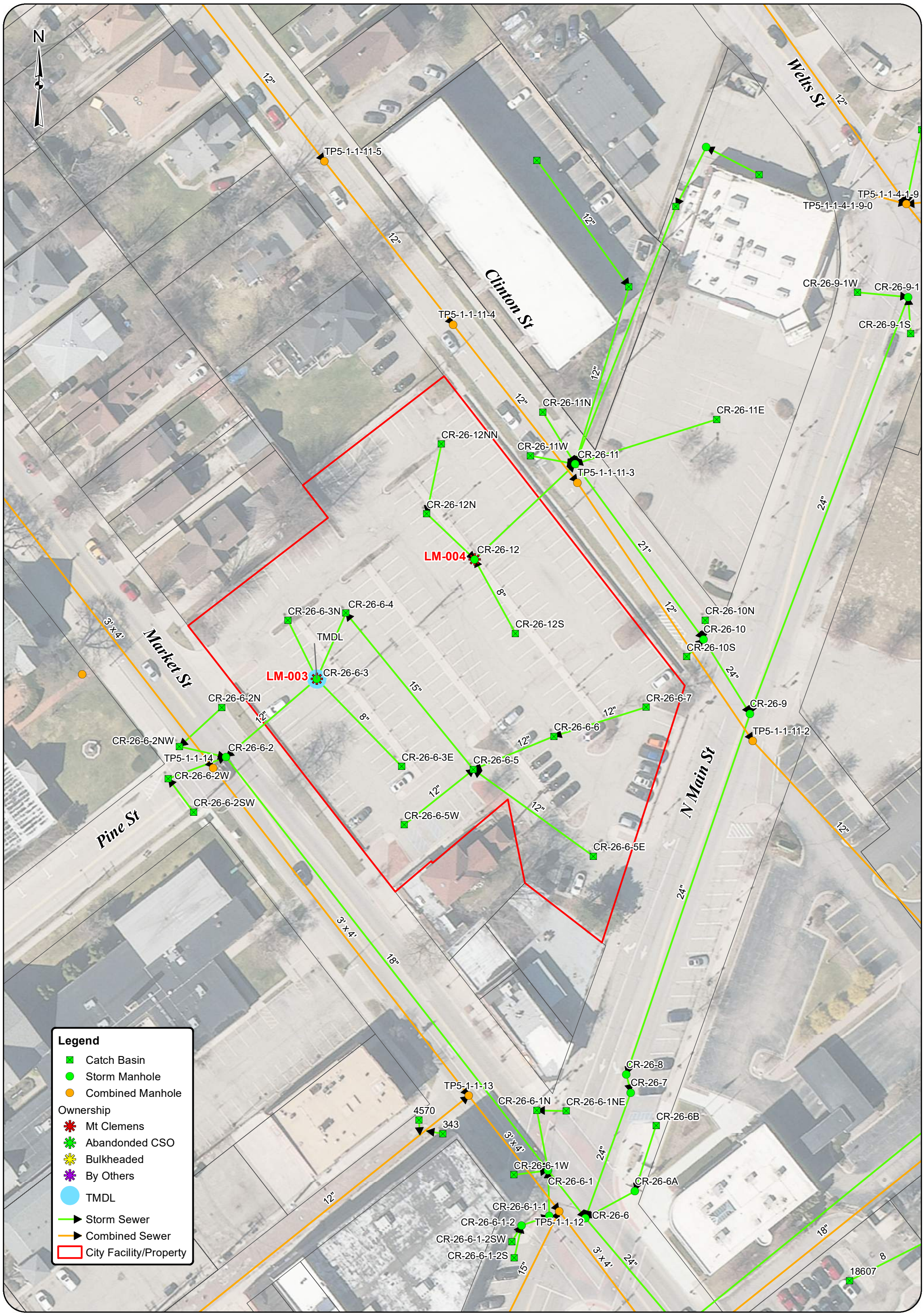

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Market St. Municipal Parking Green Lot

PANEL NUMBER: A.12

CAUTION

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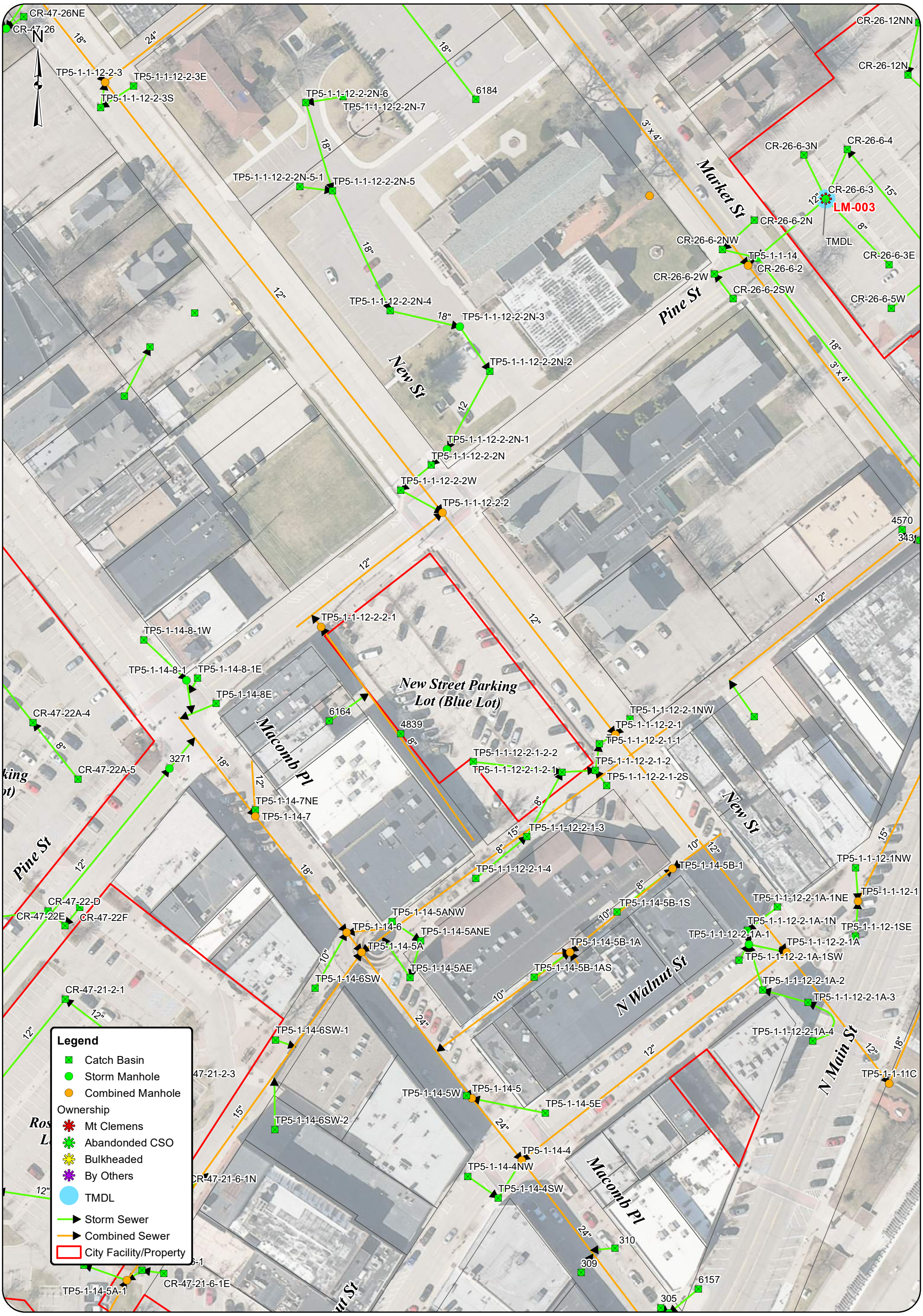

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REVISIONS

DATE	REMARKS

City of Mount Clemens

New St. Municipal Parking Blue Lot

PANEL NUMBER: A.13

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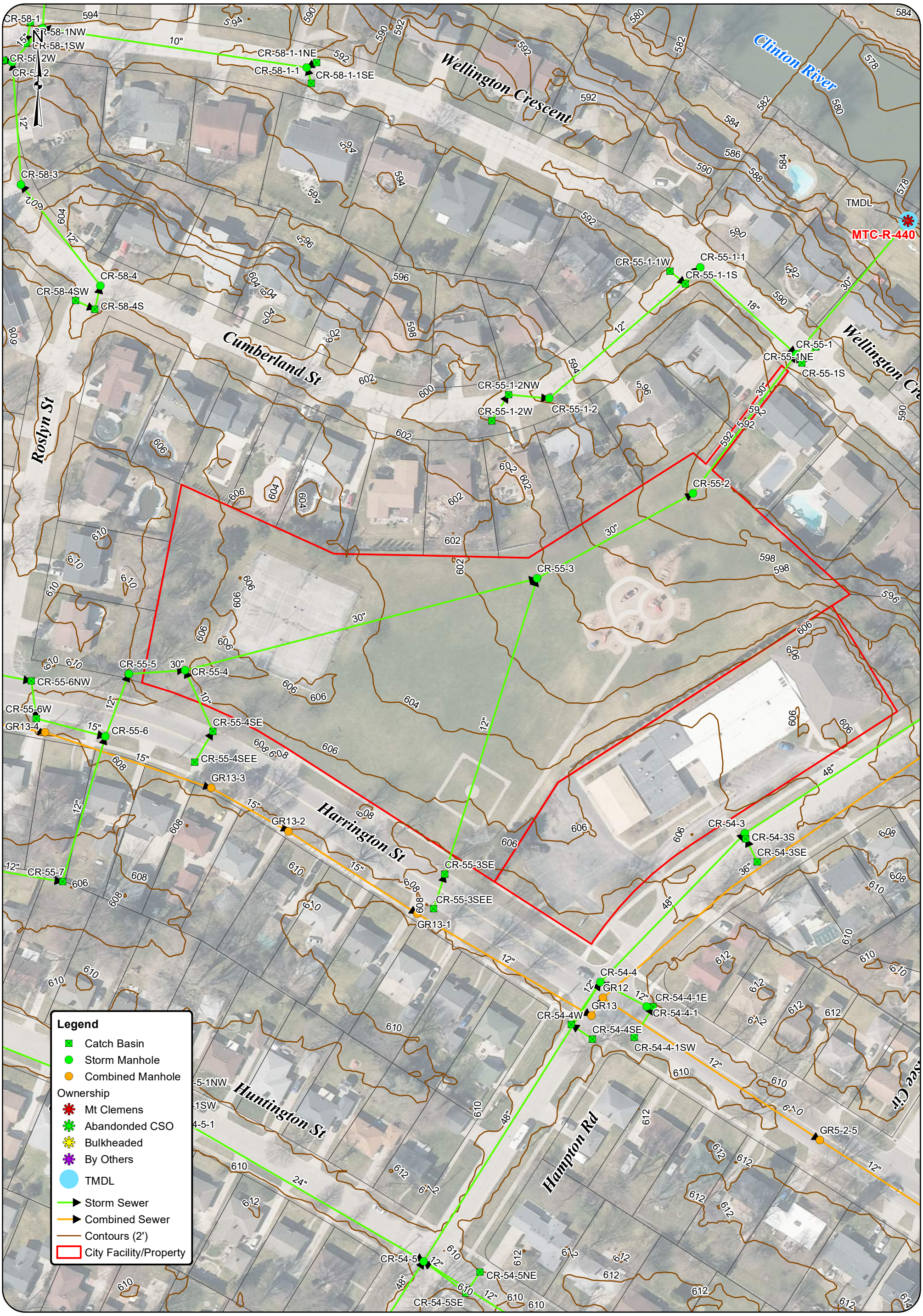

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Olsen Park
850 Harrington St.

PANEL NUMBER: A.14

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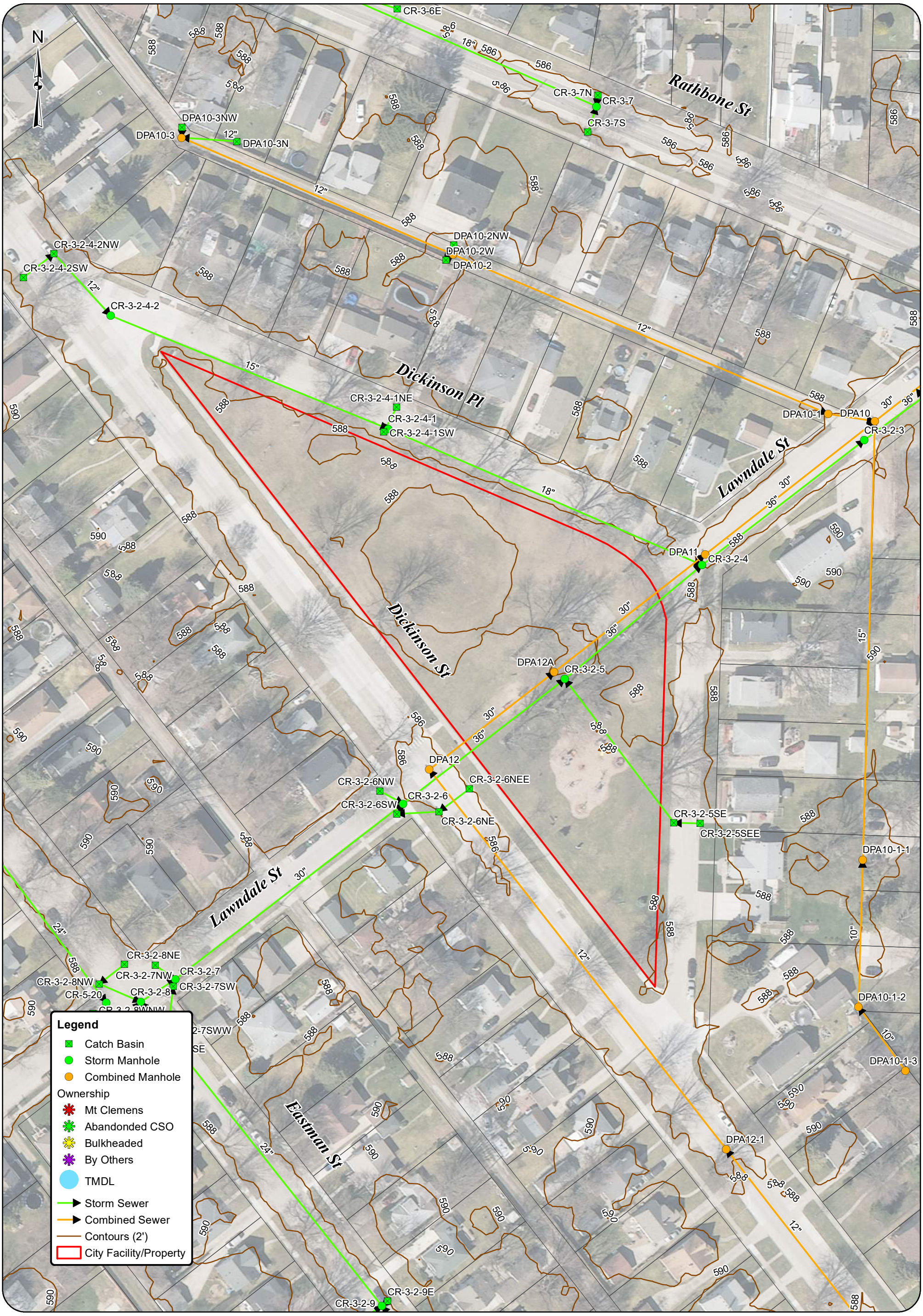

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PROJECT NO: 0220-0113	CREATED BY: AWD / CHECKED BY: CBR

REVISIONS

DATE	REMARKS

City of Mount Clemens

Lawndale Park
Lawndale St. at Dickinson St.

PANEL NUMBER: A.15

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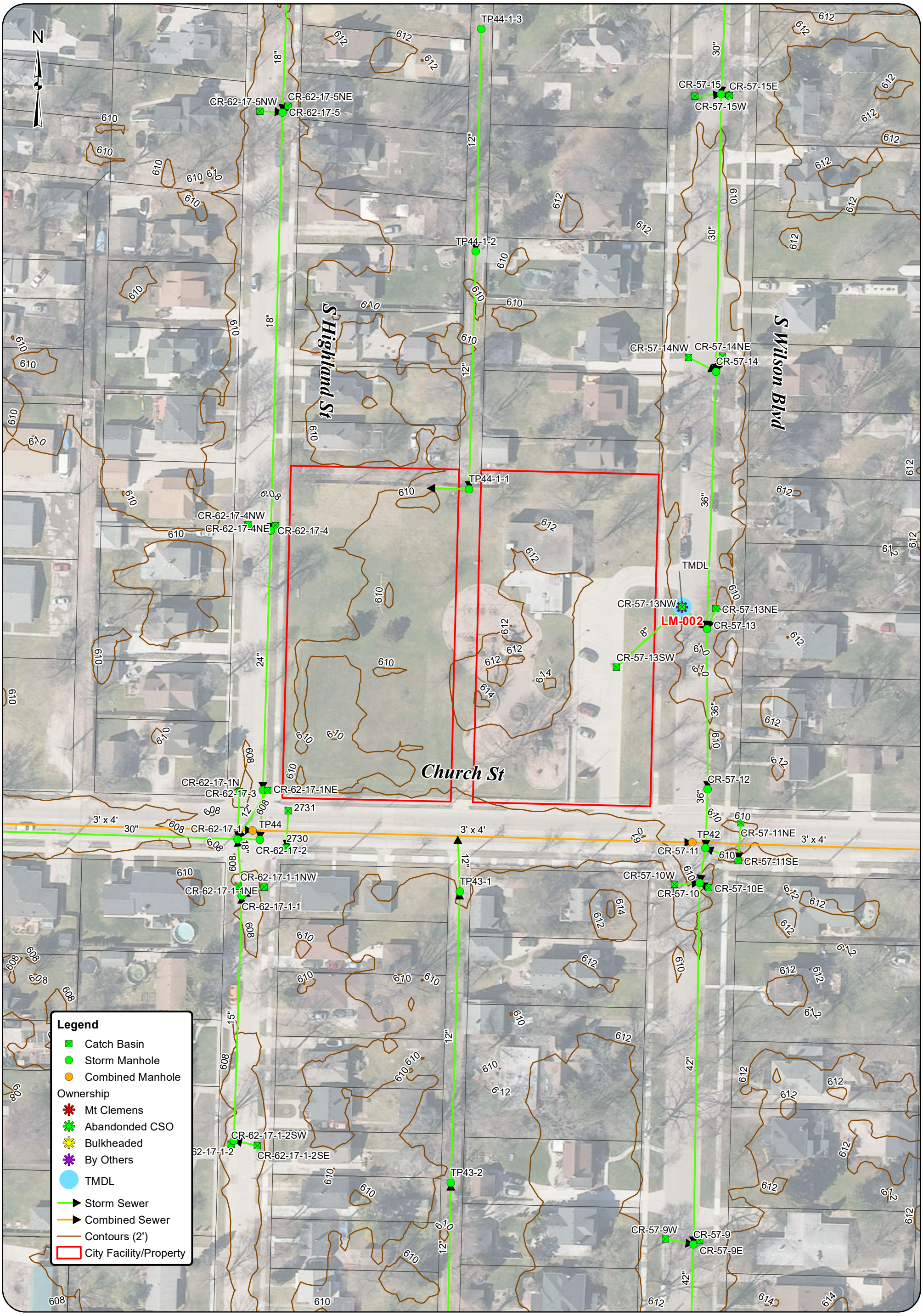

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PROJECT NO: 0220-0113	CREATED BY: AWD	CHECKED BY: CBR

REVISIONS

DATE	REMARKS

City of Mount Clemens

Kirkum Memorial Park
58 S. Wilson Blvd.

PANEL NUMBER: A.16

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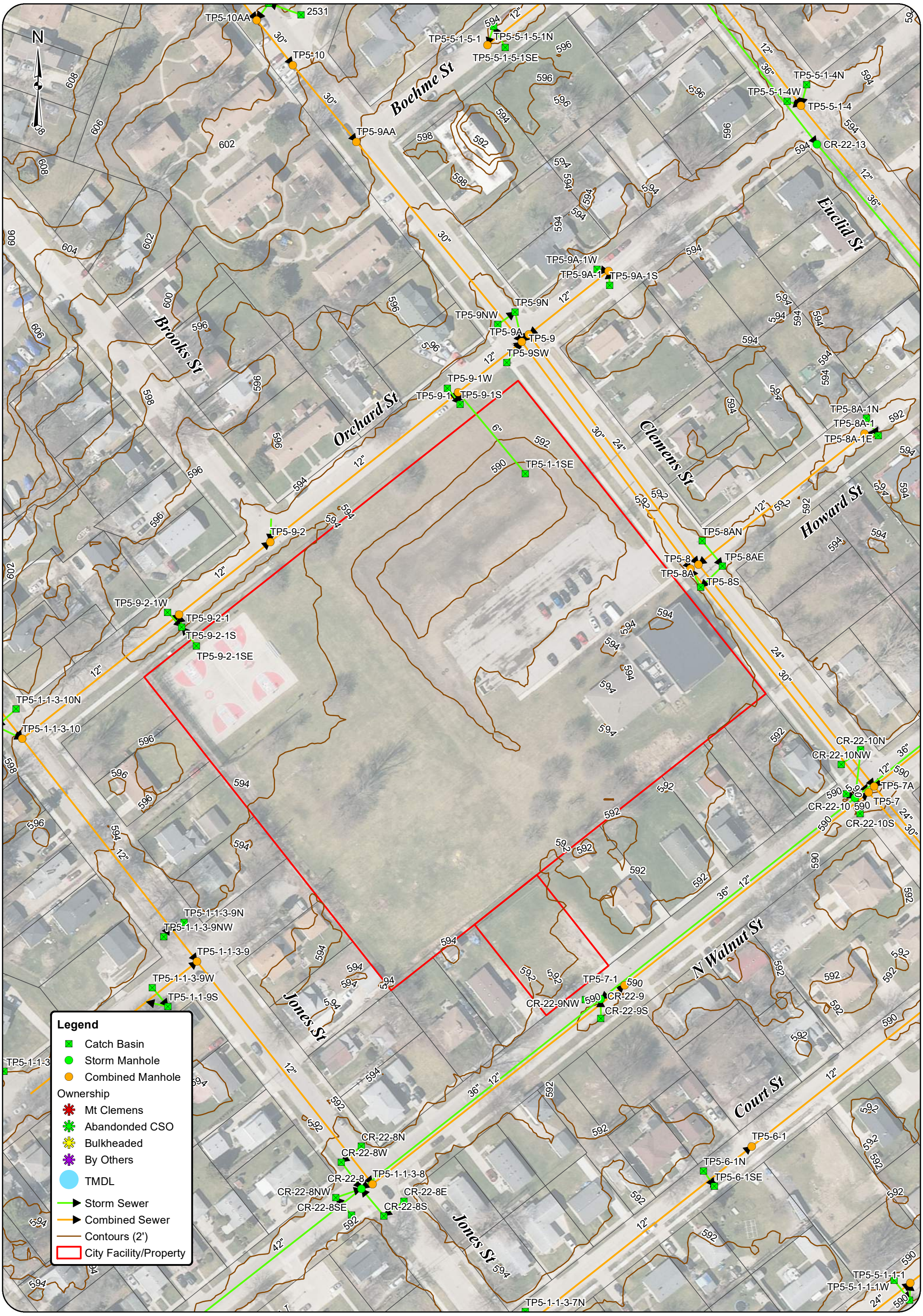

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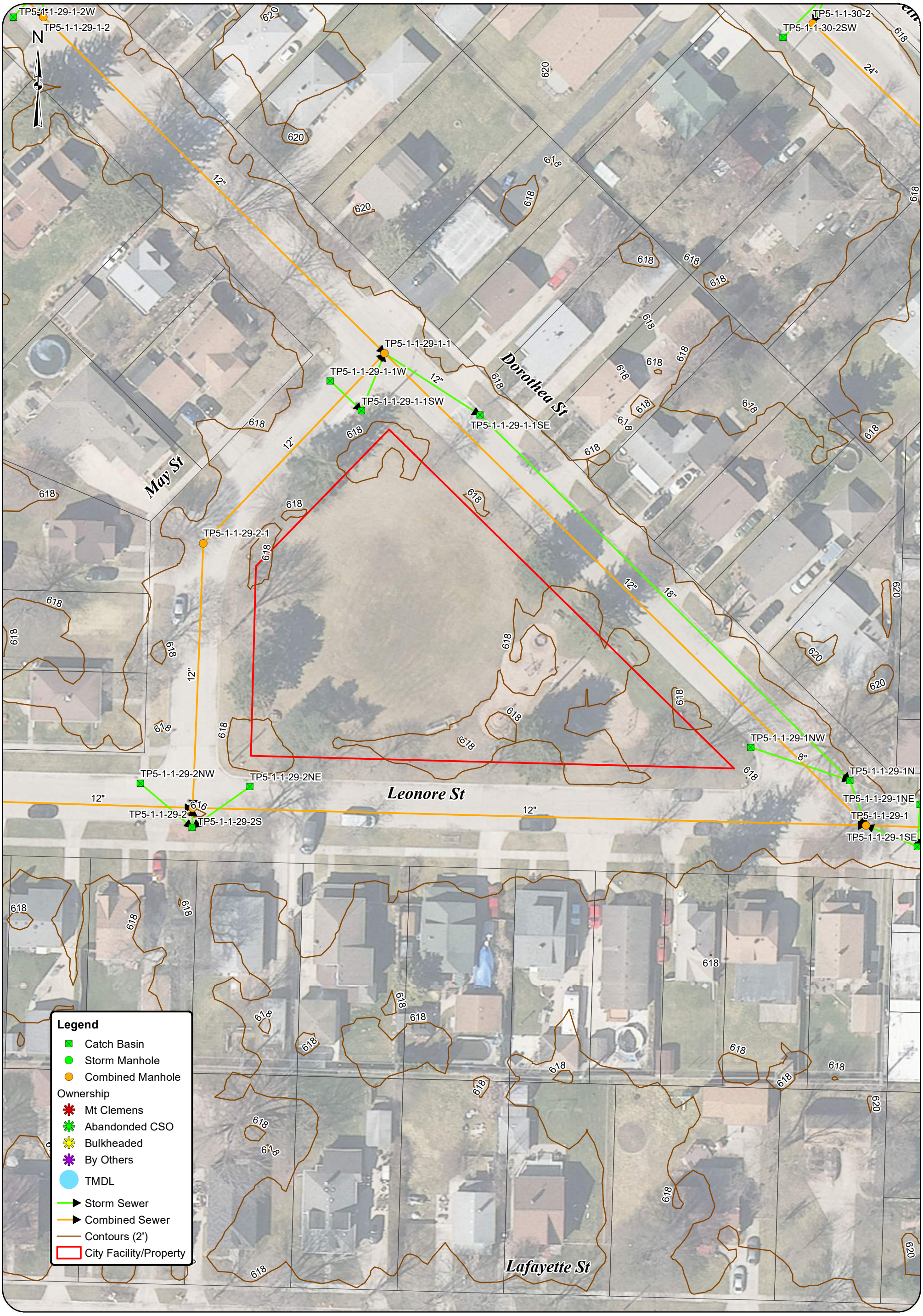
REVISIONS

DATE	REMARKS

City of Mount Clemens

Jermaine Jackson Comm. Center
58 Orchard St.

PANEL NUMBER: A.17



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REVISIONS

DATE	REMARKS

City of Mount Clemens

Dorothea-Leonore Park
Dorothea St. at Leonore St.

PANEL NUMBER: A.18

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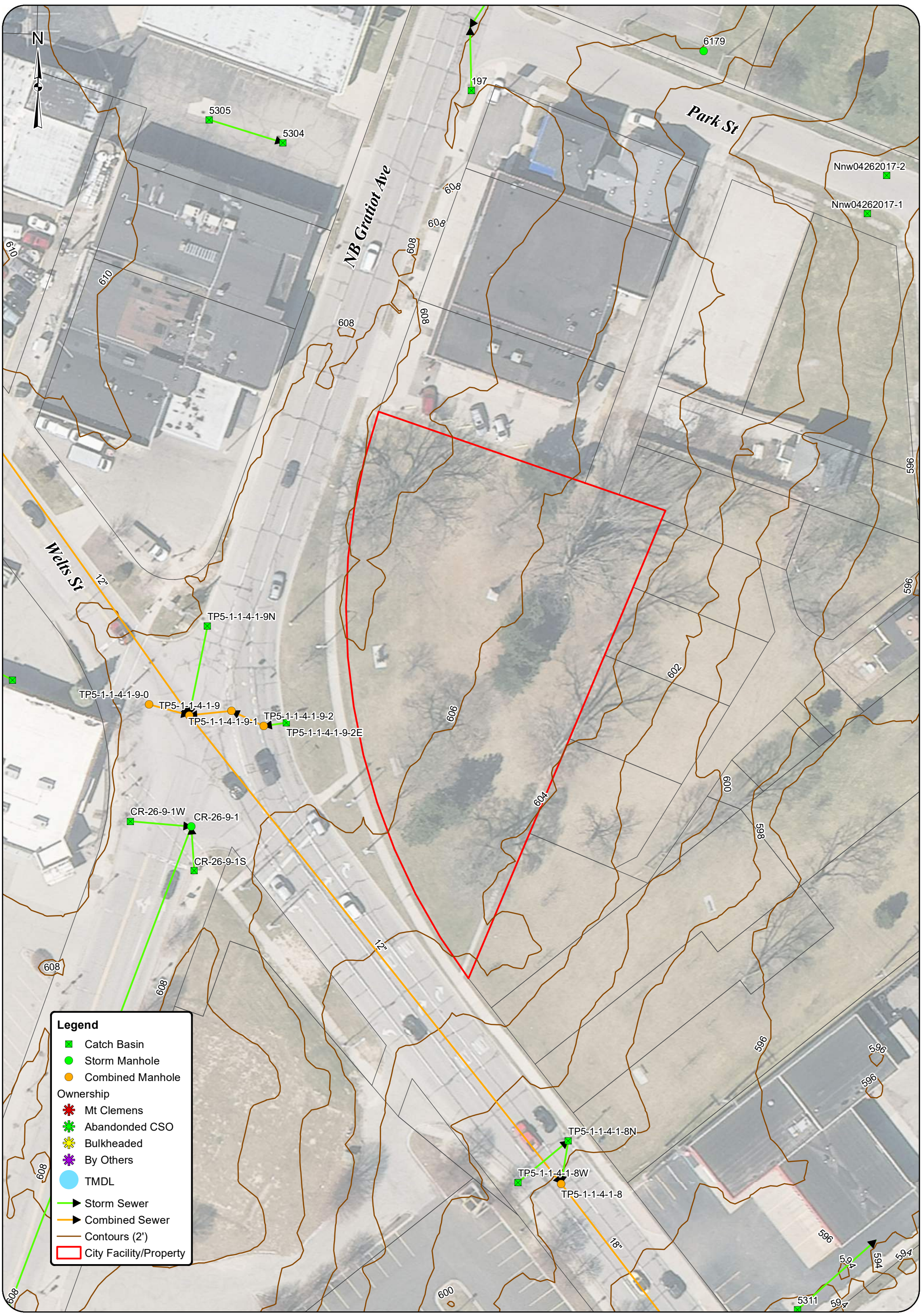

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REVISIONS

DATE	REMARKS

City of Mount Clemens

Clemens Park
NB Gratiot Ave. at N. Main St.

PANEL NUMBER: A.19

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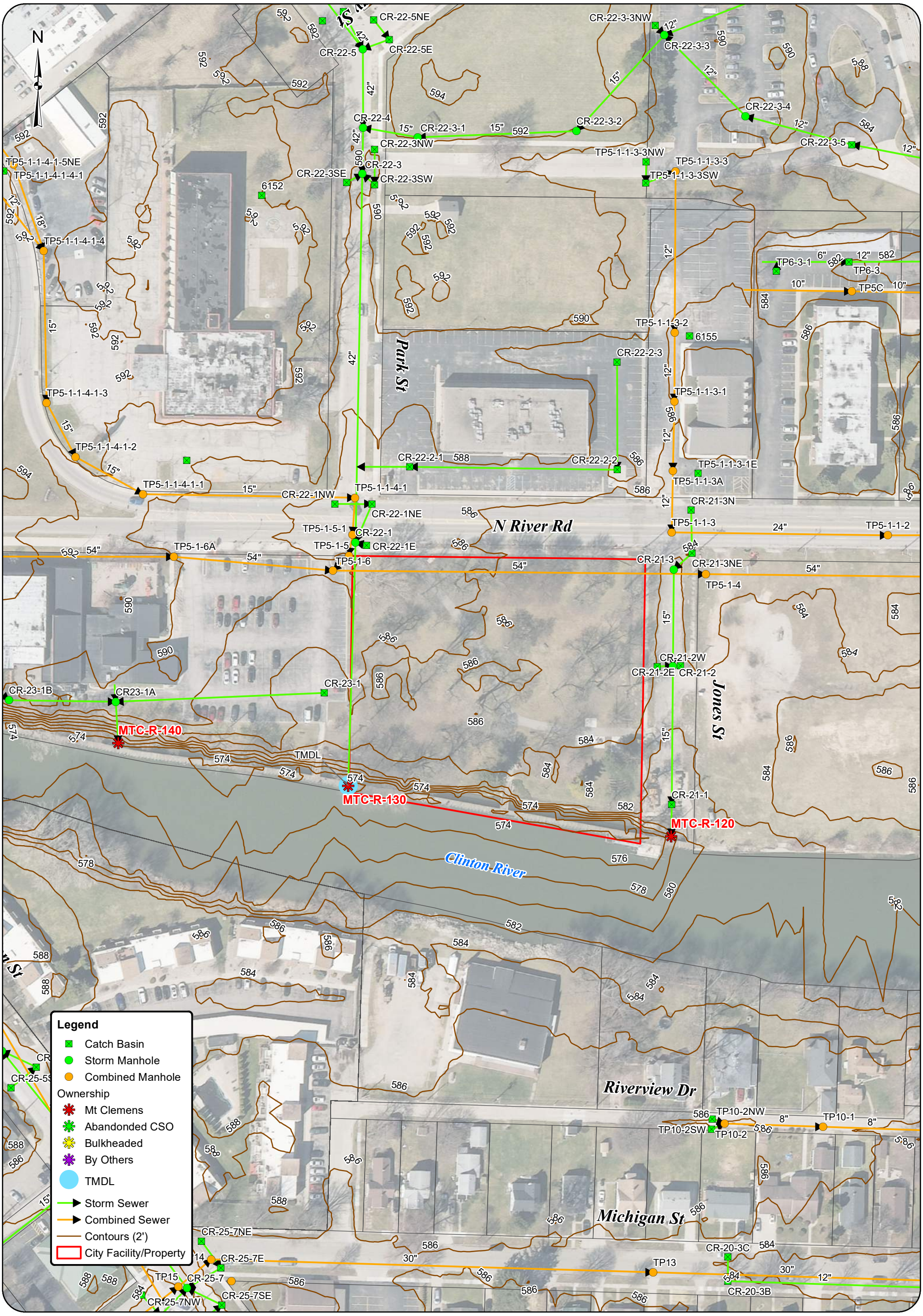

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REVISIONS

DATE	REMARKS

City of Mount Clemens

MacArthur Park
96 N. River Rd.

PANEL NUMBER: A.20

NORTH
W NTS E
S

CT-G-001 (GT-20)
MTC-G-025 (GD-13)
MTC-G-030 (GD-14)
MTC-G-010 (GD-18)
MTC-G-020 (GD-15)
MTC-G-015 (GD-17)
MTC-G-015A (GD-16)
MTC-G-050 (GD-11)
MTC-G-055 (GD-10)
MTC-G-075 (GD-2)
MTC-G-080 (GD-1)
MTC-G-060 (GD-9)
MTC-G-090 (GD-3)
MTC-G-065 GD-7
MTC-G-070 (GD-6)
MTC-G-100 (GD-4)
MTC-G-040 (GD-12)
MTC-G-063 (GD-8)
MTC-G-110 (GD-5)
MTC-G-120 (GD-5A)
MTC-G-130 (M-97-1)
MTC-G-140 (M-97-2)
MTC-G-999
MTC-C-010 (CR-22-25)
MTC-C-020 (CR-22-23-1)
MTC-C-030 (CR-22-22-1)
MTC-C-040 (CR-22-21-1)
MTC-C-050 (CR-22-19NW)
MTC-C-060 (CR-22-19SW)
MTC-C-070 (CR-47-26-7)
MTC-C-080 (CR-47-26-3-3)
MTC-C-090 (CR-47-27)
MTC-C-100 (CR-47-22A)
MTC-C-110 (CR-47-21-1)
LM-001 (CR-47-18E)
LM-002 (CR-57-13NW)
LM-003 (CR-26-6-3)
LM-004 (CR-26-6-7)
MTC-R-010 (CR-2)
MTC-R-020 (CR-3)
MTC-R-030 (CR-5)
MTC-R-040 (CR-9)
MTC-R-050 (CR-10)
MTC-R-053 (CR-10A)
MTC-R-055 (CR-11)
MTC-R-060 (CR-12)
MTC-R-065 (CR-13)
MTC-R-070 (CR-14)
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MTC-R-520 (CR-64)
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CT-R-005 (CR-1A)
P-D-050 (I94-1)
MTC-D-010 (I94-2)
P-R-037 (CR-8)
P-R-035 (CR-7)
P-R-033 (CR-6)
P-R-025 (CR-4)
P-R-001 (CR-1)

Individual Permit No. MIS111703
Individual Permit No. MIS110256
Individual Permit No. MIS111406
Individual Permit No. MIS110876
Individual Permit No. MI0023647
WWTP Outfall
Outfall 3 (RTB) (CR-15)
RTB Outfall

DUNHAM RD
ELIZABETH RD
N CHRISTINE CIR
S CHRISTINE CIR
MARK DR
PARNACOTT DR
CARLSON DR
ELLWOOD ST
ROSEVIEW BLVD
ALTER CT
VALLEY DR
N GROESBECK HWY
LAFAYETTE ST
N WILSON BLVD
MADISON ST
LEONORE AVE
DOROTHEA AVE
ELIZABETH ST
ENGLEWOOD AVE
YEAMANS AVE
PARKVIEW AVE
GALLUP AVE
JONES ST
KENDRICK AVE
HUBBARD AVE
LINCOLN ST
GRAND AVE
UNION ST
CASS AVE
CANFIELD DR
HURON AVE
CLAIR AVE
HIGH ST
SCOTT BLVD
EUCLID AVE
AHRENS ST
MOSER PL
HOLLYWOOD CT
OLDE ST
BOEHME ST
ORCHARD ST
CLEMENS ST
HOWARD ST
JOHN ST
CHARLES ST
JOY BLVD
WALNUT ST
N GRATIOT AVE
WELTS ST
GRATIOT CT
CLINTON ST
STAPLETON ST
BROOKS ST
PARK ST
COURT ST
N WALNUT ST
N BROADWAY ST
CLARA ST
EUCLID ST
MACOMB DAILY DR
N RIVER RD
RIVERVIEW DR
MICHIGAN ST
GIBBS ST
FESSENDEN ST
AVERY ST
RATHBONE ST
DON ST
5TH ST
4TH ST
3RD ST
2ND ST
AMVET DR 1ST ST
DICKINSON ST
NEWBERRY ST
MACOMB PL
PINE ST
CHERRY ST
MAIN ST
MARKET ST
PARROTT
S GRATIOT AVE
S NB GRATIOT AVE
S SB GRATIOT AVE
NEWBERRY ST
MACK ST
BYRON CT
WOOLWORTH CT
ELDREDGE ST
GROVE PARK ST
WASHINGTON ST
FERNDALE RD
MARY ST
COMET ST
N ROSE ST
N HIGHLAND ST
S ROSE ST
S HIGHLAND ST
LOGAN ST
SHERIDAN ST
CHURCH ST
FLORAL AVE
MOROSS ST
LODEWYCK ST
MILLER ST
WILSON BLVD
LESLIE ST
SOUTH AVE
SMITH ST
LANA CT
BEULAND AVE
BREITMEYER PL
BREITMEYER CT
ROBERTSON CT
ROBERTSON ST
W BREITMEYER CT
MALOW ST
HAMPTON ST
UTE ST
EMERY ST
WARRINGTON ST
HAMPTON RD
KINGSLEY ST
WESTLAWN ST
IROQUOIS DR
ROSLYN ST
CUMBERLAND ST
HARRINGTON BLVD
WELLINGTON CREST BLVD
SHAWASSEE CIR
CAMBRIDGE DR
HUNTINGTON ST
N ESPLANADE ST
CHIPPEWA ST
CREST ST
BALMORAL DR
ESPLANADE ST
BURLINGTON DR
WELLESLEY DR
MULBERRY ST
BELLEVIEW AVE
LOIS LN
COLONIAL CT
KIBBEE ST
GREINER
BEYNE ST
MEADLE CT
MEADLE ST
BARBARA CT
BARBARA ST
LINDSEY DR
CLINTON RIVER DR
MULLIGAN DR
INCHES ST
SHADYSIDE DR
BURR ST
WOODSIDE CIR
AVON ST
HARPER AVE
ROHNS ST
SOUTH AVE
RIVERSIDE DR
CROCKER BLVD
EASTMAN ST
DICKINSON PL
LAWNDALE ST
ALLEN ST

Clinton River
Clinton River Spillway

Legend

Outfall Points

Ownership

- Mt Clemens
- Abandonded CSO
- Bulkheaded
- By Others
- WWTP/RTB Effluent Outfalls
- Catch Basin
- Storm Manhole
- TMDL
- Storm Sewer
- Ditches
- County Drain (Open)
- Individual Permits

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SCALE: 1 " = 564 '	MAP DOCUMENT: OverallOutfalls.mxd	
PROJECT NO: 0220-0113	CREATED BY: AWD	CHECKED BY: CBR

REVISIONS

DATE	REMARKS

City of Mount Clemens

Known Outfall Locations

PANEL NUMBER: A.21

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Combined Sewer Area - 423.92 ac

- Clinton Twp. - 6.60 ac
- MDOT - 14.32 ac
- MCDR - 2.45 ac
- Mt. Clemens - 400.55 ac

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DATE PRINTED: February 13, 2023	DATE CREATED: July 22, 2019
SCALE: NTS	MAP DOCUMENT: CS System Map Overall.mxd
PROJECT NO: 0220-0119	CREATED BY: AWD / CHECKED BY: AC

City of Mt. Clemens

Combined Sewer Areas

REFERENCE SHEET NUMBER	PAGE NAME
Index	A.22

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NORTH
W
E
S
1":300'

MTC-C-010
MTC-C-020
MTC-C-030
MTC-C-040
MTC-C-050
MTC-C-060
MTC-C-070
MTC-C-080
MTC-C-090
MTC-C-100
MTC-C-110
LM-001
LM-003
LM-004
MTC-R-010
MTC-R-020
MTC-R-030
MTC-R-040
MTC-R-050
MTC-R-053
MTC-R-055
MTC-R-060
MTC-R-070
MTC-R-080
MTC-R-090
MTC-R-100
MTC-R-110
MTC-R-115
MTC-R-120
MTC-R-130
MTC-R-140
MTC-R-150
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MTC-R-170
MTC-R-180
MTC-R-190
MTC-R-195
MTC-R-200
MTC-R-210
MTC-R-215
MTC-R-220
MTC-D-010
P-D-050
P-R-025
P-R-033
P-R-035
P-R-037
001
002
Outfall 3 (RTB)
Individual Permit No. MI0023647
Individual Permit No. MI0023647
Clinton River

CANFIELD DR
HURON AVE
CLAIR AVE
HIGH ST
SCOTT BLVD
EUCLID AVE
AHRENS ST
MOSER PL
HOLLYWOOD CT
GALLUP AVE
JONES ST
PARK ST
CLARA ST
JOY BLVD
CHARLES ST
GIBBS ST
FESSENDEN ST
RIVERVIEW DR
MICHIGAN ST
DON ST
N GRATIOT AVE
S GRATIOT AVE
WELTS ST
NORTH AVE
CLINTON ST
STAPLETON ST
MARKET ST
NEW ST
MACOMB PL
CHERRY ST
PINE ST
N MAIN ST
N WALNUT ST
WALNUT ST
MACOMB DAILY DR
N RIVER RD
OLDE STOLD ST
EUCLID ST
BOEHME ST
GRATIOT CT
JOHN ST
ORCHARD ST
CLEMENS ST
HOWARD ST
BROOKS ST
COURT ST
N BROADWAY ST
DICKINSON ST
AMVET DR
1ST ST
2ND ST
3RD ST
4TH ST
5TH ST
AVERY ST
RATHBONE ST

Legend

Outfall Ownership

- Mt Clemens
- Abandoned CSO
- Bulkheaded
- Owned By Others
- WWTP/RTB Effluent Outfalls
- Catch Basin
- Storm Manhole
- TMDL
- Storm Sewer
- Ditches
- County Drain (Open)

ANDERSON, ECKSTEIN AND WESTRICK, INC.
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REVISIONS

DATE	REMARKS

City of Mount Clemens

Known Outfall Locations

QUADRANT	PANEL NUMBER
NE	A.23

CAUTION

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NORTH
W 1":300' E
S

CT-G-001
DUNHAM RD
MTC-G-080
ELIZABETH RD
MTC-G-090
MTC-G-075
MTC-G-015A
MTC-G-030
MTC-G-040
MTC-G-055
MTC-G-015
MTC-G-060
N CHRISTINE CIR
MTC-G-050
MTC-G-070
MTC-G-100
Individual Permit No. MIS111703
MTC-G-010
MTC-G-020
MARK DR
S CHRISTINE CIR
MTC-G-063
MTC-G-065
MTC-G-110
CARLSON DR
PARNACOTT DR
MTC-G-120
ELIZABETH ST
DOROTHEA AVE
MAY ST
LEONORE AVE
ELLWOOD ST
N GROESBECK HWY
LAFAYETTE ST
ROSEVIEW BLVD
N WILSON BLVD
ENGLEWOOD AVE
ALTER CT
MADISON ST
YEAMANS AVE
VALLEY DR
MTC-G-130
NORTH AVE
PARKVIEW AVE
HOLLYWOO
GALLUP AVE
MTC-G-140
N ROSE ST
COMET ST
N HIGHLAND ST
JONES ST
GALL
GROVE PARK ST
KENDRICK AVE
CLINTON ST
STAPLETON ST
HUBBARD AVE
WASHINGTON ST
FERRIN PL
S GRATIOT AVE
MTC-C-090
LINCOLN ST
NEW ST
MACOMB PL
FERNDALE RD
Individual Permit No. MIS110256
MARY ST
Individual Permit No. MIS111406
GRAND AVE
ELDREDGE ST
MTC-C-100
MTC-C-999
UNION ST
PINE ST
CASS AVE
MACK ST
BYRON CT
MTC-C-110
N WALNUT
N WILSON BLVD
WOOLWORTH CT
LM-001
LM-002
CHURCH ST
S GROESBECK HWY
LOGAN ST
SHERIDAN ST
N ROSE ST
Individual Permit No. MIS110876

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City of Mount Clemens

Known Outfall Locations

QUADRANT	PANEL NUMBER
NW	A.24

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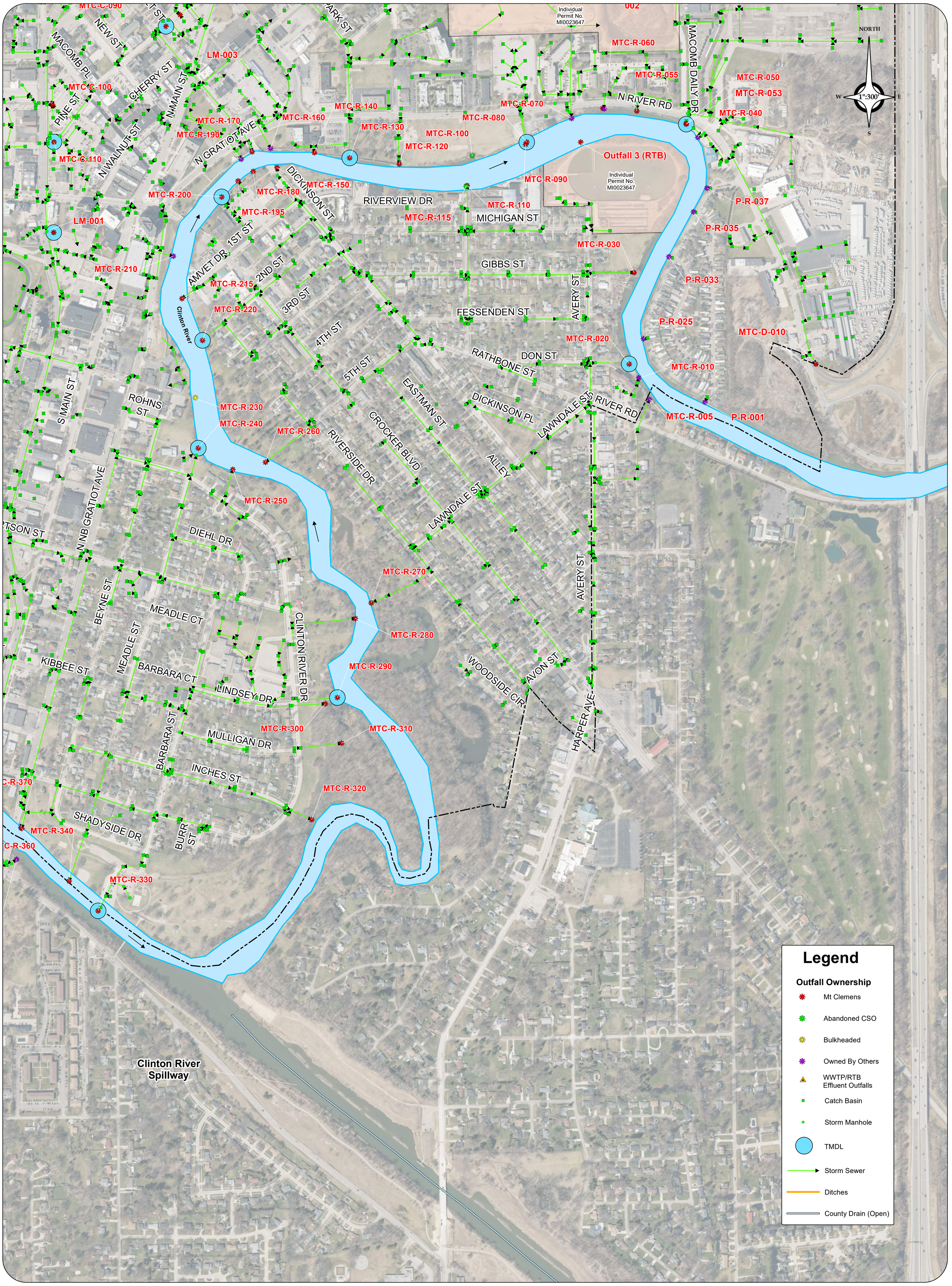

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City of Mount Clemens

Known Outfall Locations

QUADRANT	PANEL NUMBER
SE	A.25

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NORTH
W
E
S
1":300'

LOGAN ST
SHERIDAN ST
N ROSE ST
S GROESBECK HWY
Individual Permit No. MIS110876
S ROSE ST
MALOW ST
FLORAL AVE
S HIGHLAND ST
WILSON BLVD
MOROSS ST
LODEWYCK ST
MILLER ST
QUEEN ST
LESLIE ST
SOUTH AVE
S MAIN ST
N NB GRATIOT AVE
CHURCH ST
LM-001
LM-002
MTC-R-21
CT-R-520
MTC-R-505
MTC-R-510
MTC-R-500
W BREITMEYER CT
W BREITMEYER PL
ROBERTSON CT
BREITMEYER PL
ROBERTSON ST
MOROSS AVE
BEULAND AVE
SMITH ST
LANA CT
MTC-R-480
MTC-R-460
MTC-R-450
MTC-R-490
Clinton River
MTC-R-440
MTC-R-470
CUMBERLAND ST
ROSLYN ST
HARRINGTON BLVD
BELLEVIEW AVE
LOIS LN
COLONIAL CT
GREINER
S SB GRATIOT AVE
KIBBEE ST
MTC-R-420
MTC-R-430
WELLINGTON CREST BLVD
MTC-R-410
MTC-R-390
MTC-R-370
MTC-R-400
SHIAWASSEE CIR
CAMBRIDGE DR
MTC-R-395
MTC-R-380
MTC-R-360
MTC-R-340
SHADYSIDE D
MTC-R-350
HUNTINGTON ST
N ESPLANADE ST
MULBERRY ST
CHIPPEWA ST
CREST ST
BALMORAL DR
ESPLANADE ST
BURLINGTON DR
WELLESLEY DR
BEYNE ST
MEADL
EMERY ST
UTE ST
WARRINGTON ST
HAMPTON RD
KINGSLEY ST
WESTLAWN ST
HAMPTON ST
IROQUOIS DR

Legend

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City of Mount Clemens

Known Outfall Locations

QUADRANT	PANEL NUMBER
SW	A.26

CAUTION

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City of Mount Clemens

Storm Water Management Plan (SWMP)

Appendix B

Public Education Plan (PEP)

Revised April 4, 2023
Previous Revision May 20, 2019

Clinton River Watershed, and Lake St. Clair Direct Drainage, Collaborative PEP (dated March 21, 2023)

Clinton River Watershed
Anchor Bay
Lake St. Clair Direct Drainage

Collaborative Public Education Plan

Approved:
March 21st, 2023

Submitted by the Clinton River Watershed Council on behalf of
Macomb County, Oakland County
and the MS4 permit holders that participate in the
Clinton River Watershed Council's Stormwater Education Program

Table of Contents

I. INTRODUCTION

This watershed wide Public Education Plan (PEP) was developed to inform the public within the Clinton River Watershed about their role in protecting water quality and preventing stormwater pollution. This plan was created by the municipalities and other partners in the Clinton River Watershed with the input of stakeholders and professionals in the environmental education field. This plan outlines the public education goals and messages that must be communicated under the requirements of the National Pollutant Discharge Elimination System (NPDES) Phase I and Phase II regulations. The PEP also describes the existing and future efforts the communities and other partners will undertake to achieve these education goals, and how these efforts will be evaluated.

II. PARTNERS & STAKEHOLDERS

This watershed wide PEP is submitted on behalf of Macomb County, Oakland County and the MS4 permit holders that participate in the Stormwater Education Program facilitated by the Clinton River Watershed Council (CRWC). Municipal staff, county agencies, and CRWC participated in the development of the PEP. The CRWC Stormwater Education program was developed to assist communities that must comply with the NPDES Phase I or Phase II stormwater discharge regulations. Activities facilitated by CRWC, Macomb and Oakland Counties, and the MSU Extension Office will be reported on behalf of the following permit holders and their nested MS4's.

Avondale School District
Charter Township of Chesterfield
Charter Township of Clinton
Charter Township of Harrison
Charter Township Orion
Charter Township of Oxford
Charter Township of Shelby
Charter Township of Washington
City of Center Line
City of Keego Harbor
City of Eastpointe
City of Fraser
City of Grosse Pointe
City of Grosse Pointe Farms
City of Grosse Pointe Park
City of Grosse Pointe Shores
City of Fraser
City of Harper Woods
City of Hazel Park
City of Madison Heights
City of Mount Clemens
City of New Baltimore
City of Orchard Lake Village
City of Pontiac
City of Rochester
City of Rochester Hills
City of Roseville
City of St. Clair Shores
City of Sterling Heights
City of Sylvan Lake
City of the Village of Clarkston
City of Troy
City of Utica
City of Warren
Independence Township
Macomb Intermediate School District
Macomb Township
Macomb County
Oakland County
Oakland University
Oxford Area Community Schools
Rochester Community Schools
Village of Lake Orion
Village of New Haven
Village of Oxford
Village of Romeo

Clinton River watershed communities, subwatershed groups, and partners agreed that approaching stormwater education on a watershed, cross-jurisdictional basis is both cost-effective and environmentally sound. The watershed approach allows the partners to share information and resources to address stormwater concerns at their source. Similarly, developing and implementing a public education program on a watershed basis provides a consistent and effective mechanism for protecting water resources across the region, while leveraging financial resources in each community.

During preparation of this PEP, various municipal staff, environmental organizations, county agencies, and the MSU Extension offices were contacted.

The following information was compiled to identify and organize existing stormwater education materials and programs:

- Existing materials or programs used to educate the public about watersheds and water quality protection (e.g. brochures, videos, displays, school programs, etc.).
- Existing audiences to target for watershed education (e.g. homeowners associations, lake associations, churches, civic groups, business associations, etc.).
- Existing communication methods that could be used to disseminate watershed education (e.g. cable access channel, email, website, newsletter, water bills, etc.).

III. CLINTON RIVER WATERSHED COUNCIL'S STORMWATER EDUCATION PROGRAM

The CRWC is a nonprofit organization dedicated to protecting, enhancing, and celebrating the Clinton River, its watershed, and Lake St. Clair. For over 50 years, the CRWC has worked collaboratively with local governments, businesses, individuals, and other community groups to address water quality and land use issues in the watershed. Stormwater runoff is the leading source of pollution in the Clinton River today, thus CRWC's efforts are focused primarily on decreasing the amount of stormwater and stormwater pollution reaching our streams, rivers, and lakes. CRWC works to achieve its mission by providing education and stewardship programs to the more than 1.5 million people, 63 communities, and 4 counties in the Clinton River watershed.

Upon the request of a number of communities, CRWC developed the Stormwater Education Program to assist its members in meeting their Phase I or Phase II public education requirements. The components of the Stormwater Education Program are outlined in this PEP, along with materials and programs offered by the counties, CRWC, and MSU extension. These materials and programs will be supported and promoted by the MS4 permittees named in this PEP. In subscribing to the Stormwater Education Program, each participating entity has entered into contract with the watershed council. CRWC has agreed to provide the programs outlined in this plan.

As outlined in this PEP, CRWC's program includes the following major components:

- Education of the public and recruitment of volunteers in each subwatershed through a variety of outreach methods (presentations, workshops, websites, cable TV, print media, etc.).
- Regular volunteer training sessions and establishment of water quality monitoring sites throughout each subwatershed.
- Quarterly stormwater management forums for municipal staff, City Council members, planners, engineers, consultants, MDEQ MS4 permit staff, and other watershed stakeholders to share information and discuss topics related to stormwater management, planning, and infrastructure development.
- Coordination of other on-going education and stewardship efforts, including River Day, Weekly Clean, Clinton Clean-Up, paddling events, water festivals, Adopt-A-Stream citizen science program, the Stream Leaders student river monitoring program, and the RiverSafe LakeSafe program.

- Engage and collaborate with municipalities to promote and facilitate CRWC's WaterTowns™ place making initiative focused on connecting communities to their waterways through education, green stormwater infrastructure, history, art, and ecology.
- Development and distribution of supporting print and web-based materials.

IV. GOALS & OBJECTIVES

The goal of this PEP is to promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Pollution prevention shall be encouraged.

"Public" is defined to include all persons who potentially could affect the authorized stormwater discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, construction contractors, and developers.

This PEP is designed to ensure that the targeted audiences ("public") are reached with the appropriate messages for the following nine topics as required in the 2003 NPDES Phase II stormwater permit:

1. Responsibility and stewardship in their watershed.

2. The connection of MS4 catch basins, storm drains, and ditches to area waterways, and the potential impacts these could have on the surface waters of the state.

3. Public reporting of illicit discharges or improper disposal of materials in MS4s.

4. The effects and need to minimize the amount of residential or noncommercial wastes discharged into MS4s, including:

    i. Preferred cleaning materials and procedures for car, pavement, and power washing.
    ii. Acceptable application and disposal of pesticides, herbicides, and fertilizers.
    iii. Proper disposal practices for grass clippings, leaf litter, and animal wastes that get flushed into MS4s and the surface waters of the state.

5. 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.

6. For property owners with septic systems, the proper septic system care and maintenance, and how to recognize system failure.

7. The benefits of using native vegetation as well as other landscape practices that enhance water quality such as rain gardens and rain barrels.

8. For permittees with riparian land owners, methods for managing riparian lands to protect water quality.

9. Additional pollutants unique to commercial, industrial, and institutional entities as the need is identified.

10. Green stormwater infrastructure development and benefits.

All PEP participating permittees were required to apply for a new MS4 permit in their respective permit cycle years. The following key messages will be covered within the Clinton River Watershed and Lake St. Clair Direct Drainage Collaborative Public Education Plan. This Collaborative PEP was developed and will be implemented to continue meeting the PEP requirements of the 2003 MS4 permit as well as the new MS4 permit going forward.

A. Promote public responsibility and stewardship in the applicant's watershed(s).

B. Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state.

C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.

D. Promote preferred cleaning materials and procedures for car, pavement, and power washing.

E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.

F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4.

G. Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids.

H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.

I. Educate the public on and promote the benefits of green stormwater infrastructure and Low Impact Development.

J. Promote methods for managing riparian lands to protect water quality.

K. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to stormwater runoff.

V. REQUIRED ELEMENTS –EDUCATION ACTIVITIES

Appendix A details the activities and methods that the **Clinton River Watershed Council, Macomb County, Oakland County, and MSU extension will perform on behalf of the participating communities.** The matrix breaks out the activities according to the elements and key messages that they address and describes the target audiences, delivery mechanisms, timeline, responsible parties, and evaluation methods for each activity. An overall evaluation plan is also included in Section VI.

VI. EVALUATION PLAN

A variety of mechanisms will be employed. Some will quantify the usage of materials (e.g. number of materials distributed, website hits) and participation in events (e.g. number of attendees at a presentation or workshop, number of participants at an event). These mechanisms can be useful in determining whether the education effort is reaching the audience; however it is difficult to evaluate behavior change resulting from the education activity using these purely quantitative methods.

The CRWC will use an online survey tool to measure post contact behavioral changes. For example; email addresses will be collected from all CRWC facilitated event attendees, 60-90 days following the event an email with a link to the online survey will be sent asking the participant some questions about their general knowledge and behavior changes. While the surveys are not scientifically significant the results of the survey can help mold the Public Education Efforts throughout the Clinton.

Through CRWC's Adopt-A-Stream monitoring program, it is possible to evaluate long-term changes in water quality. The results are compiled in an annual data summary, which allows a simple mechanism for measuring improvements or declines in water quality across the various subwatersheds. This data is managed in a document that records water quality monitoring results for up to the past five years. Improvements in water quality cannot be attributed solely to a successful public education effort, but indicate the overall effectiveness of the stormwater management efforts in the community, subwatershed, and watershed-wide.

VII. REPORTING

The Clinton River Watershed Council will provide a Biennial Progress Report on this Public Education Plan to the Michigan Department of Environmental Quality. This Biennial Report of the watershed wide collaborative PEP is submitted by the CRWC on behalf of Macomb County, Oakland County and the MS4 permit holders that participate in the Stormwater Education Program facilitated by CRWC. Activities facilitated by CRWC, Macomb and Oakland Counties, and the MSU Extension Office will be reported on behalf of the permit holders and their nested MS4s.

VIII. APPENDIX A: ACTVITIES DETAIL TABLE 1

IX. APPENDIX B: COMMUNITY SPECIFIC ACTIONS TRACKING SPREADSHEET

X. APPENDIX C: LETTERS OF COMMITMENT FOR SERVICES AND PROGRAMS

1. Macomb County Public Works Office
2. Oakland County Water Resources Commissioner's Office
3. MSU Extension

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	TARGET AUDIENCE	Key Message(s) Addressed Green =High Priority Orange= Medium Priority Yellow= Low Priority											FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
					PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education			
	Watershed Wide Actvities																	
A-C, E-G, I, J	Michigan Green Schools Program	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”.	YES	K-12th grade students and teachers	x	x	x		x	x	x		x	x		Annually	Oakland Macomb	Minimum participation of 100 schools annually in each county.
A-G, I,J	River Day	CRWC will recruit, host and promote events. MS4 permit communities will promote River Day events.	YES	Citizens including the general public and county and municipal employees	x	x	x	X	x	x	x		x	x		Annually	CRWC	Promote and publicize a minimum of 15 events annually.
A,B,C,J, K	Clinton Cleanup	CRWC will recruit, host and promote events. MS4 permit communties will promote Clinton Clean Up events. Recruitment of volunteers is targeted to the general public, as wells as commerical, industrial and corporate partners.	YES	Citizens including the general public and corporate employees/volunteers	x	x	x							x	x	Annually In September	CRWC	Host a minumum of 12 events annually 150 volunteers and 150 bags of trash removed.
A,B,C,J, K	Weekly Clean	CRWC will recruit, host and promote weekly clean up in the watershed. Recruitment of volunteers is targeted to commerical, industrial and corporate partners.	YES	Citizens including the general public and corporate employees/volunteers	x	x	x							x	x	33-34 weeks a year	CRWC	**Host weekly events beginning in April through the third week of November, with a total volunteer count of 375 and approximately 3,000 lbs of trash removed annually.**
A-G, I,J	School Program - Clinton River Water Festival at Oakland University	Participate in the Clinton River Water Festival at Oakland University, providing staff for event planning, registration, volunteer guiding, and presentations at the festival. CRWC and Oakland County representatives serve on the planning committee that meets a minimum of 5 times annually. This water festival educates students in the Oakland County portion of the Clinton River watershed.	YES	4th-5th grade students, teachers; corporate volunteers	x	x	x	x	x	x	x		x	x		Annually in May	Oakland CRWC	Maintain a level of 1100 students per year plus 150 adults chaperones and teachers and 100 volunteers.

A-G, I,J	School Program - Lake St. Clair Water Festival at Macomb Community College	Participate in the Lake St. Clair Water Festival, providing staff for event planning, registration, volunteer guiding, and presentations at the festival. CRWC and Macomb County Public Works representatives serve on the planning committee that meets a minimum of 10 times annually. This water festival educates students in the the the Clinton River, Lake. St. Clair, and Anchor Bay (sub)watersheds.	YES	4th-5th grade students,teachers; corporate volunteers	x	x	x	x	x	x	x		x	x		Annually in May	Macomb CRWC	Maintain a level of 1500 participants.
A-J	Stormwater Management Forum	CRWC will plan, promote, and host quarterly stormwater management forums. These forums bring decision makers and stakeholders within our watershed together to share information and discuss relevant topics in stormwater management.	YES	County and Municipal Employees, NGO/NPO employees, MS4 permittees, City Councils, engineers, city planners, public works operators, industrial and commercial facilities management and employees.	x	x	x	x	x	x	x	x	x	x	x	Quarterly	CRWC	Quarterly forums, at least 1 presenter at each forum with a minimum of 15 attendees.
A-K	Stormwater Education: Community Presentations and Workshops	Presentation on watersheds, stormwater pollution, green infrastructure, and lifestyle practices that preserve and protect water resources. (CRWC will host a minimum of 2 in each subwatershed.) Topics will vary and will be based on host subwatershed requests. CRWC will communicate with webmasters and communication staff of the MS4 permittees community to ensure promotion of events.	YES	Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	CRWC	**Minimum 14 per year (2 per subwatershed). Attendance is tracked via sign-in sheets and submitted in the biennial report.**
A,B,C,J	Adopt-A-Stream Training Workshops	Adopt A Stream training includes one 3-hour workshop on watersheds, stormwater pollution, watershed friendly practices, and training in volunteer monitoring procedures including macroinvertebrate collection and physical assessment. (Minimum of one 3 hr workshop per subwatershed) Bug Identification Workshops are also held to ensure that each team has at least one bug certified member.	YES	Citizens including the general public and county and municipal employees	x	x	x							x		Continuous	CRWC	**Minimum 7 AAS trainings annually (1 per subwatershed). Minimum 2 Bug ID trainings annually.**
A,B,C,J	Adopt-A-Stream Volunteer Water Quality Monitoring Program	Coordination of volunteer monitoring teams at pre-selected sites.	YES	Citizens including the general public and county and municipal employees	x	x	x							x		Biannually	CRWC	Monitor a minimum of 35 locations, with a minimum of 100 volunteers on the first Saturday in May and the first Saturday in October.

A-K	Subwatershed Website	Hosted by CRWC website; features subwatershed map, photos, description, events and links to education resources.	YES	Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Continuous	CRWC	Continue to maintain page and update information and verify participating communites links to this website. Website admin (CRWC) can view number of website hits and will submit in biennial report.
A-C,E,F,I,J	Stream Leaders Student River Monitoring Program	The mission of the Stream Leaders program is to raise young people's awareness of the importance of water quality; and to help cultivate a connection to a Great Lakes stewardship identity. This is accomplished through a multidisciplinary, place-based initiative that provides students with an educational experience in water quality monitoring, data interpretation, and citizen action. Students and teachers perform biological, physical, and chemical stream monitoring assessments. They then interpret and analyze stream data and submit it to CRWC to corroborate.	YES	K-12th grade students, teachers and chaperones	x	x	x		x	x			x	x		Program is continuous; Actual monitoring events in April/May and October.	CRWC	Retain participation of a minimum of 3,100 students and 20 schools per year, weather permitting.
A, D-F, H-J	RiverSafe LakeSafe	Educational outreach survey tool offering homeowners the opportunity to become certified "RiverSafe LakeSafe" by CRWC if they commit to the series of household water quality BMPs at home that reduce stormwater pollution and protect local fresh surface waters. Encourage MS4 permit communities to become certified and promote through City Council, beautification boards, planning committees, or other local committees.	YES	Home/Property owners	x			x	x	x		x	x	x		Continuous	CRWC	add a minimum of 10 new certifications a year
I-K	WaterTowns	CRWC's place making initiative focused on connecting communities to their waterways through education, green infrastructure, history, art and ecology. Municipalities are equipped with complete shovel ready green infrastructure project designs custom for their community and are given the opportunity to implement a GI project, providing an educational opportunity for the public to get involved through native plantings, educational signage, etc.	YES	Municipal Employees, property developers, general public									x	x	x	Continuous	CRWC	bring on a minimum of 2 new communities a year to the WaterTowns program

I-K	Stormwater Education: Industrial and Commercial Facilities	Provide educational materials and BMP fact sheets to industrial and commercial facilities. Target 2 industrial/commercial sectors per year. Distribute BMP information via email that is created specifically for each sector.	YES	Employees and property owners at industrial and commercial facilities. Property developers, planners, engineers.	x										x	Continuous	Macomb; Oakland; CRWC; MS4 Permittes	Target 2 sectors per year. Distribute BMP fact sheets through annual email blast to designated contact at each facility. Track distribution via list of businesses and emails sent.
I-K	Stormwater Education: Industrial and Commercial Facilities	Attend Regional Chamber of Commerce Networking events to build relationships with business owners and share information related to stormwater pollution prevention for business/industry.	YES	Employees and property owners at industrial and commercial facilities. Property developers, planners, engineers.	x										x		CRWC	Attend a minimun of 2 events annually.
A-K	Social Media Outreach	Use social media platforms (Facebook, Twitter, Instagram) to collaborate among partners for cross promotion of events, fundraisers, news, education, and community announcements.	YES	Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Continuous	CRWC	Track total monthly response and interactions such as likes, comments, and shares on Facebook, likes, responses, and retweets on Twitter, and likes on Instagram.
	Macomb County Specific Activities																	
A-K	Public Works Presentations	Presentations are offered to school and adult groups. These presentations educate citizens on pollution prevention in our waterways in order to improve the quality of life and promote economic prosperity with clean water.	YES	General Public in Macomb County	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	30 presentations per year
A-D,K	Clean Boating	Inform and promote clean boating practices with including pollution prevention, spill notification and invasive species control	YES	General Public	x	x	x	x							x	Seasonally	Macomb	Meet with local boating association once a year and hand out 50 flyers promoting current pollution prevention initiatives.
A,K	MSU Extension Understanding Groundwater	This presentation targets 4th through 6th graders. Using a groundwater model and hands on activities, students review basic water knowledge, learn what groundwater is, the surface/groundwater connection and the importance of protecting and conserving groundwater resources.	YES	Elementary students and educators	x										x	Annually	Macomb	Participation is tracked, based on school requests for the program and availability of staff
A-D, G,H,K	MSU Extension Water Conservation Program	Designed for 1st through 3rd graders. The children explore water conservation topics such as where water comes from, how to use water wisely, and how to protect and conserve this precious resource.	YES	Elementary students and educators	x	x	x	x			x	x			x	Annually	Macomb	100 classroom presentations per year

A,E,F,I,K	MSU Extension Master Gardener Program	The Michigan State University Extension Master Gardener Program is an adult horticulture education and volunteer leader training program. Volunteers are committed to improving the quality of life in Michigan through horticulture-based volunteerism and beautifying communities throughout the state.	YES	Citizens	x				x	x			x		x	Annually	Macomb	50 active volunteers providing 2,000 hours of volunteer service.
A,E,F,I,K	MSU Extension Master Composter Program	The Master Composter course instructs residents about yard waste composting and reduction. This shows the importance of improving your yard at little cost, with little odor or attracting critters, and teaches how to reduce waste that must be disposed. This program gives correct knowledge that can be shared through volunteer activities.	YES	General Public	x				x	x			x		x	Annually	Macomb	5 active volunteers providing 100 hours of volunteer service.
A-C, E,F,J,K	MSU Extension Sea Grant Summer Discovery Cruises	Summer Discovery Cruises offer anyone intersted in exploring Lake Erie, the Detroit River and Lake St. Clair the opportunity to get out on the water for an education experience.	YES	General Public	x	x	x		x	x				x	x	Seasonally	Macomb	250 participants per year
A,E,F,K	MSU Extension 4-H Environmental and Outdoor Education	Programs focus on teaching environmental responsibility and stewardship. This 4-H program area provides educational opportunities for youth to enjoy the outdoors and learn about the interconnection of people and nature.	YES	Youth	x				x	x					x	Annually	Macomb	1,000 youth per year mentored and educated by 100 adult and teen volunteers to deliver their programs.
A-K	MSU Extension Public Education Classes	Homeowner classes on environmentally safe maintenance	YES	General Public	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	25 attendees per year
A-K	Facility Tours	On-site tours of Macomb County facilities are available relating to environmental impacts to the Clinton River and Lake St. Clair. Tours focus on what the county is doing to improve our water resources and to educate the public on how they can help.	YES	General Public	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	Engage 20 participants per year.
A,B,C,G	Household Hazardous Waste Collection	The Macomb County Health Department sponsors hazardous waste collection drop-off sites for proper disposal. This includes fluorescent bulbs, used oil & oil filters, mercury thermometers, PCBs, etc.	YES	Macomb County Residents	x	x	x				x					Annually	Macomb	Host six events per year and a collection goal of 100,000 pounds of waste from participating residents

A,G	Medication Disposal	Low concentrations of prescription drugs, including opiates, and over the counter medications have been detected in the drinking water supplies of 24 major metropolitan areas throughout the country, including Detroit. Contributing to the problem is the disposal dilemma faced by residents who want to safely dispose of unwanted medications without flushing them down the drain.The Macomb County Health Department is partnering with local pharmacies to accept unwanted and expired medications.	YES	General Public	x						x					Annually	Macomb	Collect 1,000 pounds of unwanted medication annually. Data is collected from sheriff's department.
A,I-K	The Blue Economy Initiative	Macomb County's Blue Economy Initiative is designed to protect and enhance Macomb County's assests, Lake St. Clair and the Clinton River Watershed. Its objectives are to increase public access and cultivate investment while maintaining high standards for environmental stewardship.	YES	General Public	x								x	x	x	Annually	Macomb	Annually host a lake event.
	Lake St. Clair Initiative Circle the Lake Tour	Macomb County Planning and Economic Development created this public/private, non-profit association to increase the awareness, protect, and develop the rich and diverse assets on and around this fresh water community.	YES	General Public	x											Annually	Macomb	Distribute 500 maps through municipalities and tourism events.
A,J	Clinton River Blue Way Water Trail	Macomb Count created a Blue Way Water Trail to increase awareness of the natural assets the county possesses and create opportunities to publicize and increase access to the Clinton River.	YES	General Public	x									x		Annually	Macomb	Distribute 200 water trail maps through the CRWC.
A,E,J	Phragmites Invasive Removal	The intent of the project is to protect coastal marshes (wetlands) within the St. Clair watershed through the control of common reed, or phragmites. Treatment includes aerial and ground application of herbicide, followed by either prescribed burning or mowing.	YES	General Public	x				x					x		Seasonally	Macomb	Attend 4 CISMA meetings per year.
A,B,J	Spill Awareness	Macomb County will promote a citizens awareness program for spill response and how to notify proper authorities for clean up if necessary.	YES	Homeowners, visitors, and business owners within Macomb	x	x								x		Annually	Macomb	Attend 1 Emergency Response meeting a year to update and report procedures.
A-K	Bulletin Boards/ Displays	Bulletin boards in the designated county buildings on clean water topics. Other related information is posted and/or materials are placed for public/county employees to take. Display booths at county events and other events as requested.	YES	General public, Macomb County employees	x	x	x	x	x	x	x	x	x	x		Quarterly	Macomb	flyers and topics to be rotated at least 4 times per year. Materials are counted before and after each event

A-C, G, I, J	Macomb County Social Media Sites	All the nested Macomb County departments keep the Macomb County communities informed on the many projects, services provided, and highlights some of the ongoing projects and services going on in the county through various forms of social media. These resources also provide updates about events and education the citizens can participate in around the county. The main county website is: http://www.macombgov.org/.	YES	General public, Macomb County employees	x	x	x				x		x	x		Updated on a regular basis	Macomb	Provide working links to websites and pages. Track hits on websites and social media pages
A-K	Publications	Publicize environmental stewardship, pollution prevention, best mangement practices and other relevant environmental activities to Macomb County staff, the general public and business/industry	YES	General public, Macomb County employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	distribute at least 150 publications through direct mailing or email each year
A-K	Riparian Information	Make available riparian landowner educational materials at events, meetings, and through mailings.	YES	General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	Educate at least 12 riparian residents a year through inquiries.
	Macomb County NON-REQUIRED Activities																	
A,B,G,K	Board of Commissioners Earth Day Contest	Macomb County will promote and sponsor an Earth Day contest for 4th & 5th grade students in the county.	YES	Elementary students	x	x					x				x	Annually	Macomb	Have at least 10 participants per year.
A,B,E,F,I<K	Green Macomb	The Macomb County Department of Planning & Economic Development is developing a new initiative to support green infrastructure efforts that strengthen the economic vitality, quality of life, and environmental wellbeing for those visiting, living, and working in Macomb County.	YES	General Public	x	x			x	x			x		x	Annually	Macomb	Plant 50 trees a year and attend one event per year.
A,J	HEART Freshwater Center	The HEART Freshwater Center is a unique alliance of agencies working together to study the Huron to Erie Corridor through research, education and training. The purpose of this research is to improve the ecosystems of these water bodies and the quality of life for the people who use them.	YES	General Public	x									x		Annually	Macomb	Work with lab two times a year on water quality event/testing.
	Oakland County Specific Activities																	

A-C, G, I-K	Regional Stormwater Summit	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.	YES	Citizens including the general public and county and municipal employees	x	x	x				x		x	x	x	Annually in the Fall (September/October)	Oakland	Maintain a minimum 100 participants annually from southeast MI
A-K	Bulletin Boards	Bulletin boards in the WRC Public Works Building main lobby and framed posters in the vestibule of the WRC Water and Sewer Billing Office in Waterford 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 front desk of the Public Works Building main lobby for the public/county employees to take.	YES	General public, CVTs, county employees within Oakland County	x	x	x	x	x	x	x	x	x	x		Monthly	Oakland	Topics posted are tracked in an excel spreadsheet available upon request. Topics posted will be reported annually
A-C E-G, I	Dirt Doctors Program	The Dirt Doctors Program is an interactive program facilitated by WRC staff 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.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x		x	x	x		x			Annually	Oakland	Minimum of 25 programs annually
A-C, H	Drain Detectives Program	The Drain Detectives Program is an interactive program facilitated by WRC staff 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.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x					x				Annually	Oakland	Minimum of 5 programs over the permit cycle
A-J	Enviroscape Watershed Model Program	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 model is programming is facilitated by WRC staff The Enviroscape is also made available to the public to borrow for presentations.	YES	General public, Oakland County students	x	x	x	x	x	x	x	x	x	x		Annually	Oakland	Minimum of 10 programs annually

A-C, G, I, J	E-newsletter Articles	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.	YES	General public, CVTs, elected officials, and county employees in Oakland County	x	x	x				x		x	x		Published quarterly	Oakland	Minimum of 4 newsletters annually
A-K	Household Hazardous Waste Information	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 (SOCRRA) 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.	YES	Residents	x						x					Annually	Oakland	Maintain working links to Web sites and track number of website hits annually Hold a minimum of four collection events per year Collect and properly dispose of a minimum of 200,000 pounds of household hazardous waste per year
A-K	Kids' Clean Water Calendar Contest	The Kids' Clean Water Calendar contest is open to all 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.	YES	General public, Oakland County 4th and 5th grade students	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Achieve participation of a minimum of 600 students per year Distribute a minimum of 5,000 calendars per year throughout Oakland County

A, I, J	Natural Resources Education Program	Special programs are offered by Oakland County Parks and Recreation Commission (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. Stewardship opportunities are posted on OCPRC's Web site at: www.destinationoakland.com	YES	General public, visitors to the area	x								x	x		Annually	Oakland	Hold a minimum of 10 stewardship events per year with participation from a minimum of 200 individuals per year
A-K	Oakland County Environmental Stewardship and Water Resource Web sites	WRC, Oakland County Planning and Econominc Development Services (OCPEDS), Road Commision of Oakland County (RCOC), OCPRC and MSU-Extension Oakland County maintain environmental stewardship and/or water resource information on their Web sites at: www.oakgov.com/es, www.oakgov.com/riparian, https://www.oakgov.com/parks/getinvolved/Pages/Natural-Resource-Management.aspx, http://www.rcocweb.org/Environmental/Environmental.aspx, and http://www.oakgov.com/msu/. Information will also be provided via the Be Phosphorus Smart! Web site, which is a portal to information on phosphorus and its role in and impacts on crops, turf and lawn care, and stormwater (http://www.bephosphorussmart.msu.edu/)	YES	General public, CVTs, county employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland MSUE Oakland	Provide working links to Web sites and track number of website hits annually
A	Oakland Lakefront Magazine Advertisements	Public education messages are placed in the Oakland Lakefront magazine. The messages include pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, car care and storm drain awareness. Oakland Lakefront is published monthly and reaches approximately 17,000 homeowners on the waterways of Oakland County.	YES	General public, riparian landowners	x	x	x	x	x	x	x	x	x	x	x	April through September	Oakland	Place six (6) ads per year Reach a minimum of 13,000 lakefront residents per ad per year
A-K	Publicize Environmental-Related Events	Publicize environmental stewardship and other relevant environmental activities to WRC staff and the general public through in-house bulletin boards in WRC lobby. Oakland County also has a Web portal where this information is available at: https://www.oakgov.com/parks/getinvolved/Pages/Natural-Resource-Management.aspx	YES	General Public, visitors to the area, WRC staff	x											Annually	Oakland	Publicize a minimum of 20 natural-resource related events per year Maintain working links to Web sites and track number of website hits annually

G	Recreational Vehicle Waste Dumpsites	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region on Southeast Michigan Council of Government's (SEMCOG) Ours to ProtectWeb site at: www.semcog.org/OursToProtect_HouseholdWaste.aspx and provide a link to Michigan RV dump sites (www.rvdumps.com/mi.htm) on Oakland County Waste Resource Management Division's Web site at: www.oakgov.com/waste/.	YES	Residents, visitors to the area							x					Annually	Oakland	Provide working links to Web sites and track number of website hits annually to Oakland County's Waste and Recycling Resources page will be tracked annually
A-K	Riparian Information Distribution	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)	YES	General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Maintain working links to Web sites and track number of website hits annually Distribute a minimum of 100 Waterfront Wisdom booklets per year
A, G	Solid Waste Plan	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.	YES	Residents	x						x					Annually	Oakland	Provide working link to Web site and track number of website hits annually
A-K	Inland Lake Natural Shoreline/Education Program	The MDEQ 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 MDEQ to offer programming locally.	YES	General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Report annually: -Number of programs held -Number of attendees -Workshop partners Host and participate in at least one program annually in Oakland County

	Operation Medicine Cabinet	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: www.operationmedicinecabinetmi.com		General public							x						OC Sherriff's office and participating CVT's	Maintain a minimum of 30 participating CVTs in the program. Maintain working links to website and track number of website hits annually Report on the number and location of participating CVTs
	Community Specific Activites	**These items are to be reported by the communities in the SWMP. ALL items will be implemented by each community.**																	
A-J	Presentations and Displays	Provide displays and presentations for water quality-related events upon request and availability of staff time display to public at least once in the next 5 years.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x		Minimum of once during 5-year permit cycle	MS4 Permittees; CRWC	Host display once during permit cycle
A-K	Regional Public Education Materials	Distribute resources available from SEMCOG 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 are avialable on the Ours to Protect Website. at http://www.semcog.org/ourstoprotect.aspx		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees; CRWC	Distribute educational materials (pamphlets, brochures, tip cards) on request from MS4 permit communities, on various topics at community facilities and events. MS4 communties have an excel spreadsheet to track distribution.
A-K	Subwatershed Website	Hosted by CRWC website; features subwatershed map, photos, description, events and links to education resources. MS4 permittees will provide links to the CRWC website of their own websites.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Continuous	MS4 Permittees; CRWC	Provide working links to Web sites. MS4 permit communties have an excel document to track link locations and website hits.
A-K	Community Information	Write or distribute articles about watersheds, green infrastructure, watershed friendly practices for homeowners, and other stormwater pollution related topics for publication into existing municipal newsletters, enewsletters and websites; Four articles per year will be given to MS4 permittees from CRWC for publication in newsletters and other publications. MS4 permittees will distribute these article to the public each year via print or digital media.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees; CRWC	Publish via print or digital media 4 articles per year.

A,C,G	Household Hazardous Waste Information	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 (SOCRRA) 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). Oakland County MS4 permittees will also promote. 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.		Residents	x		x				x					Continuous	MS4 Permittees	Provide working links to websites. MS4 permit communties have an excel document to track link locations and website hits.
A,G	Recreational Vehicle Waste Dumpsites	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region on Southeast Michigan Council of Government's (SEMCOG) Ours to Protect Web site at: www.semcog.org/OursToProtect_HouseholdWaste.aspx or provide a link to Michigan RV dump sites (www.rvdumps.com/mi.htm) on Oakland County Waste Resource Management Division's Web site at: www.oakgov.com/waste/. MS4 may add this to thier SWMP		Residents, visitors to the area	x						x					Continuous	MS4 Permittees	Provide working links to websites and track number of hits. MS4 permit communties have an excel document to track link locations and website hits.
A-J	Riparian Information Distribution	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) make available to their public via mailings or through their website. events, meetings, and through mailings. MS4 may add this to thier SWMP Maintain WRC's riparian education Web site (www.oakgov.com/riparian)		General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x		Continuous	MS4 Permittees	Provide working link to website and track number of hits. MS4 permit communties have an excel document to track link locations and website hits.

MS4 PEP Community Specific Actions - Checklist & Tracking

Presentations and Displays - Display must be hosted once every five years. Please note the date(s) when you hosted the CRWC stormwater display and/or any other public display in your community/location. Presentations are upon request and availability of staff time. CRWC does presentations in every subwatershed throughout the year. Track your sharing of flyers and/or if you hosted a CRWC presentation you may track that here as well.

Topic of Display/Presentation	Date	Location	Attendance (if Applicable)	Photo of display? Flyer distributed? Y/N

Articles - A minimum of 4 articles are provided to you by CRWC. Please track your distribution of articles below (quantity, method, etc.). You may track distribution of aditional articles/information here as well.

Title	Date	Location	Quantity	Method of Distribution

Brochures/Educational Materials - Please track your distribution of any brochures and other educational materials below (quantity, method, etc.).

Title	Date	Location	Quantity	Method of Distribution

Commercial and Industrial Business Education and Outreach - Please track your distribution of any BMPs and other educational materials below (quantity, method, etc.).

Targeted Sector	BMP(s)	Date	Quantity	Method of Distribution	Link to web publication (if applicable)

Website Checklist - the following links must be displayed and in working order in an easy to access/locate page on your individual community/district website.

Household Hazardous Waste (By County)		Paste Link to your Webpage below where link is displayed	Date	# of Hits
Oakland	https://www.oakgov.com/advantageoakland/planning/wasteandrecycling/Pages/nohaz.aspx			
Macomb	http://health.macombgov.org/Health-Programs-EnvironmentalHealth-RiskAssessment-HouseholdWaste			
Wayne	https://www.waynecounty.com/departments/environmental/landresources/household-hazardous-waste.aspx			
Recreational Vehicle Waste Information		**Paste Link to your Webpage below where link is displayed**	**Date**	**# of Hits**
RV Dumps - Michigan	**https://www.rvdumps.com/dump-stations-by-state/**			
Riparian Land Owner Information		**Paste Link to your Webpage below where link is displayed**	**Date**	**# of Hits**
Waterfront Widsom Booklet	https://www.crwc.org/resources/resource-library/homeowner-resources			

Community Links - Please include links ot both CRWC and SEMCOG websites. Also include any other relevant community links that that you have chosen to include that are unique to your community/district and valuable resources to your residents/public. This could include community organizations, links to articles or resources, etc.

Community Group/Organization/Resource	Link	Paste Link to your Webpage below where link is displayed	Date	# of Hits
CRWC	www.crwc.org			
SEMCOG	www.SEMCOG.org			

Candice S. Miller
Public Works Commissioner
Macomb County

March 15, 2023

Lishba Varughese
Christine Caddick
EGLE-Water Resources Division
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48093

RE: Watershed-wide Public Education Plan Submittal for the Clinton River Watershed

Dear Lishba Varughese & Christine Caddick:

The Macomb County Public Works Office is writing to affirm its commitment to assist communities in implementing the collaborative Public Education Plan (PEP) that has been developed for the storm water permit holders within the Clinton River Watershed.

The Macomb County Public works Office understands that the PEP is a requirement of the National Pollutant Discharge Elimination System (NPDES) permit administered by the Michigan Department of Environmental Quality. The permit regulates stormwater discharges from municipal separate storm sewer systems, in compliance with the provisions of the Federal Water Pollution Control Act (Clean Water Act), as amended (33 U.S.C. 1251 et seq), and Michigan Act 451, Public Acts of 1994, as amended, Parts 31 and 41.

The Macomb County Public Works Office is included as a responsible party for the implementation of a variety of actions in the PEP because many of our activities and programs offer excellent opportunities for engaging the public in watershed education and environmental stewardship.

If you have any questions, please feel free to contact Jeff Bednar, Environmental Resources Manager, at jeff.bednar@macombgov.org or (586)493-0685.

Sincerely,

Candice S. Miller

Candice S. Miller, Commissioner
Macomb County Public Works

WRC
WATER RESOURCES COMMISSIONER
Jim Nash

March 7, 2023

Ms. Lishba Varughese
Ms. Christine Caddick
EGLE – Water Resources Division
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48093

RE: Watershed-wide Public Education Plan Submittal for the Clinton River Watershed

Dear Ms. Varughese and Ms. Caddick:

The Oakland County Water Resources Commissioner's Office (WRC) is writing to affirm its commitment to assist communities in implementing the collaborative Public Education Plan (PEP) that has been developed for the stormwater permit holders within the Clinton River Watershed.

The WRC recognizes that the PEP is a requirement of the National Pollutant Discharge Elimination System (NPDES) administered by the Michigan Department of Environment, Great Lakes and Energy (EGLE). The permit regulates stormwater discharges from municipal separate storm sewer systems, in compliance with the provisions of the Federal Water Pollution Control Act (Clean Water Act), as amended (33 U.S.C. 1251 et seq), and Michigan Act 451, Public Acts of 1994, as amended, Parts 31 and 41.

Oakland County is included as a responsible party for the implementation of a variety of actions in the PEP because many of our activities and programs offer excellent opportunities for engaging the public in watershed education and environmental stewardship.

If you have any questions, please feel free to contact me at 248-858-5264.

Sincerely,

Jacy L. Garrison
Environmental Planner

MICHIGAN STATE UNIVERSITY | Extension

March 21, 2023

Ms. Kaleigh Snoddy
Clinton River Watershed Council
1115 W Avon Rd.
Rochester Hills, MI 48309

Re: Clinton River Watershed Collaborative Public Education Plan

Dear Ms. Snoddy,

The Michigan State University (MSU) Extension assists communities in water related education programs that can be helpful in implementing the collaborative Public Education Plan (PEP) that has been developed for the stormwater permit holders within the Clinton River Watershed.

MSU Extension recognizes that the PEP is a requirement of the National Pollutant Discharge Elimination System (NPDES) administered by the Michigan Department of Environmental Quality. The permit regulates stormwater discharges from municipal separate stormwater sewer systems, in compliance with the provisions of the Federal Water Pollution Control Act (Clean Water Act), as amended (33 U.S.C. 1251 et seq), and Michigan Act 451, Public Acts of 1994, as amended, Parts 31 and 41.

MSU Extension is included as a responsible party for the implementation of a variety of actions in the PEP because many of our activities and programs offer excellent opportunities for engaging the public in watershed education and environmental stewardship. Furthermore, the programming and resources offered are science-based and delivered through a collaboration of academic staff, specialists, and faculty from Michigan State University in partnership with local organizations and agencies. When possible, programming is offered as both classroom and field-based learning opportunities, and is tailored to meet the specific areas of interest and needs of the target audience. These programs may include the Water Conservation Program, Summer Discovery Cruises, and Michigan Conservation Stewards Program.

If you have any questions, please feel free to contact me at (586) 469-5060 or scapinia@msu.edu.

Sincerely,

Angela Scapini
Extension Program Worker
Michigan Sea Grant, MSU Extension

Heather Triezenberg
Associate Director & Program Leader
Michigan Sea Grant, MSU Extension

Cc: Ed Scott, District 11 Director, MSU Extension
Dave Ivan, Director, Community, Food, and Environment Institute, MSU Extension

City of Mount Clemens

Storm Water Management Plan (SWMP)

Appendix C

Illicit Discharge Elimination Plan (IDEP) & Total Maximum Daily Load (TMDL)

Revised April 4, 2023
Previous Revision May 20, 2019

1. City of Mount Clemens Illicit Discharge Elimination Plan (IDEP) & Total Maximum Daily Load (TMDL)
2. IDEP / TMDL and Phase II Outfall Screening Form

City of Mount Clemens

ILLICIT DISCHARGE ELIMINATION PLAN

&

TOTAL MAXIMUM DAILY LOAD

WATERSHED PERMIT
GENERAL PERMIT NO.: MIG619000

Revised April 4, 2023
Previous Revision May 20, 2019

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1.0 ILLICIT DISCHARGE ELIMINATION PLAN

1.1 INTRODUCTION

As part of the NPDES Phase 2 Watershed Permit, an Illicit Discharge Elimination Program (IDEP) must be developed and submitted to the Department of Environment, Great Lakes and Energy (EGLE formerly MDEQ). The Purpose of the IDEP is to develop a program to prohibit and effectively eliminate illicit discharges and connections, including discharges of sanitary wastewater to the City of Mount Clemens' (the City's) separate storm water drainage system. The IDEP also identifies the interaction and responsibilities of the City with Macomb County and other watershed partner communities located within the Clinton River Watershed.

An effective IDEP requires a variety of government entities working cooperatively. By working on a watershed approach, duplication of effort is avoided when locating and eliminating illicit discharges/connections and training and education activities can be conducted in a more effective and cost-efficient manner. This IDEP coordinates activities with Macomb County, watershed partner communities, and the EGLE to protect and restore the surface waters of the state within the Clinton River Watershed.

1.2 DEFINITIONS

To ensure the IDEP is developed and implemented with clear understanding of the type of sources to be eliminated, following are key terms to be understood:

- Separate Storm Water System: Includes open and enclosed drainage systems owned or operated by the permittee and discharge either to a surface water of the State or to a separate water drainage system operated by another public body.
- Illicit Discharge: Any discharge (or seepage) to the separate storm water drainage system that is not composed of storm water or uncontaminated groundwater.
- Illicit Connection: A physical connection to the separate storm water 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).
- Point Source: An outfall from a drainage system to the waters of the State, or a point where a storm water drainage system discharges into a system operated by another public body.
- Significant Illicit Discharge: A discharge that shows evidence of impairing water quality in the receiving water.

1.3 EXISTING IDEP EFFORTS

The City will use compiled data to prioritize all IDEP activities. Data will include information already compiled during the 2018 SAW Grant Investigation, any in stream monitoring data available through various agencies involved in the Clinton River East Watershed, and any other information that may be useful.

The City will work with the Macomb County Public Works Office (MCPWO) which has established a toll-free 24-hour hotline that accepts water pollution complaints. If the MCPWO receives a call of an urgent nature, on-call staff will respond to the complaint and notify the EGLE, MCHD and other appropriate agencies immediately. All other calls are responded to the following business day by the MCPWO. If the MCPWO believes the call requires City follow up, the City is contacted by the MCPWO to address the pollution complaint.

MCPWO advertises the hotline number with signage and printed materials. The Report-A-Polluter sign is 24 by 30 inches and is placed throughout the Clinton River Watershed in Macomb County. Most signs are hung with the 'Ours to Protect' watershed signs. The City will work with MCPWO to determine appropriate locations to post the Report-A-Polluter signs.

Printed materials include a calendar that includes the hotline number printed on each month and an IDEP brochure. The City is provided calendars and brochures from the county and makes them available to both staff and citizens.

1.4 OUTFALL SURVEY

The City of Mount Clemens will ensure that City-owned and operated facilities are not illicitly discharging into the storm drain system. A complete outfall survey of all known point sources under the City's jurisdiction has been completed through the 2018 SAW Grant Investigation. The City performs sampling on the storm drain system immediately downstream of their facilities to verify proper connections. If illicit connections are found, the City is committed to correcting them as soon as practically possible. Progress of this task is tracked and reported in the biennial report.

Prior to initiating an outfall survey, staff participating in IDEP activities are trained, at a minimum, on the following topics:

- Definition of illicit discharges and illicit connections
- Techniques for finding and identifying illicit discharges and illicit connections
- Recognizing naturally occurring phenomena and their sources (i.e. bacterial sheens, slimes, films, etc.)
- Techniques for sampling, analyzing and recording results
- Proper methods and procedures for reporting, eliminating the illicit discharges and illicit connections
- Safety issues associated with IDEP activities

Following links provide Stormwater Training,

https://www.youtube.com/watch?v=GyOFmXViQ4I

https://www.waynecounty.com/departments/environmental/waterquality/training.aspx

Existing staff are trained once during the permit cycle and new hires within the first year of their hire date.

Once IDEP staff are trained, the City will conduct dry weather screening on its outfalls. Screening will include noting observations of the following physical characteristics:

- Flow during dry weather conditions.
- Water clarity and color.
- Presence of foam, oil sheen, trash, and/or floatable materials.
- Presence of bacterial sheens or slimes.
- Staining of the banks, outfall structure, and/or vegetation.
- Excessive vegetative growth or algae.
- Odor.
- Outfall Damage (Spalling / Cracking / Chipping/ Peeling Paint / Corrosion).

If field-screening investigations indicate the presence of an illicit discharge, a follow up source investigation is conducted within 1-2 business days of discovery. The follow up source investigation will include at a minimum the suspect discharge is sampled for E. coli bacteria and/or any other appropriate parameter(s) based on the screening results and on any data previously attained. Once a potential illicit discharge is identified, the outfall is placed on the priority list for follow-up. Follow-up will include any or all of the following:

- Systematic upstream sampling and testing.
- Further investigation of sewer maps.
- Storm sewer cleaning and televising.
- Dye testing of suspected homes or businesses that could be the source of the illicit discharge.
- Smoke testing of the storm sewer sections known to contain contamination.

All dye testing and smoke testing will comply with EGLE requirements. Discharges having the greatest impact on the Clinton River East Watershed will receive top prioritization for follow up and corrective action. All data collected during IDEP activities is kept in the GIS database so that progress in eliminating illicit discharges may be efficiently tracked. The City will verify illicit discharge corrections are done properly by inspecting the work done. The City will also do follow up sampling and testing to make sure no leaks, seepage, or additional illicit discharges are near a corrected illicit discharge.

If untreated or partially treated sewage of human origin is discharged from the drainage system, the City will comply with Section 324.112a of Part 31 of Public Act 451 of 1994, including notification of the EGLE, the local health department and one or more daily newspapers of general circulation.

If illicit sanitary connections are found during IDEP investigations, the City will do, at a minimum, the following to comply with the permit and the law:

- Report discharges of untreated or partially treated sewage from illicit sanitary connections to the land or into waters of the state annually as Sanitary Sewer Overflows (SSOs) related to either dry or wet weather events.
- The reports indicate whether the frequency of discharge is periodic or continuous and provide an estimate of the annual volume of the discharge.
- The discharge is reported annually until the illicit connection is eliminated.
- In addition to being reported annually, significant illicit discharges of untreated or partially treated sewage are reported within 24 hours after discharge begins or is discovered.
- The reporting form found on MiWaters is used for illicit discharge reporting.

1.5 FINDING AND ELIMINATING THE SOURCE

Description: In order to perform outfall surveys City staff will attend IDEP training when offered in the watershed. The City will follow-up on drains placed on the priority list. First, the City will try to identify the ownership of the drain. Drains may be under the jurisdiction of the Macomb County Public Works Office (MCPWO), the Macomb County Department of Roads (MCDR), Michigan Department of Transportation (MDOT), neighboring communities, or the City of Mount Clemens. If a drain outside the jurisdiction of the City is suspected to be improperly discharging into a storm drain, the City will notify the appropriate jurisdiction in writing within 30 days of the discovery of the suspected discharge including any pertinent information pertaining to the suspected discharge.

The City of Mount Clemens will follow-up on suspicious discharges that are found to be discharging from their drainage system. The follow up investigations will consist of first narrowing down the location of the source of the illicit discharge by sampling various manholes along the drain. Once a section of the drain has been targeted, advanced investigation techniques will then be employed. Advanced investigation techniques may include televising the target section of the sewer, using automatic samplers for discharges that are intermittent or flow dependent, smoke testing storm sewers, and dye testing homes or facilities to verify a suspected illicit connection or discharge. **Notice of Intent to treat under General Rule 97 Certification** of approval will be obtained from the EGLE in the event tracer dyes are used for sewer investigations.

If a spill (or illegal dumping) is large or hazardous or cannot be contained on site, so that it might be released to the surface water or groundwater of the state, **it should be reported immediately by calling 911 to dispatch the Fire Department** and by calling EGLE at the phone numbers listed below. The Fire Department will mobilize the Macomb County Hazardous Materials Response Team personnel (Clinton Township, Eastpointe, Lenox Township, Mount Clemens,

Shelby Township, Sterling Heights, Warren, Roseville and Center Line participate) if deemed necessary. Spills that are below the threshold reporting quantities in the state's Part 5 Rules do not need to be reported to EGLE. During regular business hours, EGLE district office in Warren should be called at: (586) 753-3700. During non-business hours call the Pollution Emergency Alert System (PEAS) at 1-800-292-4706. If the spill might reach navigable waters, the Coast Guard will also be called at: (313) 568-9524.

The City of Mount Clemens will track the status of each suspicious discharge that has been identified. Tracking will consist of a dated log of activities that have been performed to locate the source(s) of the problem. Once a source has been identified, the property owner is notified within (48) Hours of discovery.

The City's goal is to have each illicit connection or illegal spill/dumping corrected within ninety (90) days of notification to the property owner, if a sanitary sewer is readily available and the cost for correction is not prohibitive for the property owner. However, if more complicated solutions are required, the City will set up a schedule for correction with each individual property owner. After the ninety (90) days of notification, or approved target date, the City will recheck and possibly dye test the outfall to ensure that the corrections have been made.

1.6 LEGAL AUTHORITY

From the City's experience, those individual property owners found discharging illegally into the storm water sewer system have voluntarily corrected the problem. If enforcement becomes necessary, the City has the authority to enforce correction of illicit connections under its Sewer Use Ordinance. An Enforcement Response Plan (ERP) was developed by the City.

Illicit Discharge Elimination in the City of Mount Clemens Enforcement Response Plan:

TYPES OF VIOLATIONS

Noncompliance includes any violations of 25.000 "Wastewater and Drainage Water Disposal Ordinance" and the International Plumbing Code. Typical violations which will require action can include buildings that have the building service sewer directly hooked to the City Storm Sewer or directly discharging to surface waters of the State of Michigan.

ENFORCEMENT RESPONSIBILITY

Notification of a possible violation can come from the building inspection department or thru a formal inspection program. The first levels of enforcement can come from the Utilities Director or the Building Inspector. The highest level of enforcement, a court summons, will come from the Utilities Director.

ENFORCEMENT RESPONSE LEVELS

1. *Informal Communications*:
   Initially, a violation can be addressed by a telephone call or direct communication with the building owner. A two-week period is given to the building owner to schedule a qualified excavation contractor to re-plumb the illicit connection.

2. *Warning Letter*:
   A warning letter will represent the next level of communication for enforcement. The warning letter gives the building owner an opportunity to correct the problem on his/her own initiative, rather through City Enforcement, thereby helping to foster a cooperative spirit. The warning letter can be issued in person or mailed. Additionally, the warning letter will include a 30-day time deadline to remove the illicit connection and outline the consequences for failing to correct the violation.

3. *Code Enforcement Action*:
   If the warning letter fails to bring a building owner into compliance, an ORDINANCE VIOLATION NOTICE is issued. The OVN is a standard code enforcement form used in the City of Mount Clemens for all types of Ordinance Code Enforcement. Failure to comply with a violation notice will result in a COURT SUMMONS and possible impositions of fines, court costs, and misdemeanor charges.

1.7 IDEP EVALUATION

The City will track the number of City employees trained, the number of illicit discharges/connections found by staff, along with the number of discharges/connections eliminated. This information is submitted with the City's biennial report. If possible, the estimated pollutant reduction is determined and reported biennially.

1.8 SCHEDULE

IDEP activities will commence as shown in Table 1 once EGLE approves the Plan. If EGLE does not approve or comment on the Plan within 90 days of submittal, The City of Mount Clemens will begin implementation of the Plan as submitted. At minimum, outfalls are screened at least once every five years or per an alternate schedule approved by EGLE if the outfall shows no presence of an illicit discharge/connection.

1.9 MAPPING

The City continually updates outfall maps with newly constructed or newly identified point sources within thirty (30) days of construction or identification. Updated maps are submitted with the City's biennial reports.

1.10 EMPLOYEE TRAINING PROGRAM

New employees / Contractors will view EGLE online employee training video "Storm water Employee Training" upon Hire.

All Mount Clemens Utility Staff will watch a storm water training video "Working for Clean Water" developed by Wayne County Department of Environmental Services during the Phase 2 permit cycle. Utility Staff actively working on IDEP will attend regional training seminars when available during the Phase 2 permit cycle.

2.0 TOTAL MAXIMUM DAILY LOAD (TMDL)

2.1 INTRODUCTION

Total Maximum Daily Loads (TMDLs) are developed by the states for water bodies that are not meeting water quality standards. TMDL development is required by "Section 303(d) of the federal Clean Water Act and the United States Environmental Protection Agency's (USEPA's) Water Quality Planning and Management Regulations (Title 40 of the Code of Federal Regulations [CFR], Part 130)". The TMDL process sets the allowable levels of pollutants for a body of water, and provides the states with a basis for determining the pollution reductions necessary to restore and maintain the quality of their water resources.

Escherichia coli (E. coli) is a type of bacteria (single cell organism) that is used by the State of Michigan as a water quality indicator. When E. coli is found in surface waters, it means that there has been fecal contamination. While E. coli itself may be harmful to human health, other disease causing organisms might also be present. Once these pathogens are in a stream or lake, they can infect humans through ingestion or skin contact, resulting in diseases such as gastroenteritis (diarrhea), giardia, hepatitis, or cholera.

2.2 WATER QUALITY STANDARD FOR E. COLI

The Water Quality Standard for E. coli is shown below:

Total Body Contact (May1 - October 31):

Daily Maximum Geometric Mean: 300 E. coli per 100 milliliters (ml)

30-Day Geometric Mean: 130 E. coli per 100 ml

Partial Body Contact (all year):

Daily Maximum Geometric Mean: 1,000 E. coli per 100 ml

2.3 SAMPLING AND MONITORING PROCEDURE

For the water bodies impacted or potentially impacted by the City of Mount Clemens MS4, the following TMDL's have been established:

E. coli Clinton River	-	TMDL	ID-91
E. coli Lake St. Clair, Memorial Beach and Metro Beach		TMDL	ID-72

The City of Mount Clemens conducts wet weather sampling of outfalls or discharge points from the City owned facilities and other locations within the City boundaries to cover proper TMDL monitoring program. TMDL monitoring plans with BMPs are included in appendix A, Table 1 and Table 1A.

Wet weather sampling program is conducted after at least 0.25 inch of rain has fallen in the last 24 hours. At least two wet weather screening of outfalls or discharge points are performed during the permit cycle for monitoring purpose. The amount of rainfall should also be included when investigating a spill/suspicious flow reporting.

If any sampling indicates samples in excess of the standard limit of E-coli amount, the City of

Mount Clemens will inform MCHD and conduct further investigation to identify illicit connection upstream of the outfall or discharge points and implement BMPs for pollution prevention and good housekeeping throughout the City. The results of any compliance related sampling are assessed and summarized in the required biennial progress reports or at least twice during the permit cycle. Based on a review of the sampling results, Implementation of new BMP's is reviewed and/or existing BMPs are updated or revised to ensure progress toward achieving TMDL pollutant load reductions. The actions and records of each activity are kept and submitted in the biennial report.

Table 1. IDEP Implementation Schedule – Annual Basis

Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Review Water Quality Data from County's Sampling Program												
Initial Investigations on known City Owned Outfalls, as appropriate												
Follow-up Investigations on known City Owned Outfalls, as appropriate												
Outfall Database Update												
Annual Report												

IDEP/TMDL AND PHASE II
OUTFALL SCREENING FORM

Section 1: Background Data

Subwatershed:	Outfall ID:		☐Actual ☐Tributary To	
Drain Name:	Drain #:		School Name:	
Today's Date:	Time (Military):		Structure #:	
Temperature: °F	Rainfall (in.)	Last 24 hours:	Last 48 hours:	
Inspectors:		Project:		
Latitude:	Longitude:		GPS Unit:	
Camera:		Photo #'s:		

Land Use in Drainage Area (Check all that apply):

☐Commercial ☐Institutional ☐High Density ☐Park Known Industries:

☐Industrial ☐Residential ☐Rural ☐Other:

Notes (e.g., origin of outfall, cross streets, addresses, structure numbers, landmarks):

Downstream Inspection and Sample: (Y/N)

Section 2: Outfall Description

LOCATION	MATERIAL		SHAPE		DIMENSIONS	SUBMERGED	
☐Closed Pipe	☐Concrete ☐Clay ☐PVC ☐Other:	☐Ductile ☐CMP ☐HDPE	☐Circular ☐Elliptical ☐Box ☐Other:	☐Single ☐Double ☐Triple	Diameter or Other:	Water ☐No ☐Partially ☐Fully	Sediment ☐No ☐Partially ☐Fully
☐Open Drainage	☐Concrete ☐Earthen ☐Rip-Rap	☐Other:	☐Trapezoid ☐Parabolic ☐Other:		Depth: Top Width: Bottom Width:		

Flow Present? ☐No ☐Yes *If No, Skip Section 4 & 5*

Flow Description: ☐Trickle ☐Moderate ☐Substantial

Section 3: Notes, Sketches (Include Non-IDEP Concerns such as Trash Dumping, Structural Damage, etc.)

Section 4: Physical Indicators for Flowing Outfalls Only

INDICATOR	CHECK (if present)	DESCRIPTION	RELATIVE SEVERITY INDEX
Odor	☐	☐Sewage ☐Rancid/sour ☐Petroleum/gas ☐Sulfide ☐Other:	☐ 1 – Faint ☐ 2 – Easily detected ☐ 3 – Noticeable from a distance
Color	☐	☐Clear ☐Brown ☐Gray ☐Green ☐Orange ☐Red ☐Yellow ☐Other:	☐ 1 – Faint colors in sample bottle ☐ 2 – Clearly visible in sample ☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See Severity	☐ 1 – Slight cloudiness ☐ 2 – Cloudy ☐ 3 – Opaque
Floatables – Not Trash	☐	☐Sewage (Toilet paper, etc.) ☐Suds ☐Petroleum (oil sheen) ☐Other:	☐ 1 – Few/Slight; origin not obvious ☐ 2 – Some; indications of origin (ex. possible suds or oil sheen) ☐ 3 – Some; origin clear (ex. obvious suds, oil sheen, or floating sanitary materials

Section 5: Field Screening

Temperature:	Conductivity:	Ammonia:
Surfactants:	pH:	Fluoride:

Section 6: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 7)*

INDICATOR	CHECK (if present)	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐Spalling/Cracking/Chipping ☐Peeling Paint ☐Corrosion	
Deposits/Stains	☐	☐Oily ☐Flow Line ☐Paint ☐Other:	
Abnormal Vegetation	☐	☐Excessive ☐Inhibited	
Poor Pool Quality	☐	☐Odors ☐Colors ☐Floatables ☐Excessive Algae ☐Suds ☐Oil Sheen ☐Other:	
Pipe Benthic Growth	☐	☐Brown ☐Orange ☐Green ☐Other:	

Section 7: Overall Outfall Characterization

☐Unlikely ☐Potential (two or more indicators) ☐Suspect (one or more indicators with a severity of 3) ☐Obvious

Section 8: Data Collection

1. Sample For The Lab?	☐Yes	☐No	If Yes, Type: ☐*E. coli*	☐Other
2. If Yes, Collected From?	☐Flow	☐Pool	Sample ID #'s:	
3. Intermittent Flow Trap Set?	☐Yes	☐No	If Yes, Type: ☐OBM	☐Caulk Dam

City of Mount Clemens

Storm Water Management Program (SWMP)

Appendix D

Policy, Ordinances and Regulations

Revised April 4, 2023

1. Policy S1 - Public Participation Procedure - SEMCOG
2. Policy S2 - Enforcement Response Procedure - SEMCOG
3. Policy S3 - Construction Site Runoff Control Procedure – SEMCOG
4. Mount Clemens Code of Ordinances Chapter 15, Zoning, Article Site Plan Review and Approval
5. Mount Clemens Code of Ordinances Chapter 25, Sewers City of Mount Clemens (Sec. 52 Enforcement and Penalties)
6. Mount Clemens Stormwater Runoff Engineering and Construction Standards

City of Mount Clemens **POLICY #: S1**
MUNICIPAL SEPARATE STORM SEWER SYSTEM
PUBLIC PARTICIPATION INVOLVEMENT PROGRAM POLICY

I. POLICY:

This policy is to establish procedures for City of Mount Clemens Public Participation/Involvement Program (PPP)

II. BACKGROUND:

The Department of Environment, Great Lakes and Energy (EGLE) NPDES Phase II Stormwater Discharge Permit Application requires a procedure for public participation/involvement program as identified in the Application. This procedure includes a description of the opportunities for the public to provide comment on the Storm Water Management Plan and inviting public involvement and participation in the implementation and period review of the Storm Water Management Plan.

III. PROCEDURE:

Storm Water Management Plan Available for Public Inspection and Comment

The storm water management plan will be posted on City of Mount Clemens web site for review and comment by the public when the application is approved by EGLE. This information will include the contact information of the storm water manager to forward comments. The storm water manager will compile and track comments from the public including: commenter name, date, and comment.

Public Involvement and Participation in the Implementation and Periodic Review of the Storm Water Management Plan

The following BMPs will be utilized to allow for public involvement and participation in the implementation and periodic review of the storm water management plan.

BMP	Description	Schedule	Method of Assessment
Web Site	The web site will be utilized to explain the program and opportunities for public involvement and participation.	Four (4) Articles per year (Seasonal)	Number of hits on community web site.
Community Newsletter	The newsletter is circulated to residents and will include information on the SWMP.	Twice during permit cycle	Number of residents receiving newsletter

IV. OTHER:

Any questions on this policy and procedure should be directed to the Storm Water Manager.

V. PROCESS FOR UPDATING/REVISING THIS PROCEDURE

This procedure shall be reviewed on an annual basis by the Storm Water Manager for any updates to streamline the requirements.

City of Mount Clemens **POLICY #: S2**
MUNICIPAL SEPARATE STORM SEWER SYSTEM
ENFORCEMENT RESPONSE PROCEDURE

I. POLICY:

This policy is to establish the City of Mount Clemens Enforcement Response Procedure.

II. BACKGROUND:

The Department of Environment, Great Lakes and Energy (EGLE) NPDES Phase II Storm Water Discharge Permit Application requires a procedure for Enforcement Response to address violations of the ordinances or regulatory mechanism identified in the Storm Water Management Plan.

III. PROCEDURE:

Each ordinance/regulatory mechanism within this jurisdiction includes an enforcement response to violations of the ordinance. The ordinances referenced in this application include:

- City of Mount Clemens Code of Ordinances 25.052 Sewers – Enforcement and Penalties
- City of Mount Clemens Stormwater Engineering and Construction Standards

In addition to the enforcement mechanisms noted in the ordinance, additional tracking of instances of noncompliance occurs and includes the following information:

- Name
- Date
- Location of Violation (address, cross streets, etc.,)
- Business/Agency/Organization (as appropriate)
- Description of Violation
- Description of Enforcement Response
- Schedule for Returning to Compliance
- Date Violation was Resolved.

The following is a description of the procedures the City will utilize in response to violations of the ordinances and regulations in place.

Violation Reporting:

1. Utility Department notices violation during daily duties or on routine inspection
2. Resident contacts City and files a complaint
3. MCHD receives complaint from resident

Procedure Once Violation is Reported:

1. Complete Violation Report and notify appropriate parties immediately
2. City completes testing and documents area of concern
3. City notifies property owner/violator(s) in writing of violation immediately; document all correspondence with resident
4. Responsible party has reasonable time, as established by the Utility Department, to arrange and permanently cease all violations.

5. If no correction is made, or each day in which any such violation shall continue, shall be deemed a separate offense. Any person who violates the provisions of Ordinance 25.052 shall be guilty of a misdemeanor.

IV. OTHER:

Any questions on this policy and procedure should be directed to the Storm Water Manager.

V. PROCESS FOR UPDATING/REVISING THIS PROCEDURE

This procedure shall be reviewed on an annual basis by the Storm Water Manager for any updates to streamline the requirements.

City of Mount Clemens **POLICY #: S3**
MUNICIPAL SEPARATE STORM SEWER SYSTEM
CONSTRUCTION SITE RUNOFF CONTROL PROCEDURE

I. POLICY:

This policy is to establish the City of Mount Clemens procedures for construction site runoff control.

II. BACKGROUND:

The Department of Environment, Great Lakes and Energy (EGLE) NPDES Phase II Storm Water Discharge Permit Application requires procedures for construction site runoff control that includes notification procedures and ensuring proper permits are obtained by those disturbing greater than one acre of soil within the jurisdiction.

III. PROCEDURE:

City of Mount Clemens will track the receipt of complaints submitted by the public or noted by staff during regular course of business of soil, sediment, or other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes are being discharged into the City of Mount Clemens MS4. The tracking will include:

- Name of person providing the complaint
- Location (address or nearest cross street)
- Description of follow up (e.g., date referred to the Part 91 enforcing agency).

Mount Clemens will notify the EGLE PEAS Hotline when soil, sediment, and other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes are discharged into Mount Clemens's MS4 in a quantity that could negatively impact surface waters of the state.

Mount Clemens will notify the Part 91 Agency, Macomb County Public Works Office, when soil or sediment are discharged into Mount Clemens's MS4 in a quantity that could negatively impact surface waters of the state.

Mount Clemens ensures that construction activity one acre of greater in total earth disturbance with the potential to discharge to the MS4 does obtain a Part 91 Permit and State of Michigan Permit by Rule or is conducted by an approved Authorized Public Agency through the site plan review process.

IV. OTHER:

Any questions on this policy and procedure should be directed to the Storm Water Manager.

V. PROCESS FOR UPDATING/REVISING THIS PROCEDURE

This procedure shall be reviewed on an annual basis by the Storm Water Manager for any updates to streamline the requirements.

15.030 - ARTICLE 3: SITE PLAN REVIEW AND APPROVAL

15.031 - Sec. 3.1

INTENT.

Site plan review provides the City with an opportunity to review the proposed use of a site in relation to all applicable provisions of the Zoning Ordinance and City planning policy. Site plan review also provides the City with an opportunity to review the relationship of the plan to surrounding uses, accessibility, pedestrian and vehicular circulation, off-street parking, public utilities, drainage, natural features, screening, and other relevant factors which may have an impact on the public health, safety and general welfare.

15.032 - Sec. 3.2

PLANNING STANDARDS.

In reviewing all applications for site plan approval, the Planning Commission shall consider the plan in relation to the following standards:

A. **RELATIONSHIP TO SURROUNDING PROPERTY.** All site development features shall be arranged to minimize the potential for negatively impacting surrounding property or may have an effect upon the public health, safety, morals, and general welfare and its relationship and harmony with the adopted City Ordinance and Plans. In making this determination, the Planning Commission shall review the plan for negative conditions such as, but not limited to:

1. Location of the principle building or buildings and any accessory buildings or uses.
2. Channeling excessive traffic onto local residential streets.
3. The lack of adequate screening of parking or service areas.
4. The impediments to the access of emergency vehicles.
5. Site drainage characteristics
6. The accumulation of litter, production of noise, light, smoke, fumes, or the piling of snow.

B. **VEHICULAR ACCESS AND CIRCULATION.** The location and design of driveways providing vehicular access to the site shall be arranged to promote the safety and convenience of vehicles and pedestrians and to provide access in a manner that promotes proper internal circulation. The Planning Commission shall require public streets adjacent or through a proposed development, when it is necessary for the public health, safety and welfare, and/or provide continuity to the public road system. In those instances where the Planning Commission determines that there are an excessive number of curb-cuts in relation to abutting public roads, thereby diminishing the capacity of the road or creating excessive points of conflict, a reduction in the number of driveways shall be required. For a narrow frontage which will require a single outlet, the Planning Commission may require that money be placed in escrow with the City so as to provide for a marginal service drive equal in length to the frontage of the property involved. Occupancy permits shall not be issued until the improvement is physically provided or monies have been deposited with the City.

C. **RELATIONSHIP TO NATURAL FEATURES.** All buildings, driveways, parking lots and site improvements shall be designed to be compatible with the physical characteristics of the site,

including, but not limited to, woodlands, wetlands, slopes, floodplains and soil suitability. The proposed development shall not needlessly have an adverse impact on the natural environment of the site or the surrounding area.

D. **INFRASTRUCTURE.** The Planning Commission shall consider the City Engineer's evaluation of the adequacy of public or private utilities proposed to serve the site, including water, sanitary sewers and stormwater retention.

E. **LANDSCAPING.** The Planning Commission may require further landscaping, fences, walls and berms pursuant to the objectives of this Ordinance, and such improvements shall be provided and maintained as a condition of the establishment and the continued maintenance of any use to which they are appurtenant.

F. **RECREATION AREAS AND FACILITIES.** Recreation areas and facilities, such as playgrounds, swimming pools and community buildings, shall be provided to the extent necessary to meet the anticipated needs of the residents of the project it is designed to serve. Provision of separate adult and tot-lot recreation areas adequately landscaped is encouraged. Recreation facilities generally should be provided in a central location and should be convenient to the project community center. In larger development, however, recreation facilities can be decentralized, if more than one or if made part of an open space area.

G. **SITE DEVELOPMENT.** During development, building, renovating or razing operations, the developer shall erect and maintain suitable protective barriers around all trees specified to be maintained so as to prevent damage to said trees and shall not allow storage of equipment, materials, debris or fill to be placed in this preservation area.

15.033 - Sec. 3.3

SUBMISSION REQUIREMENTS.

A. A site plan shall be submitted for review and approval by the Planning Commission whenever one or more of the following conditions apply:

1. Whenever a building permit is required for the erection or structural alteration of a building (other than accessory structures to single-family residential uses).

   a. Single-family residential homes shall require site plan review for the new construction of a home. Submission requirements for single-family residential site plans shall be based upon policy set forth by the Planning Commission. Additions to existing single-family homes shall be subject to site plan review if any of the following circumstances apply:

      (1) The square footage of the addition exceeds twenty-five (25) percent of the square footage of the existing home.

      (2) The addition is located in the side yard or front yard of the property, unless exempt as provided below:

         a. The construction of a new porch that is less than twenty-five (25) square feet in size shall be exempt from site plan review, or;

         b. The reconstruction of an existing porch where the footprint will not be expanded shall be exempt from site plan review.

2. For the construction or establishment of a new or additional parking or storage area, or for the use or reuse of an existing parking lot or storage area in a character or fashion that differs from its approved use. Such use or reuse shall not be approved unless the parking and/or storage area meets the standards of this Ordinance and the City Engineering Standards.

3. For all special land uses.

4. For any substantial change in use or class of use when referred by the Community Development Director.

5. The erection of, or addition to, any major utility service facilities, including towers, substations, pump stations and similar facilities.

B. The Site Plan Review Application shall be furnished in the number of copies required by the City, together with the same number of site plans, building drawings and required review fees. A required site plan shall include the entire site under the control or ownership of the applicant with all areas proposed for improvement and all unplanned areas also included. All site plans submitted for consideration shall include the following information:

1. **GENERAL SITE DATA.**

a. The site plan shall be prepared by and carry the seal and signature of the registered architect, landscape architect, community planner, land surveyor or professional engineer who prepared it, unless waived by the Planning Commission or its designee because of the minor nature of the project. The site plan shall consist of one or more sheets necessary to adequately provide the required data.

b. Date and/or revision dates.

c. The site plan shall be drawn to a scale of 1 inch = 20 feet. The Planning Commission may accept other scales based on a large (or small) site area which can more clearly be presented at an alternative scale.

d. North arrow.

e. Complete legal description.

f. Size of the size expressed in acres.

g. Location map (4 inches = 1 mile) showing major roads, nearby cross-streets and property lines, where necessary.

h. Existing or proposed address (if any).

i. Zoning of site and all surrounding property. If the site has split zoning, show the line between the districts.

j. Topography at two (2) foot contours or five (5) foot contour intervals in areas of extreme topography (existing and proposed). Grade shots at building corners, property lines, and for the parking lot and street may be substituted on small site plans.

k. Benchmarks.

l. Existing structures, streets and improvements (buildings, parking, driveways, sidewalks, signs, fences, walks etc.) within one-hundred (100') feet of all property lines.

m. Road centerline and existing and proposed rights-of-way for all abutting roads.

n. Site dimensions and the dimensions of all improvements and yards shall be labeled in a manner that clearly indicates the plan's compliance with the applicable Zoning Ordinance standards and requirements.

o. Yards/setbacks and critical dimensions between buildings and other site improvements.

p. Location and designation of proposed structures and improvements (Indicate if any such structure or improvement is to be removed).

q. Sidewalks, interior walks and their connection.

r. Sufficient information describing the proposed use and compliance with use regulations.

s. A cover letter, signed by the owner and prospective developer holding an equitable interest in the property, shall include: a general description and estimated timetable of the development.

2. **BUILDING PLANS.**

a. All architectural building elevations (front, sides and rear).

b. Type of surface material and design of all exterior surfaces.

c. Dimensioned floor plans, including total and usable floor area (principal and accessory buildings).

d. Decks and/or patios (dimensions, location, height and materials).

e. All exterior appliances, such as cooling towers, dust collectors, condensers, evaporators and the like. Include all roof-top and ground appliances, and provide an appropriate means for screening both the roof-top and ground appliances.

f. Community building details and method of fencing the swimming pool, if applicable.

3. **ACCESS, PARKING AND CIRCULATION.**

a. Location and dimensions of all driveways and street approaches, including acceleration, deceleration and passing lanes.

b. Dedicated road or service drive right-of-way and pavement widths and lengths.

c. Indicate the type of surface (concrete or asphalt).

d. Parking spaces, including handicapped parking spaces (location, number, dimensions, aisle dimensions and pavement material).

e. Site circulation pattern (direction of pedestrian and vehicular traffic flow if one-way or not obvious from the arrangement).

f. Loading and unloading area.

g. Identification of all fire lanes.

h. Carport locations and details (including architectural elevations).

4. **ENVIRONMENTAL FEATURES.**

a. Complete landscaping plan, including ground cover and the location, number, type and size of all proposed plantings.

b. Indications of trees and shrubs shall only be used on the site plan where trees and shrubs exist, or where such vegetation will be planted prior to occupancy. All such trees and shrubs shall be labeled as to size, type and whether existing or proposed.

c. Whenever a tree or group of trees of three (3") inch caliper or greater is to be removed as part of the planned improvements, its or their location shall be shown on the site plan in dotted outline and noted "to be removed."

d. Greenbelt, obscuring wall, or berm locations and details. (Provide at least one cross-section for each type used.)

e. Site irrigation (sprinklers). Indicate all areas to be irrigated.

f. Treatment of all undeveloped areas (such as seeded, sodded, plantings, maintenance or other).

g. Trash receptacle location and method of screening.

h. Site lighting details (location, height, type, intensity and method of shielding).

5. **OTHER INFORMATION.**

a. Density calculations.

b. Location of all site utilities.

c. Site drainage characteristics and improvements.

d. Soil borings, locations and summary report data shall be shown where soil quality may be in question.

e. Hydrant locations.

f. Park or recreation areas (show boundary and size in square feet).

g. Fences (location and details).

h. Statistical data shall be furnished, including: number of dwelling units; size of dwelling units (i.e., 1-bedroom, 2-bedrooms and 3-bedrooms), if any; and the total gross acreage involved. (In the case of mobile home parks, the size and location of each mobile home site shall be shown.)

i. Where large equipment or machinery is to be installed as part of the development, the location, type, horsepower, fuel, dimensions and other data of all such equipment and/or machinery shall be indicated.

j. If phasing is proposed or intended, it shall be clearly shown on the site plan.

k. The plan shall include a note indicating that all State and Federal requirements (including the Americans with Disabilities Act and all State Handicap Accessibility standards) shall be complied with as part of the development.

6. Where it is determined by the Planning Commission that certain requirements of this Section are not necessary to the review and understanding of the site, the Planning Commission may waive the requirements. Any and all waivers shall be recorded in the Commission's minutes, together with the unique circumstances and reasons for such waiver. The City Planning Commission and/or the Community Development Department may also require additional information where the particular circumstances reasonably warrant their inclusion; such as flooding data, traffic analysis, soil borings or other similar data.

(ord. eff. Oct. 30, 2008)

15.034 - Sec. 3.4

PROCEDURES.

A. **SUBMISSION.** The proposed site plan shall be submitted to the Community Development Department, or other designated representative, who shall check the submission data and transmit it to the following departments, agencies and consultants, as applicable:

1. Road Commission of Macomb County or Michigan Department of Transportation, whenever appropriate.

2. Macomb County Public Works Commissioner, when appropriate.

3. Macomb County Health Department, when appropriate.

4. Fire Department.

5. Community Development Department.

6. Assessor's Office (Check legal description).

7. City Engineer.

8. City Planner.
9. Planning Commissioners (one for each).
10. Planning Commission File.
11. Appropriate School District (residential plans).
12. Mount Clemens Historic Commission (residential plans).
13. Downtown Development Authority (Central Business District plans).

The Community Development Department shall next submit the site plan with the available written comments from the various agencies and departments to the Planning Commission for review at the meeting at which the site plan is placed on the agenda.

B. **PLANNING COMMISSION REVIEW.** The site plan shall be reviewed by the Planning Commission with reference to the specific requirements of the Ordinance, including those items listed above, planning standards of Section 3.2, and other factors to be considered by the City in planning and establishing zoning districts as authorized under this Ordinance. The Commission shall also require review and comment from the City Planner, City Engineer and City Attorney, where appropriate. Approval of the site plan (as submitted, or with additions, corrections, or alterations) by the Planning Commission shall satisfy the requirements of this Zoning Ordinance for the issuance of a zoning compliance permit. It shall not, however, exempt the petitioner from compliance with other City ordinances.

C. **APPROVAL PERIOD.** A site plan approval shall be valid for twelve (12) months from the date of approval. If physical improvement of the site is not in actual progress at the expiration of the approval and diligently pursued to completion, the approval shall be null and void unless renewed or extended by specific Planning Commission action. Any request for an extension shall be made in writing. If approval is not extended before expiration of the twelve (12) month period, then a new application and a new approval shall be required before a building permit may be issued. An extension may be granted for up to twenty-four (24) months. No more than one (1) extension shall be granted for any project.

D. **PERFORMANCE BONDS.** The Planning Commission may require a cash deposit or irrevocable bank letter of credit acceptable to the City, covering the estimated cost of improvements associated with a project for which the site plan approval is sought, be deposited with the Clerk of the City to ensure faithful completion of the improvements. The performance guarantee shall be deposited at the time of the issuance of the permit authorizing the activity or project.

E. **APPEALS.** An applicant for a site plan approval may appeal the decision or absence of a decision of the Planning Commission to the City Zoning Board of Appeals.

25.000 - SEWERS CITY OF MOUNT CLEMENS, MICHIGAN code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978[1]

Footnotes:

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Editor's note— At the direction of the city, an amendment effective Feb. 11, 2010, has been treated as amending Ordinance 25.000 in its entirety to read as herein set out. The following sections have been repealed: 25-011—25-013; 25-015(7), (8), (39) and (55); 25-021; 25-022; 25-30; 25-043(B), (G), and (H); 24-044(O); 25-049(B); 25-053—25-55; 25-070—25-074; 25-080; 25-091; 25-092BB(J), (L), and (Y); 25-092JJ; 25-092KK; 25-093—25-095; 25-111(I) and (R); 25-114; 25-119; 25-161A(2)(a) and 25-170. The historical notations have been preserved for reference purposes.

25.010 - INTRODUCTION

25.011 - Sec. 1.

RESERVED.

(code eff. Oct. 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.012 - Sec. 2.

RESERVED.

(code. eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.013 - Sec. 3.

RESERVED.

(code eff. Oct. 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. March 13, 1986; amend. eff. Feb. 11, 2010)

25.014 - Sec. 4.

SCOPE.

This Ordinance shall apply to all wastewater and drainagewater facilities serving any property that is presently draining to, or will be expected to be draining to, the City Wastewater and Drainagewater Disposal System. This Ordinance is not intended to cover sewer facilities inside of any buildings, since

these facilities are to be regulated by the City Plumbing Code. This Ordinance is intended to repeal provisions of any existing Ordinances or City regulations that are in conflict with this Ordinance. Where this Ordinance imposes a greater restriction than is imposed by existing provisions of other laws, Ordinances, or regulations, the provisions of this Ordinance shall control.

The provisions of this Ordinance shall be deemed incorporated in, and a part of, every agreement or contract to furnish wastewater and/or drainagewater disposal service to any customer. Any person being furnished such services shall be bound by such provisions.

(code eff. Oct. 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.014; amend. eff. Feb. 11, 2010)

25.015 - Sec. 5.

DEFINITIONS.

Unless the context specifically indicates otherwise, the meaning of the terms used in this Ordinance shall be as follows:

1. **BIOCHEMICAL OXYGEN DEMAND (BOD)** shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20 degrees Celsius, expressed in milligrams per liter.
2. **BUILDING** shall mean any structure, including a mobile home, that requires wastewater and/or drainagewater disposal services.
3. **BUILDING DRAIN** shall mean that part of the lowest horizontal piping of a building drainage system that receives the discharge from soil, waste, and other wastewater drainage pipes inside the walls of the building and conveys it to the building service sewer which begins at a point 4 feet (1.2 meters) outside of the outer face of the building.
4. **BUILDING SERVICE SEWER (DRAINAGEWATER)** or **CUSTOMER'S STORM DRAIN** shall mean any drainagewater pipe extension from a building drainagewater outlet point located four feet (1.2 meters) outside of a building or dwelling unit to a point of connection with a public stormwater drain; or any private drain upstream of a public drain.
5. **BUILDING SERVICE SEWER (WASTEWATER)** or **CUSTOMER'S SERVICE SEWER** shall mean the sewer extension from a building drain outlet point located four feet (1.2 meters) outside of a building or a dwelling unit to a point of connection with a public sanitary sewer. The minimum pipe size for a building service sewer shall be six (6) inches under the paved portion of any public street or road which abuts or traverses the property.
6. **CAPITAL EXPENDITURES** shall mean those expenditures (including principal and interest) that are considered amortizable over a period of time in excess of one (1) year and which are made for those additions to, or improvements of, the system having long operating usability capable of serving future users as well as present users.
7. **RESERVED.**
8. **RESERVED.**
9. **CITY PUBLIC UTILITY** shall mean any one of the following utilities that is owned, operated, and maintained by the City: a public water main; a public sanitary sewer; or a public storm drain.
10. **CLASSES OF USERS** shall mean the division of wastewater treatment customers by waste characteristics, and process or discharge similarities. The distinct classes are:

a. **RESIDENTIAL** which shall include all dwelling units such as detached, semi-detached, and row houses, mobile homes, garden and standard apartments, and permanent multi-family dwellings (transit lodging, considered commercial in nature, is not included).

b. **COMMERCIAL** which shall include transit lodging, retail and wholesale establishments or places engaged in selling merchandise for personal, household or industrial consumption, and/or rendering services to others.

c. **INSTITUTIONAL** which shall include social, charitable, religious, and educational activities such as schools, churches, hospitals, nursing homes, penal institutions and similar institutional users.

d. **GOVERNMENTAL** which shall include legislative, judicial, administrative, and regulatory activities of Federal, State and local governments, such as courthouses, police and fire stations, City halls and similar governmental users.

e. **INDUSTRIAL** which shall include any manufacturing or processing facility that discharges industrial wastes to a publicly-owned treatment works, such as those establishments identified in the Federal Office of Management and Budget's **"Standard Industrial Classification Manual"** (1972 Edition) under Divisions A, B, D, E and I which discharge an industrial waste as defined and determined by the City. A governmental industrial user shall be subject to the user charge system but not subject to the industrial cost recovery provisions of the Federal Water Pollution Control Act Amendments of 1972.

11. **COMBINED SEWER** shall mean a sewer intended to receive both wastewater and drainagewater.

12. **COMPATIBLE POLLUTANT** shall mean biochemical oxygen demand, suspended solids, pH, and fecal coliform bacteria, plus additional pollutants identified in the NPDES Permit if the treatment works was designed to treat such pollutants, and in fact does remove such pollutants to a substantial degree. The term substantial degree is not subject to precise definition, but generally contemplates removals in the order of 80 percent or greater. Minor incidental removals in the order of 10 to 30 percent are not considered substantial. Examples of the additional pollutants which may be considered compatible include:

    a. Chemical oxygen demand;

    b. Total organic carbon;

    c. Phosphorus and phosphorus compounds;

    d. Nitrogen and nitrogen compounds; and

    e. Fats, oils, and greases of animal or vegetable origin (except as prohibited where these materials would interfere with the operation of the treatment works).

13. **CUSTOMER** shall mean the person responsible for payment of wastewater-drainagewater disposal service charges.

14. **CUSTOMER'S WASTEWATER DISPOSAL OUTLET** shall mean the point of connection with the public sanitary sewer.

15. **RESERVED.**

16. **DITCH** or **DRAINAGE SWALE** shall mean an open channel or graded depression used to transport water, groundwater, surface water runoff, or drainagewater from any source.

17. **DRAINAGE FACILITY** or **DRAINAGEWATER DISPOSAL FACILITY** shall mean any part, or all, or the property, structures, equipment, materials, sewers, drains, and/or appurtenances used in conjunction with the act of collecting, treating, and/or disposing of drainagewater.

18. **DRAINAGEWATER** or **UNPOLLUTED WATER** is water of a quality equal to, or better than, the effluent criteria currently in effect, or water that would not cause violations of receiving water quality standard and would not be benefited by discharge to the City sanitary sewers and waste

water disposal system provided. Such water normally includes the following: Stormwater drainage, groundwater seepage, surface water runoff, melting ice or snow, other than sanitary seepage.

19. **DRAINAGEWATER DISPOSAL SERVICE CHARGE** shall mean a charge levied on users of the drainagewater disposal system of the cost of operation and maintenance of such system pursuant to Section 204(b) of PL 92-500 of 1972. The charge shall be based on the net area of each separate land parcel as listed on the City's tax rolls, not including dedicated road rights-of-way.

20. **DRAINAGEWATER DISPOSAL SYSTEM** shall mean all of the drainagewater disposal facilities taken collectively that are operated and maintained by the City.

21. **DRAINAGEWATER TREATMENT WORKS** shall mean an arrangement of devices and structures for treating drainagewater.

22. **DWELLING UNIT** shall mean a building, or a unit thereof, that is occupied by one or more persons as a residence (with a single set of regular culinary facilities) intended for a single family.

23. **EASEMENT** shall mean an acquired legal right for the specific use of land owned by others.

24. **FLOATABLE OIL** shall mean oil, fat, or grease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. A wastewater shall be considered free of floatable oil if it is properly pretreated and the wastewater does not interfere with the collection system.

25. **FOUNDATION DRAIN SERVICE PIPE** shall mean a conveyance pipe that receives only foundation drain groundwater seepage, exclusive of directly and intentionally introduced surface water runoff.

26. **GARBAGE** shall mean the animal and vegetable waste resulting from the handling, preparation, cooking, and serving of foods.

27. **GREASE** shall mean a group of substances, including fats, waxes, free fatty acids, calcium and magnesium soaps, mineral oils, and certain other non-fatty materials which are extractable by the laboratory procedures outlined in **"Standard Methods for the Examination of Water and Wastewater."**

28. **INCOMPATIBLE POLLUTANT** shall mean any pollutant that is not defined as a compatible pollutant, including non-biodegradable dissolved solids.

29. **INDUSTRIAL WASTE** shall mean any liquid, solid or gaseous waste or form of energy or combination thereof resulting from any process of industry, manufacturing, business, trade or research, including the development, recovery or processing of natural resources.

30. **INFILTRATION** shall mean the water entering a sewer system, including building drains and sewers, from the ground through such means as, but not limited to, defective pipes, pipe joints, connections, or manhole walls (Infiltration does not include, and is distinguished from, inflow).

31. **INFILTRATION/INFLOW** shall mean the total quantity of water from both infiltration and inflow without distinguishing the source.

32. **INFLOW** shall mean the water discharged into a sewer system, including building drains and sewers, from such sources as, but not limited to, roof leaders, cellar, yard and area drains, foundation drains, unpolluted cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections from storm sewers and combined sewers, catch basins, stormwaters, surface runoff, street wash waters or drainage (Inflow does not include, and is distinguished from, infiltration).

33. **LOT** shall mean a measured portion of a parcel or tract of land that is described and whose location is established in a recorded plat.

34. **MAJOR CONTRIBUTING INDUSTRY** shall mean an industry that:

a. Has a flow of 50,000 gallons or more per average work day;

b. Has a flow greater than five percent of the flow carried by the municipal system receiving the waste;

c. Has in its waste a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of PL 92-500 of 1972; or

d. Has a significant impact, whether singly or in combination with other contributing industries, on a treatment works or on the quality of effluent from that treatment works.

35. **RESERVED.**

36. **NATURAL OUTLET** shall mean any drainagewater disposal outlet, including storm drains and sewers, into a watercourse, pond, ditch, lake, or other body of surface water or groundwater.

37. **NPDES PERMIT** shall mean a permit issued under the National Pollutant Discharge Elimination System for discharge of waste waters to the navigable waters of the United States pursuant to Section 402 of PL 92-500.

38. **OPERATION AND MAINTENANCE COSTS** shall mean all costs, direct and indirect, necessary to operate the system to provide adequate wastewater treatment on a continuing basis conforming with all Federal, State and local requirements including all ordinary and necessary expenses of administration, operation and installing equipment, accessories or appurtenances which are necessary during the service life of the treatment works to maintain the capacity and performance for which such works were designed and constructed.

39. **RESERVED.**

40. **pH** shall mean the reciprocal of the logarithm of the hydrogen-ion concentration. The concentration is the weight of hydrogen-ions, in grams per liter of solution. Neutral water, for example, has a pH value of 7 and a hydrogen-ion concentration of 10 to the negative power of 7.

41. **PHENOLIC COMPOUNDS** shall mean hydroxy derivatives of benzene as described in "Standard Methods of Wastewater Analysis."

42. **PLAT** shall mean a map or chart of a subdivision of land as defined in the Land Division Act (MCL 560.101 et seq.).

43. **PREMISES** shall mean a tract of land (with any building(s) thereon) that is, or is intended to be, owned and maintained by a single responsible person served as a single customer by a single Customer Wastewater Disposal Outlet and a single water supply meter. Each Mobile Home Park is considered separately as premises.

44. **PRIVATE WASTEWATER DISPOSAL SYSTEM** shall mean any septic tank with sub-surface soil absorption facilities, Wastewater Treatment Facilities, or similar methods of wastewater disposal which may be approvable by the Macomb County Health Department and/or the Michigan Department of Natural Resources and Environment.

45. **PROPERLY SHREDDED GARBAGE** shall mean the wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half inch (1.27 centimeters) in any dimension.

46. **PUBLIC SANITARY SEWER** shall mean a sanitary sewer, intended to be located in public easements or public rights-of-way, that collects (or is intended to collect) wastewater from more than one user or premises.

47. **PUBLIC SEWER** or **PUBLIC DRAIN** shall mean a common sewer or drain, intended to be located in public easements or public rights-of-way, that services more than one user or premises.

48. **ROOF LEADER** or **DOWNSPOUT** shall mean a drain or pipe that conducts stormwater from the roof of a structure downward and thence into a sewer for removal from the property or into the ground for runoff or seepage disposal.

49. **SANITARY SEWER (sometimes called "Wastewater Sewer")** shall mean a sewer, together with appurtenances, that carries liquid and water-carried wastes (from residences, commercial buildings, industrial plants and institutions) together with minor quantities of ground, storm, and surface waters that are not admitted intentionally.

50. **SEWAGE FORCE MAIN (sometimes called "Force Main")** shall mean a wastewater conveyance pipe that carries wastewater under pressure.

51. **SEWER** shall mean a pipe or conduit that carries wastewater or drainagewater.

52. **SLUG** shall mean any discharge of water or wastewater, which in concentration of any given constituent, or in quantity of flow, exceeds for any period of duration longer than fifteen (15) minutes, more than five (5) times the average twenty-four (24) hour concentration of flows during normal operation, and adversely affects the collection system and/or performance of the wastewater treatment works.

53. **STANDARD METHODS** shall mean the laboratory procedures set forth in the latest edition at the time of analysis, of "Standard Methods for the Examination of Water and Wastewater", as prepared, approved and published jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation, or methods acceptable to the United States Environmental Protection Agency.

54. **STORMWATER DRAIN (sometimes termed "Storm Drain" or "Storm Sewer")** shall mean a watercourse, ditch, drainage swale, or sewer intended for the conveyance of water, groundwater, surface water runoff, drainagewater, or other water from any source exclusive of intentionally admitted wastewater.

55. **RESERVED.**

56. **SURCHARGE** shall mean a charge for BOD, suspended solids, or other measurements of wastewater strength when such strength is in excess of the strength of normal domestic sewage.

57. **SURFACE WATER RUNOFF (sometimes called "Stormwater")** shall mean that part of rainfall or melting snowfall which reaches the stormwater drain or the combined sewer as runoff from natural land surfaces, building roofs, or pavements.

58. **SUSPENDED SOLIDS** shall mean total suspended matter that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater."

59. **TOTAL PROJECT COST OF CONSTRUCTION** shall mean the entire cost of construction, including costs of engineering, layout, inspection, administration, legal services, bonding costs, contingencies and other related incidental costs.

60. **UNDERDRAIN PIPE** shall mean a perforated or loose jointed pipe installed underground for the specific purpose of lowering a high groundwater condition or draining a granular sub base by receiving groundwater seepage and conveying it to a stormwater drain.

61. **USER** shall mean the owner or occupants of any premises connected with and/or using any of the facilities operated by the City.

62. **WASTEWATER** or **SEWAGE** shall mean the spent water of a community. From the standpoint of source, it may be a combination of the liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, together with any groundwater, surface water and stormwater that may be present. Normal Domestic Wastewater or Sewage as defined for the purposes of determining surcharge, shall mean wastewater or sewage having any average daily suspended solids concentration of not more than 300 mg/l, an average daily BOD

of not more than 300 mg/l, an average daily phosphorus concentration of 13 mg/l and containing not more than 100 mg/l of hexane soluble matter (grease and oil).

63. **WASTEWATER DISPOSAL FACILITY** or **WASTEWATER FACILITY** shall mean any part, or all, of the property, structures, equipment, sewers, materials, and/or appurtenances used in conjunction with the act of collecting, treating, and/or disposing of, wastewater.

64. **WASTEWATER DISPOSAL SERVICE CHARGE** shall mean a charge levied on users of the wastewater disposal system for the cost of operation and maintenance of such system pursuant to Section 204(b) of PL 92-500 of 1972.

65. **WASTEWATER DISPOSAL SYSTEM** shall mean all of the Wastewater Disposal Facilities taken collectively that are operated and maintained by the City.

66. **WASTEWATER AND/OR DRAINAGEWATER DISPOSAL SYSTEM BENEFIT FEE** shall mean a fee, to be paid by an Applicant for Wastewater and/or Drainagewater Disposal service for a specific type of building or property drainage use, that is intended to cover the Applicant's fair share portion of Wastewater and/or Drainagewater Disposal System capital expenditures (past, present, or future) to provide capacity or service for the applicant's building(s) or property based on drainage fixture unit values for continuous and semi-continuous flow into a sewer system used to service the building(s) and/or property; said capital expenditures are made for items such as (but not limited to) the following: land; buildings; structures; equipment; portions of the cost of sewers and appurtenances not charged against benefited frontage; pumping stations and force mains; sewage treatment facilities; and Master Wastewater Disposal Meters.

67. **WASTEWATER TREATMENT WORKS** or **SEWAGE TREATMENT PLANT** shall mean an arrangement of devices and structures for treating wastewater, industrial wastes, and sludge.

68. **WATERCOURSE** shall mean a natural or artificial open channel for the passage of water either continuously or intermittently.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Aug. 27, 1987; amend eff. Aug. 17, 2002; code 1980, § 25.015; amend. eff. Feb. 11, 2010)

25.020 - Sec. 20.

ORGANIZATION AND OPERATION OF THE WASTEWATER AND DRAINAGEWATER DISPOSAL SYSTEM.

25.021 - Sec. 21.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Feb. 17, 1994; amend. eff. Feb. 11, 2010)

25.022 - Sec. 22.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Feb. 17, 1994; amend. eff. Feb. 11, 2010)

25.023 - Sec. 23.

INSTALLATION, REPAIRS AND CONNECTIONS.

A. **SUPERVISION.** All drainagewater sewers and drains, and wastewater sewers located outside of buildings that are expected to be connected with the Wastewater and Drainagewater Disposal System shall be installed under the inspection of the City's Plumbing Code Official.

B. **PROCEDURE FOR REPAIR.** The owner or operator of any facility, including business and residential premises, connected to the City Wastewater and Drainagewater Disposal System shall follow the following procedures in the event there is a blockage or other malfunction within the system:

1. The owner or operator of such facility shall retain the services of a contractor authorized under the laws of the State of Michigan to conduct repairs upon and service sewer lines.
2. The contractor shall initially determine the cause of any blockage and/or other malfunction and shall contact the City to alert the City of the determination relative to any problem and the means of repairing the same.
3. The City shall send an inspector to review the findings of the contractor relative to the causation of any blockage or malfunction and the location of the blockage or malfunction.
4. The City may authorize any repairs to the System and shall have the authority to contract with a different contractor(s) in the event the City is responsible for the payment, in whole or in part, for the cost of repair.

C. **FINANCIAL RESPONSIBILITY FOR REPAIR.** The owner or operator of such facility connected to the Wastewater and Drainagewater Disposal System shall be responsible for the costs of all repairs to the System that are performed between the owner or operator's premises and the point of connection of the owner or operator's facility to the system ("Owner's Portion") and for repairs upon other portions of the system caused by malfunctions occurring within the owner's portion of the System. Other repairs upon other portions of the System shall be the responsibility of the System.

D. **EXCEPTIONS.** The provisions of this section shall be inapplicable where there are written agreements or understandings between the City and the owner or operator of such facility to the contrary. The provisions of this section are also inapplicable to persons with Industrial Users permits to the extent that such permits contain terms contrary to the foregoing provisions.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Sept. 18, 1992; further amend. eff. Feb. 17, 1994; Code 1980, § 25.023; amend. eff. Feb. 11, 2010)

25.024 - Sec. 24.

CITY TREASURER; RESPONSIBILITY.

The City Treasurer shall be responsible for all money received for the operation of the Wastewater and Drainagewater Disposal System and shall keep an accurate, separate account for the City.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.024; amend. eff. Feb. 11, 2010)

25.025 - Sec. 25.

CHANGES IN WASTEWATER/DRAINAGEWATER DISPOSAL SYSTEM.

Any connection to, extensions of, or changes in, the wastewater and/or drainagewater disposal system for which the City participates in any degree in the cost thereof, shall be made only upon approval of the City Commission. Requests for determination of reasonable and logical special assessment districts for extensions of the wastewater and drainagewater disposal system shall be addressed to the City Commission which will thereupon consider same and advise the petitioners of its decision. If a special assessment district is to be initiated, the City Commission shall then stipulate the portion of the cost to be borne by the petitioners and the portion, if any, to be borne by the wastewater and drainagewater disposal system.

(code eff. Oct., 1958; amend. June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.025; amend. eff. Feb. 11, 2010)

25.026 - Sec. 26.

FEES; AMENDMENTS TO.

Fees for various benefits and service are established by resolution.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.026; amend. eff. Feb. 11, 2010)

25.027 - Sec. 27.

DISCONNECTION.

The City shall have the right to disconnect any premises from the City water supply system and/or the drainagewater disposal system or the wastewater disposal system of the City upon:

A. Violation by the user of the system of any provisions of this Ordinance; or

B. In the event of nonpayment, when due, of wastewater and drainagewater disposal charges.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.027; amend. eff. Feb. 11, 2010)

25.028 - Sec. 28.

CHARGES; LIEN ON PROPERTY.

Charges for wastewater and drainagewater disposal service shall constitute a lien on the property served, and if not paid within six months after the due date, the amount of the deficiency shall be certified by the City Treasurer on or before June 1st of each year, which amount shall be placed on the next general tax roll to be collected as a part of the general City taxes.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.028; amend. eff. Feb. 11, 2010)

25.029 - Sec. 29.

NO FREE SERVICE.

No free service shall be furnished by the City to any person, nor to any public or governmental agency. The City shall pay for all wastewater and drainagewater disposal services provided to it or any of its departments at the established current rates for such services.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.029; amend. eff. Feb. 11, 2010)

25.030 - Sec. 30.

RESERVED.

(code eff. Oct., 1958; amend. June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.031 - Sec. 31.

ANNUAL AUDIT.

The City Commission shall cause to be performed an annual audit or other financial surveillance of the schedule of charges set forth in Appendix "A" to facilitate periodical adjustment of the user charge rates to maintain proportionality in the user charge system.

(ord. eff. Oct., 1958; amend. June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.031; amend. eff. Feb. 11, 2010)

25.032 - Sec. 32.

OPERATING YEAR.

The Wastewater and Drainagewater Disposal service shall be operated on the basis of an operating year commencing on July 1st and ending on June 30th.

(ord. eff. Oct., 1958; amend. June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.032; amend. eff. Feb. 11, 2010)

25.040 - Sec. 40.

DRAINAGEWATER AND WASTEWATER DISPOSAL FACILITIES.

25.041 - Sec. 41.

USE OF PUBLIC SEWERS—WHEN REQUIRED.

A. **DEPOSITING OF OBJECTIONABLE WASTE.** It shall be unlawful for any person to place, deposit, or permit to be deposited in any unsanitary manner upon public or private property within the City, or in any area under the jurisdiction of the City, except in the pursuit of a normally accepted farming, gardening or City approved sanitary landfill practice, any human or animal excrement, garbage, or other objectionable waste.

B. **SUITABLE TREATMENT REQUIRED.** It shall be unlawful to discharge to any natural outlet within the City, or in any area under the jurisdiction of said City, any wastewater or other polluted waters, except where suitable treatment has been provided in accordance with this Ordinance.

C. **PRIVY; SEPTIC, CESSPOOL PROHIBITED.** Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of wastewater.

D. **PUBLIC SANITARY SEWER REQUIRED.** The owner of all buildings used for human occupancy, employment, recreation, or other purposes, situated within the City and abutting on any street or right-of-way in which there is now located, or may in the future be located, a public sanitary or combined sewer of the City is hereby required at the owner's expense to install suitable toilet facilities therein, and to connect such facilities with a public sewer in accordance with the provisions of this Ordinance within ninety (90) days after date of official notice to do so, provided that said public sewer is within one hundred (100) feet (30.5 meters) of the property line, and capacity is available in all downstream facilities (interceptors and treatment plant.)

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.041; amend. eff. Feb. 11, 2010)

25.042 - Sec. 42.

PRIVATE WASTEWATER DISPOSAL FACILITIES.

A. **CONNECTION TO BUILDING SERVICE SEWER.** Where a public sanitary sewer is not available under the provisions of this Ordinance, a building service sewer may be connected to a private wastewater disposal system complying with the provisions of this Ordinance.

B. **WRITTEN PERMIT.** Before applying for a building permit for any building where a private wastewater disposal system is contemplated, the owner shall first obtain a written permit for a private Wastewater Disposal System from the City. The application for such a permit shall be made on a form furnished by the City which the applicant shall supplement by any plans, specifications, or other information considered pertinent by the City. The applicant for any

private wastewater disposal system shall be encouraged to locate his Building Service Sewer on the side of his building on which the public sewer (to which he will connect in the future) is likely to be located. In most instances, this will be on the street side of his building for both the wastewater and the drainagewater building service sewers.

C. **PERMIT; EFFECTIVE; CONDITIONS.** A permit for a private wastewater disposal system shall not become effective until the applicant has obtained the approval for same from the Macomb County Health Department and thereafter the City. Upon this approval from the City, the Applicant shall pay a construction inspection fee, as specified in Appendix "A", covering the cost of inspection of construction of the Building Service Sewer. The building shall not be occupied until the Wastewater Disposal System has been approved in writing by the City. The City shall be allowed to inspect the work at any stage of construction and the permittee shall notify the City when the work is ready for final inspection and before any underground portions are covered.

D. **CONNECTION TO PUBLIC SEWER REQUIRED.** At such time as a public sanitary sewer becomes available to a property served by a private wastewater disposal system, a direct connection shall be made to the public sewer as hereinbefore set forth; and any septic tanks and similar private wastewater disposal facilities shall be cleaned of sludge and filled with suitable material. In the meantime the owner shall operate and maintain the private wastewater disposal facilities in a sanitary manner at all times, at no expense to the City.

E. **PRIVATE SYSTEM; COMPLIANCE WITH HEALTH DEPARTMENT.** The type, capacities, location and layout of a private wastewater disposal system shall comply with all requirements of the City, the Macomb County Health Department, and/or the State of Michigan. No permit shall be issued for any private wastewater disposal system employing subsurface soil absorption facilities where the area of the lot is less than twelve thousand (12,000) square feet (115 square meters). No septic tank or cesspool outlet shall be permitted to discharge directly or indirectly to any natural outlet.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.042; amend. eff. Feb. 11, 2010)

25.043 - Sec. 43.

BUILDING SERVICE SEWERS—CONNECTIONS TO, AND/OR EXTENSIONS OF, SEWERS.

A. **WRITTEN PERMIT.** No person shall uncover, make any connections with or opening into, use, alter, or disturb any sewer or appurtenance thereof, without first obtaining a written permit from the City. No new sewer connections shall be made unless there is capacity available in all downstream sewers, lift stations, force mains and the wastewater treatment plant, including capacity for BOD and suspended solids.

B. **RESERVED.**

C. **FOUNDATION DRAINS.** All new buildings having foundation drains shall direct the flow from such foundation drains into a storm drain by means of an underground enclosed conveyance pipe. No building permit for any building having a basement shall be issued unless the plans for such building indicate a building service sewer (drainagewater) with drainage to a storm sewer or storm drain, or approved drainage treatment works.

D. **RESERVED.**

E. **STORMWATER RUNOFF.** The City will publish (and periodically update by formal amendment) Stormwater Runoff Engineering and Construction Standards. Hereafter, said standards will be

referred to as the engineering and construction standards. The City engineering and construction standards shall be enforced as part of this ordinance, and copies therefore will be available from the City.

F. **PIPING OF ROOF DRAINAGEWATER.** Runoff from building roof drainagewater shall be piped to a point five (5) feet (1.52 meters) away from the outside walls of any building. As an alternate to the piping, five-foot long splash blocks may be used. Existing roof leaders that are connected directly to a combined sewer shall be disconnected therefrom and the roof drainagewater shall be discharged as previously described herein.

G. Reserved.

H. Reserved.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.043; amend. eff. Feb. 11, 2010)

25.044 - Sec. 44.

USE OF PUBLIC SEWERS.

A. **DISCHARGING OF WATER.** No person shall discharge, or cause to be discharged, any unpolluted waters such as stormwater, groundwater, roof runoff, subsurface drainage, or cooling water to any sanitary sewer.

B. **STORM SEWERS.** Groundwater, stormwater, and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers or to a natural watercourse outlet approved by the City and other appropriate regulatory agencies. Unpolluted industrial cooling water or process waters may be discharged, on approval of the City, to a storm sewer or natural watercourse outlet.

C. **PROHIBITED WATERS & WASTES.** Except as hereinafter provided, no person shall discharge, or cause to be discharged, any of the following described waters or wastes to any public sewers:

1. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
2. Any waters containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any waste treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the wastewater treatment plant.
3. Any waters or waste having a pH lower than 5.0 or higher than 11.0, or having any other corrosive property capable of causing damage or hazard to structures equipment, and personnel of the Wastewater and Drainagewater Disposal System.
4. Solid or viscous substances (such as, but not limited to, ashes, bones, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastic, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders) in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the wastewater facilities.
5. Wastewater having a temperature higher than 150 degrees Fahrenheit (65 degrees Celsius).

6. Wastewater containing more than 25 milligrams per liter of petroleum oil, non-biodegradable cutting oils, or product of mineral oil origin.

7. Wastewater from industrial plants containing floatable oils, fat or grease.

8. Any garbage that has not been properly shredded. Garbage grinders may be connected to sanitary sewers from homes, hotels, institutions, restaurants, hospitals, catering establishments, or similar places where garbage originates from the preparation of food in kitchens for the purpose of consumption on the premises or when served by caterers.

9. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances to such degree that any such material received in the composite wastewater at the City Wastewater Disposal Outlet exceeds the limits established by the City for such materials.

10. Any waters or wastes containing odor-producing substances exceeding limits which may be established by the Superintendent.

11. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the City in compliance with applicable State or Federal Regulations.

12. Quantities of flow, concentration, or both which constitute a **"slug"** as defined herein.

13. Waters or wastes containing substances which are not amenable to treatment or reduction by the wastewater treatment processes employed, or are amenable to treatment only to such degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

14. Any water or wastes which, by interaction with other water or wastes in the public sewer system, release obnoxious gases, form suspended solids which interfere with the collection system, or create a condition deleterious to structures and treatment processes.

15. Any wastewater which is in excess of the limitations imposed under the contract between the City and the County of Macomb, which includes by reference the limitations imposed by the Detroit Water and Sewerage Department for the Detroit Wastewater Disposal System.

16. Any waters or wastes causing damaging effects such as:

    a. Chemical reactions, either directly or indirectly, with the material of construction to impair the strength or durability of sewer structures and/or appurtenances.

    b. Mechanical action that will destroy or damage the sewer structures and/or appurtenances.

    c. Restriction of the normal inspection or maintenance of the sewer structures and/or appurtenances.

    d. Limitation of the effectiveness of the wastewater treatment process.

    e. Danger to public health and safety.

D. **WASTE; DAMAGING EFFECTS.** Any waste will be considered deleterious (and prohibited) that may cause damaging effects, as stated above, or does not conform to the limitations stated under specific chemical pollutants.

E. **COMPATIBLE WASTES; SURCHARGES.** Compatible wastes which are discharged by industry in concentrations greatly in excess of domestic sewage will be sampled, analyzed, and treated at costs to be borne by the permittee. No surcharge costs shall be assessed unless the concentrations are greater than the surcharge threshold values found below, whereas no wastes shall be discharged at concentrations exceeding the maximum allowed values where found below unless specifically authorized by the City:

WASTE	SURCHARGE THRESHOLD CONCENTRATION (in 24-hour composite sampler)	MAXIMUM ALLOWABLE CONCENTRATION (in 24-hour composite sampler)
Suspended Solids	300 mg/L	1,300 mg/L
BOD, 5-day	300 mg/L	1,400 mg/L
(Chemical Oxygen Demand, 5-day)*	(700 mg/L)*	**
Ammonia	65 mg/L	70 mg/L
Total Phosphorus	13 mg/L	50 mg/L

* Represents an alternative to the 5-day BOD and shall be applicable when surcharge cost is greater than 5-day BOD cost.

**Maximum allowable limit to be determined by the City on a user-specific basis using ratio of COD to 5-day BOD that corresponds to the user's discharge.

F. **RESERVED.**

G. **CITY; POWER AND AUTHORITY.** If any waters or waste are discharged, or are proposed to be discharged to the public sewer from any source, which may cause damaging effects or contain an excess of the substances or exceed the limitations herein established or which otherwise create a hazard to life or constitute a public nuisance, or for any other reasonable reason the City may:

1. Reject the waste in whole or in part and/or stop the flow from entering the City wastewater and/or drainagewater disposal system for any reasonable reason - heavy loading, loss of treatment capacity, breach of NPDES permit, etc.;
2. Require pretreatment of incompatible waste to an acceptable condition for discharge to the public sewers;
3. Require periodic reports on effluent volume and quality;
4. Require control over the quantities and rates of discharge; and/or
5. Assess and collect surcharges to cover the added cost of handling and treating the over-limit discharge of compatible waste and assess monitoring and surveillance fees when the limits of incompatible wastes, as defined in this Ordinance, are found to be exceeded. Such surcharges shall be uniform throughout the system and in accordance with a schedule to be published whenever conditions require updating. Such surcharges shall be applicable on the basis of samples taken at the control manhole (or its equivalent) of each industrial and commercial user.

H. **INTERCEPTORS.** Grease, oil and sand interceptors shall be provided when, in the opinion of the City, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the City and shall be located as to be readily and easily accessible for cleaning and inspection. In the maintaining of these interceptors, the owner shall be responsible for the proper removal and disposal, by appropriate means, of the captured materials and shall maintain records of the dates and means of disposal, which are subject to review by the City. Any removal and hauling of the collected materials must be performed by currently licensed waste disposal firms.

I. **PRETREATMENT.** Where pretreatment or flow-equalizing facilities are provided or required, the design and installation of the pretreatment plant and equipment shall be subject to the review and approval of the City and subject to the requirements of all applicable codes, Ordinances and laws. They shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

J. **OBSERVATION; SAMPLING; MEASUREMENT.** When required by the City, the owner of any property serviced by a sewer carrying industrial wastes shall install a suitable structure together with such necessary meters and other appurtenances in the sewer to facilitate observation, sampling, and measurement of the wastes. Such structure, when required, shall be accessibly and safely located and shall be constructed in accordance with plans approved by the City. The structure shall be installed by the owner at his expense and shall be maintained by him so as to be safe and accessible at all times.

K. **ENFORCEMENT.** The City, as the duly authorized agent of the City, shall be responsible for the investigation, sampling, monitoring and other work necessary for the enforcement of this Ordinance.

L. **HEARINGS; ADDITIONS; DELETIONS.** The City, acting through the City, shall have the authority to schedule hearings and to make changes, additions or deletions to the foregoing limitations with due notice to affected industrial or commercial users.

M. **STANDARDS AND GUIDELINES FOR TESTING.** All measurements, tests and analyses of the characteristics of waters and waste to which reference is made in this Ordinance shall be determined in accordance with the latest edition of "Standard Methods", and in accordance with the October 16, 1973 Federal Register (40 CFR 136) entitled, "Guidelines Establishing Test Procedures for Analysis of Pollutants", and shall be determined at the control structure provided, or upon suitable samples taken at said control structure. In the event that no special structure has been required, the control structure shall be considered to be the nearest downstream manhole in the public sewer to the point at which the sewer is connected. Sampling shall be carried out using the best practical technology.

N. **SPECIAL AGREEMENTS.** No statement contained in this Article shall be construed as preventing any special agreement or arrangement between the City and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the City for treatment, subject to payment therefor by the industrial concern. In all such cases the provisions set forth herein in the Wastewater and Drainagewater Disposal Ordinance will be governing factors in any contract entered into.

O. **RESERVED.**

P. **DAMAGES TO SYSTEM.** Damages to public sewers, appurtenances, pumping stations, the wastewater plant or treatment processes arising from harmful industrial waste shall be assessed to the permittee. Such assessments shall constitute a lien on the property. The City reserves the right to discontinue service to any person, firm or corporation for gross and/or repeated violations of this Ordinance, after written notice has been given.

Q. **PERMIT REQUIRED.** In order to control the admission of industrial waste to a public sewer, any person desiring to deposit or discharge an industrial waste into the wastewater plant, or any

sewer connected therewith, or who is now so doing, shall make application to the City within one hundred and twenty-five (125) days from the date of effectuation of this Ordinance for a permit therefor, upon special forms to be obtained from the City or its duly authorized representatives. Only bona-fide industrial and commercial users shall be eligible for a permit. These forms shall include an industrial waste questionnaire which shall furnish pertinent data inclusive of quantity of flow and an analysis of the waste discharged to the sewerage system. Any up-to-date map, showing all connections to the public sewers, shall be furnished if required by the City.

1. Upon issuance of the permit, the permittee shall henceforth comply with all conditions of the permit or be subject to the fees established herein.
2. All permits shall be updated and renewed at five-year intervals or such earlier time as may be necessitated by changed conditions, rules, regulations or laws.

(code eff. Oct., 1958; revised Apr. 21, 1976; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. Sept. 30, 1993; further amend. eff. March 27, 2003; Code 1980, § 25.044; amend. eff. Feb. 11, 2010; amend. eff. July 25, 2013)

25.045 - Sec. 45.

ACCESS TO PREMISES.

A. The City or any of its agents bearing proper credentials and identification shall have the power and authority at all reasonable hours to enter upon any premises or easement for the purpose of inspection, observation, measurement, sampling and/or testing pertinent to the discharge to the sewer system in accordance with the provisions of this Ordinance.

B. While performing the necessary work on private properties the City shall observe all safety rules applicable to the premises and the owner shall be held harmless for injury or death to the Superintendent or his representatives, and the City shall indemnify the owner against loss or damage to his property by City employees and against liability claims and demands for personal injury or property damage asserted against the owner and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the owner to maintain safe conditions.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.045; amend. eff. Feb. 11, 2010)

25.046 - Sec. 46.

FEES AND CHARGES—DESCRIPTION.

A. Any person requiring a Wastewater Disposal Service Connection for any building, mobile home, dwelling unit, or premises to be served by such connection shall make application therefor. The application shall be accompanied by payment of applicable fees and charges.

B. The applicable fees and charges for a Wastewater Disposal Service Connection include the Wastewater System Benefit Fee.

C. Application for connection shall be made:

1. For new construction, prior to issuance of a building permit, or prior to issuance of a foundation/pad permit for a mobile home.
2. For existing buildings or mobile homes, prior to connection to the City System.

D. In addition to the above requirements, it is intended that no wastewater disposal service be furnished to any building unless a water meter is installed and operating. In the event that a City water supply connection is not available, payment for flow into the City Wastewater Disposal System shall be based upon a determination by the City of the annual water consumption which would normally be used in a building of similar size and used in a similar manner.

E. All fees and charges shall be as established by resolution.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Aug. 27, 1987; Code 1980, § 25.046; amend. eff. Feb. 11, 2010)

25.047 - Sec. 47.

WASTEWATER AND/OR DRAINAGEWATER DISPOSAL SYSTEM BENEFIT FEE.

A. Any building or premises, for which Wastewater and/or Drainagewater Disposal service is required, shall be charged a Wastewater and/or Drainagewater Disposal System Benefit Fee.

B. The City Commission shall establish by resolution the Wastewater and/or Drainagewater Disposal System Benefit Fee, applicants for wastewater and/or drainagewater disposal service shall pay such fee based upon the size of the sewer tap.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Aug. 27, 1987; amend. eff. Aug. 17, 2002; Code 1980, § 25.047; amend. eff. Feb. 11, 2010)

25.048 - Sec. 48.

CONSTRUCTION INSPECTION CHARGES.

Persons shall pay direct expenses incurred by the City as a result of inspections for construction, repair or alteration of the Customer's Wastewater and/or Drainage water service sewer which occur after regular business hours.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; repealed eff. Aug. 27, 1987; further amend. eff. March 27, 2003; Code 1980, § 25.048; amend. eff. Feb. 11, 2010)

25.049 - Sec. 49.

DRAINAGEWATER AND/OR WASTEWATER DISPOSAL SERVICE CHARGES.

A. Upon being furnished drainagewater disposal service and/or a wastewater disposal service connection for any building, or premises, a Customer shall begin payment of service charges for same. The service charges are intended to pay for such items including (but not limited to) the customer's share of the following: Meter reading; billing; collecting; accounting; water meter

maintenance; drainagewater disposal facility expenses; the City's minimum drainagewater disposal system and/or wastewater disposal system payment obligations; unaccounted for wastewater flow; and/or remaining operation, maintenance, depreciation, replacement, and/or overhead expenses of the Systems.

B. Reserved.

C. The charges for Wastewater Disposal Service shall consist of a minimum monthly charge plus a charge based on water consumption. For wastewater disposal service, the consumption charge already recognizes the fact that all water consumed does not necessarily reach the Wastewater Disposal System.

D. The minimum monthly charges, drainagewater and/or wastewater, shall be applied to all premises served by the Drainagewater Disposal System and/or the Wastewater Disposal System, whether the property and/or building being serviced is occupied or not occupied.

E. The City reserves the right to bill Customers either monthly, or quarter-annually, at its discretion.

F. The Customer shall pay the Drainagewater Disposal Service Charges and/or the Wastewater Disposal Service Charges.

(code eff. Oct., 1958; amend. adopted June 22, 1977; further amend. Jan., 1978; Code 1980, § 25.049; amend. eff. Feb. 11, 2010)

25.050 - Sec. 50.

DELINQUENT ACCOUNT PENALTY CHARGE.

Whenever any payments are due the City (for any deferred charges rendered under this Ordinance), the City shall tender a dated invoice (or bill) for same. If the bill remains unpaid for a ten-day period beginning from the date of such bill, there shall be added to this Customer's Account, as of the last day of this ten-day period, a five percent (5%) Delinquent Account Penalty Charge.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.050; amend. eff. Feb. 11, 2010)

25.051 - Sec. 51.

VARIANCES.

The City Commission may authorize a variance from the provisions of this Ordinance when it determines that undue hardship may result from strict compliance with specific provisions or requirements of this Ordinance. In granting any variance, the Commission may prescribe other conditions that it deems necessary or desirable for the public interest. No variance shall be granted unless the City Commission finds:

A. There are special circumstances or conditions affecting the situation such that a strict application of the provisions of this Ordinance would deprive the applicant of reasonable use of his property;

B. That the variance is necessary for the preservation and enjoyment of the substantial property right of the applicant;

C. That the granting of the variance will not be unduly detrimental to the public welfare or injurious to other property in the City;

D. That such variance will not have the effect of nullifying the interest and purpose of this Ordinance nor violate the provisions of other State or Federal Regulations.

E. Any person may apply for such variance by requesting same in writing, stating fully and clearly the reasons for the request and including any supplemental information and data which he believes may aid in the analysis of the proposed request.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.051; amend. eff. Feb. 11, 2010)

25.052 - Sec. 52.

ENFORCEMENT AND PENALTIES.

Any person who violates the provisions of this Ordinance shall be served by the City with written notice stating the nature of the violation and providing a reasonable time within which to make satisfactory correction thereof. The offender shall, within the period of the time stated in such notice, permanently cease all violation.

Each day in which any such violation shall continue shall be deemed to be a separate offense. Further, any person violating any of the provisions of this Ordinance shall be liable to the City for any expense, loss, or damage caused the City by reason of such violation.

Any person who violates the provisions of this Ordinance shall be guilty of a misdemeanor.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; Code 1980, § 25.052; amend. eff. Feb. 11, 2010)

25.053 - Sec. 53.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.054 - Sec. 54.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.055 - Sec. 55.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

APPENDIX A

25.070 - Sec. 70.

RESERVED.

(ord. eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; amend. eff. Feb. 11, 2010)

25.071 - Sec. 71.

RESERVED.

(code eff. Oct., 1958, amend. adopted June 20, 1977; further amend. Jan., 1978; repealed eff. Aug. 27, 1987; amend. eff. Feb. 11, 2010)

25.072 - Sec. 72.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; repealed eff. Aug. 27, 1987; amend. eff. Feb. 11, 2010)

25.073 - Sec. 73.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; further amend. eff. Dec. 17, 1981; further amend. eff. Apr. 29, 1983; further amend. eff. June 1, 1985; further amend. eff. March 13, 1986; further amend. eff. Dec. 1, 1986; further amend. eff. Sept. 1, 1988; further amend. eff. May 15, 1997; further amend. eff. July 1, 1998; amend. eff. Aug. 17, 2002; further amend. eff. June 28, 2007 amend. eff. Feb. 11, 2010)

25.074 - Sec. 74.

RESERVED.

(ord. eff. May 25, 1989; amend eff. May 14, 1992; amend. eff. Feb. 11, 2010)

25.080 - Sec. 80.

RESERVED.

(code eff. Oct., 1958; amend. adopted June 20, 1977; further amend. Jan., 1978; repealed eff. Aug. 27, 1987; amend. eff. Feb. 11, 2010)

25.085 - Sec. 85.

DISCONNECTIONS AND SEALING OF SEWER LINES.

A. The complete disconnection from and sealing of any and all connections to City sewer lines is required prior to demolition or removal of any foundation members, basement walls, basement floors or support pads on or below ground level.

B. Disconnection and sealing of sewer lines are to be performed as directed by the City and only during the presence of a person designated by the City for that specific purpose. The City will publish (and periodically update by formal amendment) disconnection and sealing of sewer line requirements. Hereafter, said requirements will be referred to as the disconnection and sealing of sewer line requirements and shall be enforced as part of this ordinance, and copies, therefore, will be available from the City.

C. No person shall make connections from any City sewer to any structure or equipment regulated by this code that has been disconnected or use of which has been ordered to be disconnected by the City until the City authorizes the reconnection and use of such connection.

(ord. eff. Mar. 29, 2012)

25.090 - WASTEWATER TREATMENT SYSTEM

25.091 - Sec. 91.

RESERVED.

(code eff. Oct., 1958; amend. March 14, 1985; amend. eff. Feb. 11, 2010)

25.092AA - Sec. 2.

PURPOSE.

This Ordinance has as its purpose the protection of public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of Industrial or Commercial wastes admitted to or discharged into the sewerage collection system and to enable the City to comply with all applicable State and Federal Laws required by the Federal Clean Water Act of 1977 and the General Pretreatment Regulations (40 CFR 403).

The objectives of this Ordinance are:

A. To prevent the introduction of pollutants into the Wastewater System which will interfere with the operation of the system or contaminate the resulting sludge.

B. To prevent the introduction of pollutants into the Wastewater System which will pass through the system, inadequately treated, into the receiving waters.

C. To improve the opportunity to recycle and reclaim wastewater and sludge from the system.

This Ordinance provides for the regulation of direct and indirect contributors to the Municipal Wastewater System through the issuance of discharge permits to nondomestic users, authorizes monitoring and enforcement, through the requiring of user reporting, and through the authorization of fees and the establishment of fines.

(Code 1980, § 25.092AA; amend. eff. Feb. 11, 2010)

25.092BB - Sec. 3.

DEFINITIONS.

A. **ACT** or **THE ACT** shall mean the Federal Water Pollution Control Act PL 92500, also known as the Clean Water Act as amended, 33 U.S.C. 1251, et seq.

B. **APPROVAL AUTHORITY** shall refer to the Michigan Department of Natural Resources and Environment.

C. **AUTHORIZED REPRESENTATIVE OF INDUSTRIAL USER** shall refer to (1) a corporate officer, if the industrial user is a corporation; (2) a general partner or proprietor if the industrial user is a partnership or proprietorship; respectively; (3) or a duly authorized representative of the individual designated in either of the above if such representative is responsible for the overall operations of the facilities from which the indirect discharge originates or is the identified corporate, partnership or proprietorship representative for responding to such discharge inquiries or actions. Authorization for this representative must be submitted to the City in writing by the individual designated in (1) and (2) hereof.

C.1. **BEST MANAGEMENT PRACTICES,** or **BMPs,** shall mean schedules of activities, prohibitions of activities, maintenance procedures, and other management actions. BMPs may include treatment requirements; operating procedures; control of site runoff, spillage or leaks; sludge or waste disposal procedures; or control of drainage from materials storage.

D. **BIOCHEMICAL OXYGEN DEMAND (BOD)** shall mean the quantity of oxygen utilized in the biochemical oxidation or organic matter under standard laboratory procedure, five (5) days at 20 degrees centigrade expressed in terms of weight and concentration (milligrams per liter (mg/l)), as measured by "Standard Methods."

E. **BOARD** shall mean the City Commission of the City of Mount Clemens.

E.1. **BYPASS** means the intentional diversion of waste streams from any portion of a user's treatment facility needed for compliance with pretreatment standards.

F. **CATEGORICAL STANDARDS** shall refer to national categorical pretreatment standards or a pretreatment standard as promulgated under authority of the Act, 40 CFR 403.

G. **City** shall mean the City of Mount Clemens or the City Commission of the City of Mount Clemens.

H. **COMMERCIAL USER** shall mean all nondomestic sources of indirect discharge other than industrial users, as defined herein, including, but not limited to, the following: a publicly or privately owned facility where persons are engaged in the exchange or sale of goods or

services, hospitals, retail establishments, schools and facilities operated by local and State governments.

I. **COMPOSITE SAMPLE** shall mean a series of sample aliquots collected separately using a flow-proportional sampling technique, or alternate time-based or grab-based sampling technique, and combined into one sample prior to analysis. A flow-proportional composite is where numerous sample aliquots are collected at a rate directly proportional to the wastestream flow. An alternate time-based sampling technique is where numerous sample aliquots are collected at regular time intervals regardless of the wastestream flow, and an alternate grab-based sampling technique is where a limited number of sample aliquots are collected at specific times.

J. **RESERVED.**

K. **CONTROL MANHOLE** shall mean a suitable manhole together with such necessary meters including where appropriate adequate power source, and other appurtenances, to facilitate observation, sampling and measurement of wastewater to be constructed in accordance with plans approved by the Board's engineering personnel.

L. **RESERVED.**

M. **ENVIRONMENTAL PROTECTION AGENCY** or **EPA** shall mean the U.S. Environmental Protection Agency or where appropriate the term may also [be] used as a designation for the administrator or other authorized official of said agency.

N. **GRAB SAMPLE** shall mean a sample which is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time or variation in constituent composition.

O. **INDIRECT DISCHARGE** shall mean the discharge or the introduction of nondomestic pollutants from any source regulated under Section 307(b) or (c) of the Act into the waste treatment system.

P. **INDUSTRIAL USER** shall mean a source of indirect discharge under regulations issued pursuant to Section 402 of the Act (33 U.S.C. 1342), which source originates from, but is not limited to, facilities engaged in industry, manufacturing, business, trade or research, including the development, recovery or processing of natural resources.

Q. **INDUSTRIAL WASTE** shall mean any liquid, solid or gaseous waste or form of energy combination thereof resulting from any process of industry, manufacturing, business, trade or research, including the development, recovery or processing of natural resources.

R. **INTERFERENCE** shall mean inhibition or disruption of a POTW's Sewer System Treatment Processes or Operations which contribute to a violation of any requirement of its NPDES permit. The term includes prevention of sewage sludge use or disposal by the POTW in accordance with Section 405 of the Act, or any criteria, guidelines or regulations developed pursuant to the Federal Solid Waste Disposal Act (SWDA), the Federal Clean Air Act, the Federal Toxic Substances Control Act, or more stringent State criteria applicable to the method of disposal or use employed by the POTW.

R.1. **LOCAL LIMIT** shall mean any specific prohibition set by the City on discharges to the wastewater system from an industrial user.

S. **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT** shall be defined in the Act, 33 U.S.C. 1342, PL 92-500, Section 402, and 40 CFR 125.

S.1. **PASS-THROUGH** shall mean a discharge that exits the City's wastewater system in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, cause a violation of any requirement of the act.

T. **PERSON** shall mean any individual, partnership, copartnership, firm, company, corporation, association, joint stock company, trust, estate, unit of government, school district, or any other legal entity, or their legal representative, agent or assigns.

U. **pH** shall mean the logarithm (base 10) of the reciprocal of hydrogen ions expressed in grams per liter of solution as measured in accordance with "Standard Methods."

V. **POLLUTANT** shall mean any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

W. **PUBLIC SEWER** shall mean a common sewer controlled by a governmental agency or public utility.

W.1. **PRETREATMENT REQUIREMENT** shall mean any substantive or procedural requirement related to pretreatment, other than a pretreatment standard, imposed on an industrial user.

W.2. **PRETREATMENT STANDARD** shall mean any regulation containing pollutant discharge limits and categorical standards.

X. **SERVICE AREA** shall include any area whose wastewater is treated at a wastewater treatment plant of the Board.

Y. **RESERVED.**

Z. **SLUG** shall mean any discharge of water, sewage or industrial waste which in concentration of any given regulated constituent or in quantity of flow exceeds for any period of duration longer than 15 minutes more than 5 times the average 24-hour concentration or flows during normal operation.

AA. **STANDARD INDUSTRIAL CLASSIFICATION (SIC)** shall refer to a classification made according to the standard industrial classification manual issued by the Executive Office of the President, Office of Management and Budget, 1977.

BB. **"STANDARD METHODS"** shall mean the laboratory procedures set forth in the latest edition at the time of analyses, of "Standard Methods for Examination of Water and Wastewater," published by the American Public Health Association or methods given in 40 CFR 136, "Guidelines for Establishing Test Procedures for Analysis of Pollutants." Where these two references are in disagreement on procedures for the analysis of a specific pollutant, the methods given in 40 CFR 136 shall be followed.

CC. **SUSPENDED SOLIDS** shall mean the total suspended matter that floats on the surface of, or is suspended in, water, wastewater or other liquids, and which is removable by laboratory filtering as measured according to "Standard Methods."

DD. **TOXIC POLLUTANT** shall mean any pollutant or combination of pollutants listed as toxic in regulations promulgated by the EPA under the provisions of the Clean Water Act, Section 307(A), 33 U.S.C. 1317, or included in the critical materials register promulgated by the MDNRE, or other acts.

EE. **UPSET CONDITION** shall mean an exceptional incident in which there is an unintentional and temporary noncompliance with applicable effluent standards and criteria due to circumstances beyond the reasonable control of the user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

FF. **WASTEWATER SYSTEM** shall mean any Board-owned facility, devices and structures used for receiving and treating sewage. This definition shall include any sewers, pump stations, and other structures or appurtenances that convey wastewater to the treatment plant. For the purpose of this Ordinance, "Wastewater System" shall also include any sewer, pump stations other structures or appurtenances that convey wastewaters to the treatment plant from persons outside the City of Mount Clemens who are users of the City of Mount Clemens' treatment plant.

GG. **ABBREVIATIONS.** The following abbreviations shall have the designated meanings:

BOD	—	Biochemical oxygen demand
CFR	—	Code of Federal Regulations
EPA	—	Environmental Protection Agency
l	—	Liter
MDNRE	—	Michigan Department of Natural Resources and Environment
mg	—	Milligrams
mg/l	—	Milligrams per liter
NPDES	—	National Pollutant Discharge Elimination System
POTW	—	Publicly owned treatment works, e.g., Wastewater System as defined herein
SIC	—	Standard Industrial Classification
ss	—	Suspended Solids
SWDA	—	Solid Waste Disposal Act, 42 U.S.C. 6901 et seq.
TSS	—	Total Suspended Solids
USC	—	United States Code

HH. **NEW SOURCE** shall mean any source, the construction of which is commenced after the publication of proposed pretreatment standards which will be applicable to such source, provided that:

A. Construction is at a site where no other point source is located;

B. Process or production equipment causing discharge is totally replaced due to construction; or

C. Production or wastewater generating processes of the facility are substantially independent of an existing source at the same site.

Construction is considered to have commenced when installation or assembly of facilities/equipment has begun, significant site preparation has begun for installation or assembly, or the owner/operator has entered into a building contractual obligation.

II. **BYPASS** shall mean the intentional diversion of waste streams from any portion of a user's treatment facility.

JJ. **SEVERE PROPERTY DAMAGE** shall mean substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

KK. **SIGNIFICANT INDUSTRIAL USER** shall mean a User to which the following applies:

1. Is subject to Categorical Pretreatment Standards; and/or

2. Discharges an average of 25,000 gallons per day or more of process water to the POTW, contributes a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant, or is designated as such by the City on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement.

LL. **SIGNIFICANT NONCOMPLIANCE** shall mean a User is in violation of one or more of the following:

(1) Chronic violation of waste water discharge limit, defined here as when sixty-six (66) percent or more of all the measurements for a pollutant parameter taken during a six-month period the corresponding daily maximum limit, average limit, or instantaneous limit by any magnitude;

(2) Technical Review Criteria (TRC) violation of waste water discharge limit, defined here as when thirty-three (33) percent or more of all of the measurements for a pollutant parameter taken during a six-month period equal or exceed the product of the corresponding daily maximum limit multiplied by the applicable TRC factor, or the product of the corresponding average limit multiplied by the applicable TRC factor, or the product of the corresponding instantaneous limit multiplied by the applicable TRC factor. (TRC factor = 1.4 for BOD, TSS, fats, oil & grease, and 2.2 for all other pollutants except pH);

(3) Any other violation of a daily maximum limit, average limit, instantaneous limit, narrative standard or requirement that the City determines has alone or in combination with other discharges caused interference or pass through, including endangering the health of POTW personnel or the general public;

(4) Any discharge of a pollutant that has caused imminent endangerment to human health, public welfare, or the environment, or has resulted in the POTW exercising its emergency authority to halt or prevent such a discharge;

(5) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a City-issued discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;

(6) Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, and/or reports on compliance with compliance schedules;

(7) Failure to accurately report noncompliance; and

(8) Any other violation, or group of violations, which the City determines as adversely affecting operation or implementation of the City's pretreatment program.

MM. **SLUG DISCHARGE** means any discharge of a non-routine episodic nature, including an accidental spill or non-customary batch discharge, which has a reasonable potential to cause interference or pass-through at the City's wastewater system, or in any other way violates the City's regulations, local limits, or permit conditions.

NN. **UPSET** means an exceptional incident in which there is unintentional and temporary noncompliance with pretreatment standards and requirements because of factors beyond the reasonable control of the user. An upset does not include noncompliance caused by improper or careless operation, improperly designed or inadequate treatment facilities, or lack of preventive maintenance.

(code eff. Oct., 1958; amend. March 14, 1985; further amend. Jan. 17, 1991; further amend. eff. March 12, 1992; Code 1980, § 25.092BB; amend. eff. Feb. 11, 2010)

25.092CC - Sec. 4.

[REGULATIONS.]

1. **PROHIBITING POLLUTANTS:** It shall be unlawful for any person to cause or allow to be discharged sewage or waste of any kind directly or indirectly into the Wastewater System which does not conform to the criteria or effluent standards set forth in Appendix A. The user shall be permitted to demonstrate to the City that the effluent being received by the user contains pollutants and upon such demonstration, the user shall be accountable only for the net pollutants added to the effluent and not for the total gross pollutants contained in the effluent. The user shall not be liable for noncompliance due to an upset condition.

   The City may develop BMPs to implement pollution prohibitions and specific pollutant limitations. Local limits, specific prohibitions, and BMPs developed by the City shall be considered pretreatment standards for purposes of this Ordinance.

2. **MEASURING METHODS:** In order to ascertain whether or not the sewage or waste of any kind discharged by any person into the public sewers or Wastewater System conforms to the criteria or effluent standards established and adopted by this Ordinance the City may use any appropriate method or device which will lead to such a determination.

   All measurements, tests and analyses of wastewater, sewage and wastes of any kind shall be determined in accordance with "Standard Methods."

3. **SAMPLING:** When required by the City each person covered by this Ordinance shall provide a control manhole or any other device or facility suitable and appropriate to enable the City to conduct gauging and sampling operations to determine conformance with the criteria and effluent standards established and adopted by this Ordinance. The gauging and sampling facility should normally be situated on the user's premises, but the City may, when such a location would be impractical or cause undue hardship on the user, allow the facility to be constructed in the public street or sidewalk area; and it shall be the responsibility of the user to obtain any necessary approvals for the location of the gauging and sampling facility from appropriate governmental agencies. The City shall have the right, during reasonable hours and, at the option of the user, accompanied by a representative of the user, to enter upon the premises of each person for the purpose of setting up measurement or sampling operations.

   All wastewater samples must be representative of the user's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of a user to keep its monitoring facility in good working order shall not be grounds for claiming that sample results are unrepresentative of its discharge.

   For composite samples, the user shall use a flow-proportional sampling technique unless an alternative time-based or grab-based sampling technique is authorized by the City. A user seeking an alternative sampling technique shall submit a written request, and shall have the burden of demonstrating that the alternative sampling technique will be representative of the

discharge. The decision whether to allow an alternative sampling technique will be at the City's discretion, and the basis for the decision will be documented in the City's file for that user.

Grab samples shall be used for assessing compliance of oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds. For compliance reports, the user shall collect the number of grab samples necessary to properly assess its compliance with applicable pretreatment standards and requirements except as follows: for sampling associated with a 90-day compliance report or baseline monitoring report, a minimum of four (4) daily grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds where historical sampling data do not exist. Where historical sampling data do exist, the City may authorize a lower number of samples. The user may use multiple grab samples for sampling associated with a baseline monitoring report or a 90-day compliance report provided they are collected during a 24-hour period and composited prior to analysis according to the following basis:

(a) Composited in the field or the laboratory for cyanide, total phenols, and sulfides;

(b) Composited only in the laboratory for volatile organics and oil and grease; and

(c) Composited as authorized by the City for other parameters.

The duly authorized employees of the Board, bearing proper credentials and identification, shall be permitted to enter all properties accompanied by a representative of the user, at the user's option, for the purpose of inspection, observation, measurement, sampling and testing in accordance with the provisions of this Article. Duly authorized employees shall have no authority to inquire into any process, including metallurgical, chemical, oil, refining, ceramic, paper or other industries, beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for waste treatment.

While performing the necessary work on private properties, authorized employees of the Board shall observe all safety, security and other company rules applicable to the premises established by the property owner or his agent, [and] such persons shall leave a portion of any sample taken from any sampling point on or adjacent to the premises with such property owner or agent. In cases of disputes arising over shared samples, the portion taken and analyzed by the representatives of the Board shall be presumed to be the valid sample.

4. **FEDERAL CATEGORICAL PRETREATMENT STANDARDS:** Existing Sources subject to new Categorical Standards shall achieve compliance within three (3) years of the date the standard is promulgated, unless a shorter compliance schedule is specified in the standard. New Sources subject to Categorical Standards shall install, have in operating condition, and have started-up all pretreatment equipment required to achieve compliance before beginning to discharge; and shall meet all applicable Pretreatment Standards within the shortest feasible time, but not to exceed ninety (90) days. Where necessary and/or appropriate, the City may convert production-based National Categorical Pretreatment Standards to equivalent mass per day or concentration limits in accordance with 40 CFR, Section 403.6(c). Equivalent limits shall be deemed Pretreatment Standards with which Industrial Users will be required to comply in lieu of the promulgated categorical standards.

5. **MODIFICATION:** The Board may modify the effluent limitations applicable to indirect discharges as specified in the Federal Pretreatment Standards if the requirements contained in 40 CFR 403.7 are fulfilled concerning consistent removal of pollutants by the Board's wastewater plant and prior approval from the Approval Authority (MDNRE or EPA) is obtained.

6. **STATE REQUIREMENTS:** State requirements and limitations on discharges shall apply in any case where they are more stringent than Federal requirements and limitations or those imposed under the Ordinance effective upon the dates compliance is required.

7. **DILUTION PROHIBITED:** Except where expressly authorized to do so by an applicable Pretreatment Standard or Requirement, dilution of a waste discharge introduced into the Wastewater System by an increase in the use of process water as a continuing practice in partial or complete substitution for adequate treatment is not acceptable as a method for achieving the criteria set forth in this Ordinance or the limitations contained in the Federal Pretreatment Standards. The City may impose mass limitations on users which are using dilution to meet applicable Pretreatment Standards or requirements, or in other cases where the imposition of mass limitations is appropriate.

Any introduction of any wastewater or industrial waste which originates outside the service area of the Board is expressly prohibited unless permission for such introduction is obtained from the City in advance.

(code eff. Oct., 1958; amend. March 14, 1985; further amend. eff. Jan. 17, 1991; Code 1980, § 25.092CC; amend. eff. Feb. 11, 2010)

25.092DD - Sec. 5.

FEES.

The City Commission of the City of Mount Clemens shall establish fees sufficient to meet costs of operation of the system, or as provided by law, from time to time by Resolution. Such fees shall include:

1. Fees for reimbursement of costs of setting up and operating the Board's Industrial Waste Control and Pretreatment Programs.
2. Fees for monitoring, sampling, analysis, inspections and surveillance procedures.
3. Fees for reviewing accidental discharge procedures and construction.
4. Fees for permit application.
5. Fees for filing appeals.
6. Fees for consistent removal (by the Board) of pollutants otherwise subject to Federal Pretreatment Standards.
7. Other fees as the Board may deem necessary to carry out the requirements contained herein.
8. User fees and surcharges as required by law shall be adopted by the City on the basis of the volume of waste and the quantities of specific pollutants present in the wastewater.

(code eff. Oct., 1958; amend. March 14, 1985; Code 1980, § 25.092DD; amend. eff. Feb. 11, 2010)

25.092DDa - Sec. 5.a.

PRETREATMENT.

User shall provide necessary wastewater treatment as required to comply with this Ordinance and shall achieve compliance with all National Categorical Pretreatment Standards within the time limitations specified by the Federal Pretreatment Regulation. Any facilities required to pretreat wastewater to a level in compliance with the provisions of this Ordinance shall be provided, operated and maintained at the user's expense. Detailed plans showing the pretreatment facilities and operating procedure shall be submitted to the City for review and shall be acceptable to the City before construction of the facility. The

review of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the City under the provisions of this Ordinance. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be approved by the City prior to the user's initiation of the changes.

(ord. eff. March 13, 1986; Code 1980, § 25.092DDa; amend. eff. Feb. 11, 2010)

25.092EE - Sec. 6.

REPORTING REQUIREMENTS.

1. **SEMI-ANNUAL COMPLIANCE REPORT:** The Board, through the City, shall require all users during the months of June and December to submit reports on waste discharge volume, quality, specific pollutant analyses, and any other information pertaining to the provisions of this Ordinance. In cases were compliance with a BMP is required, the user shall submit documentation necessary for the City to determine compliance with the requirement. The Board may require all users to perform sampling operations of their wastewater, obtain analytical determinations on such samples, and file reports of these results with the Board for the purpose of monitoring compliance with the provisions of this Ordinance. Sampling, analyses and reporting required hereunder shall be limited to pollutants regulated by this Ordinance, EPA regulations or MDNRE regulations. All documents required by this Section and 25.092FF, 3. PERMIT APPLICATION, shall be signed by an authorized representative of the Industrial User and include the following certification statement:

   > I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

   If the authorized representative changes because a different individual or position has responsibility for the overall operation of the facility or for environmental matters of the company, a new authorization satisfying the requirements of 25.092BB, C. AUTHORIZED REPRESENTATIVE OF INDUSTRIAL USER, must be submitted to the City prior to or together with any reports to be signed by the newly authorized representative.

   If a User subject to reporting requirements required to demonstrate continued compliance monitors any pollutant more frequently than required by the City, using approved procedures, the results of this additional monitoring shall be included in the report.

2. **BASELINE CATEGORICAL MONITORING REPORT:** Within one hundred eighty (180) days after promulgation or revision of a national categorical pretreatment standard, all existing affected industrial users must submit to the City a baseline monitoring report containing the following information for each process regulated by such pretreatment standard.

   a. Identifying information including name and address of the facility, and name of the owner or operator.

   b. A list of any environmental control permits held by or for the facility.

   c. A brief description of the nature, average rate of production, and SIC classifications of operations carried out at the facility. This description should include a schematic process

diagram that includes points of discharge to the City's wastewater system from the regulated processes.

d. Information on measured average daily and maximum daily flows to the City's wastewater system from regulated process streams, and other streams as necessary to enable use of the combined wastestream formula of 40 CFR Part 403.6(e).

e. All pretreatment standards and requirements applicable to regulated processes and/or to the discharge to the City's wastewater system.

f. Results of sampling and analysis identifying the nature of associated pollutants in the discharge from regulated processes and/or the discharge to the City's wastewater system. Samples shall be representative of daily operations, and shall be collected and analyzed in accordance with procedures of this Ordinance and 40 CFR Part 403.12(b)(5)(iii) and (iv). In cases where compliance with a BMP is required, the user shall submit documentation necessary for the City to determine compliance with the requirement.

g. A statement indicating whether applicable pretreatment standard and requirements are being met on a consistent basis and, if not, what additional operating and maintenance (O&M) and/or additional pretreatment will be provided to achieve compliance. If additional O&M and/or pretreatment are required, the report shall also include a compliance schedule in accordance with 40 CFR Part 403.12(c) by which the user will complete such actions in the shortest time possible. The completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard.

This report shall be signed and certified by an authorized representative of the user. Any changes in information submitted pursuant to the City within sixty (60 days) of becoming aware of the change.

3. **90-DAY CATAGORICAL COMPLIANCE REPORT:** Within ninety (90) days following the date for final compliance with applicable Pretreatment Standards, or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any user subject to Pretreatment Standards and Requirements shall submit a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by Pretreatment Standards and Requirements and the average and maximum daily flow for such process units in the user facility which are limited by such standards and requirements. Any user subject to BMP-based pretreatment standards shall also report necessary BMP compliance information. The report shall state whether the applicable Pretreatment Standards and Requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the user into compliance with such standards or requirements. This report shall be signed and certified by an authorized representative of the user.

[4]. **NOTIFICATION OF CHANGED CONDITIONS:** Each User shall notify the City in advance of any significant changes planned for the user's operations or system which might alter the nature, quality or volume of its wastewater, including the potential for a slug discharge, at least ninety (90) days before the change if possible. If not possible, this notification shall be made to the City as soon as the planned change becomes known to the User. The City may require the User to submit additional information as may be deemed necessary to evaluate the changed condition, including the submission of a wastewater discharge permit application. The City may issue a new wastewater discharge permit, or modify an existing wastewater discharge permit in response to changed or anticipated changed conditions. This notification shall be signed and certified by an authorized representative of the user.

[5]. **NOTIFICATION OF POTENTIAL PROBLEMS:** In the case of any nonroutine discharge that could cause problems at the City's wastewater system including a slug load, accidental discharge, or unintentional bypass, the user shall telephone and notify the City of the incident. Such notification shall occur as soon as possible, but in no case more than twenty-four hours after the user becomes aware of the incident. In the case of a slug load, accidental discharge,

or unintentional bypass, the User shall submit a detailed written report to the City within five (5) days providing the following information:

A description of the discharge including the location of discharge, type of waste, concentration and volume if known; the period of discharge including exact dates and times or, if not corrected, the anticipated time the discharge is expected to continue; and corrective actions being taken to reduce, eliminate, and prevent recurrence of the discharge.

This report shall be signed and certified by an authorized representative of the user. Such notification shall not relieve the user of any expense, loss, damage or other liability which may be incurred as a result of damage to the City's wastewater system, fish kills or any other damage to person or property. Such notification shall also not relieve the user of any fine, civil penalty, or other liability which may be imposed by this Ordinance or other applicable laws.

[6]. **NOTIFICATION OF LIMIT EXCEEDANCE; REPEAT SAMPLING REPORT:** ;hg;If sampling performed by a User indicates a violation, the User shall notify the City within twenty-four (24) hours of becoming aware of the violation. The User shall repeat the sampling and submit the results of re-analysis to the City within thirty (30) days after becoming aware of the violation except when the City will be performing scheduled surveillance sampling/analysis within this period. This and report shall both be signed and certified by an authorized representative of the User.

If sampling is performed by the City on behalf of the user, the City will either repeat the sampling within thirty days after becoming aware of the violation or immediately notify the user of the requirement to repeat the sampling within thirty days.

[7]. **NOTIFICATION OF HAZARDOUS WASTE DISCHARGE:** All Users shall also notify the POTW, the EPA Regional Waste Management Division Director, and the State Hazardous Waste Authority in writing of any discharge into the POTW of a substance which would be a hazardous waste under 40 CFR 261 if disposed via other means. Notification details, as well as allowable exemptions, shall be in accordance with 40 CFR 403.12(p). In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the User must provide notification of the discharge of such substance within 90 days of the effective date of such regulations. In the case of any notification of hazardous waste discharges, the User shall further certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical. This notification shall be signed and certified by an authorized representative of the user.

(code eff. Oct., 1958; amend. eff. March 14, 1985; further amend. eff. March 13, 1986; further amend. eff. Jan. 17, 1991; further amend. eff. March 12, 1992; Code 1980, § 25.092EE; amend. eff. Feb. 11, 2010)

25.092FF - Sec. 7.

PERMIT REQUIREMENTS.

1. **PERMIT REQUIREMENT.** Users whose discharge into the system which is ultimately treated at the Mount Clemens Wastewater Treatment Plant and whose discharge meets any of the following criteria shall be required to have an Industrial Waste Permit:

   (a) Flow of 10,000 gallons or more per average working day;

   (b) Discharge containing net measurable toxic pollutants; or

(c) Discharge of pollutants equal to or exceeding any of the following amounts:

BOD—80 lbs/day

Suspended Solids—100 lbs/day

Oil or Grease—40 lbs/day

2. **INDUSTRIAL WASTE PERMIT:** Any significant Industrial User or non-domestic user including, but not limited to, those classified under division (d) of the Standard Industrial Classification Manual discharging wastes meeting the criteria in Section FF.1 above shall be required to have an Industrial Waste Permit.

Industrial Waste Permits shall be expressly subject to all provisions of this Ordinance and all other applicable regulations, user charges and fees established by the City Commission. Permits may contain the following:

(a) The unit charge or schedule of user charges and fees for the wastewater to be discharged to a public sewer as established by the Board;

(b) Effluent limits, including BMPs, based on applicable general pretreatment standards, categorical standards, and local limits;

(c) Limits on average and maximum rate and time of discharge or requirements for flow regulations and equalization;

(d) Requirements for installation and maintenance of inspection and sampling facilities;

(e) Specifications for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests and reporting schedules;

(f) Compliance schedules;

(g) Requirements for submission of technical reports or discharge reports;

(h) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the Board, and affording Board access thereto;

(i) Requirements for notification of the City in advance of any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the wastewater treatment system;

(j) Requirements for notification of slug discharges, and requirements to control slug determined by the City to be necessary discharges if;

(k) Requirements for containment of specific materials, processes, or facilities for the prevention of accidental discharges; and

(l) Other conditions as deemed appropriate by the Board to ensure compliance with this Ordinance.

(m) Adjust categorical pretreatment standards to reflect the presence of pollutants in the user's intake water in accordance with 40 CFR 103.15.

(n) Statement of duration, up to five years;

(o) Statement of non-transferability without appropriate prior notification;

(p) Statement of applicable civil and criminal penalties for violations.

A user shall have the right to contest any term or condition of an industrial waste permit by requesting a hearing before the City in writing within 10 days after issuance of the permit. In the event of such request, the contested terms and conditions of the permit shall be stayed pending the conclusion of the hearing.

3. **PERMIT APPLICATION:** Users required to obtain an industrial waste permit shall complete and file with the Board an application in the form prescribed by the Board; and accompanied by a fee in the amount established by resolution.

   In support of the application, the user may be required to submit, in units and terms appropriate for evaluation, the following information:

   A. Name, address, and location (if location is different from the address).

   B. One or more SIC numbers according to the Standard Industrial Classification Manual, Bureau of the Budget, 1977. In the event that an industrial user disagrees with a given SIC classification, the user shall request that the City provide written certifications as to the proper SIC classification and the reasons therefor.

   C. Wastewater constituents and the characteristics including, but not limited to, those limited by this Ordinance as determined by a reliable analytical laboratory (including in-house laboratories utilizing approved EPA methods and procedures), with sampling and analysis performed in accordance with procedures established by the EPA pursuant to Section 304(G) of the Act and contained in 40 CFR, Part 136, as amended.

   D. Time and duration of discharge.

   E. Average daily wastewater flow rates, including daily, monthly and seasonal variations if any.

   F. Site plans, floor plans, mechanical and plumbing plans and details to show all sewers, sewer connections and appurtenances by the size, location and elevation.

   G. Description of activities, facilities and plant processes on the premises including all materials which are or could be discharged.

   H. Where known, the nature and concentration of any pollutants in the discharge which are limited by any City, State or Federal Pretreatment Standards, and a statement regarding whether or not the pretreatment standards are being met on a consistent basis and if not, whether additional operational pretreatment is required for the user to meet applicable pretreatment standards. New Sources shall disclose information on any pretreatment methods they intend to use and provide estimates on expected treated discharge flow and pollutant concentrations.

   I. Where additional pretreatment and/or operation and maintenance activities will be required to comply with this Ordinance, the user shall provide a declaration of the shortest schedule by which the user will provide such additional pretreatment and/or implementation of additional operational and maintenance activities.

      The following conditions shall apply to this schedule:

      1. The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable Categorical Pretreatment Standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.). No increment shall exceed 9 months.

      2. Not later than 14 days following each milestone date in the schedule and the final date for compliance, the user shall submit a progress report to the Board, including no less than a statement as to whether or not it complied with the increment of the progress represented by that milestone date and if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the user to return the construction to the approved schedule.

J. Within one hundred eighty (180) days of the promulgation or revision to a National Categorical Pretreatment Standard, all affected users shall resubmit to the City information required by paragraphs H and I herein.

4. **PERMIT CRITERIA MODIFICATIONS:** The Board (City) reserves the right to amend any Wastewater Discharge Permit issued hereunder in order to assure compliance by the City with applicable laws and regulations. In the event that the board (City) determines that a user is contributing substances in quality, quantity, or in locations that can cause problems to the POTW or the receiving stream, the City has the authority to develop and enforce more stringent effluent limits specifically applicable to the user. Within 9 months of the promulgation of a National Categorical Pretreatment Standard, the Wastewater Discharge Permit of each user subject to such standard shall be revised to require compliance with such standards within the same time frame prescribed by such standards.

   All National Categorical Pretreatment Standards adopted after the promulgation of this Ordinance shall be adopted by the City as part of this Ordinance. Where a user subject to a National Categorical Pretreatment Standard has not previously submitted an application for a Wastewater Discharge Permit as required by Section 307(A) [of the Act], the user shall apply for a Wastewater Discharge Permit from the City within 180 days after promulgation of an applicable National Categorical Pretreatment Standard, the information required by paragraphs (8) and (9) of Section 307(A) [of the Act]. The user shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new condition in the permit shall include a reasonable time schedule for compliance.

5. **PERMITS DURATION:** Permits shall be issued for a specified time period, not to exceed five (5) years, and shall carry a specific expiration date. Industrial waste permits issued under the provisions of former Ordinances of the City of Mount Clemens shall continue in effect until they expire in accordance with their terms, provided that the permittee shall comply with the effluent standards and criteria set forth in this Ordinance. The user shall apply for permit issuance a minimum of 180 days prior to the expiration of the user's existing permit. The terms and conditions of the permit may be subject to modifications by the Board during the term of the permit as limitations or requirement as identified in [section] 25.092FF.1 are modified or other just cause exists. A user shall be notified by the City in writing of any proposed changes in his permit and the reasons therefor at least 180 days prior to the effective date of change. A modified permit shall not be effective if the user affected by the modification within 60 days after such notice requests in writing a hearing before the City shall hold a hearing. If a hearing is requested, the modification, if affirmed, shall become effective 180 days after such notice or 60 days after such affirmance, whichever is later. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance. New or reissued permits shall be subject to a $250.00 fee.

6. **PERMIT TRANSFER:** Industrial waste permits are issued to a specific user for specific operation. An industrial waste permit shall be assignable to a new owner who continues the existing use of the facility. An industrial waste permit shall not be assigned, transferred or sold to a new owner who changes the existing use or makes a new use of the facility, or for different premises without the approval of the City. Upon transfer, sale or assignment, any succeeding owner shall comply with the terms and conditions of the existing permit. Notice of a proposed transfer of an industrial waste permit shall be given to the City in writing and shall include a written agreement specifying a date for transfer of permit responsibility and coverage between the current and new permittee which includes acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on.

(code eff. Oct., 1958; amend. eff. March 14, 1985; further amend. March 13, 1986; further amend. eff. Jan. 17, 1991; further amend. eff. March 12, 1992; further amend. eff. Sept. 30, 1993; Code 1980, § 25.092FF; amend. eff. Feb. 11, 2010)

25.092GG - Sec. 8.

ENFORCEMENT.

1. Whenever the City has reasonable ground to believe that sewage, wastes or other wastes of any kind are being or have been discharged into the Wastewater System of the Board in violation of this Ordinance, an industrial waste permit or any prohibition, limitation or requirement contained herein, the City shall, except in the case of emergency or flagrant violation, by conferences, notices, conciliations or cooperation, endeavor to the fullest extent possible to eliminate or remedy such violation.

   Notwithstanding, the City will annually publish in a local newspaper of general circulation a list of all significant industrial users that, at any time during the previous twelve months, were in significant noncompliance with pretreatment standards and requirements.

2. In the case of discharges which create a hazard to life or constitute a public nuisance or emergency, or interfere with the operation of the Wastewater System, then the City, as the duly authorized agent of the Board, shall:

   (a) Reject the waste and immediately abate such hazard or public nuisance; or

   (b) Require immediate pretreatment of the waste to an acceptable condition for discharge to the Wastewater System; and/or

   (c) Require the person responsible for the discharge to appear before the Board to show cause why service should not be discontinued immediately. In the event such action is taken, the City shall immediately notify the user in writing of such action and the specific reasons therefor, which notice shall be personally served, and shall provide the user with an opportunity for a hearing before the City within 10 days of such action.

3. **THE CONCILIATION HEARING:** The City may order any person who causes or allows an unlawful discharge to attend a conciliation hearing with the Board's representatives. A notice of violation shall be served to that person, specifying the facts upon which the alleged violation is based and designating a time and place for conciliation hearing to be held.

   The notice of violation shall be served by registered or certified mail at least 10 days before the hearing.

   The conciliation hearing is to be informal and conducted by the City or designated representative. The industrial or commercial user is required to present a plan and schedule for achieving compliance with the provisions of this Ordinance. Representatives of the City of Mount Clemens may be present. The hearing attendees shall agree upon an appropriate plan and schedule and agree upon a conciliation compliance date which sets the time period for full compliance.

4. **NOTICE OF SHOW CAUSE HEARING:** If compliance is not achieved by conciliation, the Board may order any user who causes or allows to continue an unauthorized discharge to show cause before the Board why service to that user should not be discontinued. A notice shall be served on the user specifying the time and place of a Show Cause Hearing before the Board regarding the violation, the reasons why the action is to be taken, the facts upon which the alleged violation is based, the proposed enforcement action, and directing the user to show cause before the Board why the proposed enforcement action should not be taken. The notice of the hearing shall be served by registered or certified mail at least 10 days before the hearing with copies sent to officials of the City of Mount Clemens. Service may be made on any agent or officer of a corporation or authorized representative.

5. **HEARING PROCEEDINGS:** The Board may itself conduct the show cause hearing and take the evidence, or may designate persons to:

(a) Issue in the name of the Board notices of hearings requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;

(b) Take the evidence; and

(c) Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the Board for action thereon.

TRANSCRIPT OF EVIDENCE: At any show cause hearing held pursuant to this Ordinance, testimony taken must be under oath and recorded stenographically.

ACTION: After the Board has reviewed the evidence, it may issue an order to the user responsible for the discharge directing or setting forth any of the following:

1. Pretreatment of waste by installation of adequate treatment facilities, devices or other related appurtenances, or proper operation of existing treatment facilities, devices or other related appurtenances, within a specified date as a condition for continued acceptance of the wastes into the sewer;
2. Periodic reports on effluent quality and quantity determined by self-sampling and analysis throughout the time period set by a compliance date;
3. Control of discharge quantities;
4. Payment of the costs for reasonable and necessary samples taken by the Board during the process; or
5. Any such further orders as are necessary and appropriate.

(code eff. Oct., 1958; amend. eff. March 14, 1985; Code 1980, § 25.092GG; amend. eff. Feb. 11, 2010)

25.092HH - Sec. 9.

LEGAL ACTION.

1. **VIOLATION:** If any person discharges sewage, industrial waste or any other wastes into the Board's wastewater system contrary to the provisions of this Ordinance, Federal Pretreatment Requirements, or State Pretreatment Requirements or any order of the Board, the Board, acting through its counsel, may commence an action or proceeding in the Circuit Court in the County in which the board is located or operates facilities for the purpose of having the discharge enjoined.
2. **PENALTIES:** Notwithstanding the provisions of Code Section 10.137, any person who violates the provisions of this Ordinance shall be responsible for a municipal civil infraction. Upon being found responsible for a violation of this Ordinance, a person shall be subject to a fine of one hundred dollars ($100.00) to one thousand dollars ($1,000.00) per day for each violation. Additionally, a person responsible for a violation may be assessed court costs and is subject to the equitable jurisdiction and authority of the court to issue and enforce any injunctive order, judgment, writ or other order necessary to enforce this Ordinance. The fines and municipal civil infraction proceedings specified in this subsection shall not be in place of any misdemeanor prosecution as specified in subsection 3. below. Municipal civil infraction citations for violations under this section shall be issued by the City.
3. **FALSIFYING INFORMATION:** Any person who knowingly makes any false statements, representations or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this Ordinance or industrial waste permits, or who

falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required under this Ordinance shall, upon conviction, be guilty of a misdemeanor.

4. **COSTS OF DAMAGE:** Any user violating any of the provisions of this Ordinance or issued permit, or who has a discharge which causes a deposit, obstruction, damage, or other impairment to the POTW shall become liable to the City for any expense, loss, damage, penalty, or fine caused by the violation or discharge. Such charge shall be in addition to, not in lieu of, any penalties or remedies provided under this Ordinance or other Ordinances, status, regulations or at law or in equity. The City will add to the user's charges and fees and costs assessed for any cleaning, repair or replacement work caused by the violation of discharge. Any refusal to pay the assessed costs shall constitute a violation of this Ordinance.

(code eff. Oct., 1958; amend. eff. March 14, 1985; further amend. eff. March 13, 1986; further amend. eff. Sept. 30, 1993; amend. eff. March 26, 1998; Code 1980, § 25.092HH; amend. eff. Feb. 11, 2010)

25.092II - Sec. 10.

CONFIDENTIALITY OF INFORMATION.

Except otherwise required by state law, information and data obtained by the City from reports, questionnaires, permit applications, permits, monitoring programs, and inspections shall be available to the public without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of the city that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets of the user. When requested by the person furnishing a report, the portion of a report which might disclose confidential information shall not be made available for inspection by the public. Wastewater constituents and characteristics will not be recognized as confidential information. All information and data obtained by the City from reports, questionnaires, permit applications, permits, monitoring programs, and inspections will be made available to the MDNRE or EPA upon request.

(code eff. Oct., 1958; amend. eff. March 14, 1985; Code 1980, § 25.092II; amend. eff. Feb. 11, 2010)

25.092JJ - Sec. 11.

RESERVED.

(amend. eff. Feb. 11, 2010)

25.092KK - Sec. 12.RESERVED.

(code eff. Oct., 1958; amend. eff. March 14, 1986; further amend. March 3, 1986; amend. eff. Feb. 11, 2010)

25.092LL - Sec. 12a.

RECORD RETENTION.

All significant users shall maintain records of all monitoring activities and results (whether or not such monitoring is required under this Ordinance), including documentation associated with BMPs, for a minimum of three (3) years. This period of retention shall be extended during the course of an unresolved litigation or when requested by the City, the EPA, or the Board. The Board will have the right to copy all such records. Such records shall include for all samples:

1. The date, exact place, method, and time sampling and the names of the person(s) taking the samples:
2. The dates the analyses were performed;
3. Who performed the analyses;
4. The analytical techniques/methods used;
5. The results of such analysis.

(ord. eff. March 13, 1986; Code 1980, § 25.092LL; amend. eff. Feb. 11, 2010)

25.092MM - Sec. 12a.

SLUG LOADS; ACCIDENTAL DISCHARGES; UPSETS; BYPASSES.

1. **SLUG LOADS AND ACCIDENTAL DISCHARGES:** Each user shall provide protection from slug loads or accidental discharge of prohibited materials or other substances established by this Ordinance. Where necessary, facilities to prevent accidental discharge of prohibited material shall be provided and maintained at the user's cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the City for review and shall be approved by the City before construction of the facility. Each existing user shall complete its plan and submit same to the City by a definite date, as set by the City. No user who discharges to the POTW after the aforesaid date shall be permitted to introduce pollutants into the system until accidental discharge protection procedures have been approved by the City.

   Review and approval of such plans and operating procedures by the City shall not relieve the discharger from the responsibility to modify its facility as necessary to meet the requirements of this Ordinance.

   Each significant industrial user will be evaluated by the City whether a plan, or other action, to control slug discharges is needed. For newly designated significant industrial users, this evaluation will be performed within one (1) year of being so designated. Each significant industrial user shall notify the City immediately of any changes at its facility affecting the potential for slug discharges.

   Users shall notify the City immediately upon the occurrence of a "Slugload" or accidental discharge of substances prohibited by this Ordinance. Slug load notification requirements are specified in 25.092EE Sec. 6 herein.

   Signs shall be permanently posted in conspicuous places on user's premises, advising employees when to call in the event of a slug or accidental discharge. Employers shall instruct

all employees who may cause or discover such a discharge with respect to emergency notification procedure.

2. **UPSET CONDITIONS:** Industrial users shall control production of all discharges to the extent necessary to maintain compliance with pretreatment standards and requirements upon reduction, loss, or failure of its treatment facility until such facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

   An upset shall constitute an affirmative defense to an action brought for noncompliance with pretreatment standards and requirements only if a user is able to demonstrate through operating logs or other relevant evidence that: an upset occurred and the user can identify the cause(s); the facility was at the time of the upset being operated in a prudent and workmanlike manner, and was in compliance with applicable operating and maintenance procedures; and the user provided the required notification to the City. Upset notification requirements are specified in 25.092EE Sec. 6 herein. In any enforcement proceeding, the user seeking to establish the occurrence of an upset shall have the burden of proof.

3. **BYPASS:** Bypass violating applicable pretreatment standards and requirements is prohibited, and the City may take enforcement action against a user for such bypass, unless: The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; there were no feasible alternatives to the bypass such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (except where adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to operate during normal periods of equipment downtime or preventative maintenance); and the user submitted required notices. Bypass notification requirements are specified in 25.092EE Sec. 6 herein.

(ord. eff. March 13, 1986; amend. eff. Jan. 17, 1991; Code 1980, § 25.092MM; amend. eff. Feb. 11, 2010)

25.092NN - [Sec. 12b.]

TRUCKED OR HAULED WASTE WATER PROVISIONS.

1. Any discharge of trucked or hauled waste waters to the POTW headworks will be allowed only when permitted to do so by the City. This provision specifically excludes the discharge to any other location in the sewer system, or the discharge of any substance which would be a hazardous waste under 40 CFR 261 if disposed via other means.
2. All haulers proposing to dump their waste into the POTW headworks shall provide the City the following in advance of any such discharge:

   (a) Evidence of liability insurance in appropriate amounts and form, as determined by the City, to afford compensation for taking corrective action, and for bodily injury, and for property damage to third persons caused by accidental releases; and

   (b) A notarized affidavit for each licensed truck affirming that only septage wastes are being disposed, that the discharge is not industrial wastes, and that the wastes do not contain toxins or other forbidden deleterious matter.

   Upon satisfactory documentation, a Septic Hauler Discharge Permit may be issued to the hauler. The Permit, whose duration shall remain at the City's discretion up to a maximum of five (5) years, may include any special conditions deemed necessary by the City. Permitted haulers shall be responsible for complying with all conditions contained in the permit, all provisions of

industrial and commercial users under this Ordinance, and all applicable Federal, State, or local pretreatment regulations.

3. The City reserves the right to suspend, or refuse, acceptance of any load from a permitted hauler. Suspension or refusal may result from, but not be limited to, the following:
   (a) Insufficient prior notification of the intent to discharge;
   (b) Other than City-specified day or time of discharge;
   (c) Unacceptable sampling and analysis results;
   (d) Noncompliance with general or specific limitations;
   (e) Flow and/or concentrations which may cause pass-through or interference with POTW's operations; sludge use, or disposal practices;
   (f) Waste water originating with commercial or industrial user, without prior approval; or
   (g) Inadequate maintenance of Source Information List or other records.
4. Fees for discharging trucked or hauled waste water shall be based on the total capacity of tanks, regardless of whether tanks are full or partially empty. Payment shall be by check, money order, or City-issued coupon at time of delivery, no cash will be accepted.
5. Any person discharging trucked or hauled waste water to the public sewer system without proper authorization will be subject to legal action and penalties, as provided in Section 25.092HH herein.

(ord. eff. March 12, 1992; Code 1980, § 25.092NN; amend. eff. Feb. 11, 2010)

25.093 - Sec. 13.

Reserved.

25.094 - Sec. 14.

Reserved.

25-095 - Sec. 15.

Reserved.

APPENDIX A

25.096 - Sec. 16.

GENERAL.

No user shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW. These general prohibitions apply to such users of a POTW whether or not the user is subject to National Categorical Pretreatment Standards

or any other National, State, or Local Pretreatment Standards or requirements. A user may not contribute the following substances to any POTW:

A. Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the POTW or to the operation of the POTW, including, but not limited to, waste streams with a closed cup flash point of less than 140°F. At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system) be more than five percent (5%) nor any single reading over ten percent (10%) of the lower explosive limit (LEL) of the meter. Materials which may involve a risk of a fire or explosion include, but are not limited to, gasoline, kerosene, naphtha, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides and sulfides [and] any other substances which the Board, the State or EPA has notified the user is a fire hazard or a hazard to the system.

B. Solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater treatment facilities.

C. Any wastewater having a pH less than 5.0 or more than 11.0.

D. Any wastewater containing toxic pollutants in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters of the POTW, or to exceed the limitation set forth in a categorical pretreatment standard, 40 CFR 403. A toxic pollutant shall include, but not be limited to, any pollutant identified pursuant to Section 307(A) of the Act, 33 U.S.C. 1317, and the Michigan Critical Materials Register.

E. Any noxious or malodorous liquids, gases or solids which either singly or by interaction with other wastes are sufficient to create a public nuisance or hazard to life or which are otherwise sufficient to prevent entry into the sewers for their maintenance and repair. This includes pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

F. Any substance which may cause the POTW's effluent or any other product of the POTW, such as residues, sludges, or scums, to be unsuitable for reclamation process where the POTW is pursuing a reuse and reclamation program. In no case, shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria guidelines or regulations developed under Section 405 of the Act; any criteria, guideline, or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or State Criteria applicable to the sludge management method being used.

G. Any substance which will cause the POTW to violate the consent judgment, NPDES or State disposal system permit or the receiving water quality standards.

H. Any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions.

I. Any wastewater having a temperature which will inhibit biological activity in the POTW treatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into the collection system which exceeds 65 degrees C (149 degrees F) or at a temperature which causes the influent wastewater at the POTW treatment plant to exceed 40 degrees C (104 degrees F).

J. Any pollutants, including oxygen-demanding pollutants (BOD, etc.) released at a flow and/or pollutant concentration which a user knows or has reason to know will cause interference to the POTW.

K. Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established in compliance with applicable State or Federal regulations.

L. Any wastewater which causes a hazard to human life or creates a public nuisance.

M. Any trucked or hauled waste water except as allowed by Section 25.092NN herein.

(code eff. Oct., 1958; amend. eff. March 14, 1985; further amend. eff. March 13, 1986; further amend. eff. March 12, 1992; further amend. eff. March 27, 2003; Code 1980, § 25.096; amend. eff. Feb. 11, 2010)

25.097 - Sec. 17.

SPECIFIC POLLUTANT LIMITATIONS.

A. Unless specifically authorized by the City, no person shall discharge wastewater containing in excess:

1. Maximum value for any one day in 24-hour composite sample:

   0.66 mg/L Arsenic

   0.46 mg/L Cadmium

   9.6 mg/L Chromium, Total

   0.8 mg/L Chromium, Hexavalent (Cr+6)

   6.5 mg/L Copper

   4.3 mg/L Lead

   Nondetectable mercury (based on analytical method EPA 245.1 at detection level of 0.0002 mg/L, unless a higher detection level is appropriate because of sample matrix interference)

   1.0 mg/L Molybdenum

   4.3 mg/L Nickel

   0.33 mg/L Selenium

   0.64 mg/L Silver

   7.3 mg/L Zinc

2. Maximum value for any one day consisting of at least four (4) appropriated spaced grab samples to be combined before analysis or averaged mathematically if analyzed separately, unless specifically approved otherwise by the City:

   0.13 mg/L Total Cyanides

B. Any discharge of wastes or waters into a sewer which terminates in or is a part of the sewerage system of the Board shall not contain in excess of the following in any grab sample:

100 mg/l fats, oils or greases (hexane solubles).

(code eff. Oct., 1958; amend. March 14, 1985; further amend. eff. Sept. 30, 1993; Code 1980, § 25.097; amend. eff. Feb. 11, 2010; amend. eff. July 25, 2013)

25.098 - Sec. 18.

SAMPLING.

Compliance with the numerical standards set forth shall be determined on the basis of a representative composite sample.

(code eff. Oct., 1958; amend. March 14, 1985; Code 1980, § 25.098; amend. eff. Feb. 11, 2010)

25.099 - Sec. 19.

MEANING OF NUMERICAL CONCENTRATION LIMITATIONS MG/L.

Unless specifically stated otherwise, all limitations and concentrations (mg/l) under this Ordinance shall mean concentrations of the total pollutant present, including both solubilized and nonsolubilized pollutant.

(code eff. Oct., 1958; amend. March 14, 1985; Code 1980, § 25.099; amend. eff. Feb. 11, 2010)

THE CITY OF MOUNT CLEMENS
STORMWATER RUNOFF ENGINEERING AND CONSTRUCTION STANDARDS

Standards: The Stormwater Runoff Engineering and Construction Standards presented herein have been prepared for the City of Mount Clemens, Michigan. The Standards have been developed with the intent to set forth a reasonable, uniform and sound basis for engineering design, preparation of plans and specifications, and construction of site improvements for public and private developments in the City of Mount Clemens. The Standards may not include all conditions that may possibly exist and may consist of items that may be applicable only in the future. These guidelines should be used in combination with sound engineering judgment for design and construction activities. Innovative and alternate solutions may be permitted if approved by the City.

If any standard conflicts with Federal, State or City statute and/or ordinance, then the provisions of such statute and/or ordinance shall control. If any standard is judged illegal, invalid, or unenforceable, such illegality, invalidity or unenforceability shall not affect any other standards and/or guidelines contained herein.

1. Definitions

A. *Best Management Practice (BMP)* - A practice or combination of practices based on current, accepted engineering standards that prevent or reduce storm water runoff and/or associated pollutants. BMPs include schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

B. *Construction Plans* - Detailed plans showing the existing and proposed features of a proposed development and engineering calculations supporting the design of the proposed features.

C. *County Drain* - A drain which has been designated as an Established Drain wholly within Macomb County. The drain as defined includes the main stream or trunk and all tributaries or branches of any creek or river, any watercourse or ditch, either open or closed, any covered drain, any storm sewer or conduit composed of tile, brick, concrete, or other material, any structures or mechanical devices, that will purify the flow of such drains, any pumping equipment necessary to assist or relieve the flow of such drains and any levee, dike, barrier, or a combination of any or all of same constructed, or proposed to be constructed, for the purpose of drainage or for the purification of the flow of such drains, but shall not include any dam and flowage rights used in connection therewith which is used for the generation of power by a public utility subject to regulation by the Public Service Commission.

D. *Design Storm* - A rainfall event of specified return frequency and duration (e.g. a 100-year, 24-hour storm) that is used to calculate peak flows and /or runoff volumes.

E. *Detention Facility* - A storm water management practice that captures storm water runoff temporarily and releases the storm water to a surface water body or drain at a restricted rate.

F. *Development* - A residential, industrial, municipal, commercial, or other project involving the construction of structures and/or paved surfaces on natural or previously developed land.

G. *Drainage District* – Any county or inter-county drainage district legally established pursuant to applicable provisions of the Drain Code.

H. *Easement* - A legal right granted by a property owner to another entity, allowing that entity to make limited use of the property for a specific purpose.

I. *Established Drain* - An open or enclosed storm water conveyance system that has been legally established as a county or inter-county drain pursuant to applicable provisions of the Drain Code.

J. *First Flush* - During the early stages of a storm, storm water with a highly concentrated pollutant load, due to the runoff washing away the pollutants that have accumulated on the land.

K. *Freeboard* - The vertical distance from the top of an embankment to the design water elevation of a detention basin or retention basin, required as a safety margin.

L. *Hazardous Materials* – Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

M. *Headwater* - The depth of water at the upstream end of a culvert.

N. *Illegal Discharge* - Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in Section 7.A.2 of these Standards.

O. *Illicit Connections* - An illicit connection is defined as either of the following:

1. Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or,
2. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

P. *Infiltration* - The absorption of water into the ground, often expressed in terms of inches per hour.

Q. *Inter-county Drain* - A drain traversing two or more counties that has been legally established as an established drain.

R. *Invert* - The interior surface of the bottom of a pipe.

S. *Non-stormwater* - Any discharge to the storm drain system that is not composed entirely of storm water are prohibited. Any discharges or flows categorized and/or defined as non-stormwater discharges or flows if identified as significant contributors to violations of Water Quality Standards and are prohibited to storm sewers within the City. This standard shall not authorize illicit discharges; however, the City excludes prohibiting the discharges or flows listed in Section 7.A.2 of these Standards.

T. *Obvert* – The interior surface of the top of a pipe.

U. *Pre-development Rate* – The peak outflow rate of the property based on existing pervious and impervious areas prior to the proposed development.

V. *Pre-developed Rate* – The peak outflow rate of the property based on existing surface prior to any development having occurred, i.e. agricultural peak outflow rate.

W. *Proprietor* - A person, firm, association, partnership, corporation or combination of any of them which may hold ownership in land whether recorded or not. "Proprietor" shall be synonymous with "Developer" or "Land owner".

X. *Retention Facility* - A storm water management method that captures storm water runoff and does not discharge to a surface water body or watercourse, but allows the water to evaporate or infiltrate into the ground.

Y. *Redevelopment* - Additions and/or modifications to an existing development.

Z. *Riprap* - A combination of large stone, cobbles, and boulders used to line channels, stabilize banks, reduce runoff velocities, or filter out sediment.

AA. *Runoff* - The excess portion of precipitation that does not infiltrate into the ground or is not captured by vegetation, but flows overland to a stream, storm sewer, or water body.

BB. *Spillway* - A depression in the embankment of a detention basin used to allow overflow of storm water during storm events in excess of the design storm.

CC. *Storm Drain* - The main or trunk sewer and any storm sewer or conduit composed of tile, brick, concrete, or other material, any structures or mechanical devices, that will purify the flow of such drains, any pumping equipment necessary to assist or relieve the flow of such drains and or a combination of any or all of the same constructed, or proposed to be constructed, for the purpose of drainage or for the purification of the flow of such drains.

DD. *Storm Drainage System* - Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, storm ditches, reservoirs, and other drainage structures.

EE. *Storm water* - Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation including snowmelt and resulting from such precipitation.

FF. *Tailwater* - The depth of water at the downstream end of a culvert.

GG. *Time of Concentration* - The time it takes for surface runoff to travel from the hydraulically farthest portion of a watershed to the design point.

HH. *Wastewater* - Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

2. General Requirements

A. With these standards the City will adopt requirements identifying Best Management Practices (BMPs) for any activity, operation, or facility which may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the state. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs.

B. "Reasonable Protection" for the purposes of this ordinance shall mean the installation, operation and maintenance of the required structural and/or non-structural BMPs, implementation and documentation of the BMPs operation and maintenance procedures

and practices; and pollution prevention and good housekeeping (P2/GH) procedures and practices necessary for the establishment to comply with state and federal stormwater regulations.

C. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPPP) if required for compliance with requirements of the NPDES permit.

3. Site Grading, Drainage Water Collection and Disposal Plan

A. All sets of plans which include construction plans for storm sewers shall include the current City Standard Storm Sewer Detail Sheets, which shall be considered an inseparable part of the plans when said plans are approved.

B. A Site Grading, Storm Water Drainage Collection and Disposal Plan is required for all developments; however, if the building site is located within a subdivision or other project for which a general site grading plan has been submitted and approved, no separate grading plan or permit will be required. A rear yard (in the case of land subdivisions) or a general site enclosed storm drainage system shall be designed for all land development projects. If there are any upstream watershed drainage areas which need to be routed through the site, sufficient capacity shall be provided for fully developed upstream drainage into the system.

C. Site grading for all building sites shall be reviewed to determine that proposed and/or actual site grading is proper and that drainage from land lying upstream is not obstructed and that downstream properties will not be adversely affected by runoff from the property under design consideration. Before a Certificate of Occupancy for any building is issued, the Building Department Supervisor or municipal engineer shall approve the final site grading and drainage for each building. The Building Department may require that a survey, drawing, and certificate, done by a Registered Professional Engineer or Registered Land Surveyor, be furnished by the Developer indicating that the work has been done in complete conformance with the approved site grading and drainage plan. It shall be unlawful for any person to interfere with, modify, or obstruct the flow of drainage water across any property in any manner different from the approved plan.

During periods of the year when weather conditions make site grading work unfeasible, a temporary Certificate of Occupancy may be issued, subject to the furnishing of a satisfactory bond, letter of credit, or cash deposit guaranteeing the completion of the work when weather conditions permit.

D. Planned final grade elevations shall be indicated on the plans at a maximum spacing of 50 feet. The fall of the land away from any building shall be a minimum of six inches in the first 25 feet. From this elevation the land shall slope at a minimum slope of one percent and a maximum slope of seven percent.

E. Residential lots shall be graded in accordance to a unit’s brick ledge. A brick ledge is

defined as the bottom of the first row of brick resting upon the unit's foundation wall. Finish grade elevation of the adjoining earth soil shall meet at the bottom of the brick ledge or shall be graded by the current amendment of the Building Code of the City of Mount Clemens. A residential lot shall be graded as follows:

1. A maximum difference of 0.5 feet shall be provided between adjacent units' brick ledges.

2. Brick ledge grade elevations shall be a minimum of 1.5 feet and a maximum of 2.5 feet above the adjacent top of curb.

3. A minimum two percent or 0.5 feet and a maximum seven percent or one foot fall shall be provided from the brick ledge to the adjacent side yard high point.

4. For units with non-stepped brick ledges, the side yard high point shall be located approximately 50 feet from the right-of-way.

5. For units with stepped brick ledges, front and rear side yard elevations shall be shown at approximately 25 and 70 feet, respectively, from the right-of-way. The brick ledges shall be stepped from front to back with the side yard high point provided at the front side yard elevation.

6. Reasonable building envelopes or footprints shall be shown for each lot, ensuring that the side yard elevations correctly correspond to the front, center, or rear enveloped location as necessary.

F. The maximum slope of the land for the site, except for transitional ramps between usable site areas, shall be seven (7) feet in one hundred feet (seven percent.) The sodden ramp slopes shall be a maximum of one foot vertically and three feet horizontally.

G. Adequate soil erosion and sedimentation control measures shall be specified on the plans, and followed during construction, to conform to the requirements of Michigan Act 347, P.A. of 1972, entitled, "Soil Erosion and Sedimentation Control Act of 1972." Approval by the Macomb County Public Works Commissioner's Office of the Soil Erosion Plan is required prior to approval of the engineering plans.

H. All buildings having foundation drains shall direct the flow of drainage water from such foundation drains into an enclosed storm drainage system structure. No building permit for any building having a basement shall be issued unless the plans for such building indicate a building service sewer (drainage water) directly connects to an enclosed storm sewer at a storm sewer structure.

I. For residential developments, drainage water from basement drains or sump pumps shall be directed by a sump drainage pipe with a minimum 3 inch diameter to a rear yard storm sewer structures. A minimum two foot diameter structure is required for the most upstream storm structure within a sewer, provided the structure only accepts sump drainage. Minimum three foot structures may be provided for all other structures that only accept sump discharge. Storm drainage shall be conveyed within a minimum 8 inch diameter sewer from the rear yard catch basins to a storm structure within the right-of-way.

Lot grading and storm sewer systems shall be designed such that each lot drains to a

catch basin structure at a rear corner of the lot. Rear yard swales shall be designed to carry surface drainage from the opposite lot corner to the storm structure. Therefore, lots shall be designed with alternating high points and low points with catch basins at rear corners ensuring that swales shall not convey water across lot lines.

Dry well storm structures, which outlet into the surrounding soils, may be allowed if the soils permit adequate infiltration. A geotechnical investigation must be performed and recommendations as to the construction of the drywell must be made by a certified soils engineer.

Storm sewers shall be designated as premium joint where designed along lot lines within the influence of adjacent units or when 15 inch or greater diameter sewer is indicated.

J. Drainage water run-off from building roofs, whenever possible shall be directed five feet away from the outside walls of any building to a defined overland vegetated drainage course. Roof leads under the influence of pavement shall be a six inch SDR 23.5 pipe or an eight inch truss pipe and shall be clearly labeled as roof drains.

K. Where required by the City, a four inch diameter open joint drainage pipe shall be provided for drainage with said pipe trench being backfilled entirely with pea gravel to within four inches of the grade line of swale.

L. Storm water runoff drainage systems shall be designed for a 10 year storm by means of the Rational Method formula: Q = CIA; where Q is the peak rate of run- off in cubic feet per second, A is the area in acres, C is the coefficient of runoff for the drainage area, and I is the average rainfall intensity in inches per hour for a certain time of concentration. The rainfall intensity shall be determined by the formula I=175/(25+T) where T is the time of concentration equal to the time required for a drop of water to run from the most remote point of the watershed to the point for which runoff is being estimated. The consulting engineer shall use judgment in arriving at proper imperviousness factors, but in general the following factors are acceptable minimums:

Lawn areas - 0.1

Pavement and roof areas - 0.9

Overall area of single family residential - 0.35

Overall area of multiple family residential - 0.55

Overall area of commercial development - 0.90

Overall area for industrial development - 0.80

The developing engineer shall submit a map outlining the various watershed drainage areas, including off site upstream areas, which drain to each inlet point used for design. The map shall be accompanied by storm sewer design computations showing the calculated flow and flow capacity of each pipe run, upstream and downstream inverts and hydraulic grades. The minimum acceptable size of storm sewer downstream of any storm water inlet structure is 12 inches in diameter.

For the design of storm sewers, Manning's formula shall be used for pipe sizing with an "N" factor of 0.013 for reinforced concrete pipe. Storm sewers shall be designed to provide a minimum velocity when flowing full of 2.5 feet per second and a maximum

velocity of 10 feet per second.

In general, trunk storm sewers or any sewer that carries street drainage water shall be located within a public street right-of-way. Where public storm sewers are located outside of public streets, they shall be placed in a recorded public utility easement that provides for access to the storm sewer for repairs, connections, and maintenance. The minimum acceptable width of easements for storm sewers shall be: 12 feet wide for sewers 21 inches and under in diameter; 20 feet for sewers 24 inches through 48 inches in diameter; and 30 feet wide for sewers over 48 inches in diameter.

Where possible, a minimum of three feet of cover shall be provided from the finished road or earth grade to the top of any storm sewer. In some cases, it will be acceptable to allow the hydraulic gradient to be above the top of the sewer pipe; however, the design elevation of the hydraulic gradient profile shall be indicated on the sewer profile view and hydraulic gradients shall be a minimum of one foot below the surface at any location. However, hydraulic gradients shall be maintained within the pipe on any storm sewers considered to be trunk storm sewers.

M. Access manholes shall be provided along the storm sewer at every change of pipe size, change of grade, or change of direction. However, the maximum spacing for storm sewer manholes shall be as follows:

Diameter of Sewer	Absolute Maximum Manhole Spacing
12" to 30"	350'
36" to 42"	400'
48" to 60"	500'
66" & larger	600’

Storm sewer structures shall be designed with sufficient diameter based on the number, size and configuration of incoming and outgoing storm pipes. For sewers 42 inch diameter and greater, radius pipe may be used at changes in pipe direction. Catch basin leads may tap directly into sewers 42 inches and larger, except that taps shall not be made into a precast manhole tee pipe section.

Catch basins shall not be constructed over a main sewer line to replace manholes in street sewers or trunk sewers outside of streets. Moreover, a manhole normally shall not be used as a storm water inlet structure. Additionally, no more than three upstream catch basins will be allowed to discharge into any catch basin. However, if a normal manhole location (outside of streets) coincides with a storm water inlet structure location and at least 75% of the upstream storm water inlet structures are catch basins (with sumps), the manhole may be used as a storm water inlet structure by placing a catch basin cover on the manhole. Catch basins shall be a minimum four feet diameter with a minimum two foot sump.

N. In general, pavement type catch basins shall be located as follows:

1. At the radius return of street intersections such that drainage may travel a maximum allowable 150 feet distance around a corner without an intercepting catch basin

2. At all low points in streets

3. At intermediate points along the street such that there is a maximum pavement drainage area for each structure as follows:

   a. Intercepting Catch Basins 7,500 S.F. /C.B.
   b. Low point Catch Basins 25,000 S.F. /C.B.

O. Yard type catch basins shall be provided at all low points in drainage swales. Intercepting yard type catch basins shall be provided such that a maximum of 350 feet of swale drainage runs into any one catch basin, other than a low point catch basin where 600 feet of drainage is allowed.

P. Generally, The City of Mount Clemens policy is to use open drains for drainage of storm water. However, multiple residential, institutional, commercial and industrial developments including parking lots and critical areas (as determined by the City) may require enclosed storm sewers and perhaps, retention/detention ponds. In cases where the enclosed storm sewer sizes become 60 inches or larger in diameter, the City may require improved open drains. When open drains outside the road right-of-way are used, the easement width shall be sufficient to accommodate a thirty 30 feet wide maintenance plateau (with a maximum slope of 10 percent) on each side of the channel.

Q. The side slopes of open drains shall have a maximum slope of one foot vertical to four feet horizontal, except that a low flow channel may have side slopes of one foot vertical to three feet horizontal. Open drain side slopes shall have an established vegetated surfacing as soon as possible after construction. In any event, sufficient measures shall be taken to conform to the erosion and sedimentation control requirements of applicable state or local ordinances.

R. An extension of the storm sewer system shall be provided to furnish an outlet for foundation drain service pipe for any buildings not otherwise serviced; such extensions shall have a minimum diameter of eight inches if not containing surface drainage.

S. When, in the opinion of the City and/or the Macomb County Drain Commissioner, there is inadequate drainage water outlet capacity, the developer may be required to install retention/detention basins or reservoirs. Many design considerations need to be incorporated in the design of retention/detention basins. Section 2 provides detailed discussions and design standards for retention/detention ponds. It includes site drainage, storm water management facilities including various types of basins and other pertinent issues related to storm water retention.

T. For lots developed where an engineering, grading and drainage plan has not been prepared and approved according to the above conditions, the following minimum requirements shall apply:

   1. An eight-inch enclosed drainage line of materials subject to approval by the City shall be constructed along the side and rear property lines. A variance in the size and location of the eight-inch line shall be subject to issuance by the Utilities Director upon written application therefore.

   2. A two-foot catch basin or a special basin as approved by the Utilities Director shall be placed in approved locations at the intersections of the side and rear property lines.

   3. The drainage line shall be made available to adjacent property owners through

extension of the line to abutting property lines. An easement permitting the receipt of drainage and the establishment of a connection shall be provided.

4. Lots shall be graded to allow water to flow freely to the catch basin.

5. As determined by the City, a swale may be required alongside lots.

6. Sump pumps may not discharge to any road surface. Sump pumps may only be directed to a storm sewer or a location in a ditch or swale as approved in writing by the City.

7. In the event three or more contiguous lots are being developed, the rear lot storm sewer line shall be constructed of materials as approved by the City.

8. In the event a site drainage plan cannot meet the requirements of this section, a variance may be sought in writing from the City.

4. Design Standards for Storm Management Systems

The following stormwater management system improvements are required to address runoff from new development and redevelopment of projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the drainage system. Stormwater shall be managed using four standards: flood control, channel protection, water quality, and pre-treatment to protect both water resources and real property.

A. Flood Control

Flood control shall be provided for all sites through detention and/or retention such that the peak outflow of the proposed development does not exceed the pre-development peak flow rate.

B. Channel Protection

Channel Protection control system shall be provided on all new developments connecting to an open drain to protect the drain's channel and banks from erosion due to the increased flow. Direct discharges to the Macomb County Public Works Office Drains are generally governed by MCPWO design standards. Open drains within the City of Mount Clemens jurisdiction shall be protected by incorporating a restricted flow of the Channel Protection Volume. It is required that the post-development project site runoff volume and peak flow rate must be maintained at or below pre-development levels for all storms up to the 2-year, 24-hour event. Pre-development level means the runoff flow volume and rate for the last land use prior to the planned new development or redevelopment. Compliance with this requirement is determined by calculating the existing ("pre-development") and post-development runoff volume and rate for the 2-year and smaller storm events. The method is described in the Department of Environmental Quality (DEQ) publication *Computing Flood Discharges for Small Ungaged Watersheds*, dated July 2003 (updated January 22, 2010).

1. If it is demonstrated using the Alternative Approach Flowchart (Exhibit "A") that

the development cannot meet the required channel protection performance standard, the development may propose incorporation of green infrastructure (i.e. Rain gardens, green (vegetated) roofs, permeable pavement, impervious cover removal, use of trees, etc.) This includes instances where site conditions (e.g., space limitations or tight soils that prevent infiltration) challenge or prohibit feasibility of maintaining the project site's pre-development runoff levels for all storms up to the 2-year, 24-hour event. Green Infrastructure shall be allowed under all circumstances consistent with the flowchart. Review of these proposals will be consistent with the "SEMCOG Low Impact Development Manual for Michigan, 2008" or current standards.

2. The City of Mount Clemens may, at its discretion, determine that a lower rate is appropriate, when the required discharge rate exceeds drain capacity. The volume and manner of water discharged due to development of the site shall not create adverse impacts to downstream property owners and watercourses.

   It is the property owner's obligation to meet this standard. Should a storm water system, as built, fail to comply with the design rate of discharge, it is the property owner's responsibility to design and construct, or to have constructed at his/her expense, any necessary additional and/or alternative storm water management facilities to bring the system into compliance. Such additional facilities will be subject to The City of Mount Clemens's review and approval. Additional volume controls will be required in such cases as will acquisition of rights-of-way from downstream property owners receiving the storm water flow.

C. Water Quality

Water Quality control system shall be provided on all new developments or redevelopments and may be accomplished with manufactured units, settling ponds/forebay, bio-filtration, or combination of systems. Developments that disturb less than one acre, and are not part of a larger common plan of development or sale, may be exempted from the City's Water Quality treatment standards as approved by the City Engineer, except for high risk pollutants.

1. Water Quality control system must reduce post development total suspended solids (TSS) loadings by 80% or to not exceed solids loadings of 80 milligrams per liter.

2. Water Quality control systems must provide a minimum treatment volume equal to one inch of runoff from the directly contributing drainage areas.

3. The use of many decentralized Low Impact Development (LID) BMPs is not mandated, but is encouraged on private sites.

D. Pre-Treatment

Pre-treatment is required for infiltration and filtration for ease of maintenance and to protect BMP integrity and preserve longevity.

E. Determination of Surface Runoff

The rational method of calculating storm water runoff as described earlier is generally acceptable for sites less than 100 acres in size. For larger sites due caution should be exercised. Other methodologies such as runoff hydro-graphs may be required by The City of Mount Clemens for sizing the drainage systems on sites that are deemed potentially problematic. Acceptable alternative methods include;

- U.S. Army Corps of Engineers HEC-RAS
- Soil Conservation Service UD-21, TR-20 and TR-55
- U.S. Environmental Protection Agency's Storm Water Management Model ("SWMM")

All design rainfall events will be based on the Soil Conservation Service (SCS) Type II distribution.

Computations of runoff hydro-graphs that do not rely on a continuous accounting of antecedent moisture conditions will assume a conservative wet antecedent moisture condition.

F. Retention and Detention Systems

All runoff generated by proposed impervious surfaces, unless otherwise permitted by The City of Mount Clemens, must be conveyed into a storm water storage facility for water quality treatment and retention/detention prior to being discharged from the site. The following criteria will apply to the design of all storm water retention and detention facilities.

1. In general, wet ponds and storm water marsh systems will be preferred to dry ponds. Dry ponds providing extended storage will be accepted when the development site's physical characteristics or other local circumstances make the use of a wet pond infeasible.

2. Public safety will be a paramount consideration in storm water system and pond design. Providing safe retention/detention is the property owner's responsibility. Pond designs will incorporate gradual side slopes, and vegetative and barrier plantings. Where further safety measures are required, the proprietor is expected to include them within the proposed development plans.

3. Storm water management systems incorporating pumps shall not be permitted in developments with multiple owners, such as subdivisions and site condominiums. Variances from this rule will be considered only as a measure of last resort, subsequent to demonstration that no alternative system designs are technically feasible. Special requirements, such as the establishment of an operations/maintenance/replacement escrow account by the Developer, may be imposed to help defray special assessments that would be levied upon future property owners for maintenance of the system.

4. For basins with pumped outlets, a silt trap and bar screen shall be installed on the inlet pipe to the pump station. The screen clean opening shall be a maximum of two inches.

5 Pumping stations for de-watering of the retention basins shall include duplicate

pumps with each pump capable of handling the design flow. The controls shall include a lead-pump start and stop, a lag-pump start and stop, and alternator for alternating the lead-lag pump, a high water alarm system with a light and a horn, and a safety all-pumps-off control. The control panel, pumps, and wet-well shall be installed inside of the fenced enclosure and the controls shall be installed in a suitable weatherproof and vandal-proof enclosure.

6. For drainage systems proposed to not be under the ownership of The City of Mount Clemens, detention and retention facilities, and associated buffer strips, shall be located on common-owned property (e.g. parks, etc.) and not on private lots or condominium units.

7. Underground storage must be treated for water quality improvements - before discharge to any watercourse, lake, or pond. Treatment may include storm water quality improvement devices, as approved by the City. Provisions for periodic testing of the water quality may be required by the City. The underground storage system must be a groundwater recharge or infiltration type system if the soil conditions are accommodating.

8. Sediment forebays (lower stage) or approved storm water quality improvement devices will be provided at the inlet of all storm water management facilities to provide energy dissipation and to trap and localize incoming sediments.

   a. The forebay will be a separate basin, which can be formed by gabions or a compacted earthen berm.
   b. The capacity of the forebay will be equivalent to the capacity of a 1.5 year storm.
   c. Direct maintenance access to the forebay for heavy equipment will be provided.
   d. Stormwater quality improvement devices must the following criteria:

      1) The system must demonstrate 80% removal of the total suspended solids load based on third party independent testing.
      2) The system must treat 100% of the runoff from the 1.5 year/24hour storm event.
      3) Rain events larger than the 1.5 year/24 hour rain event shall bypass the system without causing any re-suspension of trapped sediments and without causing re-entrainment of floatable contaminants.
      4) The system shall not create any backwater in the upstream pipe network during any dry weather conditions.
      5) The treatment system must prevent oil and floatable contaminants from entering downstream piping during routine maintenance and during rain events.
      6) Direct access must be provided to the sediment and floatable chambers to facilitate maintenance. There must be no appurtenances or restrictions within these chambers.
      7) If the system is proposed in traffic areas, then it must be designed to handle H20 loading.

9. Vegetative Plantings Associated with Retention/Detention Facilities shall follow the following requirements:

a. Basins and marsh designs will be accompanied by a landscaping plan that gives preference to native plant species. Plantings shall be installed according to the current Macomb County Public Works Commissioner Procedures and Design Standards for Stormwater Management.
b. A permanent buffer strip of natural vegetation extending at least 25 feet in width beyond the freeboard is required around the perimeter of all storm water storage facilities.

10. For safety purposes and to minimize erosion, basin side slopes will generally not be flatter than one foot vertical to twenty feet horizontal, nor steeper than one foot vertical to four feet horizontal. For all developments other than residential, all basins having side slopes steeper than one foot vertical to six feet horizontal, will be permitted only with the installation of a six foot high chain link fence completely surrounding the detention facility and a minimum three foot flat shoulder between the top of the slope and the fence. Gates shall be provided that are twelve feet wide with a double opening.

    Detention basins requiring fencing shall not be located within setback areas adjacent to public thoroughfares unless they are designed architecturally and aesthetically for the specific site. The location and concept of these basins shall be subject to approval by the Planning Department prior to the Engineering review.

    Please note: other decorative fence types may be used if approved by the City Commission.

11. For all subdivisions and site condominiums, all basins shall be unfenced with side slopes no steeper than one foot vertical to six feet horizontal with a minimum three foot flat shoulder between the top of slope and property line.

12. Anti-seep collars should be installed on any piping passing through the sides or bottom of the basin to prevent leakage through the embankment.

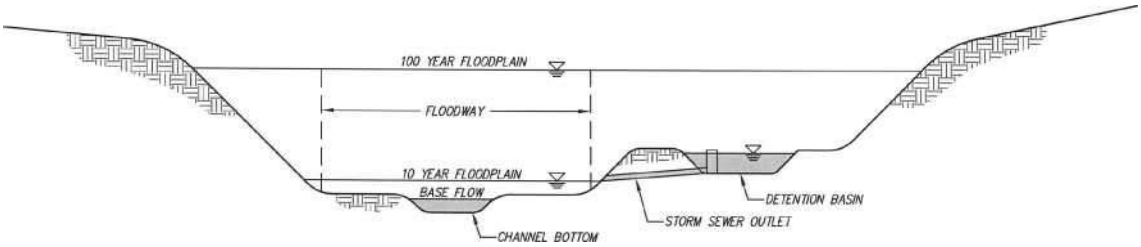
13. All basins will have provisions for a defined emergency spillway, or overflow, routed such that it can be picked up by the main outflow channel or enclosed storm drain while not discharging directly over the outlet pipe. Where possible, an overflow structure shall be designed to outlet into an adequately sized storm drain. The emergency spillway must be designed to convey a minimum 10 year storm. There are two possible alternate methods:

    a. Using an overflow pipe; the invert elevation of this pipe shall be above the maximum storage elevation of the basin.
    b. A low point overflow; the low point of the basin shall be set at an elevation no lower than the maximum storage elevation of the basin.

14. Adequate maintenance access from public or private right-of-way to the basin will be reserved. The access will be on a slope of 5:1 or less, stabilized to withstand the passage of heavy equipment, and will provide direct access to both the forebay and the riser/outlet. Access easements will be required.

15. The placement of retention/detention basins within or below a 10 year floodplain of a flood risk zone is prohibited. For basins located within the 100-year floodplain

the design engineer must evaluate the hydraulic grade line through the storm drainage system and provide written evidence that the stormwater will not result in a harmful interference to any proposed and existing structures or adjacent properties. Basins must not be located within a 100 year floodway.



16. The City will not accept subdivision and site condominium basins until vegetation is established in accordance with the City of Mount Clemens Standards and approved by the City Commission.

G. Detention Requirements

On-site storm drainage will be designed for control of flooding, control of downstream erosion, and improving water quality. Submission of flow calculations, cross-sections, and other pertinent data will be required.

1. A minimum of one foot of freeboard will be required for all detention basins.

2. At a minimum, the volume of storage provided for flood control will be equal to or in excess of that required by the method outlined in “A Simple Method of Detention Basin Design” developed by Glen Yrjanainen, P.E, and Alan W. Warren for a 10-year frequency storm.

3. The volume and storage provided for controlling the “bankfull” flood will be equal to or in excess of the total rain from a 1.5 year, 24-hour storm. This can be determined by:

   5160 x acreage x the relative imperviousness factor C = cubic feet

   The release rate from the “bankfull” storage volume will be such that this volume will be stored not less than 24 or more than 40 hours.

4. The “first flush” of runoff is defined as the first 0.5 inch of runoff over the entire site. The majority of this volume will be captured in the sediment forebay, with the residual volume detained for a minimum of 24 hours. The volume of the first flush which can be determined by:

   1815 x acreage x the relative imperviousness factor C = cubic feet

5. Basin Inlet/Outlet Design

   a. Engineered velocity dissipation measures based on discharge flow rates and velocities will be incorporated into basin designs to minimize erosion at inlets and outlets, to minimize the re- suspension of pollutants, and to create sheet flow conditions where feasible.
   b. To the extent feasible, the distance between inlets and outlets will be maximized. The length and depth of the flow path across basins and

marsh systems can be maximized by:

1) Increasing the length to width ratio of the entire design.
2) Increasing the dry weather flow path within the system to attain maximum sinuosity. If possible, inlets and outlets should be offset at opposite longitudinal ends of the basin.

c. The outlet shall be protected from clogging.

1) All outlets will be designed to be easily accessible for heavy equipment required for maintenance purposes.
2) Discharging at the "crest" of slopes will not be permitted.
3) Backwater on the outlet structure from the downstream drainage system shall be evaluated when designing the outlet.

6. Riser Design

a. The use of a perforated standpipe-type riser structure to assure an appropriate detention time for all storm events is required.
b. Orifices used to maintain a permanent pool level should withdraw water at least one foot below the surface of the water.
c. Hoods or trash racks shall be installed on the riser to prevent clogging. Grate openings shall be a maximum of three inches.
d. Orifice plates are discouraged. Where an orifice plate is to be used in the standpipe to control discharge, it will have a minimum diameter of 4 inches.
e. The riser shall be placed near the pond embankment to provide for ready maintenance access.
f. Barrels and risers will be constructed of materials that will reduce future maintenance requirements. The riser pipe shall be a minimum of 36" in diameter for riser pipes up to four feet in height. Riser pipes greater than four feet in height shall be 48" in diameter. Riser pipes will be constructed with concrete bottoms.
g. Riser outlets must include a simple oil/water separator consisting of a "T" or elbow-shaped pipe.
h. Where feasible, a drain for completely de-watering the pond should be installed for maintenance purposes.

H. Wet Detention Basins

1. Storage Volume Requirements will be as follows:

For a gravity outflow wet basin storage, volume is defined as "the volume of detention provided above the invert of the outflow device." Any volume provided below the invert of the outflow device will not be considered as detention.

At a minimum, the volume of the permanent pool should be at least:
2.5 x 0.5 inch* x runoff coefficient x site drainage area

*0.5 inch represents the mean storm event. This was determined by adding the total precipitation rainfall recorded at Detroit Metro Airport from 1977 to 1987 and dividing by the total number of storm events. Storms below 0.2 inch of precipitation, snowfall, and snowmelt were omitted.

2. Wet detention pond configuration will be as follows:

a. Surface area to volume ratio should be maximized.
b. In general, depths of the permanent pool should be varied and average between 3 and 6 feet.
c. A minimum length to width ratio of 3:1 should be used unless structural measures are used to extend the flow path.
d. Ponds should be wedge-shaped, narrower at the inlet and wider at the outlet.
e. Irregular shorelines are preferred.

3. Plantings within the detention pond shall be installed according to the current Macomb County Public Works Commissioner Procedures and Design Standards for Stormwater Management.

4. A shelf, a minimum of four feet wide at a depth of one foot, will surround the interior of the perimeter to provide suitable conditions for the establishment of aquatic vegetation and to reduce the potential safety hazard to the public.

5. In-line detention basins are strongly discouraged in all circumstances, and are prohibited on watercourses greater than two (2) square miles upstream. In-line basins are also prohibited if the waterway to be impounded traverses any area outside of the proposed development.

I. Stormwater Wetland Systems

Stormwater wetlands are defined as, constructed systems explicitly designed to mitigate the storm water quality and quantity impacts associated with development. They do so by temporarily storing storm water runoff in shallow pools that create growing conditions suitable for emergent and riparian wetland plants. The runoff storage, complex micro-topography, and emergent plants in the storm water wetland together, form an ideal system for the removal of urban pollutants. Because of their water quality benefits, the use of storm water wetlands is encouraged.

As a general rule, storm water wetlands should not be located within delineated natural wetland areas.

The design of an effective and diverse storm water wetland requires a sophisticated understanding of hydrology and wetland plant ecology. Therefore, a qualified professional with specific wetland expertise must oversee wetland design, construction, re-construction, or modification. A reference for the design of storm water wetlands is by Thomas R. Scheuler, "Design of Storm water Wetland Systems" (published by the Metropolitan Washington Council of Governments). Plantings shall be installed according to the current Macomb County Public Works Commissioner Procedures and Design Standards for Stormwater Management.

1. Stormwater wetland systems must be designed to perform in conformance with all standards for storage volume and discharge rate established in these rules.

2. For developments with stormwater wetland systems requiring maintenance, the developer shall provide for the monitoring of wetland plantings and replacement as needed for a two-year period after construction.

J. Natural Wetlands

This section governs natural wetlands (as distinct from stormwater wetland systems that are constructed expressly for stormwater management purposes), incorporated in an overall stormwater management scheme.

1. Natural wetlands will be protected from damaging modification and adverse changes in runoff quality and quantity associated with land developments. Before approval of the final plat or construction plans, all necessary wetland permits from the Department of Environment, Great Lakes and Energy (EGLE formerly MDEQ) will be in place.

2. Per EGLE regulations, direct discharge of untreated storm water to a natural wetland is prohibited. All runoff from the development will be pre- treated to remove sediment and other pollutants prior to discharge to a natural wetland. Such treatment facilities will be constructed and vegetation established before property grading begins.

3. Whenever possible, a permanent 25-foot buffer strip, preferably vegetated with native plant species, will be maintained or restored around the periphery of wetlands.

4. Wetlands will be protected during construction by appropriate soil erosion and sediment control measures (see the standard detail for City of Mount Clemens Soil Erosion and Sedimentation Control Design).

K. Floodplains

It is the responsibility of the developer to demonstrate that any activity proposed within a 100-year floodplain will not diminish flood storage capacity. In certain instances an analysis to determine the 100-year floodplain may be required. Where available, the community flood insurance study shall be used. Compensatory storage will be required for all lost floodplain storage.

L. Safety Considerations

1. Drainage system components, especially all ponds, will be designed to protect the safety of all persons coming in contact with the system. The following criteria will apply:

   a. All wet detention basins will have a level safety ledge at least four feet in width and one foot below the invert of the outlet pipe water depth, and other design and landscaping features as needed to provide for protection of the public.
   b. Animal guards shall be placed on all outlet pipes with a diameter greater than 12 inches.
   c. Signs may be required to alert residents of basin-use limitations (i.e. Warning against swimming, ice skating, etc.). Warnings may also be required in the master deed.

5. Established Drains

A. No construction activities shall be allowed without approval from the Macomb County Public Works Office for any development directly discharging to an established County Drain. All work within the Right-of-Way of the established drain is subject to the design

standards and requirements of the Macomb County Public Works Office.

B. If an established County drain is involved, construction plans shall include a note indicating that "All work performed in the right-of-way of an established drain shall require a permit from the Macomb County Public Works Office."

C. Where drainage is discharged to an established drain, such outlets shall be so designed as to enter the drain at an angle of 90 degrees or less, as determined by the upstream centerline.

6. Stormwater Management System Maintenance Plans

A. Property deed restrictions (or condominium master deed documents) will specify the timeframe for action to address needed maintenance of stormwater management facilities. Deed restrictions (or condominium documents) will also specify that, should the private entity fail to act within this timeframe, the responsible governmental entity may, but shall not be obligated to, perform the needed maintenance and assess the costs against the property owners within the development or condominium association by allowing such costs, together with a reasonable administrative fee be recovered (or collected prior to undertaking work), with the particular language and means to be approved by the City Attorney.

1. Routine maintenance of stormwater management facilities will be completed within 30 days of receipt of written notification that action is required, unless other acceptable arrangements are made with the supervising governmental entity.

2. Emergency maintenance will be completed within 36 hours of written notification.

B. A legally binding private maintenance agreement will be executed before final project approval is granted. The agreement shall be referenced on the property deed (or condominium master deed document) so that it is binding on all subsequent property owners.

C. Maintenance plans will be submitted with all construction plans and included in the bylaws of all developments and site condominiums and will include the following information:

1. An estimated annual maintenance budget itemized in detail by task and description of a financing mechanism.

2. A copy of the final approved drainage plan for the development that delineates the facilities and all easements, maintenance access, and buffer areas.

3. A listing of appropriate tasks defined for each component of the system described, and a schedule for their implementation. The following areas will be covered:

   a. Maintenance of facilities such as pipes, channels, outflow control structures and pumps.
   b. Debris removal from catch basins, channels and dry and wet basins.
   c. Dredging operations for both channels and basins to remove sediment

accumulation.

4. The party responsible for performing each of the various maintenance activities described which will be recorded with final approved plans.

5. A detailed description of the procedure for both preventative and corrective maintenance activities. The preventative maintenance component will include:

   a. Periodic inspections, adjustments and replacements;
   b. Record-keeping of operations and expenditures.

6. Provision for the routine and non-routine inspection of all components within the system described:

   a. Wet weather inspections of structural elements (including inspection for sediment accumulation in detention basins) shall be conducted annually, with as-built plans in hand. These shall be carried out by a professional engineer or certified stormwater operator reporting to the responsible agency or owner.
   b. Housekeeping inspections, such as checking for trash removal, shall take place at least once, annually.
   c. Emergency inspections on an as-needed basis, upon identification of severe problems, shall be carried out by a professional engineer or certified stormwater operator.

7. A description of ongoing landscape maintenance needs. Landscaping shall consist of low maintenance and/or native plant species. The viability of plantings will be monitored by the applicant for at least two years after establishment and plantings will be replaced as needed. The City is not responsible for landscape maintenance.

8. Provision for the maintenance of vegetative buffers by homeowner's associations, conservation groups or a public agency. Buffers will be inspected annually for evidence of erosion or concentrated flows through or around the buffer.

D. The stormwater drainage system will be designed to minimize and facilitate maintenance.

1. Riser pipes placed near or within pond embankments.

2. Easily accessible trash racks.

3. Alternate outflows for wet detention basins that can be used to completely drain the pool for sediment removal (pumping may be considered if drainage by gravity is not feasible).

4. Sediment forebays for localizing sediment deposition and removal.

5. Access for heavy equipment.

6. On-site area for spoil deposition, wherever possible.

E. Infiltration system, including porous pavement, must be aggressively maintained and protected from clogging by sediment (including the maintenance of grass buffer strips). In the event of clogging by accumulated sediments, partial or total reconstruction of infiltration facilities may be required.

Porous pavement shall be vacuum swept and jet hosed at least four times per year to remove any grit or sediment trapped in the pores. Evidence of a regular service contract for performing this activity will be required.

7. Discharge Requirements

A. Discharge Prohibitions

1. Prohibition of Illegal Discharges.

a. No person shall discharge or cause to be discharged into the municipal separate storm sewer system (MS4) or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water.

b. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

2. The following discharges if identified as not being a significant contributor to violations of Water Quality Standards (WQS) are excluded from discharge prohibitions established by these Standards:

a. Water line flushing and discharges from potable water sources
b. Landscape irrigation runoff, lawn watering runoff, and irrigation waters
c. Diverted stream flows and flows from riparian habitats and wetlands
d. Rising groundwaters and springs
e. Uncontaminated groundwater infiltration and seepage
f. Uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits
g. Foundation drains, water from crawl space pumps, footing drains, and basement sump pumps
h. Air conditioning condensation
i. Waters from noncommercial car washing
j. Street wash water
k. Dechlorinated swimming pool water from single, two, or three family residences. (A swimming pool operated by the permittee shall not be discharged to a separate storm sewer or to surface waters of the state without NPDES permit authorization from EGLE.
l. Discharges or flows from firefighting activities if identified as not being significant sources of pollutants to waters of the State.
m. Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

n. Dye testing is an allowable discharge, but requires a "Notice of Intent to Treat" under the General Rule 97 Certification of Approval to be obtained from EGLE prior to the commencement of the test.

o. The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

B. Prohibition of Illicit Connections.

1. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

2. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

3. A person is considered to be in violation of these Standards if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

8. Inspection and Monitoring Requirements

A. Monitoring Of Discharges

1. Applicability.

a. This section applies to all facilities that have storm water discharges, facilities associated with industrial activity, and those having construction activity.

B. Access to Facilities.

1. The City of Mount Clemens shall be permitted to enter and inspect facilities subject to regulation under these Standards as often as may be necessary to determine compliance with these Standards. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the City.

2. Facility operators shall allow the City ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

3. The City shall have the right to set up on any permitted facility such devices as are necessary and/or required by the MS4 permit to conduct monitoring and/or sampling of the facility's storm water discharge.

4. The City has the right to require the discharger to install monitoring equipment for permit compliance. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

5. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the City and shall not be replaced. The costs of clearing such access shall be borne by the operator.

6. Unreasonable delays in allowing the City access to a permitted facility is a violation of a storm water discharge permit and of these Standards. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by these Standards.

7. If the City has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of these Standards, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with these Standards or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the City may seek issuance of a search warrant from any court of competent jurisdiction.

9. Enforcement

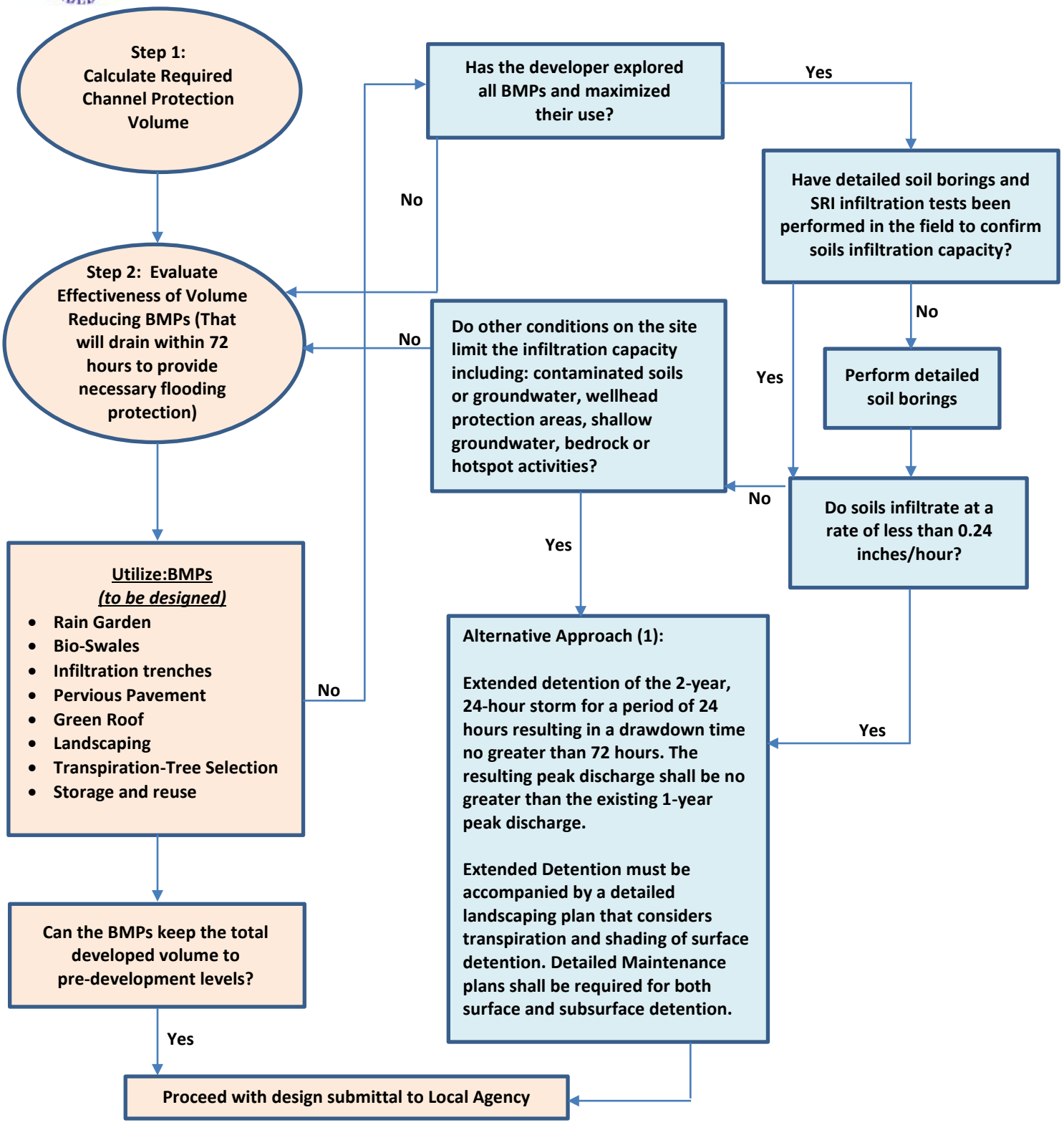
A. Notice of Violation.

1. Whenever the [authorized enforcement agency] finds that a person has violated a prohibition or failed to meet a requirement of these Standards, the authorized enforcement agency may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

a. The performance of monitoring, analyses, and reporting;
b. The elimination of illicit connections or discharges;
c. That violating discharges, practices, or operations shall cease and desist;
d. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property; and
e. Payment of a fine to cover administrative and remediation costs; and
f. The implementation of source control or treatment BMPs.

2. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

THE CITY OF MOUNT CLEMENS
STORMWATER ENGINEERING AND CONSTRUCTION STANDARDS
Exhibit "A" Channel Protection Performance Standard
Alternative Approach Flow Chart



Ref: Lower Grand River Organization of Watersheds MS4 Stormwater Ordinance Committee Alternative Approach Flow Chart

1. NOTE: If utilizing extended detention as a post-construction storm water runoff control, additional BMPs likely will be needed to maintain the pre-development volume and peak rate levels for all storms up to the 2-year, 24-hour event, through green infrastructure or specific low impact development (LID) on-site BMPs for meeting the performance standard

City of Mount Clemens

Storm Water Management Plan (SWMP)

Appendix E

Pollution Prevention and Good Housekeeping (P2GH)

Revised April 4, 2023

E.01 Spill Prevention SOP
E.02 Dumping the Sewer Vactor Policy
E.03 Vehicle and Equipment Fueling SOP
E.04 Vehicle and Equipment Cleaning SOP
E.05 Vehicle and Equipment Repair SOP
E.06 Outdoor Container Storage SOP
E.07 Outdoor Equipment Maintenance SOP
E.08 Outdoor Storage of Raw Materials SOP
E.09 Waste Handling SOP
E.10 Building and Grounds SOP
E.11 Parking Lot Maintenance SOP
E.11a ELGIN Broom Bear Sweeper Specification Sheet
E.12 Safer Alternative Products SOP
E.13 Road and Street Maintenance SOP
E.14 Salt Application and Storage SOP
E.15 Drainage System Maintenance SOP
E.16 Water & Sewer Utility Maintenance SOP
E.17 Reporting and Recordkeeping SOP
City of Mount Clemens DPS Work Order and Work Sheet

E.01 Spill Prevention, Control & Cleanup SOP

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment. Since spill prevention is such a broad topic, many areas related to spill prevention and control are covered throughout the remaining SOP fact sheets.

Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- Storage areas will be inspected daily.
- Pesticides are not used in the City of Mount Clemens.
- Fertilizers with Herbicides are generally not stored on-site. The city does not apply or contract anyone to apply fertilizers on city owned properties.
- Spill cleanup material is readily available in the storage and maintenance areas.
- Paints and coatings are stored only indoors in a designated area. Containers are held within an appropriately designed storage cabinet. Small quantities of aerosol paints are stored in the maintenance shops areas.
- Whenever possible, the least toxic product will be selected for painting/coating operations. In most cases, paints/coatings are purchased in small easy-to-handle quantities, usually gallon-sized containers; which allow for easier handling, less potential spillage, and less waste requiring disposal.
- Paint/coating products will be used as completely as possible. Any latex based product remaining in the container will be allowed to harden. The container and residual product can then be disposed of in a landfill. Unusable product that cannot be handled in this manner will be stored until a County sponsored household hazardous waste disposal day, and then be removed by a contracted waste hauler.

Protocols

- All material handling is conducted indoors, under cover, or away from storm drains or

sensitive water bodies.

- Spill cleanup materials, such as absorbents are located in areas where they are readily accessible (e.g. near storage and maintenance areas, etc.).

Spill Cleanup Procedures

- For spills in which there is no immediate dangers to employees or the general public and does not represent a danger of contamination to a sanitary sewer, storm sewer, or the ground:

  -Contain spill to the smallest area possible.
  -Review the Safety Data Sheet for determination of proper spill handling, and appropriate personal protective equipment selection.
  -Place compatible absorbent material or spill pads on the area.
  -Clean up and containerize the absorbent materials.
  -Properly dispose of waste materials.
  -Determine and perform any additional cleaning requirements.

- For a spill that represents an immediate danger to employees or the general public and/or has the potential to impact the sanitary sewer, storm sewer, or the ground:

  -Notify the Department Supervisor on duty.
  -If there is the threat of fire, explosion, or if any person(s) exhibit severe symptoms of exposure, contact 911 to initiate local emergency services.
  -Alert anyone in the area and begin evacuation procedures.
  -Use booms or other absorbents to dike the spill area if safe to do so, and secure the area from unauthorized personnel. Refer to the Safety Data Sheet to determine the proper personal protective equipment.
  -Remove all sources of ignition for releases of flammable or combustible materials.
  -The Department Supervisor will initiate all notification procedures and contact the contracted emergency response company to mitigate and remediate the release.
  -The Department Supervisor will assess the spill and notify all agencies as required.

Reporting

- Spills are reported in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to 911. The City of Mount Clemens Fire Department hazardous materials mitigation personnel are mobilized via 911. The City has five (5) industrial storm water permitted sites in the city, which the state deems as high hazard businesses. Special safety measures are in place at the businesses and the Department has special written procedures on how to respond to emergencies at these businesses. All members get extra annual training at these businesses. Macomb County Hazardous Materials Response Team personnel (Clinton Township, Eastpointe, Lenox Township, Mount Clemens, Shelby Township, Sterling Heights, Warren, Roseville and Center Line participate) may be mobilized via 911 as well as the Pollution Emergency Alerting System (PEAS) at 800-292- 4706 and the National Response Center (NRC) at 800-424-8802.

- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Macomb County Emergency Management which coordinates the Macomb County Local Emergency Planning Committee (LEPC), State Emergency Response Center (SERC), Michigan Department of Agriculture (MDA), various divisions of EGLE, and the Department of Labor and Economic Growth (DLEG).

- After the spill has been contained and cleaned up, a detailed report about the incident will be generated and kept on file. The incident may also be used in briefing staff about proper procedures.

Contact Persons

- The Department of Public Services is responsible for maintaining the majority of the City's facilities. The primary contact person(s) for issues regarding these facilities is the Assistant City Manager, Jeff Wood, at (810) 650-2100.

E.02 Vactor Operation and Discharge of Liquid and Solid Waste SOP

From: **Jason Pich**
WWTP Plant Operator
City of Mount Clemens Utility Department

Date: December 2018

To: All Utility Employees

Re: Sewer Vactor Operation Policy and Discharge of Liquid and Solid Waste

1.0 Purpose

The purpose of this policy is to ensure compliance with State and Federal regulations for storm water and relating to Sanitary Sewer Overflows (SSO's). This is to eliminate the possibility of discharging contaminated materials into storm drains that lead to drains, rivers, streams and lakes as waters of the State. Under the Clean Water Act (CWA) 33 U.S.C. §1251 et seq. (1972) and the Natural Resources Protection Act of 1994 PA 451, The Michigan Department of Environmental Quality (MDEQ) has regulations against the discharge of raw or partially treated sewerage to waters of the State.

2.0 Scope

This policy applies to all Utility Department employees, full time and part time, that work on the Sewer Vactor or maintenance of the sewer system.

3.0 Policy

It is the policy of the City of Mount Clemens to provide clear guidance to all Utility employees to ensure protection of the environment and that regulations of the Clean Water Act are adhered to.

4.0 Definition

4.1 During the cleaning of a sanitary or storm sewer or storm catch basin, either when the sewer vactor is full or the job is completed, the Sewer Vactor truck storage tank must be emptied and cleaned. To decant liquids only, the truck is to be taken to the Wastewater Treatment Plant and decanted at the septic hauling receiving station.

4.2 Under no circumstance is the Sewer Vactor to be decanted or dumped in a storm sewer system if sanitary sewers or sewage was involved.

4.3 Solids from the vactor are to be stored in the roll-off dumpster at the WWTP prior to proper disposal.

4.4 For storm sewer use, the Sewer Vactor shall be properly flushed or decontaminated prior to this use. The decontamination materials shall be disposed of as for sanitary sewer materials and in compliance with State and Federal Regulations.

5.0 Responsibilities

The Interim City Manager and Clerk have the overall responsibility for ensuring compliance with this policy.

The WWTP Plant Operator is responsible for ensuring compliance with this policy within this Department.

Each Utility employee is also individually responsible for compliance with this policy.

Jason Pich
City of Mount Clemens
Wastewater Treatment Plant Operator

E.03 Vehicle and Equipment Fueling SOP

Description

Spills and leaks that occur during vehicle and equipment fueling can contribute hydrocarbons, oil and grease, as well as heavy metals to storm water runoff.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Pollution Prevention

- The City currently conducts on-site fueling at the DPS Yard fueling station. City has three underground tanks including two (2) 10,000 gallon capacity gasoline tanks and one (1) 10,000 gallon capacity diesel tank.
- Focus pollution prevention activities on containment of spills and leaks, most of which may occur during liquid transfers.

Protocols

- "Spot cleaning" of leaks and drips is routinely conducted.
- Maintenance staff is familiar with the site's proper spill cleanup procedures.
- Spill Kit available at the site.

E.04 Vehicle and Equipment Cleaning SOP

Description

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to storm water runoff.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Pollution Prevention

- City owned utility vehicles are cleaned at Waste Water Treatment Plant garage which is connected to the combined sewer system.

- Department of Public Services (DPS) vehicles are washed at DPS yard which is connected to the combined sewer system.

- Fire apparatus and equipment are washed at the Fire Building within the vehicle apparatus bays. Floor drains in the apparatus bays are connected to the City's sanitary sewer system.

Vehicle and Equipment Cleaning/Washing Purpose

The purpose of this policy is to comply with the EGLE and EPA regulations regarding storm water runoff. Any dry or liquid product or contaminant that may be on the ground, whether it is on a lawn or hard surface such as pavement, may eventually reach a storm water drain during a rain or when washing apparatus or equipment outside. Once that potential runoff reaches the storm water drain, it will eventually reach a waterway such as a river, lake or pond. This runoff could have a negative effect on the environment. To mitigate the issue, the City implemented a policy to eliminate or reduce the potential discharge of such storm water runoff contamination.

Policy

It is the City's policy to take a proactive approach to minimize and eliminate the discharge of potential contaminants produced through the washing and cleaning of vehicles, fire apparatus, and equipment into the storm water drain system.

Procedure

Cleaning solutions:

Personnel will follow the manufacturers recommended procedures as printed on the cleaning detergent.

Vehicles/Equipment/Apparatus:

All DPS vehicles will be washed within DPS yard and other City owned utility vehicles will be

washed at wastewater treatment plant garage. Fire trucks are washed in the vehicle apparatus bays where there are floor drains connected to the City's sanitary sewer system. Runoff within the floor drains will run to the sanitary sewer where it will be treated at the wastewater treatment plant.

Personnel awareness:
This policy will be distributed to all affected personnel in a conspicuous manner at Department of Public services, City Hall and Fire Hall.

Maintenance:
Floor drains will be inspected and cleaned periodically to remove solid sediments collected.

E.05 Vehicle and Equipment Repair SOP

Description

Vehicle or equipment maintenance and repair is potentially a significant source of storm water pollution, due to the use of materials and wastes created that are harmful to humans and the environment. Engine repair and service (e.g. parts cleaning), replacement of fluids (e.g. oil change), and outdoor equipment storage and parking (dripping engines) can impact water quality if storm water runoff from areas with these activities occurring on them becomes polluted by a variety of contaminants.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Pollution Prevention

- The City performs routine maintenance on its vehicles in a properly outfitted garage located at the City's DPS garage.

- The City also performs light routine maintenance on equipment. This also occurs inside the DPS garage.

- NOTE: DPS only performs oil changes and light maintenance. DPS garage does have a 15 gallon parts washer; all major repairs are sent to an auto repair shop.

E.06 Outdoor Container Storage SOP

Description

Accidental releases of materials from above ground liquid storage tanks, drums, and dumpsters present the potential for contaminating storm water with many different pollutants. Tanks may store many potential storm water runoff pollutants, such as gasoline, aviation gas, diesel fuel, ammonia, solvents, syrups, etc. Materials spilled, leaked, or lost from storage tanks may accumulate in soils or on other surfaces and be carried away by rainfall runoff. These source controls apply to containers located outside of a building used to temporarily store liquid materials and include installing safeguards against accidental releases, installing secondary containment, conducting regular inspections, and training employees in standard operating procedures and spill cleanup techniques.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The City does not have outdoor container storage with the exception of Trash dumpsters. The Wastewater Treatment Plant has dedicated roll off boxes for a number of items such as Oil, Ferric Chloride, Grease, and Solids after decanting. Dumpsters are covered under Waste Handling and Disposal SOP.

E.07 Outdoor Equipment Maintenance SOP

Description

Outside process equipment operations and maintenance can contaminate storm water runoff. Activities, such as grinding, painting, coating, sanding, degreasing or parts cleaning, landfills and waste piles, solid waste treatment and disposal, are examples of process operations that can lead to contamination of storm water runoff.

Pollution Prevention

- The City requires these types of activities to be performed within an enclosed building in order to eliminate the potential for storm water contamination.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Protocols

- Maintenance of outdoor equipment is performed at the DPS Streets Department Garage which is located in the combined sewer area of the City.

E.08 Outdoor Storage of Raw Materials SOP

Description

Raw materials, by-products, finished products, containers, and material storage areas exposed to rain and/or runoff can pollute storm water. Storm water can become contaminated when materials wash off or dissolve into water or are added to runoff by spills and leaks. Improper storage of these materials can result in accidental spills and the release of materials. To prevent or reduce the discharge of pollutants to storm water from material delivery and storage, pollution prevention and source control measures, such as minimizing the storage of hazardous materials on-site, enclosing or covering materials, storing materials in a designated area, installing secondary containment, conducting regular inspections, preventing storm water run-on and runoff, and training employees and subcontractors must be implemented.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The following materials are stored outside:
  - Sand: stored at WWTP
  - 21AA Limestone: stored at WWTP
  - Wood Chips: stored at Streets Garage Yard
  - Top Soil: stored at Streets Garage Yard
  - Slag: stored at WWTP
  - Clay Brick Pavers: stored at Streets Garage Yard
  - Cold Patch: stored at WWTP

- Outdoor storage of raw materials is limited to the containment area at the DPS Streets Department Garage and shown on the DPS Streets Department Garage map in Appendix A. All other materials are appropriately stored inside the buildings for point of use.
- Both the WWTP and the DPS Streets Department Garage are located within the combined sewer system area of the City.

E.09 Waste Handling & Disposal (Solid Waste) SOP

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter storm water runoff. The discharge of pollutants to storm water from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing run-on and runoff.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- Catch Basins are cleaned by Vactor Truck, taken to the Septic Hauling Station at WWTP for decanting, solids are placed in a roll off dumpster at WWTP until transported to Pine tree acres.

- Trash receptacles at the park facilities are emptied and/or inspected on a weekly basis. Receptacles are replaced as when leaks or other significant damage is noted.

Protocols

- Covered trash or waste storage containers with leak proof lids are used and supplied by local vendors.

- Storage containers are checked weekly, when emptying, for leaks and to ensure that lids are on tightly. Any that are leaking, corroded, or otherwise deteriorating are replaced.

- Storage areas are swept and cleaned regularly. In paved areas, a hose is not used to clean the area to avoid runoff to a storm drain.

- Waste from damaged containers is transferred into safe containers and the damaged container is scheduled for replacement.

- Special care is taken when loading or unloading wastes to minimize losses.

Controlling Litter

- Both "No Littering" and "No Dumping" signs are posted throughout the City parks and facilities. The City enforces anti-litter laws.

- A sufficient number of litter receptacles are used for each facility.

- Pet waste is encouraged to be placed in the trash through the use of signage at the Dog Park.

E.10 Building & Grounds Maintenance SOP

Description

Storm water runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, and abnormal pH. The following protocols will prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the storm water collection system.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The City uses safe alternative products when possible (see E.12 Safer Alternative Practices).

- Proper lawn management and landscaping is practiced, including the use of native vegetation.

Protocols

Landscaping Activities

- Chemicals (insecticide, herbicide, or fertilizer) are not applied directly to surface waters, unless the application is approved and permitted by the State.

- Mulch is used as a control measure on exposed soils.

- Irrigation (sprinklers) system are located in the downtown district. Sprinklers are active from early summer to end of fall and system calibrated as needed. One full time staff is dedicated to work to minimize non storm water discharge.

- Grass clippings that fall on sidewalks during mowing are blown back on to the mowed area, other grass clippings are left on the mowed area to mulch.

- The least toxic chemical control will be selected and purchased. If a biological or alternative control is available, it will be selected as a first option.

- Pesticides are not used in the City. Fertilizers and herbicides are not applied or contracted for by the city.

Building Repair, Remodeling, and Construction

- The City of Mount Clemens major building repairs, remodeling and constructions works are contracted out to certified contractors.

Inspection

- Irrigation systems are inspected as needed to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.

E.11 Parking Lot Maintenance SOP

Description

Parking lots can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through storm water runoff or non-storm water discharges.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The City performs minor parking lot maintenance services (ex. Cold Patching). Major repairs are contracted out to professional parking lot maintenance firms.

- The City sweeps City facility parking lots in conjunction with the road sweeping schedule. A specific schedule cannot be provided due to unpredictable weather conditions, but generally each parking lot is swept six (6) times per year.

Protocols

- The parking lots are kept clean and orderly. Debris is removed in a timely fashion.

- An adequate number of litter receptacles are provided at all City facilities.

Surface Repair

- Pre-heat, transfer or load hot bituminous material away from storm drain inlets.

- Parking lot repair using concrete, asphalt, and seal coat is conducting during dry weather to prevent contamination from contacting storm water runoff.

- Nearby storm drain inlets and manholes are covered and sealed with waterproof material or mesh before applying seal coat, slurry seal, etc., where applicable. Covers are left in place until the job is complete and until all water from emulsified oil sealants has drained or evaporated.

- The appropriate City staff is trained on storm water pollution prevention practices, parking lot sweeping and catch basin maintenance is covered as part of the training.

Parking Lot Cleaning/Sweeping

- Parking lot cleaning and sweeping done by using the City's Global Street sweeper. Downtown sidewalk sweeping is contracted out and currently performed by Champion Power Sweeping Company.

- Waste generated from the cleaning activities will be transported to the Septic Hauling Station at WWTP for decanting, solids are placed in a roll off dumpster.

- In the winter season Cold Patch is stored inside.

- Should the above option not be available, the waste will be collected into a Vactor truck and treated as waste under Part 121 or Part 115 Solid Waste Management of NREPA.

E.12 Safer Alternative Products SOP

Description

Using less harmful products is important. Alternatives exist for most product classes including chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, automotive and paint products, and consumables (batteries, fluorescent lamps).

Objectives

- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Pollution Prevention

- The City utilizes a variety of vendors general cleaning supplies (degreaser, window cleaners, etc.). The City utilizes Green Seal certified products as much as possible.
- Pesticides are not used in the City. In the case of herbicides, the least toxic chemical control will be selected and purchased. If a biological or alternative control is available, it will be selected as a first option.

E.13 Road and Street Maintenance SOP

Description

Streets, roads, and highways are significant sources of pollutants in storm water discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Storm water pollution from roadway and bridge maintenance should be addressed on a site-specific basis.

Objectives
- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The City has jurisdictional control over the major local and local public roadways within its boundaries. Maintenance and administration of non-city roads within the City are the function of the Macomb County Department of Roads (MCDR) or Michigan Department of Transportation (MDOT), with the exception of Gratiot Avenue, which is maintained by the City under agreement with MDOT.

- The City provides maintenance to include street sweeping and catch basin cleaning activities for the City administered roads (Act 51). Beginning in early spring, a street sweeping truck (Broom Bear) operates throughout the City until the end of November.

- There is bagged collection for grass clippings/tree trimmings. Approximately 30 gallon brown paper leaf bags are placed at curb for pick up by the City contractor (currently GFL). During the fall season, the street department schedules a clean-up crew to come down every street at least twice during the season to pick up the leaves that have fallen from the trees.

- Catch basin are cleaned on an as-needed basis.

- The City's SAW Grant 1596-01 Sanitary and Combined Sewer CCTV Investigation project included catch basin and catch basin lead cleaning for inspection for the combined sewer system inventory and assessment. The City of Mount Clemens created thirty-three (33) Utility Base Maps under the SAW grant. Catch basin cleaning and heavy cleaning of leads was tracked and included in the GIS mapping. Catch basin cleaning and storm sewers/leads that are cleaned with the DPS Vactor are tracked via the Daily Log Sheets and incorporated into the GIS schema by DPS and/or AEW personnel. The tracking is used to prioritize and schedule cleaning.

- The other named agencies are responsible for implementing the appropriate storm water pollution prevention protocols in maintaining their facilities located within the City.

E.14 Salt Application and Storage SOP

Description

The application and storage of deicing materials, most commonly salts such as sodium chloride, can lead to water quality problems for surrounding areas. Salts are applied to highways and roads to reduce the amount of ice during winter storm events.

Objectives
- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	
Organics	✓
Oxygen Demanding	✓

Salts raise the melting point of ice, allowing roadways to stay free of ice buildup during cold winters making travel safer.

During road salt application, certain best management practices can produce significant environmental benefits. The amount of road salt applied should be regulated to prevent over-salting of motorways and increasing runoff concentrations. The amount of salt applied should be varied to reflect site-specific characteristics, such as road width and design, traffic concentration, and proximity to surface waters. Calibration devices for spreaders in trucks aid maintenance workers in the proper application of road salts. Alternative materials are considered for use in especially sensitive areas.

Pollution Prevention

- The City provides snow removal and salts major local and local roads, City-owned facilities parking lots and sidewalks at City facilities.
- The City uses the minimum amount of salt needed to get the job done.
- Salt is stored in accordance with Part 5 rules. Salt is stored at DPS Street Department yard under a covered pole barn, which is located in the combined sewer system area of the city.
- Surface Temperatures are considered when determining volume of salt to apply.

Protocols

- The City uses six (6) standard trucks to distribute salt.
- The City performs street sweeping prior to Spring rain.
- Salt application strategy is to optimize salt applications and minimize the discharge of salt to surface waters by pre-wetting salt, limiting areas of salt application to where necessary, and staff training of the protocols.

- Salt is stored in accordance with the Part 5 Rules, which requires secondary containment for 5 or more tons of solid salt and 1,000 or more gallons of liquid brine. Salt is stored at DPS Street Department yard under a covered pole barn, which is located in the combined sewer system area of the city.

- Snow is plowed in a way so that snow is not directly discharged to surface waters.

- Relocated snow is stored in areas with infiltration rather than near a catch basin or other BMP or BMPs are in place to capture pollutants in melting snow. Excess snow from driveways, parking areas and sidewalks at City-owned facilities is loaded and hauled to the Memorial baseball field parking lot.

E.15 Drainage System Maintenance SOP

Description

As a consequence of its function, the storm water conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, storm water inlets, and other storm water conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Objectives
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The DPS maintains the drainage system under parking lots at City facilities and Act 51 roads.

- The City's SAW Grant 1596-01 Sanitary and Combined Sewer CCTV Investigation project included catch basin and catch basin lead cleaning for inspection for the combined sewer system inventory and assessment. The City of Mount Clemens created thirty-three (33) Utility Base Maps under the SAW grant. Catch basin cleaning and heavy cleaning of leads was tracked and included in the GIS mapping. Catch basin cleaning and storm sewers/leads that are cleaned with the DPS Vactor are tracked via the Daily Log Sheets and incorporated into the GIS schema by DPS and/or AEW personnel. The tracking is used to prioritize and schedule cleaning. Limited cleaning and televising of the City's municipal separate storm sewer system (MS4) was possible in conjunction with the SAW Grant project.

- Inspection of the system and structures is conducted, as needed, during regular maintenance of the surrounding areas.

Protocols

- Catch basins are inspected or cleaned when required to maintain the sump below 40% full.

- During routine maintenance of conveyance system and drainage structures field staff looks for evidence of illegal discharges or illicit connections:

  - Note any evidence of spills such as paints, discoloring, etc.
  - Note any odors associated with the drainage system,
  - Record locations of apparent illegal discharges/illicit connections
  - Track flows back to potential dischargers and conduct above ground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection which is addressed under the City's IDEP Program

(See Appendix C).

- Once the origin of flow is established, require illicit discharger to eliminate the discharge.

Procedures

- The following procedures will be applied in order to properly deal with the waste stream generated from catch basin cleaning activities:

  - The vactor is transported to the Septic Hauling Station at WWTP for decanting. The solids are off-loaded from the vactor into the on-site roll off dumpster at WWTP until transported to disposal of solid into Pine Tree Acres.

- Should the above method be unavailable, the following described method would be used as long as there are no discharges to surface waters during dry weather conditions:

  - A visual inspection would be conducted to ensure the water in the sump has not been contaminated. If necessary, a grab sample of the water would be collected and inspected for signs of contamination such as visible sheen, discoloration, obvious odor, etc. If there is any doubt of the quality of the water, it will be collected into a Vactor truck and treated as waste under Part 121 or Part 115 Solid Waste Management of NREPA.

- The City does not currently own or maintain any detention basins or storm water facilities. The following procedures will be applied for any future storm water detention basins/ ponds:

  - Inlet pipes and outlet pipes will be inspected for structural integrity semi-annually.
  - Riprap at the inlet pipes will be inspected semi-annually. It will be replaced when the riprap is clogged with sediment and debris.
  - Routine inspections for trash or other debris that may be blocking the inlet or outlet pipes or emergency spillway will be conducted monthly during the spring, summer, and fall months. Trash and debris will be removed from the basin.
  - Inspection for sediment accumulation at the inlet pipes will be conducted semi- annually, and cleaned out so as not to restrict water flow. Accumulated sediment will be removed with a shovel and wheelbarrow if it is blocking water flow. Small amounts of removed sediment can be spread evenly on upland areas and seeded with natural vegetation.
  - Inspection of the stone around the riser/standpipe (outlet pipe) will be conducted semi-annually. If stone has accumulated sediment, vegetation and/or debris to an extent that water is not flowing through the stone and out of the pond as originally designed, then the stone will be replaced.

- The following procedures will be applied with regard to vegetated swales:

  - Inspect structural and vegetative components annually and after major runoff events. If standing water is observed on the surface 48 hours after a runoff event, till or de-thatch

the bottom to restore porosity.

- Seasonal mowing to prevent noxious weeds and woody vegetation from being established.
- Remove sediment accumulations when depth exceeds three (3) inches

E.16 Water & Sewer Utility Maintenance SOP

Description

Although the operation and maintenance of public utilities are not considered chronic sources of storm water pollution, some activities and accidents can result in the discharge of pollutants that can pose a threat to both human health and the quality of receiving waters if they enter the storm drain system. Sewage incident response and investigation may involve a coordinated effort between staff from a number of different departments/agencies. Municipalities that do not provide maintenance of water and sewer utilities must coordinate with the contracting agency responsible for these activities and ensure that these model procedures are followed.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Pollution Prevention

- The City owns and maintains the water distribution, sanitary collection system, and storm sewers. This requires maintaining 84 miles of water main, 80 miles of combined and sanitary sewers, 992 sanitary and 566 combined sewer manholes, 72 miles of separated storm sewers, 780 city owned storm sewer manholes, 1,804 catch basins, seven (7) combined/sanitary pump stations, 676 fire hydrants, and 856 gate wells.
- The DPS provides 24/7 on-call water main repair. Vactoring and jetting of sanitary, combined and storm sewers is performed to maintain capacity. The sanitary and combined systems were cleaned and televised in 2018 under the combined/sanitary SAW program and under various other projects performed since.
- The City's Engineer provides inspection of infrastructure, including water, sewer, and the pavement of streets, cement sidewalks, and approaches.
- The proposed FY2020 budget includes funding to perform cleaning & inspection of the sanitary and combined sewers on a six (6) year cycle.

E.17 Reporting and Recordkeeping SOP

As applicable, the City maintains records demonstrating successful implementation of SOPs. Recordkeeping may include training, site inspection and maintenance, and if applicable, monitoring. It is anticipated that site inspections will occur on a quarterly basis or as otherwise required under the City's MS4 permit and Action Plan (Appendix F).

The City is required under the Phase II General NDPES Permit, to submit progress reports to the MDEQ on November 1 of every other year, or as otherwise required.
Specific reporting requirements will include:

- Program implementation status.
- Summary of storm water activities performed.
- Results of information collected, such as monitoring data.
- Summary of proposed storm water activities for the next reporting cycle.
- Changes made in BMP selection.
- Changes in storm water management personnel.
- Changes made in program or measurable goals.

City of Mount Clemens

Storm Water Management Plan (SWMP)

Appendix F

Action Plan

Revised April 4, 2023
(Previous Revision May 20, 2019)

1. City of Mount Clemens Storm Water Pollution Prevention Action Plan
2. City of Mount Clemens Storm Water Pollution Prevention Action Plan – Table 3

Storm Water Pollution Prevention Action Plan
Michigan General Permit Number MI0060240
Municipality/Agency: City of Mount Clemens
Address: One Crocker Blvd, Mt. Clemens, MI 48043

Contact Person: Leonard Bertrand **Phone: (586) 707-2979**
Title: Utilities Director **Date: April 4, 2023**

1. Purpose

The purpose of this Storm Water Pollution Prevention Action Plan (SWPPAP) is to bring together the following storm water pollution controls for Mount Clemens's Municipal Separate Storm Sewer System (MS4).

- Goals and actions adopted from the Clinton River East Sub-watershed (CREW) Watershed Management Plan (WMP),
- Actions applicable to pollution prevention and good housekeeping (P2/GH) for municipal operations to meet the NPDES Jurisdictional General permit requirements,
- New and redeveloping construction site runoff control,
- Actions applicable to post construction controls for areas of significant development and redevelopment to meet the NPDES permit requirements,
- Details and schedules to describe the process for implementing the program, and
- Evaluate methods to demonstrate the reduction of storm water pollution to the maximum extent practicable.

The SWPPAP includes those actions expected to be implemented over the term of the permit. The City IDEP and PEP are separate components of the Storm Water Management Program however specific and related actions are included in this SWPPAP.

The City's MS4 is primarily located in the CREW. The City's SWPPAP will cover City-owned properties in the CREW serviced by the City's MS4.

2. Facility Assessment and Prioritization

City owned and operated facilities will be assessed for their potential to discharge pollutants to the waters of the state. Each facility will be evaluated based on the following criteria:

1. Amount of urban pollutants stored at the site (i.e. sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash bacteria, or other site-specific pollutants)
2. Identification of improperly stored materials
3. Potential for polluting activities to be conducted outside (i.e. vehicle washing)
4. Proximity to waterbodies
5. Poor housekeeping practices
6. Discharge of pollutants of concern to impaired waters

Based on these criteria, the potential for each facility to discharge pollutants to the waters of the state will be rated high, medium, or low. For low facilities where no assessment factors are present,

catch basin cleaning and street sweeping will be performed as indicated in the applicable procedures for these activities. For medium facilities, appropriate BMPs are considered based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the state.

Updating/revisions of maps and inventory will be done within 30 days following adding/removing a facility or structural storm water control.

3. Municipal Inventory and Assessment

The inventory of municipal owned and operated facilities, structural controls and implemented BMP's are listed in Table 1A in Appendix A.

3a. Updates and Priority Revisions

This inventory will be updated within 30 days as facilities and structural storm water controls are added, removed, or no longer owner or operated by the applicant. Priority level assessments will be revised within 30 days prior to discharging storm water at a new facility, or when the storage of materials, equipment, or vehicles changes at a facility.

4. Municipal Operations and Maintenance Activities

The City maintains City-owned parking lots, and major local roads of their MS4. Repairs to parking lots or other municipal maintenance activities are done on an as needed basis by either the City DPS or by a licensed contractor. The Utility Department owns a vactor truck and can perform cleaning of storm structures as required under this program. The vactor is primarily used to maintain the City's sanitary sewer system however it is not used to work in the storm sewer system without appropriate cleaning and preparation prior to use (See Standard Operating Procedure E.02 Vactor Operation and Discharge of Liquid and Solid Waste).

During cold weather operations the City applies road salt as weather conditions dictate.

Vehicle maintenance and washing is conducted by DPS staff indoors at the City's DPS facility where it drains into the sanitary sewer.

The City may hire contractors for a number of operation and maintenance activities. The City will include a statement requiring contractors hired by Mount Clemens to perform municipal operation and maintenance activities to comply with all pollution prevention and good housekeeping (P2/GH) BMPs as appropriate. Contractors are provided with a "Storm Water Pollution Prevention" brochure which includes information about recommended operation and maintenance practices. A City representative is on site to oversee the work and ensure that left over material and other associated pollutants are disposed of, or stored properly at the DPS facility.

5. Catch Basin Inspection, Maintenance, and Cleaning

Catch basins are not prioritized for cleaning in the City of Mount Clemens. Instead, they are inspected and cleaned once every five (5) years by dividing the city into 5 sectors. Catch basins are visually inspected during normal work activities or if a complaint is registered by a resident. A visual inspection of the structure will document any structural defects which may include collapse, cracking, frame damage, pipe collapse, blockage, etc.

If cleaning is deemed necessary, it is conducted using the City's vactor truck. The vactor truck is operated according to Manufacturer's operating instructions. All solids and liquids will be removed from the structure to the extent possible. Collected sediment and water will not be discharged back into the structure at any time during the cleaning process.

Repairs will be conducted as needed based on the results visual assessments conducted by the City. Structure repairs are prioritized based on public safety concerns.

Collected material will be transported to the City's WWTP facility where it will be offloaded into a designated area for dewatering. The designated dewatering area is located at the septic hauler dumping station, with the absence of any drainage into storm structures. Once the material has been dewatered, the City disposes of the material through their Wastewater Treatment Plant.

6a. Other Storm Water Controls Structures Inspection and Maintenance

The City does not currently own or maintain any storm water detention basins or ponds. The detailed maintenance schedules and inspection procedures for future facilities are available at SWMP, Appendix D, Draft Stormwater Runoff Engineering and Construction Standards and Appendix E, E.15 Drainage System Maintenance SOP.

6. SWPPAP Revisions

Revisions will be determined within 30 days following adding/removing a facility or structural storm water control.

7. Construction Site Runoff Control

The City of Mount Clemens has adopted a Stormwater Runoff Engineering and Construction Standards Document (See Appendix D, Draft Stormwater Runoff Engineering and Construction Standards) and in the event the City acquires or constructs new structural storm water controls, the design of these structures will comply with these City standards. Site plans will be reviewed by the City, or its consultants, to ensure the appropriate standards are met.

8. Post Construction Site Runoff Control

The City has drafted revisions to their Stormwater Runoff Engineering and Construction Standards Document (See Appendix D) which applies to Post Construction stormwater runoff control areas of new development and significant redevelopment in the City. In the event the City acquires or constructs new structural stormwater controls, the design of these structures will comply with these Standards. Enforcement of these standards is accomplished through site plan review by the City, or its consultants, to ensure the appropriate standards are met.

9. Retention of records

Mt. Clemens will retain the approved SWPPAP, and its associated records, in-house for a minimum of three years after the termination of the permit. The records will be available upon request by MDEQ and shall include, but not be limited to:

- Information regarding the effectiveness of these activities;
- Records of analyses performed;
- Calibration and maintenance of instrumentation, if any used;
- Recordings from continuous monitoring instrumentation, if any conducted

10. Supplement to Table 3: SWPPAP goals and priorities of Mt. Clemens

This section provides further explanation of the information contained in Table 3, to assist with the SWPPAP review and approval process. The actions contained in Table 3 are the Final SWPPAP actions recommended for the City of Mount Clemens.

11a. Actions Committed to in the Watershed Management Plan(s)

Clarification for most actions identified in the Clinton River East Sub Watershed (CREW) Watershed Management Plan had been provided through the WMP review process. The actions contained in Table 3 are the SWPPAP actions recommended for the City and incorporated in the SWMP.

Table 3 Storm Water Pollution Prevention Action Plan for Mount Clemens documents all the actions in which the City has committed to implementing based on the recommendations.

11b. Storm Water Pollution Prevention and Good Housekeeping (P2GH) for Municipal Operations

The actions committed to in the SWPPAP do not contain all the Jurisdictional Permit SWMP requirements under Part I.B.6. The last part of Table 3 incorporates the remaining requirements for P2/GH for Municipal operations.

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Table 3 – Action Plan

Action #	*Action Item*	*MIS040000 Jurisdictional General Permit Section (Note 1)*	*Method of Implementation*	*Partner Permittees*	*Schedule*	*Evaluation*
Public Education Plan (PEP) – CRW-LSCDD PEP Table 2						
PEP #1 Topics A-J	Presentations and Displays	PartI.B.1.a.1 PartI.B.1.a.4 Part I.B.3	Provide displays and presentations for water quality-related events upon request and availability of staff time display to public at least once in the next 5 years.	CRWC	Annually	Date , time location and name of event attended
PEP #2 Topics A-K	Regional Public Education Materials	PartI.B.1.a.1 PartI.B.1.a.3 PartI.B.1.a.4 PartI.B.1.a.5 PartI.B.1.a.10	Distribute resources available from SEMCOG including: Seven Simple Steps to clean water brochures, tip cards and kids activity sheets. Topics include: Fertilizer, Car care, Per care, Household hazardous waste disposal, earth friendly landscaping, water conservation and storm drain awareness. Materials are available on the Ours to Protect Website at: http://www.semcog.org/ourstoprotect.aspx	CRWC	Annually	Track the number and type of materials distributed
PEP #3 Topics A-K	Subwatershed Website	PartI.B.1.a.2 PartI.B.1.a.4 PartI.B.1.a.9 Part I.B.3	Hosted by CRWC website; features subwatershed map, photos, description, events and links to education resources. MS4 permittees will provide links to the CRWC website of their own websites.	CRWC	The website is in place and is continuous	Will use page counter to report number of hits
PEP #4 Topics A-K	Community Information	PartI.B.1.a.4 PartI.B.1.a.8 Part I.B.3	Write or distribute articles about watersheds, storm water pollution personal action for publication into existing municipal newsletters, e-newsletters and websites; Four articles per year will be given to MS4 permittees from CRWC for publication in newsletters and other publications. MS4 permittees will distribute these article to the public each year via print or digital media.	CRWC	4 articles per year one for each season	MS4 will report where and when these are published in their Biennial Progress Report

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PEP #5 Topics A,C,G	Household Hazardous Waste Information	PartI.B.1.a.3 Part I.B.3	Continue to publicize information on the Macomb County Health Department's website: http://health.macombgov.org/Health-EnvironmentalHealth-HHWAcceptedMaterial The household hazardous waste (HHW) programs are offered to citizens and employees of Macomb County These provide safe disposal of household hazardous waste to Macomb County municipalities to the maximum extent practicable (as budget allows). Macomb County MS4 permittees will also promote. The MCHD and MCPWO will continue to distribute HHW brochures.	Macomb County	Annually	"Report biennially:
PEP #6 Topics A,G	Recreational Vehicle Waste Dumpsites	PartI.B.1.a.1 PartI.B.1.a.3	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region on Southeast Michigan Council of Government's (SEMCOG) Ours to Protect Web site at: www.semcog.org/OursToProtect_HouseholdWaste.aspx or provide a link to Michigan RV dump sites (www.rvdumps.com/mi.htm) on Oakland County Waste Resource Management Division's Web site at: www.oakgov.com/waste/.	SEMCOG	Annually	Provide working links to Web sites
PEP #7 Topics A-J	Riparian Information Distribution	PartI.B.1.a.2 PartI.B.1.a.7	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) make available to the public via mailings or through their website, events, meetings, and through mailings. MS4 may add this to their SWMP.	CRWC	Annually	"Number of brochures/other materials distributed

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Action #	*Action Item*	*MIS040000 Jurisdictional General Permit Section (Note 1)*	*Method of Implementation*	*Partner Permittees*	*Schedule*	*Evaluation*
Total Maximum Daily Load (TMDL)						
TMDL #1	E. coli Monitoring	Part I.A.2.c Part I.B.3 Part II.C.2	Based on IDEP DWS and twice per permit cycle (2nd and 4th year of permit cycle during Growth Season) at Municipal owned property, City Parks and at least one City Discharge Point per quadrant map.	n/a	Biennially	Status & results will be reported biennially or as required Compliance/ Non-compliance notifications
TMDL #2	Implement SOP's and BMP's based on City review of model or recommended procedures, practices or structural controls	Part I.B.3.c	City will use the information from activity TMDL #1 to prioritize affected areas or those area that could potentially be sources of pollution.	n/a	Biennially	Priority activities will be developed and reported in biennial progress reports.
Illicit Discharge Elimination Plan (IDEP)						
IDEP #1	Policy	Part I.B.3.c	Adopted IDEP plan upon approval by MDEQ	n/a	Based on IDEP DWS of outfalls and points of discharge	DWS activities will be reported in the biennial progress report including a summary of findings. In the event that illicit connections are discovered, the number found and corrected will be reported biennially in addition to required regulatory notification.
IDEP #2	Storm Sewer System Map	Part I.B.3.c	City will keep hard-copy drawings of City owned/operated storm sewer system in one central location at the Waste Water Treatment Plant.	n/a	See Appendix A of SWMP	Number of new discharge points located/installed.
IDEP #3	Dry Weather Screening	Part I.B.3.c	City will conduct dry weather (72 hrs. or more of no precipitation) screening on all owned/operated MS4 Discharge Points within the City. This will include visual observation of discharge points and receiving waters. If flow is observed, a field analysis for E-coli.	n/a	20% per year	Method of prioritization and location of field screening based on priority areas.

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Action #	*Action Item*	*MIS040000 Jurisdictional General Permit Section (Note 1)*	*Method of Implementation*	*Partner Permittees*	*Schedule*	*Evaluation*
IDEP #4	Elimination	Part I.B.3.c	City has procedures for eliminating illicit discharge, and pursuing enforcement actions, including measures for expeditious response to, and elimination of, each identified illicit discharge, spill, and emergency situations. City will track potential illicit discharges/connections and eliminations through a written log.	n/a	Based on IDEP DWS and required follow up investigations	Documented procedures. Follow-up documentation.
IDEP #5	Staff Training	Part I.B.3.c	City will implement a training program related to identifying illicit discharges/connections (IDC) for all staff that have the potential for witnessing problems or directly involved in IDEP related activities. The training program shall include recognizing IDC, source identification, methods for elimination, proper enforcement response, and other appropriate knowledge.	n/a	At least once per permit cycle and within first year of hire date.	Training documentation. Number of staff trained will be reported in biennial progress reports.
IDEP #6	Effectiveness	Part I.B.3.c	IDEP effectiveness will be determined by various methods, including, number and type of staff observations, and potential illicit connections/discharges found during dry weather screening.	n/a	Biennially	Number and type of staff observations; potential illicit connections/discharges found during dry weather screening (DWS).
Post-Construction Storm Water Controls for New Development and Redevelopment Projects.						
PCSWC #1	Ordinance/ Related SOP's and Policies	Part I.B.4	City has drafted revised Stormwater Runoff Engineering and Construction Standards to meet the permit requirements. Draft standards require maintenance agreement to ensure long-term O&M measures are in place.	n/a	Draft Standards will be adopted into Code of Ordinances upon review and approval of permit application by MDEQ	Provide updated documents for review by MDEQ within the stated timeframes

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Action #	*Action Item*	*MIS040000 Jurisdictional General Permit Section (Note 1)*	*Method of Implementation*	*Partner Permittees*	*Schedule*	*Evaluation*
Construction Storm Water Runoff Control						
CSWRC #1	Ordinance/ Related SOP's and Policies SESC Preliminary Site Plans	Part I.B.5 b. 1) - 3)	City has drafted revised Stormwater Runoff Engineering and Construction Standards Ordinance to meet the permit requirements. City will not issue a building permit unless all appropriate permits are obtained.	n/a	Draft Standards will be adopted into Code of Ordinances upon review and approval of permit application by MDEQ	Provide updated documents for review by MDEQ within the stated timeframes
CSWRC #2	Part 91 Violation Notification	Part I.B.5 b. 1) - 3)	City will include as part of employee training what constitutes a discharge from construction activities and whom to contact within the City. Staff will be responsible for contacting Macomb County Public Works Office and the MDEQ Southeast Michigan District when a discharge has occurred.	MCPWO	Annually	Training Documentation
CSWRC #3	Public Complaint	Part I.B.5 b. 1) - 3)	City will promote Macomb County "Report-a-Polluter" hotline that is available 24/7, by posting information on their website and post information at publically open City facilities	MCPWO	Annually	Number of complaints received.
Pollution Prevention & Good Housekeeping Activities for Municipal Operations						
P2GH #1	Employee Training	Part I.B.6.c Part I. B. 6. f	City will implement a training program related to good housekeeping measures and how to reduce storm water pollution.	n/a	Review of adopted SOP's along with monthly safety briefings	Training program documentation, including sign-in sheets with topics covered during briefings
P2GH #2	Contractor Training	Part I.B.6. Part I.B.6.f	City will provide relevant SOP's, policies and permit requirements with Contract Documents	n/a	As needed	At contract commencement meeting and documentation of meeting minutes.

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Action #	*Action Item*	*MIS040000 Jurisdictional General Permit Section (Note 1)*	*Method of Implementation*	*Partner Permittees*	*Schedule*	*Evaluation*
P2GH #3	Structural Storm Water Control Inspection	Part I.B.6.a	City will inspect all City-owned structural storm water controls on a monthly basis and comprehensive annual	n/a	Per adopted SOPs	Inspection reports.
P2GH #4	Structural Storm Water Controls Owned / Operated	Part I.B.6.a	City will include all structural controls on the maps. Current City owned properties with structural controls are listed as SWMP Appendix A, Table 1A	n/a	2018	The inventory SWMP Appendix A, Table 1A will be updated within 30 days following adding/removing a facility or structural storm water control.
P2GH #5	MS4 Waste Removal	Part II.D.6	All waste from general operations and maintenance, such as catch basin cleaning, is disposed of using an outside contractor. This material is tested and then hauled to the appropriate location for disposal.	n/a	Annually	Load tickets/quantities of waste removed.
P2GH #6	Impervious Infrastructure Pollutant Reduction	Part I.B.6.b Part I.B.6.c	City will implement parking lot SOP's for all facilities owned by the City including catch basin cleaning per "Drainage System Maintenance SOP" (i.e. 40 % full criteria).	n/a	Per Adopted SOP's	Documented and reported in biennial progress report
P2GH #8	TSS Reduction	Part I.B.6.b	City will maintain unpaved City lots and yards including catch basin cleaning per "Drainage System Maintenance SOP" (i.e. 40 % full criteria)	n/a	Annually	
P2GH #9	Salt & Sand Reduction into Waterways	Part I.B.6.b	City will evaluate alternative methods for salt application on City owned roads and parking lots.	n/a	Annually	Revised procedures.
P2GH #10	Unpaved Yards/Parking Lot BMPs	Part I.B.6.b	City will improve maintenance of City owned parking lots or yards and install CB inserts where practical.	n/a	Annually and Maintenance per Implemented SOP's	Quarterly Review
P2GH #11	Coal Tar Emulsions	Part I.B.6.b	City will evaluate alternative methods for sealing asphalt surfaces.	n/a	Annually	Revised procedures.

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P2GH #12	Fleet Maintenance & Storage Yards SWPPAP	Part I.B.6.b	City will create and implement a SWPPAP for all municipal fleet maintenance and storage yards within the City. The SWPPAP will be signed and overseen by the Storm Water Manager	n/a	Bi-Annual Inspections or per implemented SOP's	Completed SWPPAP(s) are evaluated through Bi-Annual inspections and storm water manager's quarterly review.
P2GH #13	Refuse BMPs	Part II.D.6	City will review alternatives for refuse management, ensuring storm water compliance.	n/a	Quarterly	Revised procedures, if necessary.
P2GH #14	Chemical Management	Part I.B.6.f	City will require employees or contractors using, storing and handling pesticides, herbicides, and fertilizers to have their Certified Pesticide Applicators License.	n/a	Seasonal	Revised procedures, if necessary.
P2GH #15	Phosphorous-Free Fertilizer	Part I.B.6.f	City will only use phosphorous-free fertilizer for turf grass unless soil testing is completed first.	n/a	Seasonal	Soil test results, when applicable.
P2GH #16	Vegetation Management on properties	Part I.B.4.b.1 Part I.B.6.f	City will evaluate all management procedures for City-owned properties. If applicable and feasible, City will revise maintenance procedures to address Permit requirements.	n/a	Quarterly review	Revised procedures, if necessary.