Phase II Stormwater Management Program 2020 Annual Report

Permit No. MI0057364

April 2021

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Acronyms and Abbreviations

BMP	Best Management Practice
EOC	Engineering Operations Committee
EGLE	The Michigan Department of Environment, Great Lakes, and Energy
IDEP	Illicit Discharge Elimination Program
LTAP	Local Technical Assistance Program
MDOT	Michigan Department of Transportation
MEP	Maximum Extent Practicable
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollution Discharge Elimination System
PIPP	Pollution Incident Prevention Plans
QAQC	Quality Assurance Quality Control
SEMCOG	Southeast Michigan Council of Governments
SESC	Soil Erosion and Sedimentation Control
SWMP	Stormwater Management Plan
TMDL	Total Maximum Daily Load
TSC	Transportation Service Center
YTD	Year to Date

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Appendices

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1. Introduction

This Annual Report presents stormwater pollution control activities implemented by Michigan Department of Transportation (MDOT) during the 2020 monitoring period, in compliance with the National Pollutant Discharge Elimination System (NPDES) Permit No. MI0057364, hereinafter referred to as the Permit. The Permit was issued by the Michigan Department of Environmental Quality (MDEQ), now Michigan Environment, Great Lakes & Energy (EGLE), and expired on April 1, 2009. The Permit has been administratively extended and MDOT is continuing to comply with the existing permit. A permit renewal application was submitted for review and the new permit is expected to be issued in 2021.

As part of the renewal application, MDOT has created a comprehensive Stormwater Management Plan (SWMP) designed to reduce the discharge of pollutants from the MDOT drainage systems to the maximum extent practicable (MEP), protect the designated uses of the waters of the state, increase awareness of stormwater as a potential source of pollutants, and satisfy the applicable state and federal water quality requirements.

1.1. Report Objectives

The objectives for this annual report are as follows:

- To inform MDOT Staff about SWMP activity accomplishments.
- To satisfy MDOT's annual reporting requirement of the Permit.
- To evaluate and assess the appropriateness and effectiveness of MDOT's SWMP.
- To present information about new programs, changes to current programs and procedures developed by MDOT.

1.2. Report Organization

The annual report highlights actions MDOT has completed in 2020 to fulfill Permit requirements. The reported information closely follows the requirements of the six minimum measures of the Permit which include:

- Public Education Program
- Public Involvement and Participation
- Illicit Discharge Elimination Plan (IDEP)
- Post Construction Stormwater Management for New Development and Redevelopment Projects
- Construction Stormwater Runoff Control
- Pollution Prevention/Good Housekeeping for MDOT Operations.

Details on these activities can be found in the appendices at the end of the report.

1.3. Program Assessment

Program assessment is primarily determined by MDOT's adherence to the activities and measurable goals committed to in the SWMP, as well as regular evaluation of stormwater related procedures, training, and programs.

1.4. Summary

During 2020, MDOT worked toward completing the activities laid out in the SWMP. Several of these activities are ongoing and completed each year. Due to time and budget management purposes, activities that are not required to be completed each year are divided between the five years of the permit cycle.

With the updated SWMP, care will be taken to ensure that MDOT's commitments, as written in the SWMP, are fulfilled; however, as the program evolves, modifications may need to be made to the original activity, the measurable goal, or both. Details regarding current activities, measurable goals, and their assessment method are contained in the Appendices.

MDOT will continue to integrate stormwater management awareness across all business areas. Informing and educating MDOT Regions, TSCs, Maintenance Regions, and Garages about the new stormwater permit requirements will be a priority in 2021. Significant changes have been implemented that will impact many design and operational functions of MDOT. MDOT remains committed to allocating the necessary resources to meet the requirements of the Permit meeting environmental regulations for stormwater discharges.

2. Public Education Program

To educate MDOT employees as well as the general and job-related public on stormwater management, MDOT has developed several mediums for which to convey information. MDOT employees have access to information focused on stormwater by utilizing the reference library, various training modules, a pesticide/fertilizer certification course, and stormwater operator staff training. The job-related public is provided with specific information when applying for a permit, such as a tap-in discharge permit.

MDOT has developed several displays and handout materials targeting the general public's various audiences including school-age children and transportation construction. The materials are available, in electronic format, for viewing and downloading from the MDOT Stormwater Public Web Page. In addition, MDOT distributes these materials at various events, as applicable.

The following section presents the seven Public Education Program activities as outlined in the SWMP. Appendix A presents each activity's table, including a description of objectives completed in 2020.

2.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix A. Detailed descriptions of each activity can be referenced in the SWMP.

- Education 1: Stormwater and Watershed Stewardship Reference Library
- Education 2: Stormwater Management Website
- Education 3: Stormwater Management Education Brochures
- Education 4: Educational Materials for Tap-In Discharge Permits
- Education 5: Training Modules
- Education 6: Certify MDOT's Staff for Pesticide/Fertilizer Applications
- Education 7: Staff Training for Part 91 and Stormwater Operators

2.2. Upcoming Monitoring Year Goals

Future monitoring years will include various efforts within the Public Education Program, as presented below:

For Activity Education 1, the stormwater intranet site will be continuously updated to educate the job related public in 2021.

For Activity Education 2, a contact for questions and concerns related to MDOT's stormwater

management program was added to the website. This will make it easier for the general public to voice opinions about the program. This activity is closely related to the measurable goal Public Involvement and Participation.

MDOT will begin to review and update educational brochures related to stormwater management in 2021 as described in Activity Education 3. These brochures will continue to be passed out at relevant events, as well.

Activity Education 4 will be a focus for the year 2021 and involves reviewing and updating the educational materials that are distributed along with Tap-In Discharge Permits.

MDOT will continue to review and update the training modules, train staff in pesticide and fertilizer application, and track the number of staff trained under Part 91 and Stormwater Operators as described in Activities Education 5, 6 and 7.

3. Public Involvement and Participation

In addition to providing educational materials to MDOT staff and the public, MDOT is also working to encourage public input in the SWMP and strengthen relationships with other agencies interested in the better management of stormwater. Strategies have been devised to encourage and track comments to the SWMP on the public stormwater website and to pursue relationships with other state and local agencies to further stormwater management practices on various projects. Several activities listed under other minimum measures will also help to achieve the goal of this minimum measure.

The following section presents the three Public Involvement and Participation activities as outlined in the SWMP. Appendix B presents each activity's table, including a description of objectives completed in 2020.

3.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix B. Detailed descriptions of each activity can be referenced in the SWMP.

- Public Involvement 1: Public Comment of SWMP
- Public Involvement 2: Development of Offset Program
- Public Involvement 3: Identify and Coordinate with MPOs Having SWMPs

3.2. Upcoming Monitoring Year Goals

Future monitoring years will include various efforts within Public Involvement & Participation, as presented below.

Under Activity Public Involvement 1, MDOT will finalize the draft of the SWMP using comments from EGLE. This draft will be posted on MDOT's stormwater website and distributed to all TSCs and Region offices. In addition, a comment forum will be developed so the public can easily submit comments. MDOT will report and respond to public comments on the SWMP and post the final SWMP on the MDOT stormwater website by the end of 2021, pending permit approval.

Activity Public Involvement 2 involves developing a list of organizations for other state agencies, drain commissioners and municipalities to reach out to for offset programs. This will be a focus for 2021.

MDOT will continue to consider watershed and environmental groups input during early coordination of MDOT projects, per the objective of Activity Public Involvement 3.

4. Illicit Discharge Elimination Plan

This annual report assesses the IDEP as one of the six minimum measures stated in the Permit to be reviewed by EGLE. The framework for the IDEP activities is outlined in the MDOT SWMP (MDOT, 2016). MDOT's strategies provide for continued identification of illicit discharges and the notification and removal of such connections and discharges.

The following section presents the five IDEP activities as outlined in the SWMP. Appendix C presents each activity's table, including a description of objectives completed in 2020.

4.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix C. Detailed descriptions of each activity can be referenced in the SWMP.

- IDEP 1: Maintain List of Construction Projects and Maintenance Activities
- IDEP 2: Urban Area Outfall Mapping
- IDEP 3: Dry Weather Screening
- IDEP 4: Review Procedure for Receiving and Notifying EGLE of Illicit Discharges
- IDEP 5: Determining Effectiveness of IDEP

4.2. Upcoming Monitoring Year Goals

Future monitoring years will include various efforts within the IDEP, as presented below.

Under Activity IDEP 1, MDOT will develop an annual list of construction projects and maintenance activities which include work on the drainage system at the end of the fiscal year. This activity will continue to be completed each year of the permit cycle.

MDOT will update any outfall maps as needed throughout the permit cycle, in accordance with Activity IDEP 2. In 2021, MDOT will focus on the development of an identification system for all outfall structures.

The measurable goals under Activity IDEP 3 are the activities that were completed within the five-year permit cycle. In 2016, the desktop analysis was completed. In years 2017 through 2020, field work and data gathering was completed. The pilot project was completed in 2020, and the program results will be assessed in 2021.

For Activity IDEP 4, a review of the procedure for receiving the notice of an illicit discharge shall be reviewed and updated if necessary.

Per Activity IDEP 5, illicit discharge notices and resolutions have been reported in the 2020 Annual Report. A list of the illicit discharge investigations is available in Activity IDEP 5. This is an ongoing activity and will be done for each year during the permit cycle.

5. Post Construction Stormwater Management for New Development and Redevelopment Projects

MDOT's Post Construction Stormwater Management for New Development and Redevelopment Projects is a measure designed to address post construction stormwater runoff from MDOT projects and procedures for addressing post construction runoff from projects outside of the MDOT right-of-way. These goals will be achieved through structural best management practices (BMPs) designed to remove pollutants and possibly limit runoff rates from MDOT rights-of-way and other facilities.

The following section presents the six activities for Post Construction Stormwater Management for New Development and Redevelopment Projects, as outlined in the SWMP. Appendix D presents each activity's table, including a description of objectives completed in 2020.

5.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix D. Detailed descriptions of each activity can be referenced in the SWMP.

- Post Construction 1: Structural BMP Mapping
- Post Construction 2: BMP Maintenance Requirements
- Post Construction 3: Selection and Application of BMPs
- Post Construction 4: Water Quality and Channel Protection Compliance
- Post Construction 5: TMDL Compliance
- Post Construction 6: Drainage Manual Update
- Post Construction 7: Site Plan Reviews for Projects

5.2. Upcoming Monitoring Year Goals

Future monitoring years will include several efforts within Post Construction Stormwater Management, as presented below.

Under Activity Post Construction 1, The map of all known BMPs in the state has been updated and included in this report. Furthermore, MDOT plans to utilize the process for communicating newly constructed BMPs to the Stormwater Program Manager during 2021.

Per Activity Post Construction 2, MDOT will review the maintenance activity guidelines in 2021. It will be a focus for each year to develop maintenance procedures for new structural BMPs and notify appropriate staff of these procedures.

Under Activity Post Construction 3, MDOT has developed a BMP selection tool which has been distributed to MDOT designers. For 2021, it is a goal to continue to issue staff guidance with the selection tool and focus on developing maintenance procedures for structural BMPs.

Activity Post Construction 4 involves complying with performance standards for water quality and water quantity. The BMP selection tool developed in Activity Post Construction 3 was distributed to MDOT designers and it is a goal for 2021 to continue to test this tool for future projects. Furthermore, for existing structural BMPs, MDOT will continue to document their modification, replacement, or enhancement.

Activity Post Construction 5 includes the review of projects which discharge to water bodies with TMDLs. To comply with this activity, MDOT has developed a BMP selection tool which uses an interactive mapping system showing where MDOT trunklines cross 303(d) listed water bodies. This will make designers aware if their project discharges to a water body with a TMDL that they must meet these requirements. MDOT will continue to review all future projects using this tool.

Activity Post Construction 6 discusses periodically updating the drainage manual. Instead of updating the drainage manual, MDOT has decided to create a supplementary document which discusses post-construction BMP design in further detail. In the upcoming year, 2021, continuing to work on this document will be a focus.

Activity Post Construction 7 outlines the goals of having initial site plans of post-construction stormwater BMPs being reviewed by MDOT stormwater staff. This activity will be a focus for 2021

6. Construction Stormwater Runoff Control

Per the Permit, MDOT is required to establish and maintain a Soil Erosion and Sedimentation Control program. Appropriate MDOT staff are trained and certified under this program. MDOT continually educates contractors about its Soil Erosion and Sedimentation Control program (SESC), as well, on a project by project basis using the information discussed at preconstruction meetings.

The following section presents the Construction Stormwater Runoff Control activity as outlined in the SWMP. Appendix E presents the activity table, including a description of objectives completed in 2020.

6.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix E. Detailed descriptions of each activity can be referenced in the SWMP.

- Construction 1: Review of Stormwater Runoff QAQC Protocol

6.2. Upcoming Monitoring Year Goals

The efforts related to Activity Construction 1 will be a focus for 2021. These efforts include reviewing and updating the QAQC protocol for construction stormwater control and issuing staff guidance.

7. Pollution Prevention / Good Housekeeping

The goal of the Pollution Prevention and Good Housekeeping program is to prevent or reduce pollutant runoff from MDOT operations and properties to the MEP. Facilities covered under this measure include: MDOT offices, bridge facilities, maintenance garages, central repair, welcome centers, rest areas, roadside parks and scenic turnouts.

The following section presents the four Pollution Prevention / Good Housekeeping activities as outlined in the SWMP. Appendix F presents each activity's table, including a description of objectives completed in 2020.

7.1. Activities

The following activities are presented in table format with the current monitoring year results in Appendix F. Detailed descriptions of each activity can be referenced in the SWMP.

- Pollution Prevention 1: BMP Inspections
- Pollution Prevention 2: PIPP Audits
- Pollution Prevention 3: Maintenance Facility Inspections
- Pollution Prevention 4: Documentation of Road Maintenance Activities

7.2. Upcoming Monitoring Year Goals

The 2021 monitoring year will include several efforts within Pollution Prevention / Good Housekeeping, as presented below.

BMPS will be inspected in 2021 under Activity Pollution Prevention 1. The findings of these inspections will be given to the Stormwater Program Manager and any recommendations will be addressed in the following year. The new permit is anticipated to require a two-year permit cycle, as such, each structural BMP will be inspected every other year starting in 2021.

Activity Pollution Prevention 2 discusses auditing the pollution incident prevention plans every three years. Scheduled audits will continue in 2021.

In compliance with Activity Pollution Prevention 3, six (6) MDOT maintenance facilities were inspected in 2020. The findings of these inspections will be given to the Stormwater Program Manager and any recommendations will be addressed. At the end of the three-year permit cycle, each maintenance facility will have been inspected.

The objective for Activity Pollution Prevention 4 is to provide for continued street sweeping and catch basin

cleanout, following maintenance performance guidelines.

REFERENCES

MDOT, 2016. Stormwater Management Plan. Michigan Department of Transportation.

Appendix A – Public Education Activities

ACTIVITY EDUCATION 1: CONVERT LANSING INFORMATION CENTER TO WEB-BASED STORMWATER LIBRARY

MONITORING YEAR: 2020

Minimum Control Measure: Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMNISTRATION1: Program Assessment and Reporting • EDUCATION 2: Update MDOT Public Website

OBJECTIVE

Convert the current physical information center to a web-based archive containing stormwater-related materials for training and educating the job-related public including video, reference manuals and publications.

DESCRIPTION

Converting the existing, physical library to an online archive will increase ease of accessibility for MDOT employees and the job-related public. The library is to be comprised of informational materials to support activities performed for the MDOT Stormwater Management Plan.

ANNUAL REPORTING

- Complete conversion from physical to web-based library
- Track the web page traffic and number of content downloads

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
The existing, physical stormwater library housed in Lansing will be converted to an online database, available on the MDOT Stormwater Website.	Materials transferred to the online, public website by year 2020.
Annual Assessment: This task saw no action due to COVID and a lack of access to the physical stormwater library building.	
A list of stormwater-related materials will be updated quarterly on the MDOT Stormwater Public Web Site.	List of updates provided quarterly to the region stormwater and IDEP coordinators
Annual Assessment: Added the 2019 annual report to the MDOT stormwater webpage. Stormwater contacts were updated to reflect staffing changes in 2020.	
Quarterly notices will be made in the Monday Memo to advertise the stormwater-related library material.	Number of “Monday Memo” articles issued relating to the stormwater program.
Annual Assessment: 2 Monday report Memo articles were created in 2020.	
MDOT Staff to participate in the Southeast Michigan Green Infrastructure (GI) team to share relevant information to the job-related public via the MDOT Stormwater Public Website.	Staff participating in the team will provide materials to be posted on the MDOT Stormwater Public Website to the Aquatic Resource Specialist quarterly
Annual Assessment: No meetings were attended in 2020.	

ACTIVITY EDUCATION 2: UPDATE WATERSHED STEWARDSHIP INFORMATION ON MDOT PUBLIC WEBSITE

MONITORING YEAR: 2020

Minimum Control Measure : Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • EDUCATION 1: Lansing Information Center Conversion

OBJECTIVE

Information pertaining to watershed stewardship currently available that is pertinent to the general, traveling public will be maintained and kept available for public use and access. Information to be updated quarterly will focus on job-related activities specific to MDOT employees. A comment form will also be developed to provide feedback on the website and available information.

DESCRIPTION

MDOT will update the public information website about the Phase II stormwater program. The website provides general information about watershed stewardship practices as well as links to pertinent stormwater-related materials. This information will be maintained and monitored to report website usage. Updated information will focus on job-related activities relevant to MDOT.

ANNUAL REPORTING

- Track internal and external website traffic
- Track number of SWMP document downloads on the MDOT stormwater public website.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
The MDOT Stormwater Public Web Site will be updated quarterly with the most recent MDOT stormwater information and news relevant to the job-related and traveling public.	Updates to be tracked by the Stormwater Program Manager.
Annual Assessment: The MDOT public stormwater page contacts section was updated in 2020 to reflect changes in staffing that deal with stormwater related issues. It contains current contact information for the stormwater program manager, support staff, as well as the region stormwater and IDEP coordinators.	
A stormwater-related contact will be developed for inclusion on the MDOT Stormwater Public Web Site.	Contact will appear on the MDOT Stormwater Website and be forwarded to the Stormwater Program Manager.
Annual Assessment: See above comment.	
Comments received via contact link will be reviewed and addressed, as necessary. The comments will be archived to track the change in public awareness and behavior resulting from the implementation of the Public Education Program.	Comments will be addressed as necessary as determined by the Technology Manager and the Stormwater Program Manager
Annual Assessment: An email address was created in 2016 to allow for public comment and questions regarding the MDOT stormwater program on the contacts page. To date, there have been no public inquiries.	

ACTIVITY EDUCATION 3: UPDATE STORMWATER MANAGEMENT BROCHURES

MONITORING YEAR: 2020

Minimum Control Measure : Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • EDUCATION 2: MDOT Stormwater Website

OBJECTIVE

Further the public knowledge on stormwater and how MDOT manages stormwater through informative brochures.

DESCRIPTION

Informative brochures currently exist on MDOT's Stormwater website and are also distributed at events such as job fairs and various community outreach events. These brochures will be updated to contain up to date information about stormwater management.

ANNUAL REPORTING

- Track completion of brochure updates
- Track number of downloads from website

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review and update existing brochures relating to stormwater management.	To be posted on the MDOT stormwater website.
Annual Assessment: No updates were made to brochures in 2020.	
Continue to distribute brochure materials at community events, job fairs, and other relevant events.	To be distributed at various event.
Annual Assessment: Public notice for herbicide applications provided to news outlets throughout the Grand region. Muskegon TSC provided information regarding flooding/ erosion issues related to road closures	

ACTIVITY EDUCATION 4: REVIEW EDUCATION MATERIALS DISTRIBUTED WITH TAP-IN/DISCHARGE PERMIT APPLICATIONS AND UPDATE/DEVELOP TRACKING SYSTEM FOR TAP-IN PERMITS

MONITORING YEAR: 2020

Minimum Control Measure : Education/Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment & Reporting • IDEP 4: Procedure for Receiving & Notifying EGLE of Illicit Discharges & Actions Taken

OBJECTIVE

Education materials inform applicants of acceptable discharges into the MDOT drainage system, and also of the potential negative impacts to water quality from unacceptable or illegal discharges and ways to mitigate these impacts. A tracking system will enable MDOT to keep better track of those who have tap-in permits.

DESCRIPTION

Preparing education materials for typical development activities connecting to MDOT facilities. Established and implemented procedures for distributing these materials.

ANNUAL REPORTING

- Track quantity of permit applications/educational materials distributed.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review educational materials included in the tap-in/discharge permit application.	Items that need to be improved, as determined by the review process, will be given to the permit workgroup.
Annual Assessment: This goal was completed in 2020.	
Incorporate review comments into education materials included in the tap-in/discharge permit application.	Updated materials will be distributed to the new permit applicants.
Annual Assessment: There were no changes made to the education materials in 2020.	
Distribute education materials to 100% of tap-in/discharge permit applicants.	MDOT Permitting Staff to follow up with applicants to ensure information was received.
Annual Assessment: Educational materials were distributed throughout the permit cycle. There were 70 tap-in discharge permits 2020. The breakdown of these numbers by region are available in the figure on the following page.	
Review the adequacy of the procedure for distributing materials.	MDOT Permitting Staff to meet with MDOT Stormwater Staff to discuss necessary changes to education materials distributed to permit applicants.
Annual Assessment: The procedure for distributing the materials was not changed in 2020.	

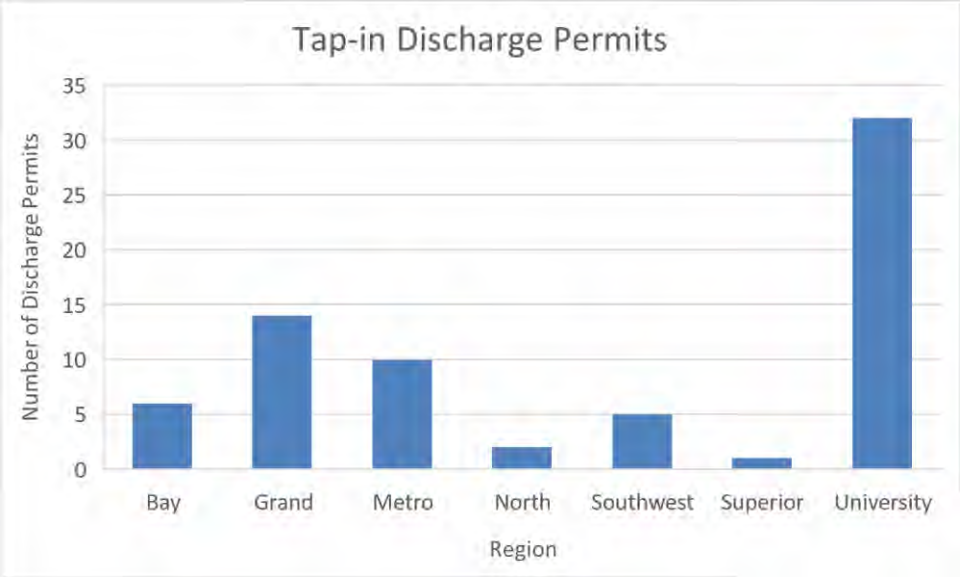


Figure A1 – 2020 Tap-In Permits Issued By Region

ACTIVITY EDUCATION 5: UPDATE EXISTING MODULES AND DEVELOP MS4 TRAINING MODULE FOR DESIGNERS

MONITORING YEAR: 2020

Minimum Control Measure : Training Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting IDEP 4: Notify EGLE of Illicit Discharges

OBJECTIVE

Educate the job-related public about the Stormwater Management Program, focusing on design.

DESCRIPTION

Use the four 15 minute MDOT stormwater program training modules to train Lansing and Region/TSC staff and contract agencies.

- Module One: Introduction to SW Management
- Module Two: Best Management Practices
- Module Three: Maintenance Considerations
- Module Four: Illicit Discharge & Maintenance
- A new module on MS4's for all MDOT staff

ANNUAL REPORTING

- Track training attendance.
- Track contract agencies receiving modules.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review and update modules to pertain up to date information relevant for designers. Once updated, modules will be added to the MDOT training database (On-Track) to track individual employee training. Training completion shall be included in employee performance evaluations. The first update will add illicit discharge reporting and notification information to Training Module Four.	Modules to be updated annually and confirmed by the MDOT Stormwater Program Manager

Annual Assessment: In 2016, a Municipal Separate Storm Sewer System (MS4) training module was developed. This module was created as an overview of MS4's, how MDOT complies with MS4 requirements, and guidance for designers on stormwater management. Creating this module was the first step for MDOT in developing updated versions of existing training modules and feedback on this module will be considered in development of these other modules, as well. No additional modules were completed in 2020.

Determine specifically who will be trained with the stormwater modules. All new employees shall be trained within the first year. All staff shall be trained once per permit cycle. Maintenance and construction staff with stormwater responsibilities will be trained to follow the illicit discharge notification procedure with the MS4 Training Module.	List of trained employees reported by the MDOT training coordinator to Stormwater Program Manager

Annual Assessment: The MS-4 Training module was completed in December of 2016 and made available on the department's intranet site. The number of page hits was not coalited due to a Microsoft analytical glitch.

Provide modules to contract agencies and contracting associations with a request to use the modules. Provide information through the Michigan Local Technical Assistance Program (LTAP).	Modules given to contract agencies on an as needed basis.
Annual Assessment: No agency reports have been reported for 2020.	

ACTIVITY EDUCATION 6: CERTIFY MDOT'S STAFF FOR PESTICIDE/FERTILIZER APPLICATIONS

MONITORING YEAR: 2020

Minimum Control Measure : Training Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting

OBJECTIVE

To reduce pollution entering waters of the state, statewide, that originates from pesticide and/or fertilizer applications.

DESCRIPTION

The existing training and certification program for pesticide/fertilizer applications will be evaluated and tracked to document performance and to prevent stormwater pollution. A turf grass management plan and soil testing for nutrients to determine appropriate fertilizer usage shall be added to the existing training. Results will be used to recommend changes if appropriate.

ANNUAL REPORTING

- Track the number of individuals attending annual pesticide training.
- Track number of MDOT personnel certified as a pesticide applicator.
- Summarize evaluation and review of programs, policies, procedures and information.
- Report changes to fertilizer specifications.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
MDOT Staff applying pesticides will be trained and certified per Michigan Department of Agriculture requirements. Staff are responsible for ensuring their certification is completed every three years and they have appropriate certification documents.	List of trained employees will be provided by the MDOT training coordinator to the Stormwater Program Manager by the TSC Region offices.
Annual Assessment: All MDOT staff that apply fertilizer or pesticides attend a training, which is offered each year. Staff must attend training every three years to maintain their certification. There are a total of 52 MDOT staff members that are certified as pesticide applicators. Furthermore, a total of 66 MDOT employees attended the annual MDOT Vegetation Management Conference in 2020.	
MDOT Staff or Contract Agencies will follow MDOT's Standard Specifications for Construction, Sections 816 and 917 for fertilizer application practices.	Verified by MDOT Stormwater Program Manager.
Annual Assessment: This specification is a focus of the MDOT fertilizer and pesticide application training. In 2020, staff and agencies were in compliance with these specifications.	
Evaluate application practices and pollution prevention measures and recommend and formalize any changes if appropriate.	A task to be completed annually, as checked by the Stormwater Program Manager.
Annual Assessment: No changes to the protocol have been identified by the Environmental Maintenance Team.	

ACTIVITY EDUCATION 7: TRAIN STAFF RESPONSIBLE FOR ADMINISTERING PART 91 AND STORMWATER OPERATORS

MONITORING YEAR: 2020

Minimum Control Measure : Training Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • CONSTRUCTION 1: Review QAQC Protocol for Construction Stormwater Runoff Control

OBJECTIVE

To reduce non-stormwater discharges to the MEP to receiving water bodies.

DESCRIPTION

The existing EGLE sponsored Soil Erosion and Sedimentation Control (SESC) training program will be attended by appropriate maintenance staff. Successful completion of the training and certification of stormwater operators will be documented.

ANNUAL REPORTING

- Track total number of staff trained and certified for compliance with Part 31 and Part 91 requirements.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
MDOT Staff Responsible for Administering Part 91 and those having Decision Making Authority for SESC Plan Development or Review, Inspections, or Enforcement will receive NPDES training.	The number of trained staff reported annually to the Stormwater Program Manager

Annual Assessment:
A total of 89 MDOT staff attended an internal training organized by Chris Potvin on the proper use of the draft MEP process and form submittal.

Number of MDOT staff trained, by region:

Bay – 5 licensed herbicide applicators trained, 6 staff attended the annual vegetation management conference.
Grand – 11 staff re-certified as stormwater operators, 13 staff attended MDOT annual herbicide applicator training conference, 13 staff re-certified as SESC PRD,5 staff attended the annual vegetation management conference.
Metro – 37 staff attended SESC/SWO training. 26 Metro Region employees attended Sharon Ferman's year 3 environmental topics training. 10 staff attended the Annual Vegetation Management Conference.
North – 5 staff obtained their Construction Stormwater Operators licenses52, 9 North Region employees attended pesticide and herbicide training through both the department as well as continuing education credits, 25 staff completed the Hazardous Materials & Waste Awareness (HM 181) training. 9 staff attended the Annual Vegetation Management Conference.
Southwest – 13 staff attended the 2020 MDOT Vegetation Management Conference.
Superior – 9 Staff attended the pesticide and herbicide training.
University –33 staff attended training sessions for Hazardous Material and Waste Awareness. 8 Staff attended the Annual Vegetation Management Conference.
Miscellaneous- 6 TSMO attended the Annual Vegetation Management Conference.

Appendix B – Public Involvement and Participation Activities

ACTIVITY PUBLIC INVOLVEMENT 1: POST STORMWATER MANAGEMENT PLAN (SWMP) ON MDOT'S PUBLIC STORMWATER WEBSITE AND DEVELOP COMMENT FORUM **MONITORING YEAR: 2020**	
Minimum Control Measure : Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • EDUCATION 1: Convert Lansing Information Center to Web-Based Stormwater Website
OBJECTIVE	
To obtain statewide comments from the public on the SWMP.	
DESCRIPTION	
Establish procedures for the public notice and distribution of the draft SWMP. Provide at least 30 days for public review and comment.	
ANNUAL REPORTING	
• Track number of public comments • Track number of downloads of the draft SWMP from MDOT Stormwater website.	
MEASURABLE GOALS	
MEASURABLE GOAL	**MEASURE OF ASSESSMENT**
Post draft SWMP on MDOT Stormwater Website.	Posted by due date & confirmed by Stormwater Program Manager.
Annual Assessment: A draft will be posted once MDOT and EGLE have moved farther through negotiation process on what is required in the SWMP.	
Distribute draft SWMP to all TSCs and Region Offices.	Posted by due date & confirmed by Stormwater Program Manager.
Annual Assessment: The SWMP was shared within the Stormwater Steering Committee in 2019. Once negotiations with EGLE have progressed, a draft copy will be forwarded to the Region and TSC offices.	
Develop comment forum for general public to comment on publicly posted SWMP.	Posted by due date & confirmed by Stormwater Program Manager.
Annual Assessment: A public comment forum on the MDOT Stormwater Website will be created once the draft SWMP is posted on the MDOT Stormwater Website.	
Distribute SWMP to watershed and environmental organizations listed in **Appendix E** of the SWMP.	Posted by due date & confirmed by Stormwater Program Manager.
Annual Assessment: Once the SWMP is posted on the MDOT Stormwater Website, the organizations listed in **Appendix E** of the SWMP will be notified of its posting.	
Distribute SWMP to planning organizations state-wide that are involved with transportation planning efforts.	Comment on in Annual Report.
Annual Assessment: Once the SWMP is posted on the MDOT Stormwater Website, it will be distributed to these organizations.	

Report and respond to public comments on SWMP.	Relevant comments to be incorporated into final version of SWMP. All comments compiled in SWMP **Appendix F**.
Annual Assessment: As comments on the SWMP are given, they will be documented and responded to through the first quarter of 2021.	
Post final SWMP on MDOT Stormwater Website.	Posted by due date & confirmed by Stormwater Program Manager.
Annual Assessment: The final SWMP will be posted on the MDOT Stormwater Website after receipt of the NPDES permit.	

ACTIVITY PUBLIC INVOLVEMENT 2: DEVELOPMENT OF OFFSET PROGRAM INCLUDING PARTNERING WITH OTHER STATE AGENCIES, DRAIN COMMISSIONERS, AND MUNICIPALITES

MONITORING YEAR: 2020

Minimum Control Measure : Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting

OBJECTIVE

To expand outreach activities and gain partners to better the management of stormwater by adopting existing stormwater management practices in the state of Michigan and for off-site mitigation for redevelopment projects that cannot meet 100 percent of the performance standards.

DESCRIPTION

MDOT will encourage the partnership with other state agencies, drain commissioners and municipalities, as appropriate, in order to better the management of stormwater and maintain the vitality of Michigan's surface waters.

ANNUAL REPORTING

- List of agencies that have agreed to a partnership, or may be interested in the future.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Develop list of organizations to reach out to by November 2021.	List included in Annual Report.
Annual Assessment: In 2019, MDOT began the process by working with multiple groups including SEMCOG, CRA, and EGLE and continued in 2020. There has been no list developed to date.	
Develop process for establishing partnerships. SEMCOG partnership to be used as a pilot program.	Standard procedure developed & distributed to appropriate persons by Stormwater Program Manager.
Annual Assessment: There was no focus on establishing a pilot program for partnership development in 2020.	

ACTIVITY PUBLIC INVOLVEMENT 3: IDENTIFY AND COORDINATE WITH MPOs HAVING A SWMP

MONITORING YEAR: 2020

Minimum Control Measure : Education/ Outreach **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 3: Procedure to Select and Apply BMPs • POST CONSTRUCTION 6: Periodically Update Drainage Manual

OBJECTIVE

To identify and coordinate, statewide, with MPOs having stormwater quality control programs to properly handle stormwater management issues during construction and maintenance activities.

DESCRIPTION

Further improve the management of stormwater by collaborating with MPOs during early coordination efforts of MDOT projects. The purpose of these efforts will be to inform and comply with local planning efforts and watershed goals.

ANNUAL REPORTING

- Track the major action environmental documents (environmental assessments and environmental impact statements) distributed to watershed groups for their comments.
- Track responses from watersheds and environmental groups concerning areas of concern.
- Track any early coordination meetings held with watershed and environmental groups including whether groups attend a public meeting or comment on one of the major action documents.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Consider watershed and environmental group input during early coordination of MDOT transportation projects.	In projects identified as impacting 303(d) listed water bodies or other important surface water features, MDOT will coordinate with local watershed and environmental groups.

Annual Assessment: No watershed groups requested information in 2020. No correspondence was received from environmental groups regarding stormwater in 2020.

Appendix C – Illicit Discharge Elimination Plan Activities

ACTIVITY IDEP 1: MAINTAIN LIST OF CONSTRUCTION PROJECTS AND MAINTENANCE ACTIVITIES

MONITORING YEAR: 2020

Minimum Control Measure : Illicit Discharge Elimination Program Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • IDEP 2: Update Maps for Outfalls in Urban Area • CONSTRUCTION 1: Review QAQC Protocol for Construction Stormwater Runoff Control

OBJECTIVE

To inform interested persons of construction projects and maintenance activities which will include work on the drainage system.

DESCRIPTION

List of construction projects and maintenance activities available to the public through the MDOT website and documented in the Stormwater Annual Report.

ANNUAL REPORTING

- A list of these projects and activities will be made available on the MDOT website.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Develop a list of construction projects and maintenance activities which include work on the drainage system at the end of the fiscal year.	List to be given quarterly from TSC and Region Managers to the Stormwater Program Manager

Annual Assessment: The MDOT public website contains 3 links that list construction projects in the state. The links cover MDOT's major road projects, the current construction projects, and future projects covered under MDOT's 5-year plan. The current construction projects are also available using the Mi Drive application. The following information is also available on the following pages:

- Maintenance activities completed in 2020, in summary:
  - A total of 12 litter pick up events plus 53 miles of litter pickup in Metro region and 494 miles in North region.
  - Five (5) BMPs repaired/ maintained.
  - A total of 13,105.66 miles of streets were swept.
  - A total of 32,647.00catch basins were cleaned out.
  - A total of 35 catch basins were reported as being repaired.
  - A total of 63.8 miles of ditches were reported as being cleaned out.
  - A total of 107 washouts were reported as being repaired.
- A summary of salt and sand usage for winter maintenance activities.

Table 1. Litter Pick-Up Programs

Region	Litter Pick-Up Programs
Bay	• 2 pick-up events
Grand	• 3 pick-up events • The county road commissions crews pick up litter at least once a month.
Metro	• 53 miles of highway roadside litter was cleaned through the Adopt -A-Highway program.
North	• 494 miles of clean up via Adopt-A-Highway.
Southwest	• The Southwest Region held 3 Adopt-A-Highway periods in 2019.
Superior	• 2 Adopt-A-Highway pick-up events.
University	• 2 Adopt-A-Highway pick-up events • 165 garage litter pickup events

Table 2. BMP Maintenance Activities

Region	BMP Maintenance Activities
Bay	Four (4) BMP culverts repaired.
Grand	None reported.
Metro	None reported.
North	None reported.
Southwest	One (1) Infiltration Basin
Superior	None reported.
University	None reported.

Table 3. Miscellaneous Maintenance Activities for 2020

Region	Street Sweeping (miles)	Catch Basin Cleanout (#)	Catch Basins Repaired (#)	Ditch Cleanout (miles)	Washout Repairs (#)	Culvert Cleanout (ft)	Drain Leads Cleaned (ft)
Bay	1,879.54	4,999	10	3	16	-	-
Grand	1,000.00	3,343	-	61	53	-	-
Metro	9,031.32	10,525	-	-	8	-	-
North	146.00**	3,492	-	-	0	-	-
Southwest	492.50	4,698	-	-	24	-	-
Superior	123.30	1,493	25	-	1	-	-
University	433.00	4,097	-	-	5	-	-

**Additionally, each bridge in the Gaylord TSC service area is swept once a year and each trunkline that passes through a city or village is swept twice per year.

STATEWIDE SUMMARY : FY 2020 County & Garage Winter Material Usage

May Report

Statwide Statistics YTD

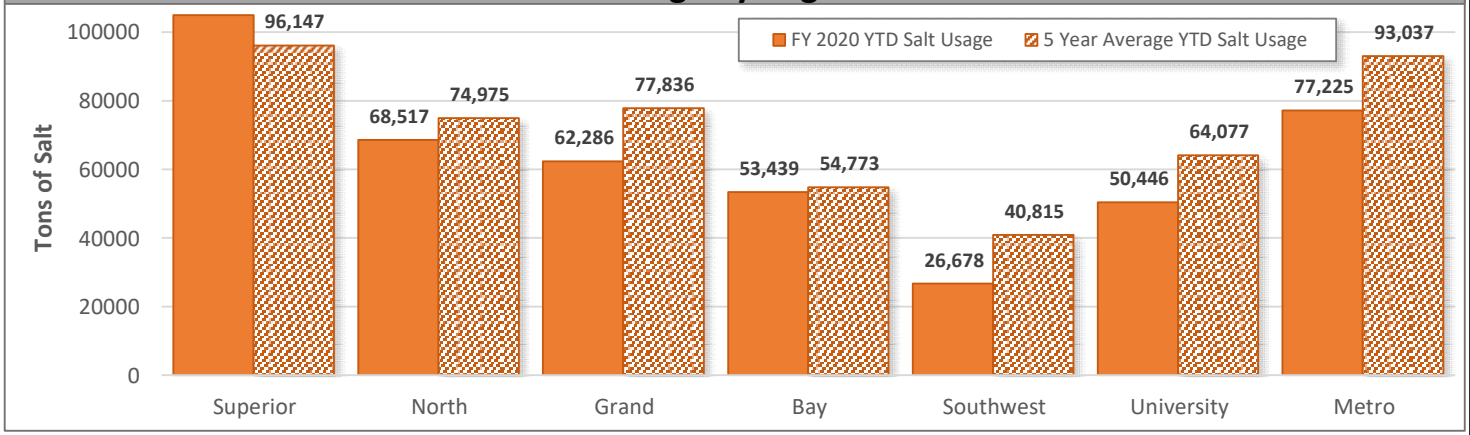
Statewide Total Lane Miles
30122.8

Salt Usage per Lane Mile
14.7

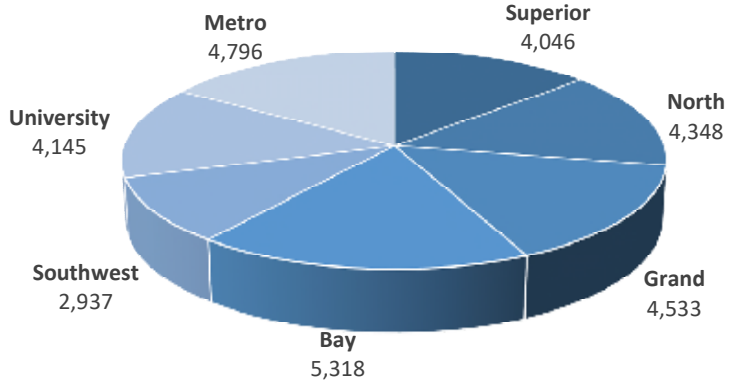
Liquid Usage per Lane Mile
58.6

Sand Usage per Lane Mile
2.1

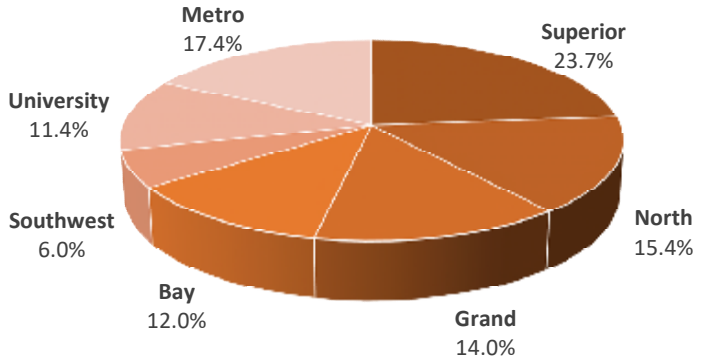
YTD Salt Usage by Region FY 2020



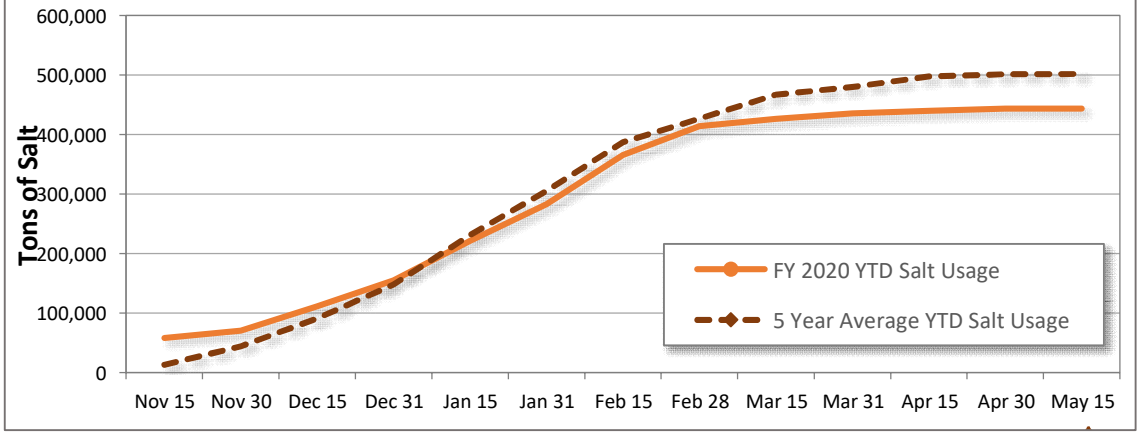
Regions Lane Miles FY 2020



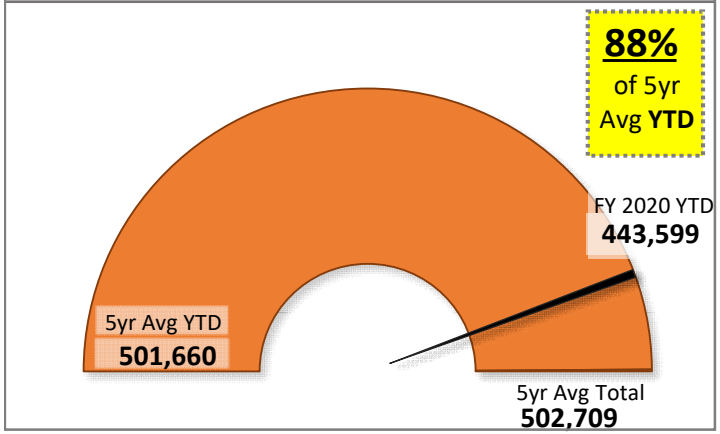
YTD Salt Usage by Region FY 2020



Cumulative Salt Usage FY 2020 YTD



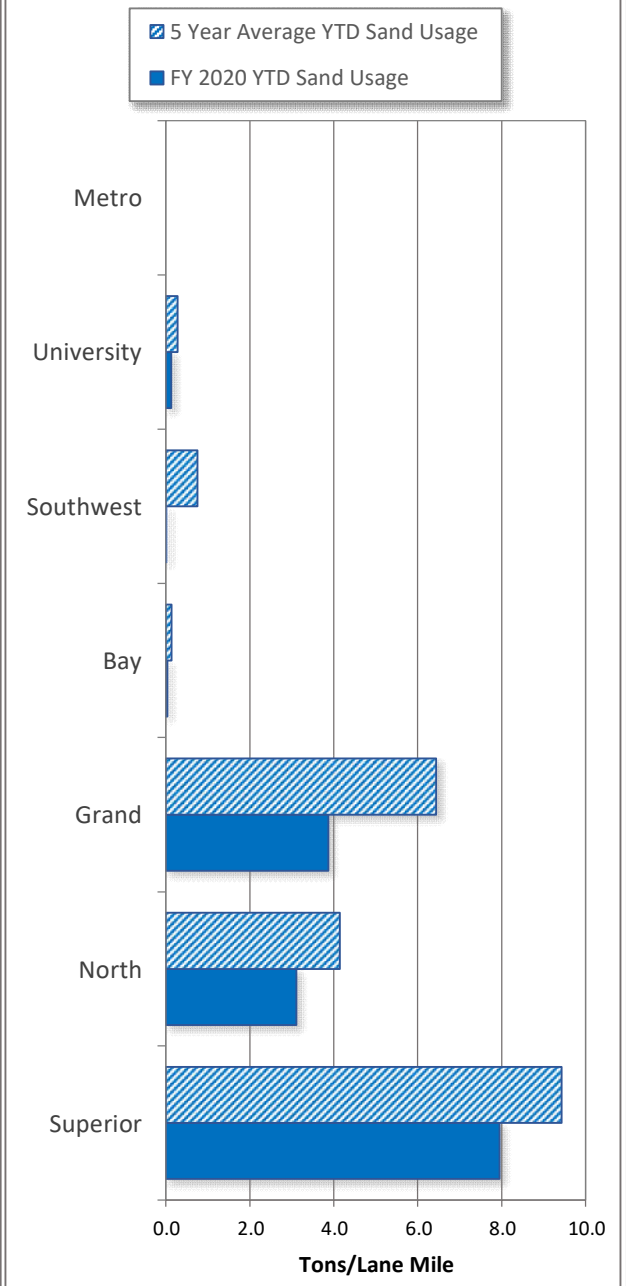
Statewide YTD Salt Usage FY 2020 (in tons)



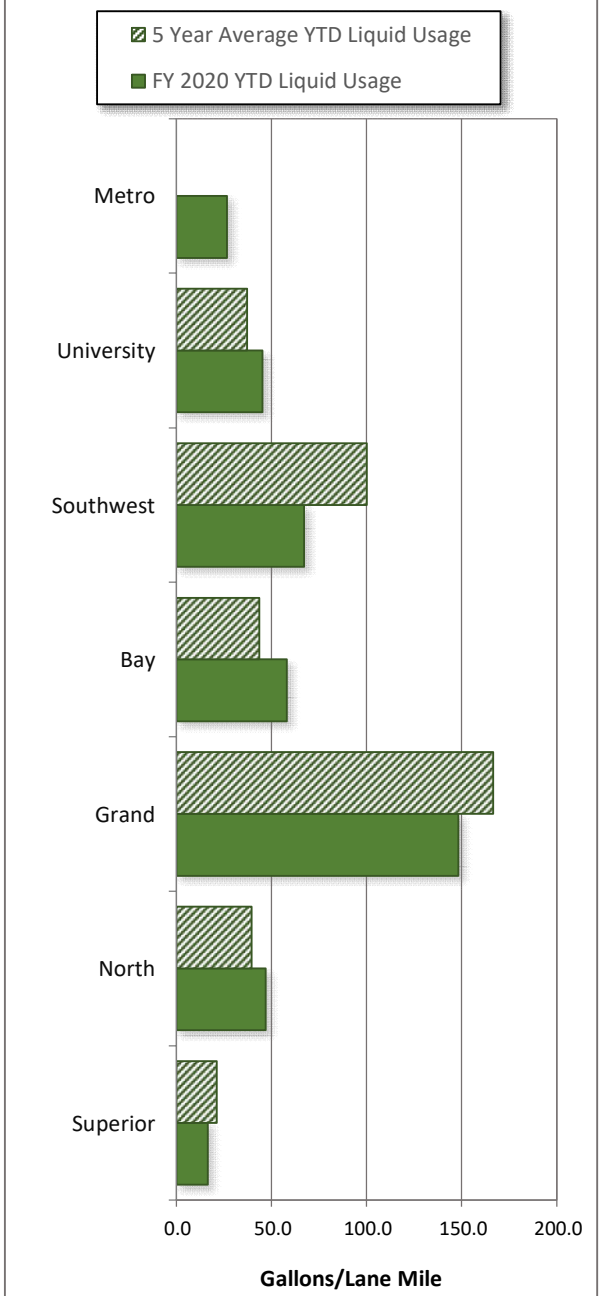
STATEWIDE SUMMARY : FY 2020 County & Garage Winter Material Usage

Salt Usage FY 2020 YTD per lane mile

Sand Usage FY 2020 YTD per lane mile

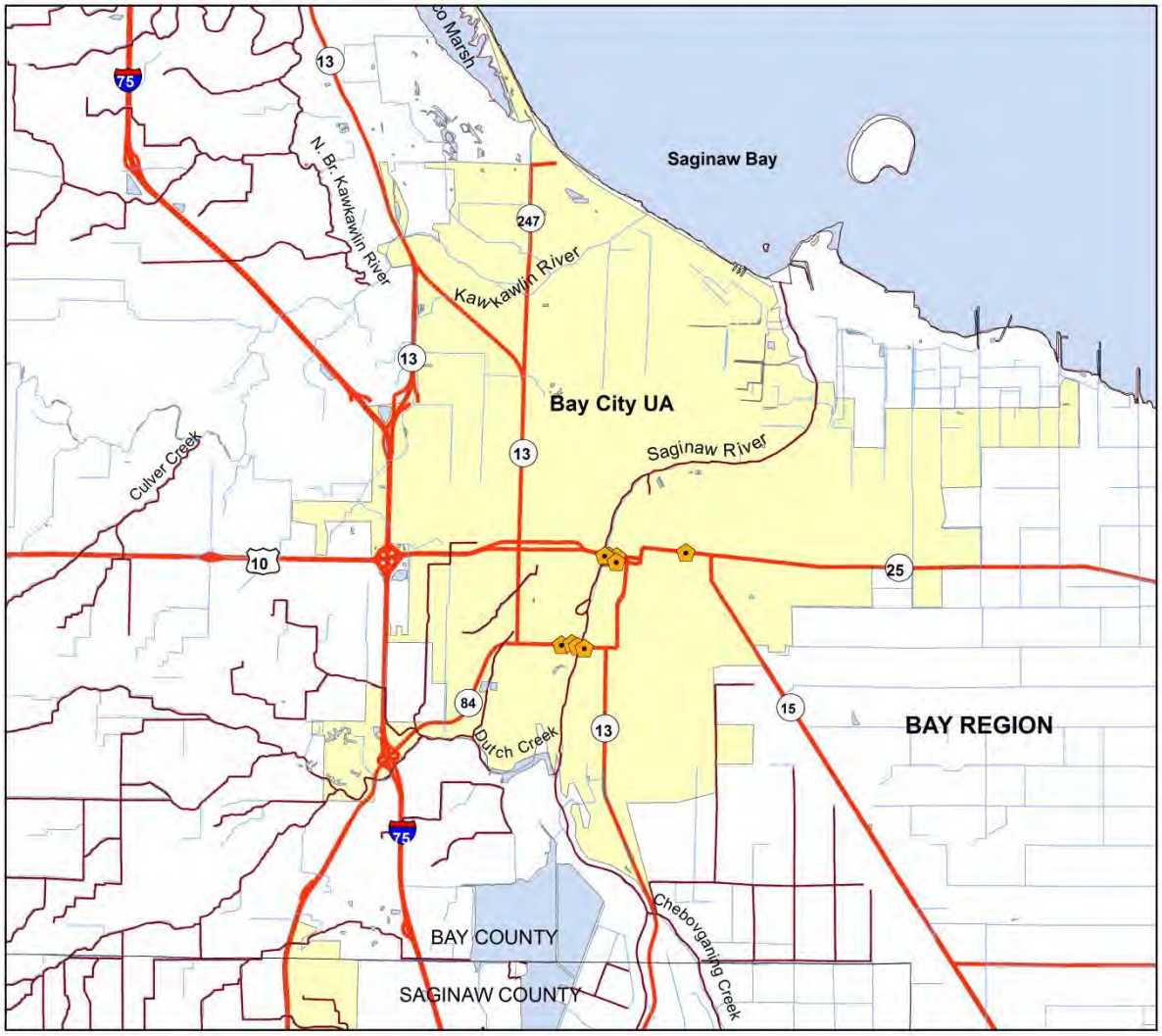


Liquid Usage FY 2020 YTD per lane



ACTIVITY IDEP 2: DEVELOP MAPPING SCHEDULE AND UPDATE MAPS FOR OUTFALLS IN URBAN AREAS **MONITORING YEAR: 2020**	
Minimum Control Measure : Illicit Discharge Elimination Program Activities **Statewide or Urbanized Area:** Urbanized Area **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • IDEP 1: Maintain List of Active Construction Projects and Major Maintenance Activities
OBJECTIVE	
To develop current outfall maps and schedule for updating in the future.	
DESCRIPTION	
To develop an annual mapping schedule and complete mapping of outfalls in MDOT right-of-way in urbanized areas including MDOT roads crossing 303(d)-listed water bodies and other non-impaired water bodies. Known outfalls will be mapped based on existing survey maps.	
ANNUAL REPORTING	
• Track completed maps and updated outfalls • Report physical location where up-to-date storm sewer system maps are available	
MEASURABLE GOALS	
MEASURABLE GOAL	**MEASURE OF ASSESSMENT**
Map outfalls in MDOT right-of-way in urbanized areas.	To be reported annually to the Stormwater Program Manager
Annual Assessment: Maps of outfalls at stream crossings over or within 300 feet of impaired waters of the state within urbanized areas based are on field inspection of top priority outfalls. Maps of outfalls at stream crossings over waters of the state within urbanized areas that are not field screened are based on a GIS analysis. Detailed storm sewer maps are also available at each MDOT Region office.	
Update known outfall maps annually and include in the annual progress report.	Maps given to the Stormwater Program Manager by the consultant annually.
Annual Assessment: Maps created in 2016 are available on the following pages and will be updated throughout the permit cycle as more outfalls are identified.	
MDOT to provide permanent identification for all outfall structures.	ID will be documented and tracked by MDOT Stormwater Program Manager
Annual Assessment: MDOT utilizes a special provision that requires all new or reconstructed outfalls under MDOT ownership to be labelled as such. In 2020, X projects utilized this special provision.	

Bay City Urbanized Area



Legend

- County Lines
- Impaired Waterbodies
- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area
- IDEP Field Investigation Locations

-Michigan county line data was obtained from the Michigan Center for Geographic Data Library
-MDOT road data was obtained from the Michigan Center for Geographic Framework Data Library
-Urbanized Area status is based on 2010 census data.
-Impaired waterbodies data was obtained from the USEPA National Geospatial Dataset
-Michigan waterbody data was obtained through the Michigan Center for Geographic Framework Data Library

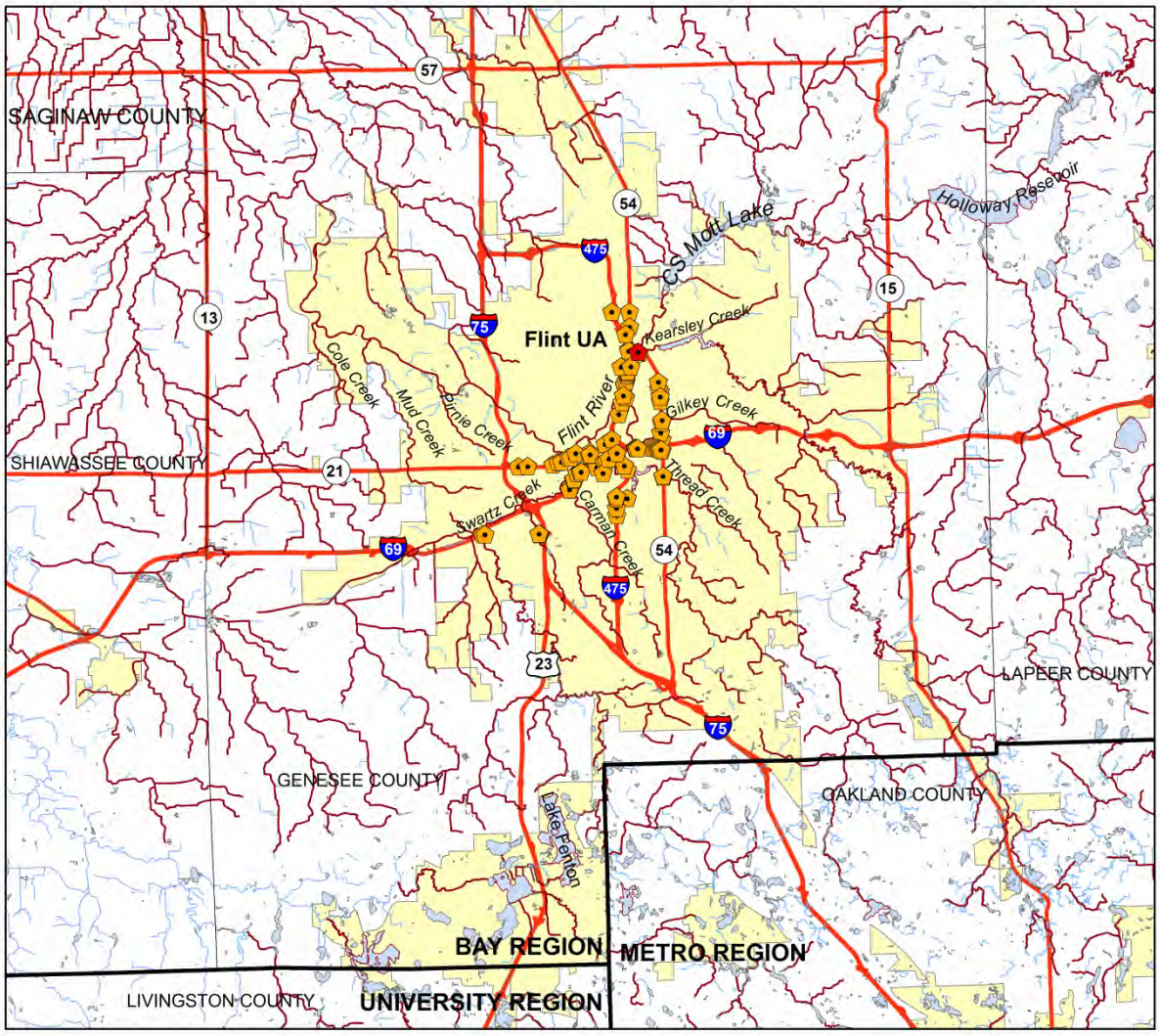
N

0 0.75 1.5 3 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Flint Urbanized Area



Legend

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- Urbanized Area
- IDEP Field Investigation Locations
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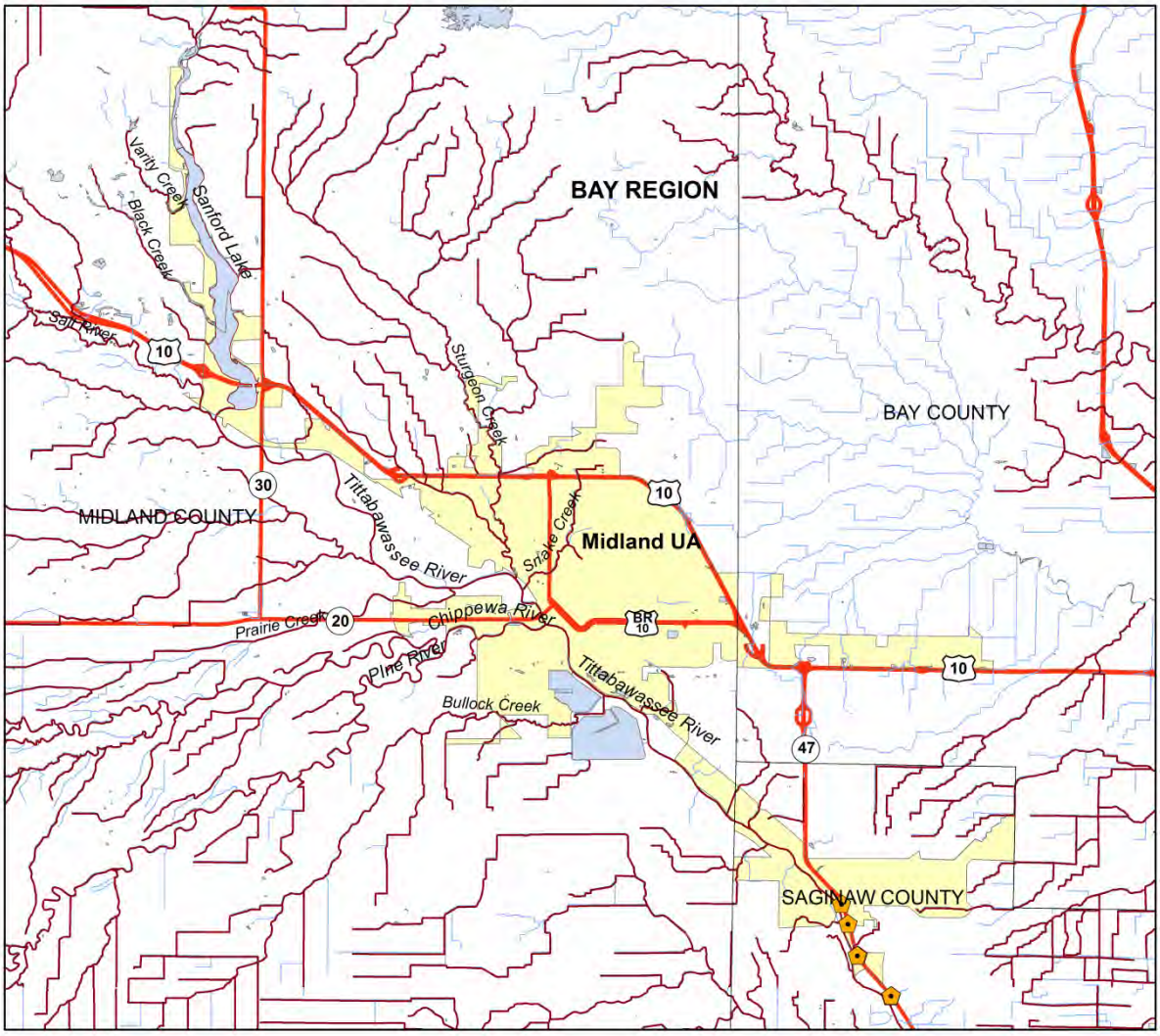
N

0 1.5 3 6 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Midland Urbanized Area



Legend

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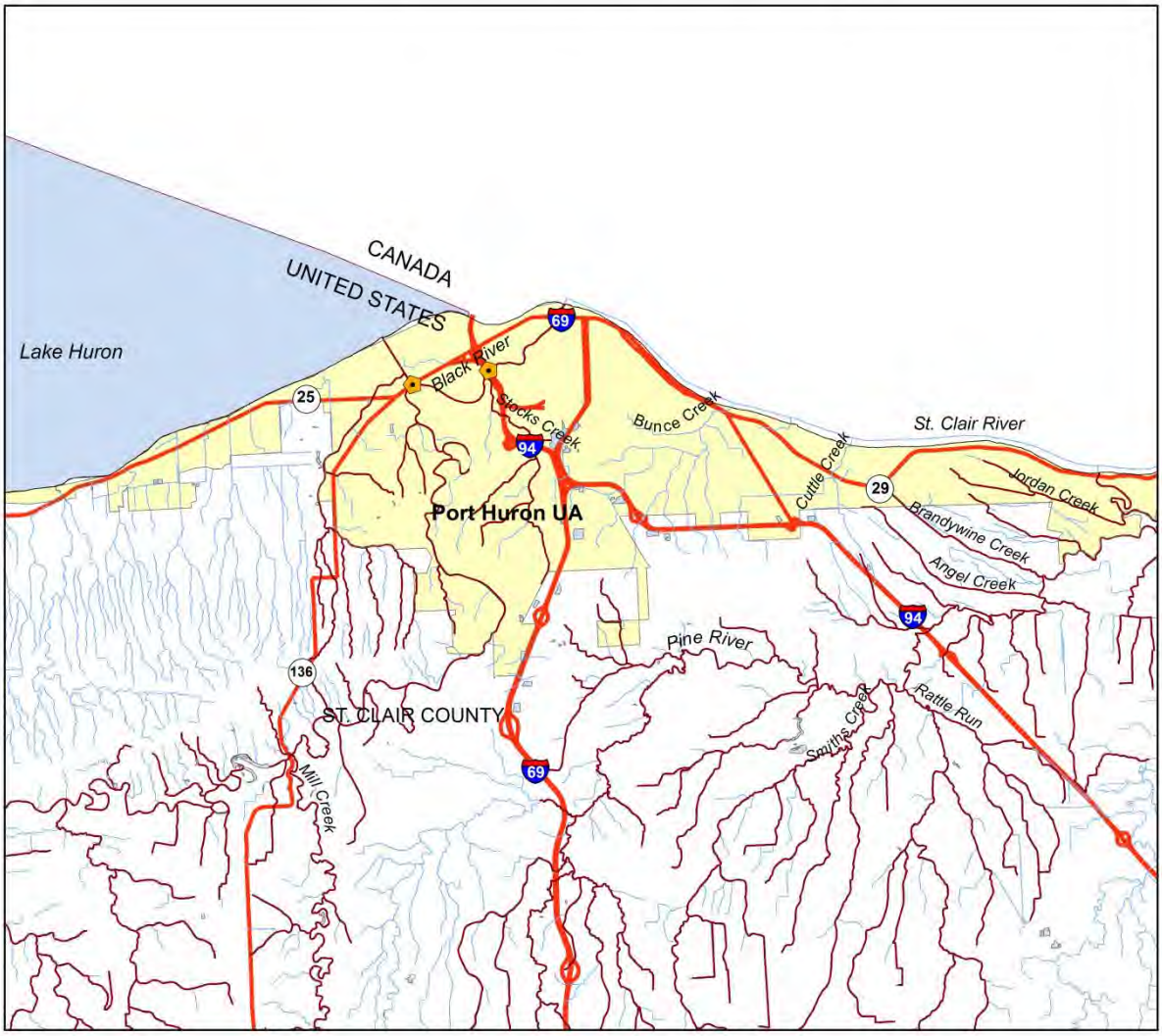
N

0 1.25 2.5 5 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Port Huron Urbanized Area



Legend

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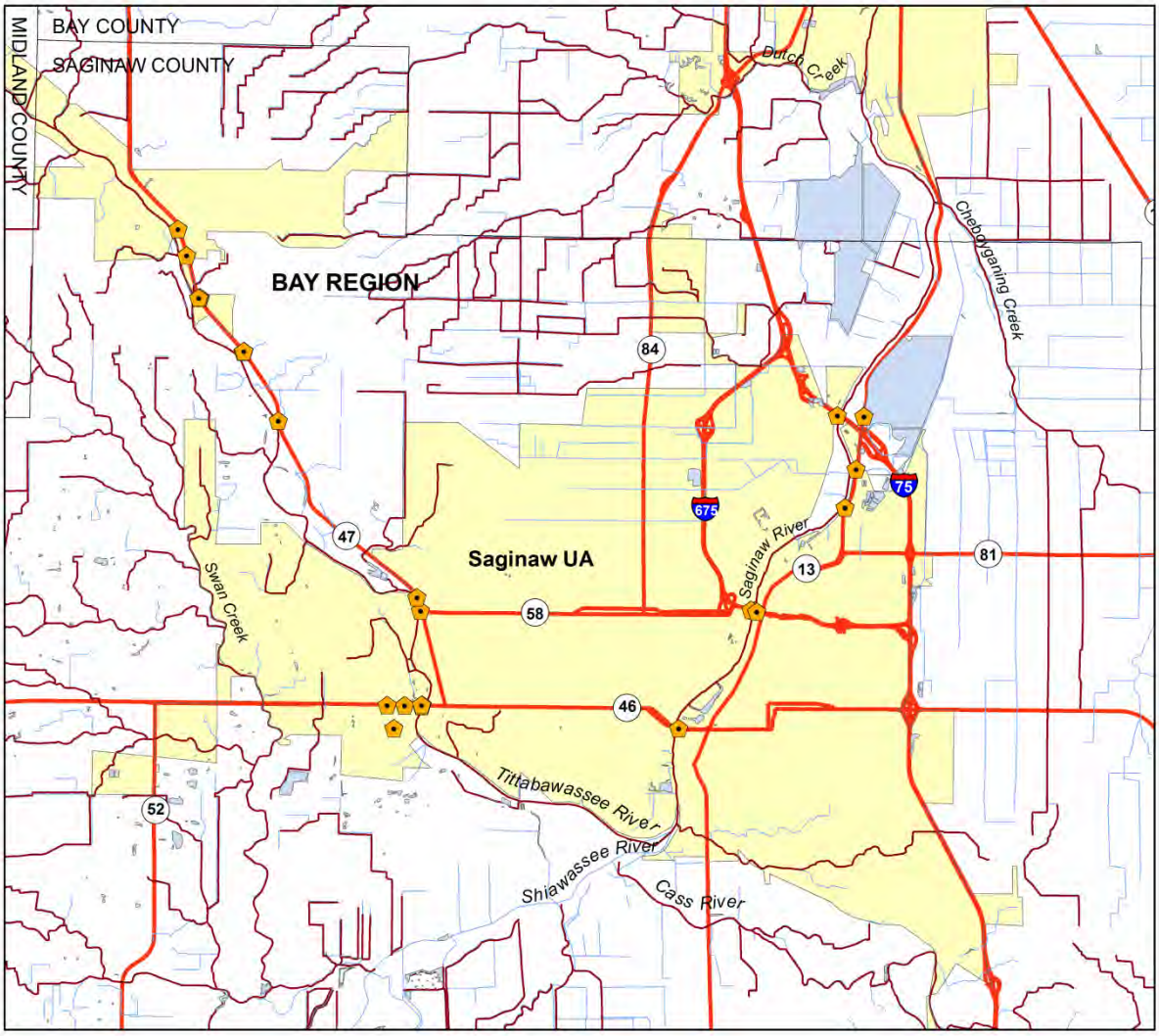
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Saginaw Urbanized Area



Legend

- County Lines
- Impaired Streams
- Streams and Rivers
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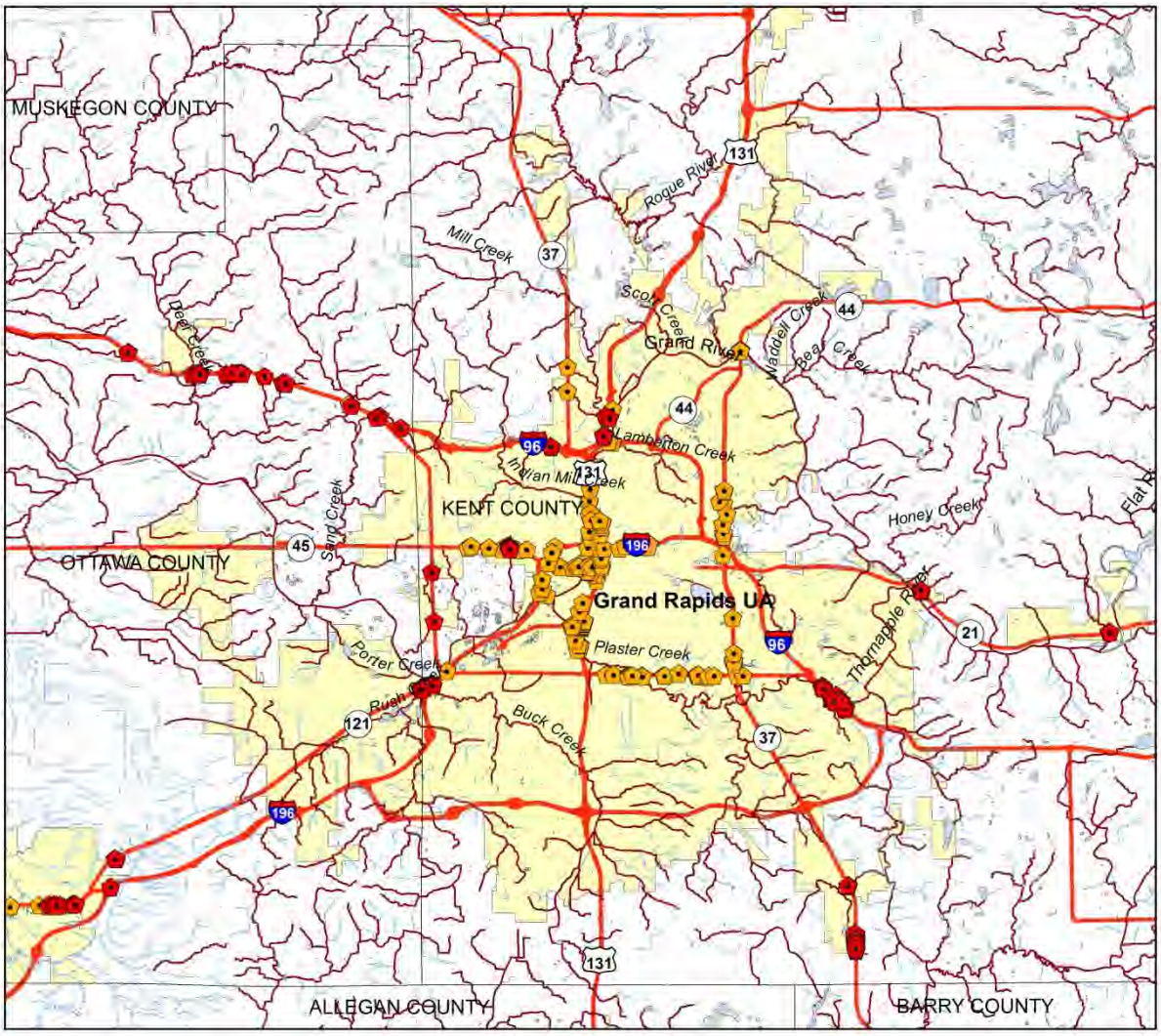
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Grand Rapids Urbanized Area



Legend

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- Lakes
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- Urbanized Area
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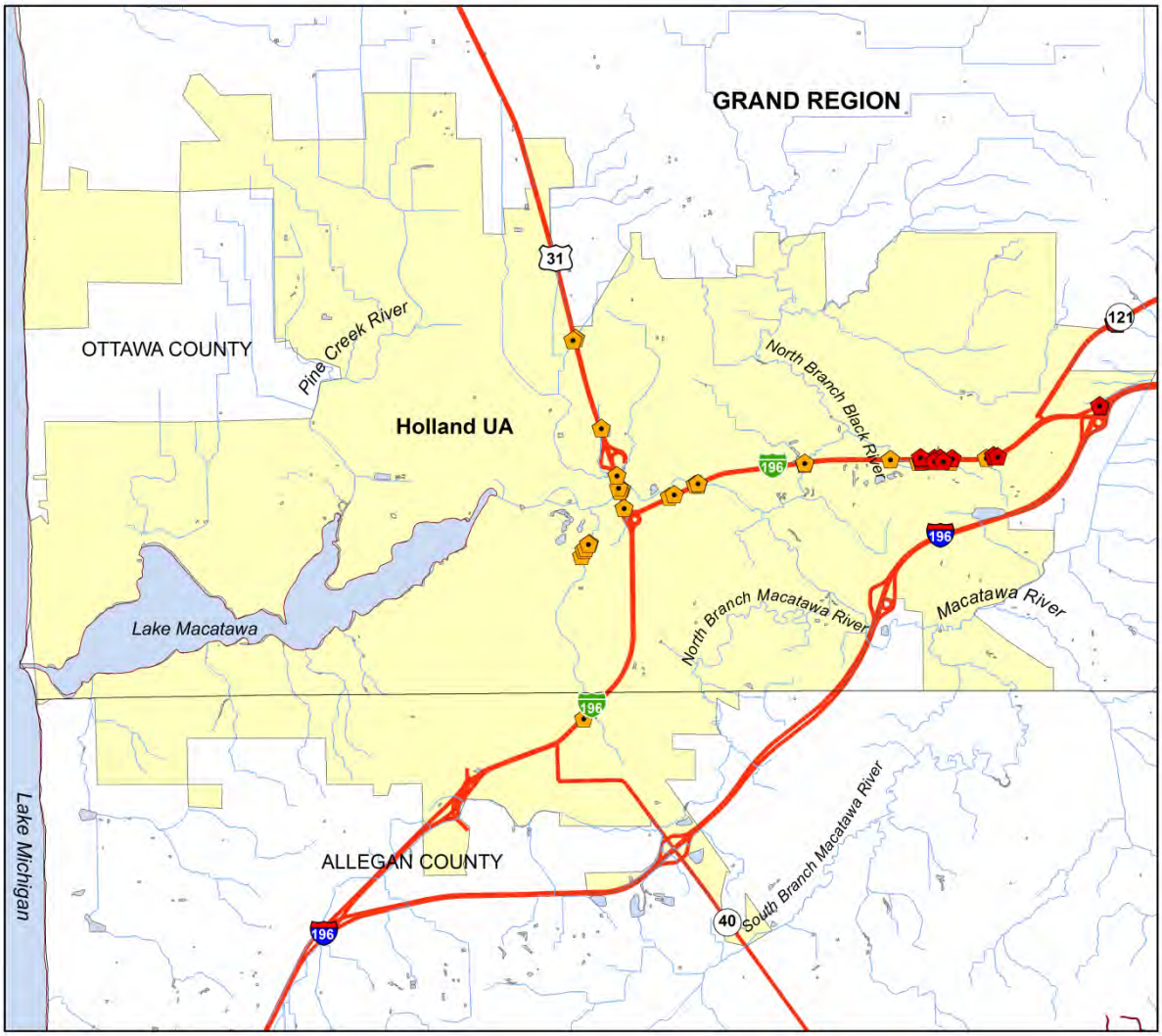
N

0 2 4 8 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Holland Urbanized Area



Legend

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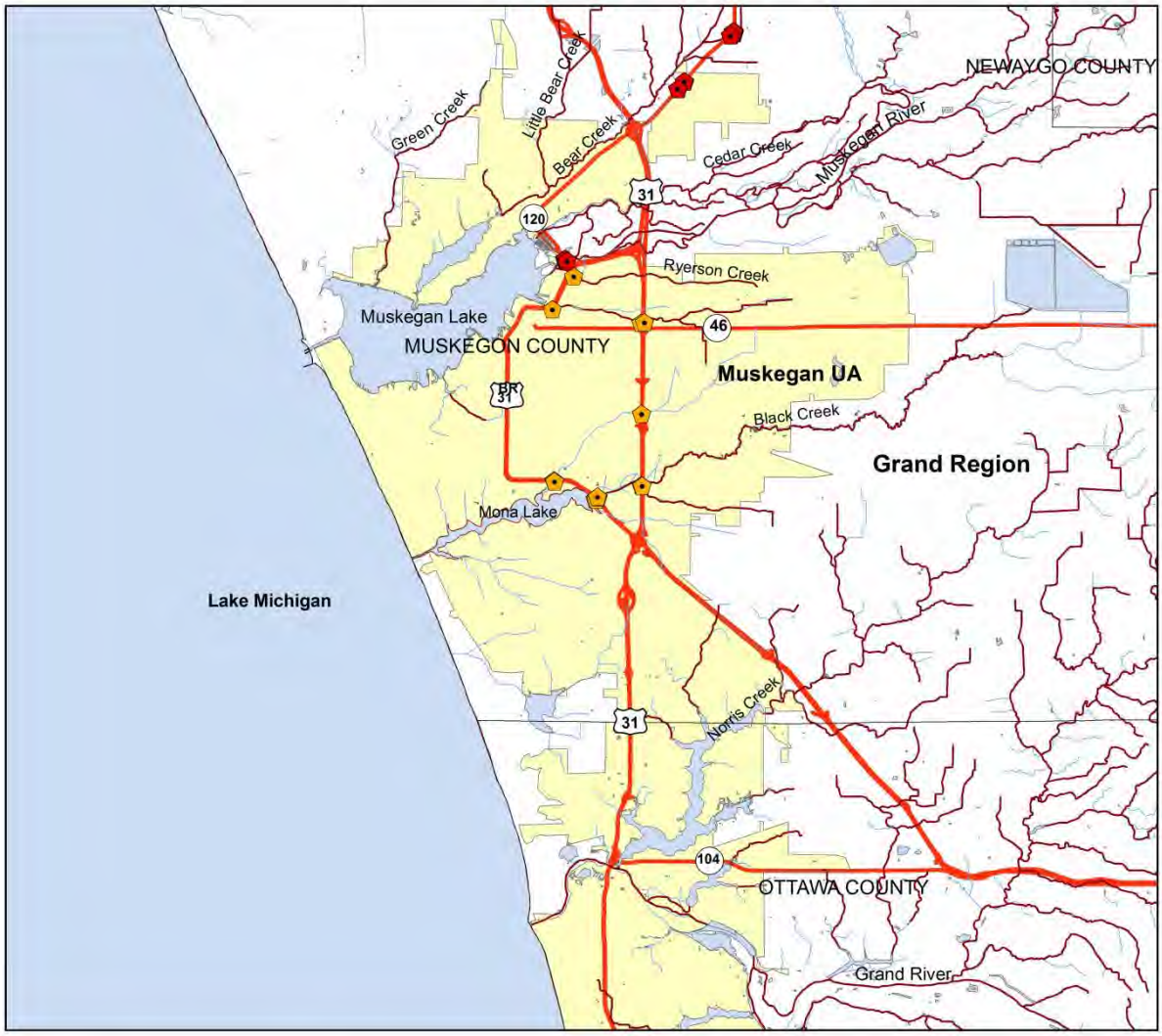
N

0 0.5 1 2 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Muskegon Urbanized Area



Legend

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- MDOT Roads
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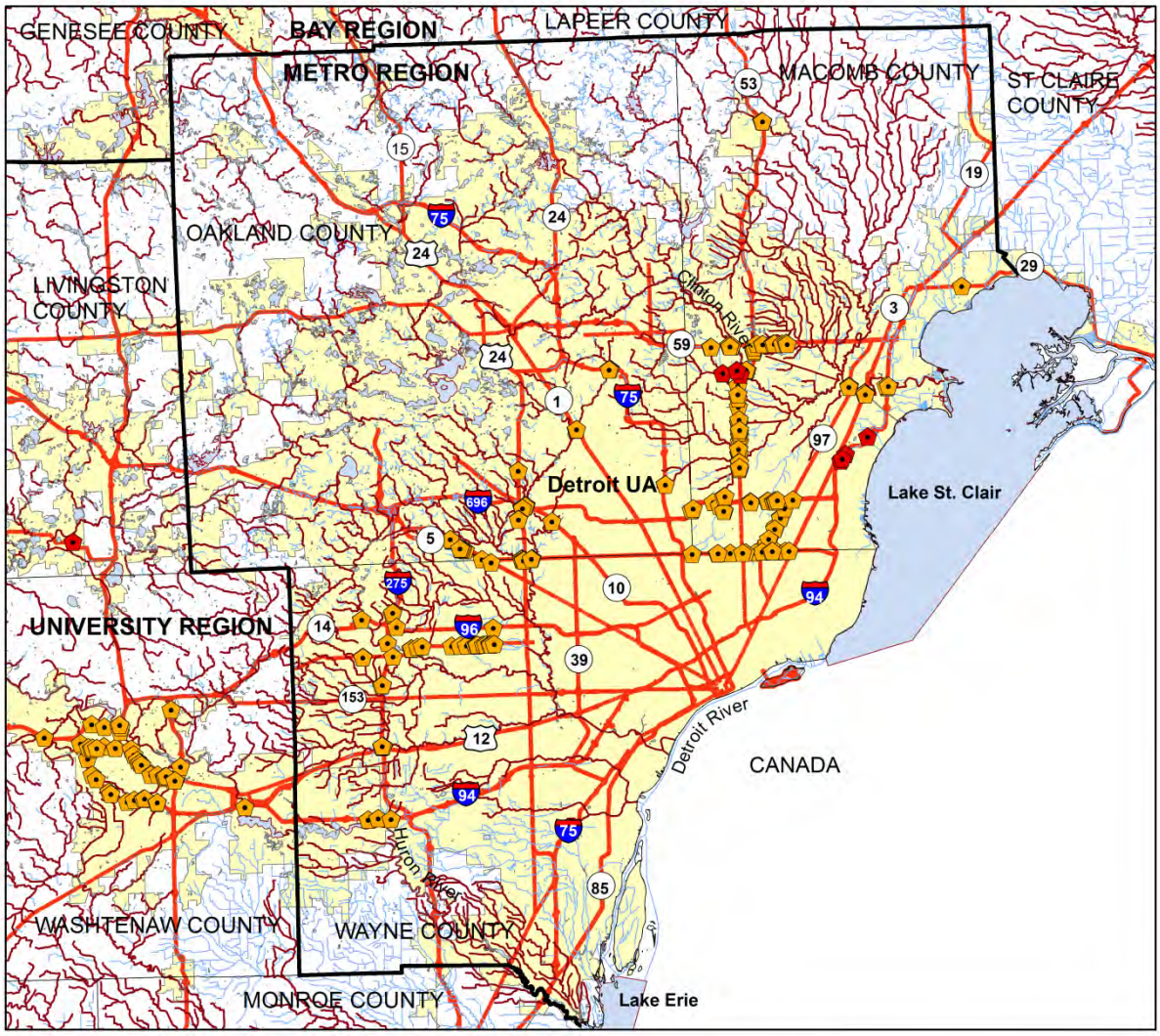
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Detroit Urbanized Area



Legend

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N

0 3.5 7 14 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Appendix M

North Region

This Appendix includes reference figures for the North Region. All activities referenced in **Appendix B** except for those to be implemented in only urbanized areas will be implemented in the North Region.

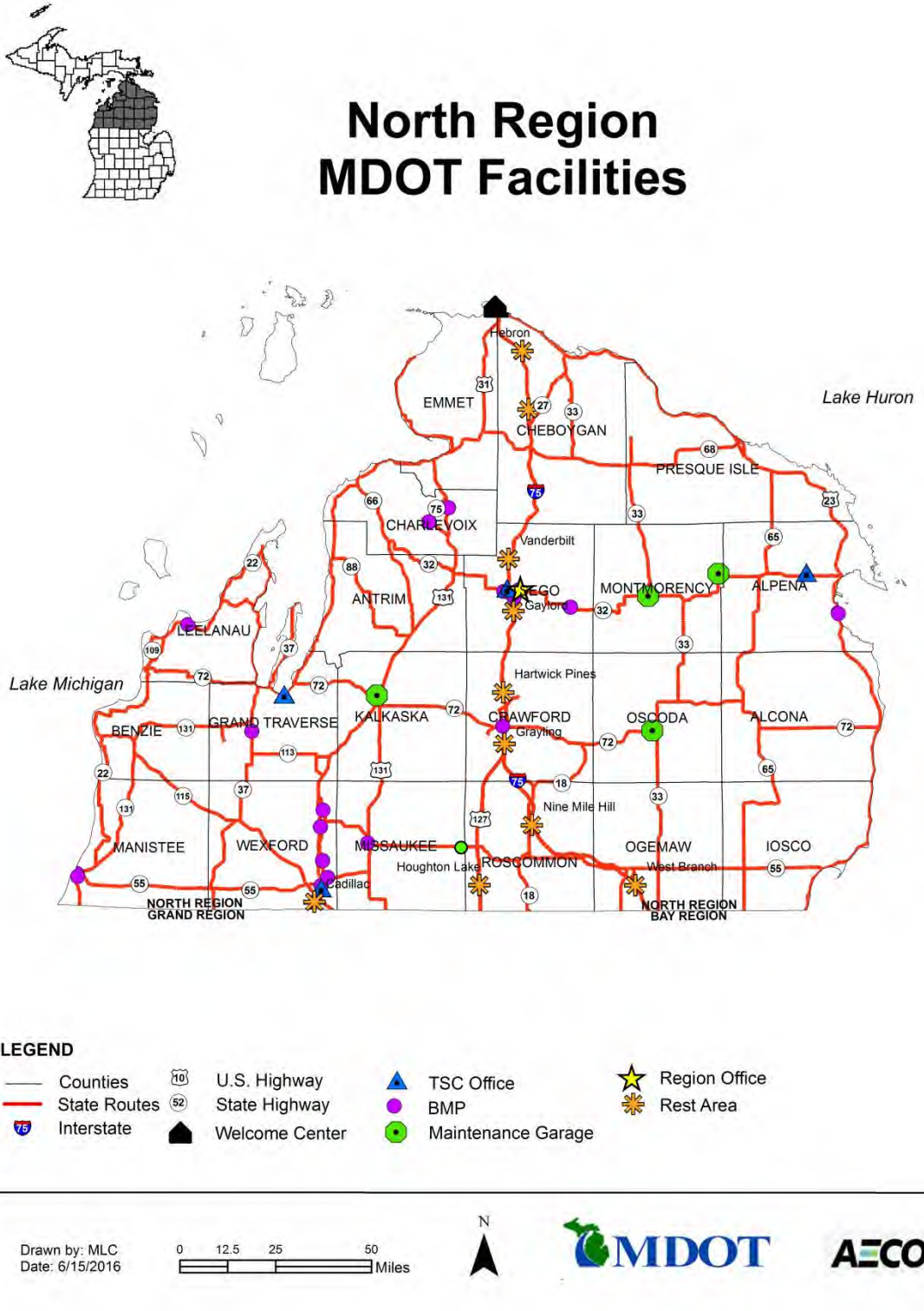
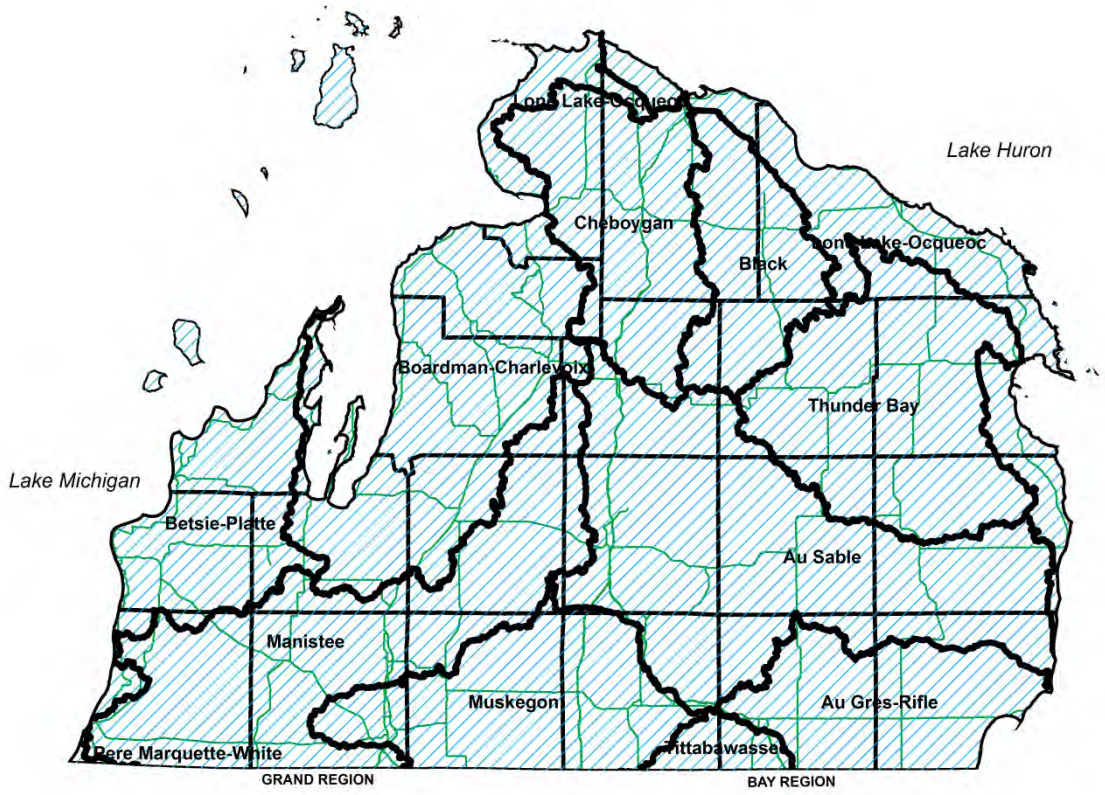


Figure M- 1 North Region MDOT Facilities

North Region Watersheds



LEGEND

Counties
State Highway
Watershed

Drawn by: MLC
Date: 6/15/2016

0 12.5 25 50 Miles

N

MDOT AECOM

Figure M- 2 North Region Watersheds designated by 8 Digit Hydrologic Unit Code (HUC)

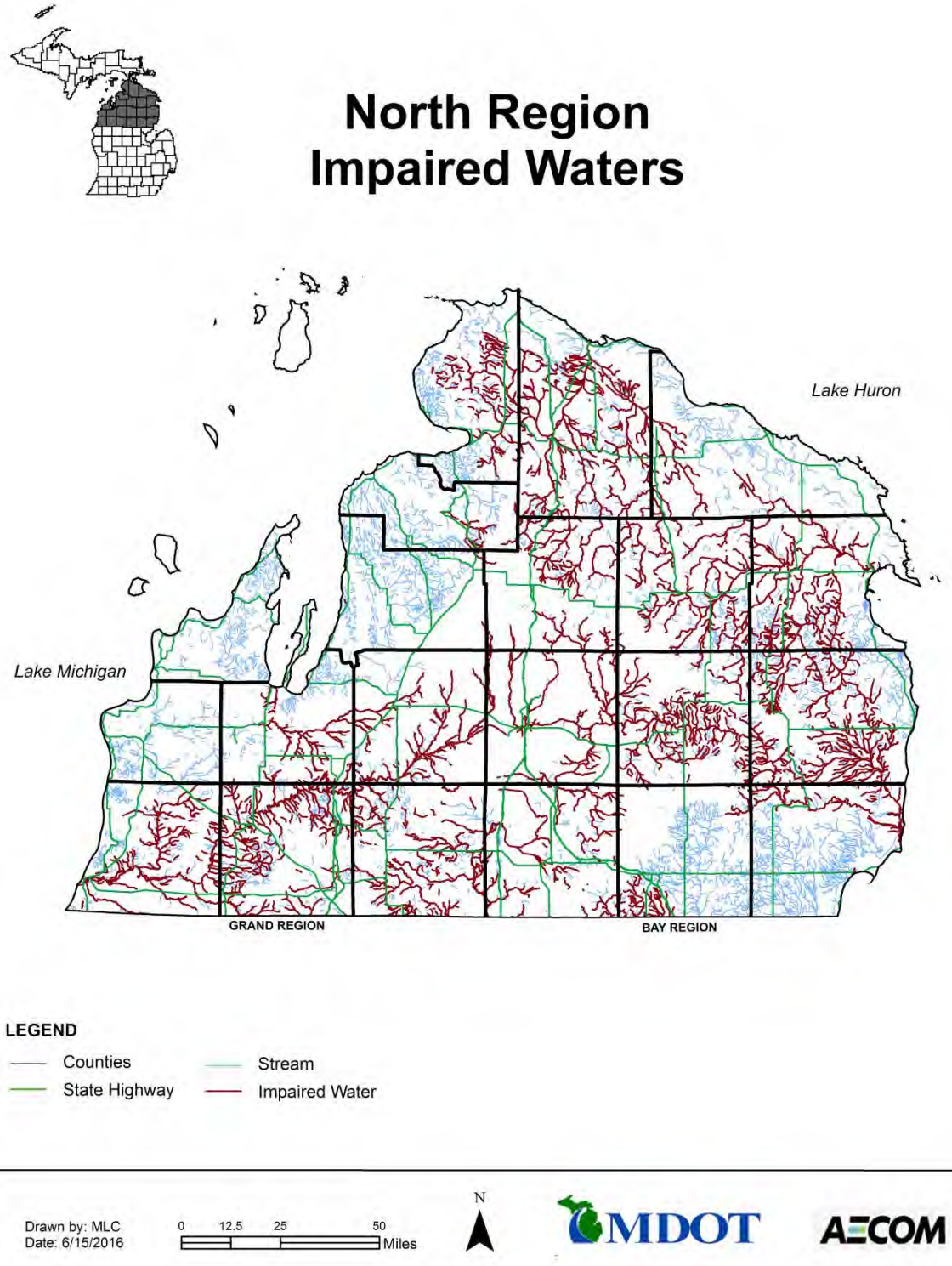


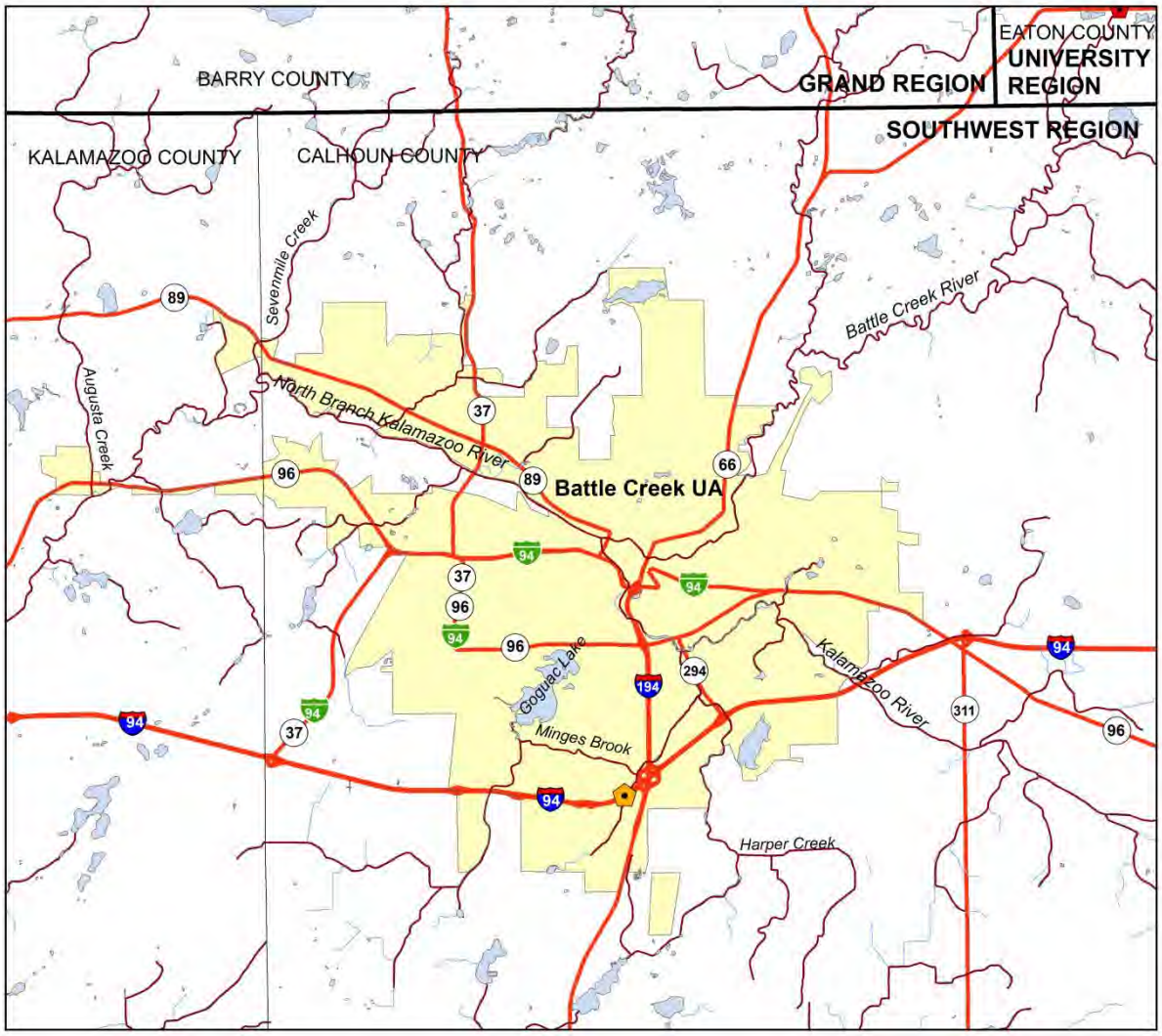
Figure M- 3 North Region Impaired Waters

Table M- 1 North Region Contact Information

North Region Office Region Engineer: Scott Thayer Region Stormwater Coordinator: Gary Niemi	1088 M-32 East, Gaylord, MI 49735 Phone: 989-731-5090 Fax: 989-731-0536
Alpena TSC Manager: Doug Wilson 1540 Airport Rd. Alpena, MI 49707 *Serves: Alcona, Alpena, Iosco, Montmorency, Oscoda, and Presque Isle counties*	Phone: 989-356-2231 Fax: 989-354-4142
Gaylord TSC Manager: Jason Gailitis 1088 M-32 East Gaylord, MI 49735 *Serves: Cheboygan, Crawford, Emmet, Ogemaw, Otsego, Roscommon counties*	Phone: 989-731-5090 Fax: 989-732-3637
Traverse City TSC Manager: Richard E. Liptak 2084 US-31 South, Suite B Traverse City, MI 49685 *Serves: Antrim, Benzie, Charlevoix, Grand Traverse, Kalkaska, and Leelanau counties*	Phone: 231-941-1986 Fax: 231-941-1512
Stormwater relation concerns at rest areas should be directed to the region Stormwater Coordinator, Gary Niemi	Phone: (231) 941-1986
Cadillac Rest Area 306 131 NB, Mile Marker 174	Wexford County
Gaylord Rest Area 405 I-75 NB, Mile Marker 277	Otsego County
Grayling Rest Area 403 I-75 NB, Mile Marker 252	Crawford County
Hartwick Pines Rest Area 404 I-75 SB, Mile Marker 262	Crawford County

Hebron Rest Area 408 I-75 SB, Mile Marker 328	Cheboygan County
Higgins Lake Rest Area 402 US-127 SB	Roscommon County
Houghton Lake Rest Area 401 US-127 NB, Mile Marker 401	Roscommon County
Mackinaw City Welcome Center 409 1-75 NB and SB	Emmet County Both southbound and northbound just off I-75, exit number 338 on Nicolet Street.
Nine Mile Hill Rest Area 434 1-75 SB, Mile Marker 235	Roscommon County
Topinabee Rest Area 407 I-75 NB, Mile Marker 317	Cheboygan County
Vanderbilt Rest Area 406 I-75 SB, Mile Marker 287	Otsego County
West Branch Rest Area 433 I-75 NB, Mile Marker 210	Ogemaw County

Battle Creek Urbanized Area



Legend

- County Lines
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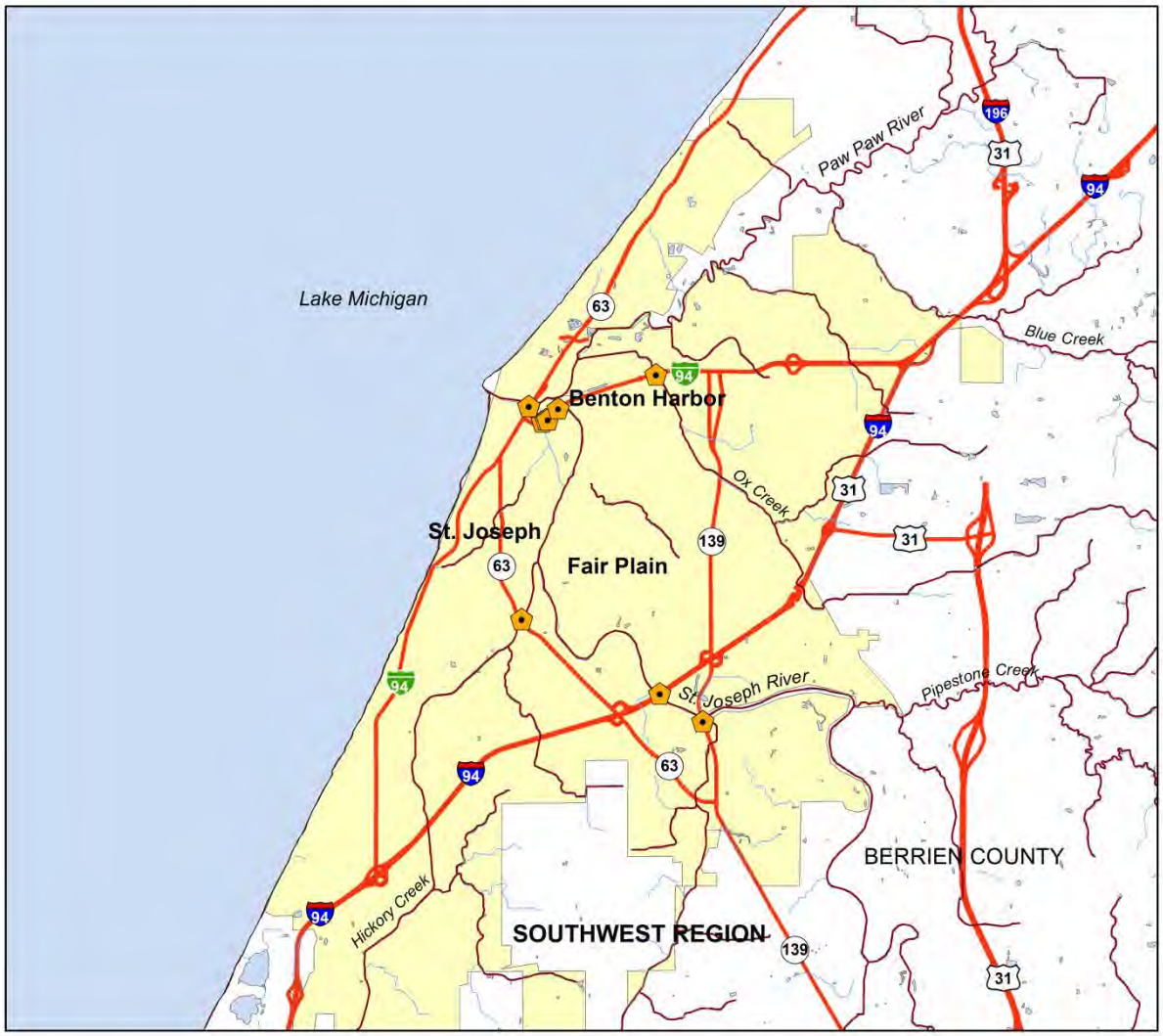
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Benton Harbor-St. Joseph Urbanized Area



Legend

- County Lines
- Impaired Waterbodies
- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area
- IDEP Field Investigation Locations

-Michigan county line data was obtained from the Michigan Center for Geographic Data Library
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-Impaired waterbodies data was obtained from the USEPA National Geospatial Dataset
-Michigan waterbody data was obtained through the Michigan Center for Geographic Framework Data Library

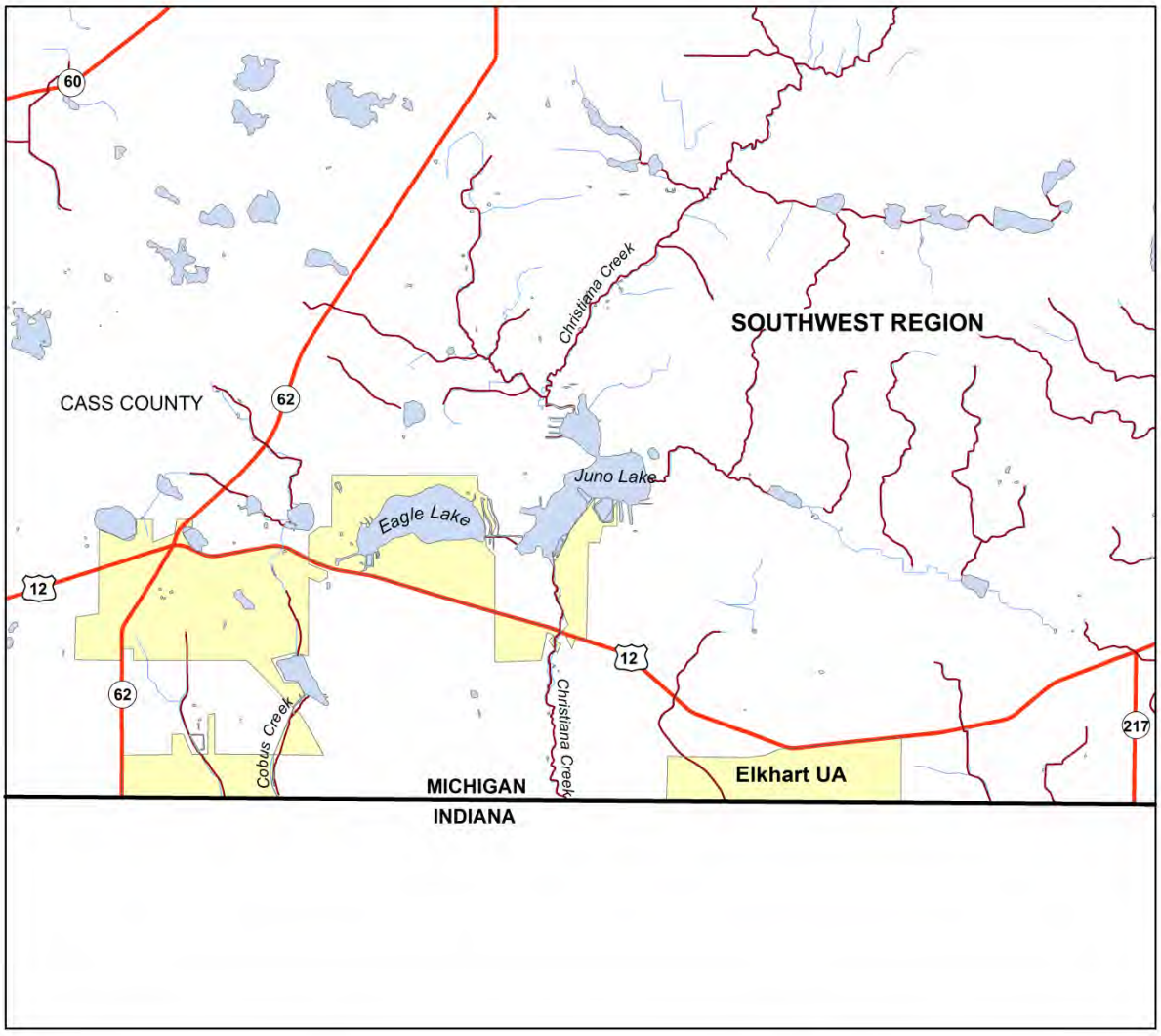
N

0 0.5 1 2 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Elkhart Urbanized Area



Legend

- County Lines
- Impaired Waterbodies
- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area

No IDEP Investigation

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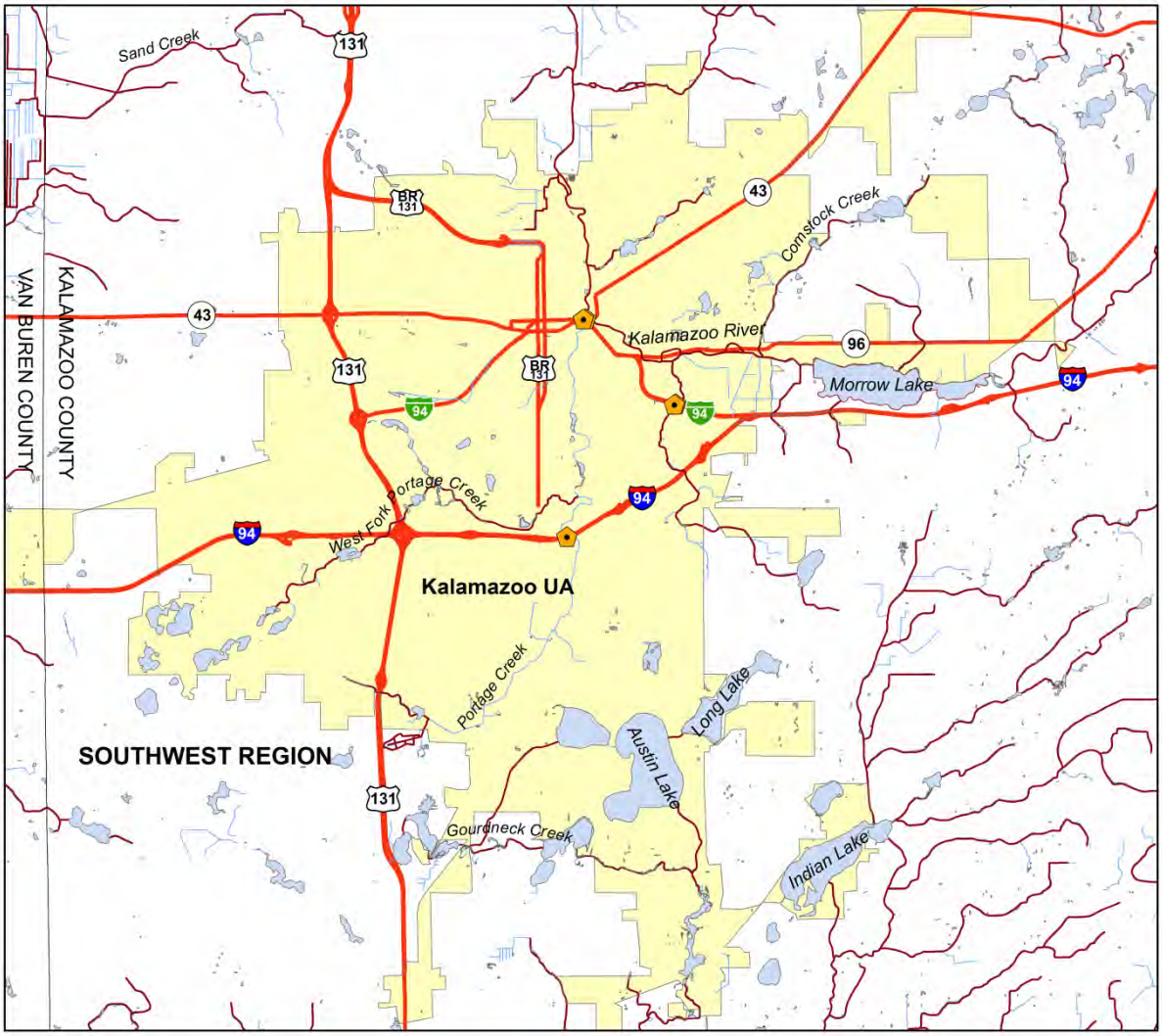
N

0 0.5 1 2 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Kalamazoo Urbanized Area



Legend

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- Lakes
- MDOT Roads
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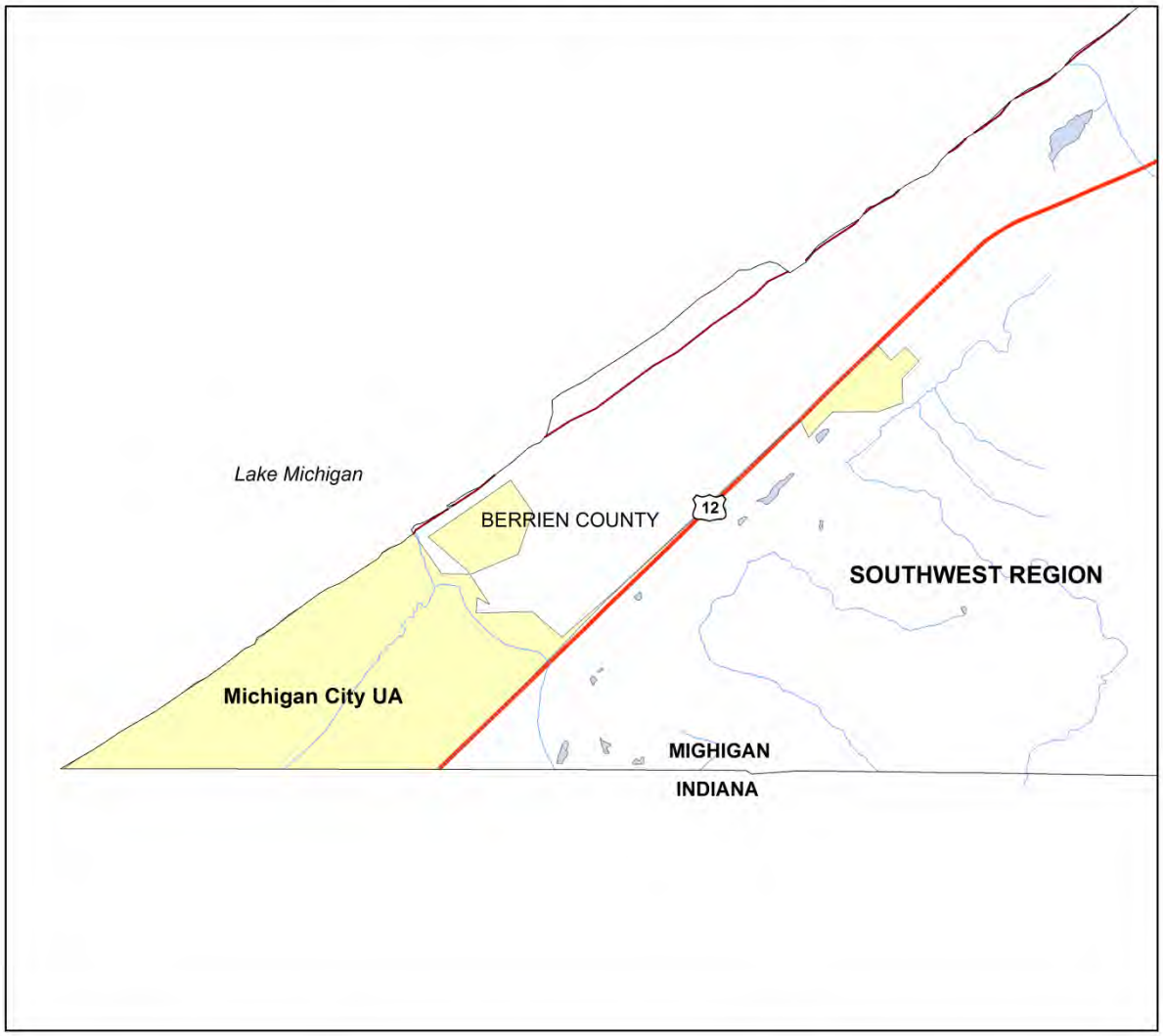
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Michigan City Urbanized Area



Legend

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- Impaired Waterbodies
- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area

No IDEP Investigation

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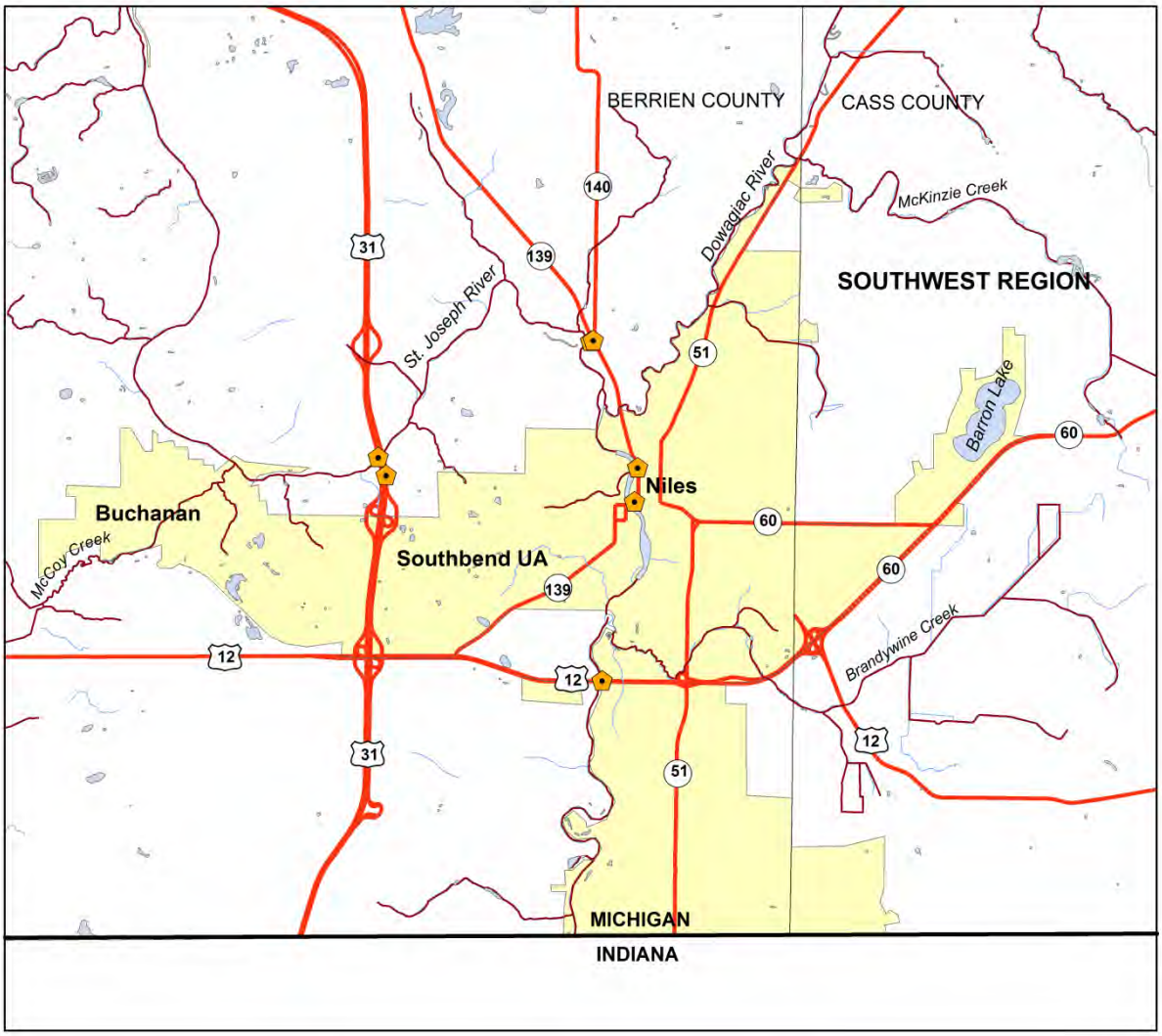
N

0 0.2 0.4 0.8 Miles

Designer: CSM
Date: 6/2/2016

AECOM

South Bend Urbanized Area



Legend

- County Lines
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- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area
- IDEP Field Investigation Locations

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-Michigan waterbody data was obtained through the Michigan Center for Geographic Framework Data Library

N

0 0.5 1 2 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Appendix O

Superior Region

This Appendix includes reference figures for the Superior Region. All activities referenced in **Appendix B** except for those to be implemented only in urbanized areas will be implemented in the Superior Region.

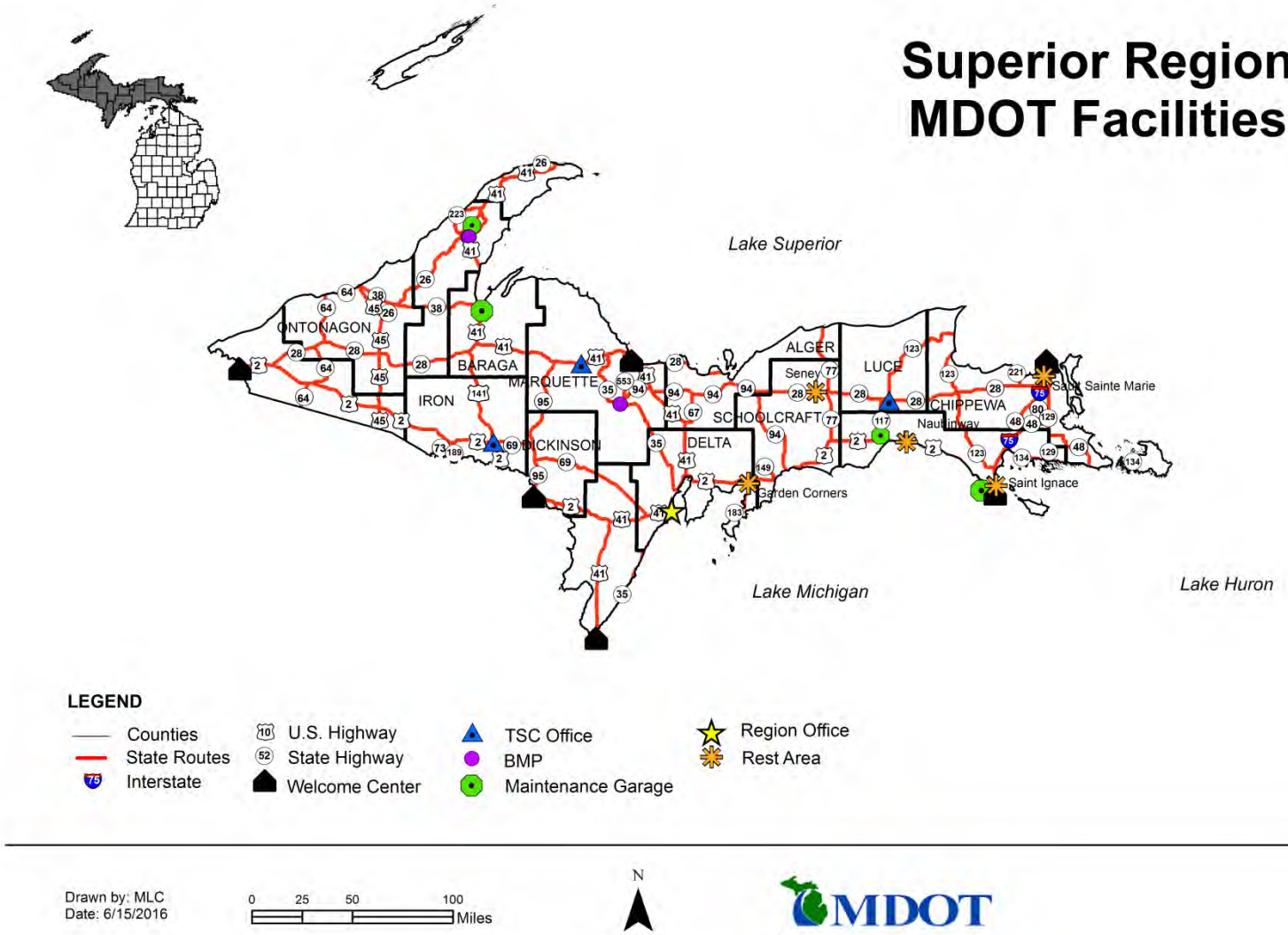


Figure O- 1 Superior Region Facilities

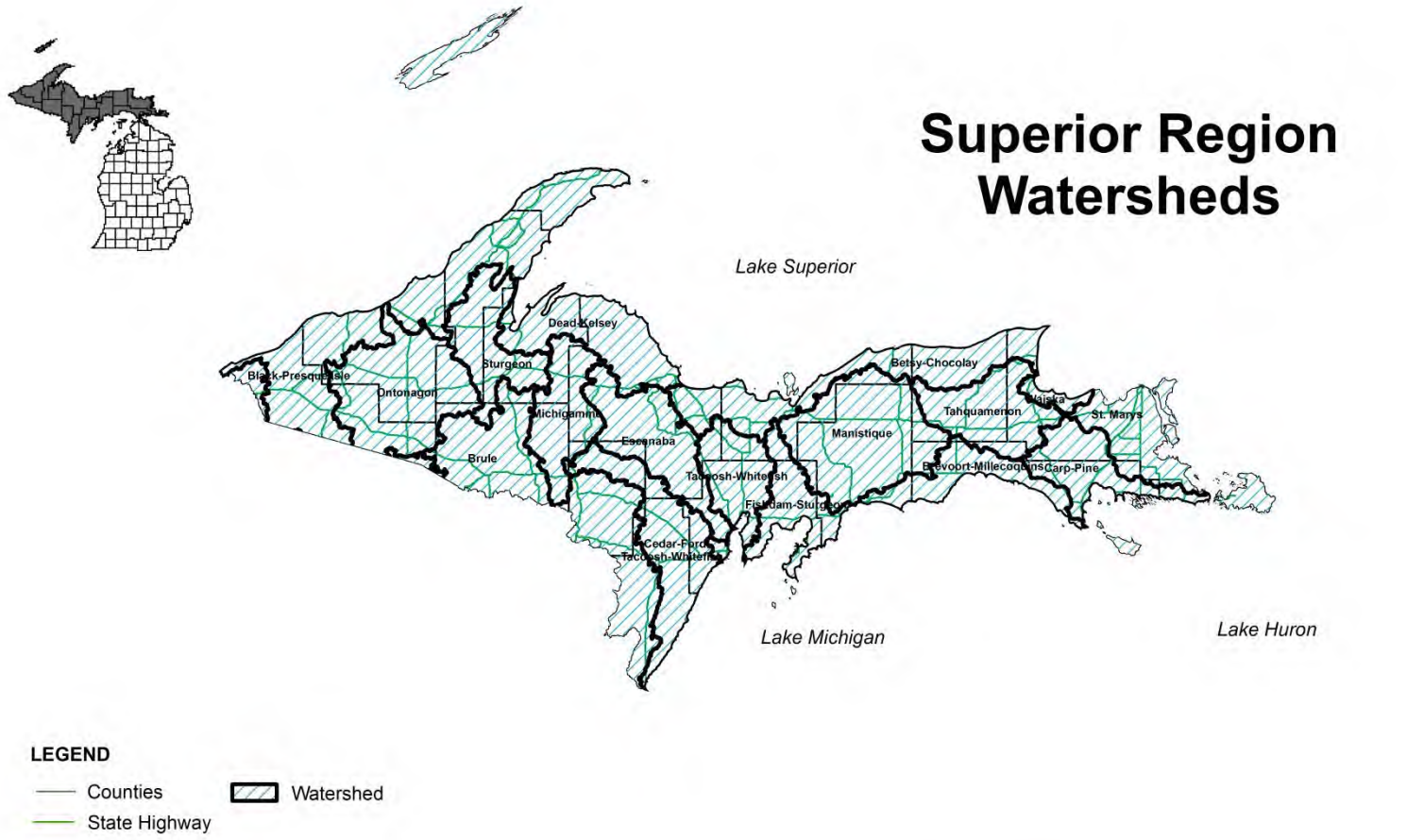


Figure O- 2 Superior Region Watersheds Designated by 8 Digist Hydrologic Unit Code (HUC)

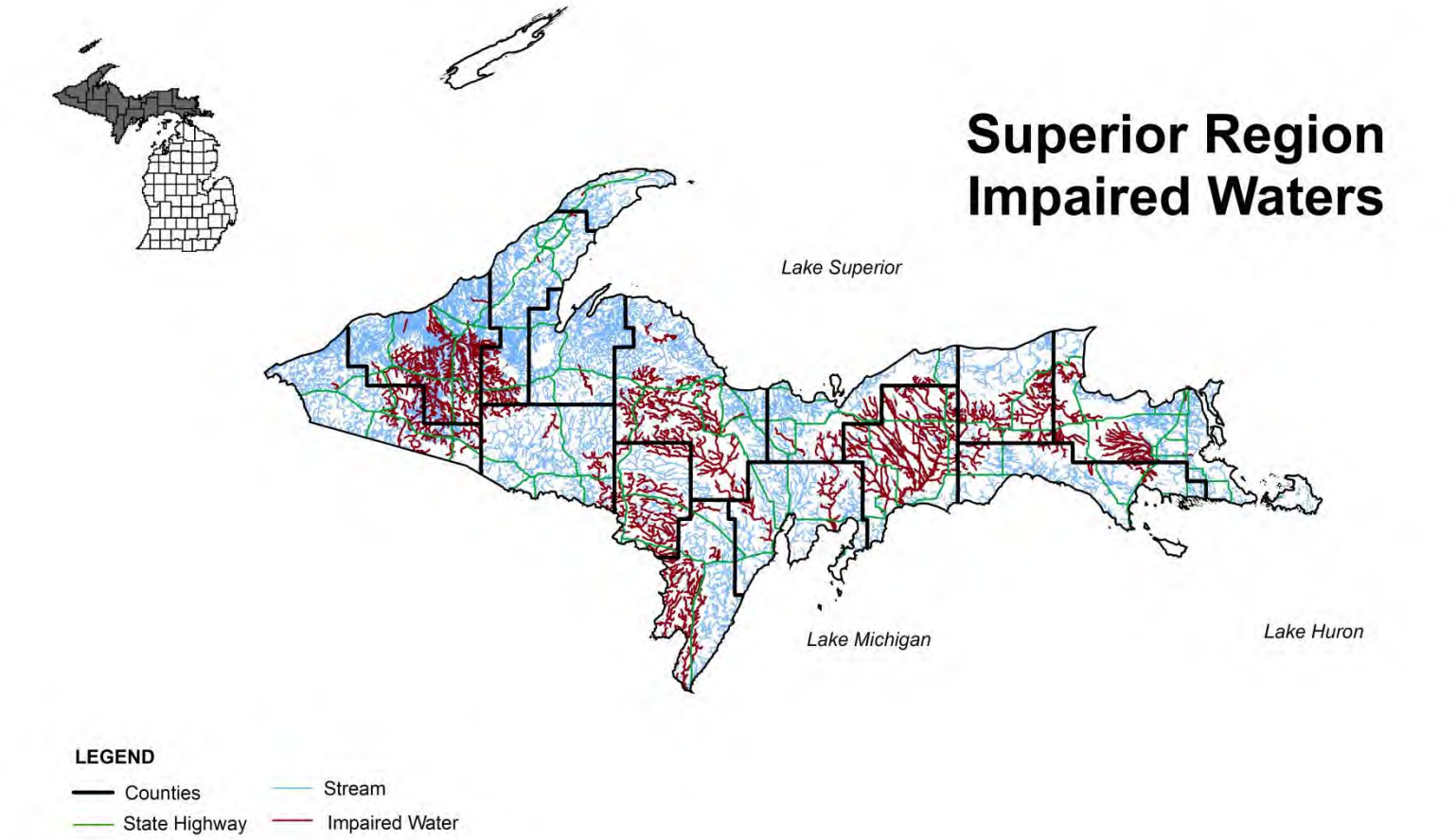


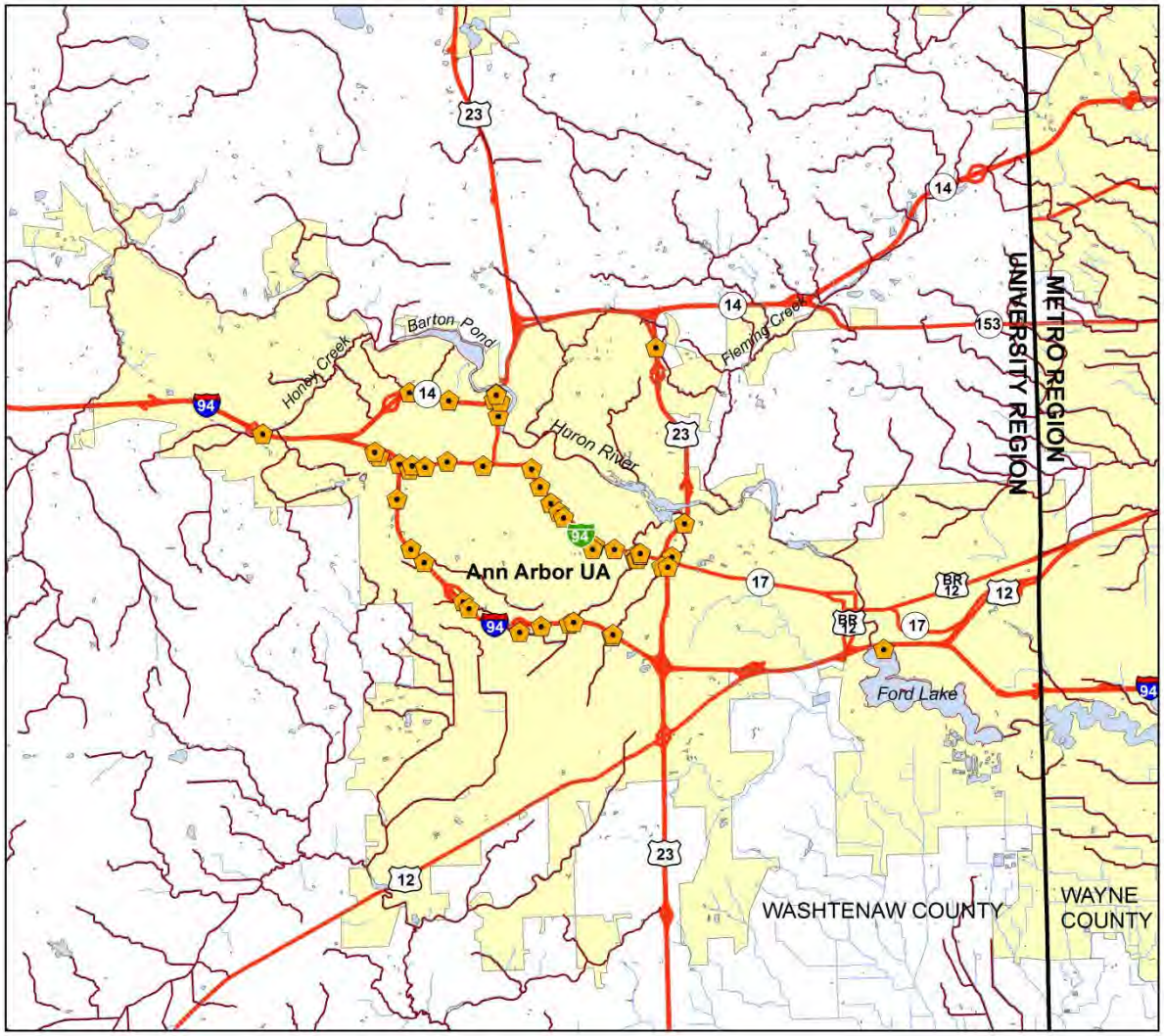
Figure O- 3 Superior Region Impaired Waters

Table O-1 Superior Region Contact Information

Superior Region Office Region Engineer: Region Stormwater Coordinator: Dan Hamlin	1818 Third Avenue North, Escanaba, MI 49829 Phone: 906-786-1800 Fax: 906-789-9775
Crystal Falls TSC Manager: Mike Premo 120 Tobin-Alpha Rd Crystal Falls, MI 49920 *Serves: Delta, Dickinson, Gogebic, Iron, and Menominee counties*	Phone: 906-875-6644 Fax: 906-875-6264
Isphpeming TSC Manager: Aaron Johnson 100 S. Westwood Dr. Ishpeming, MI 49849 *Serves: Baraga, Houghton, Keweenaw, Marquette, and Ontonagon counties*	Phone: 906-485-4270 Fax: 906-485-4878
Newberry TSC Manager: Dawn Gustafson 14113 M-28 Newberry, MI 49868 *Serves: Alger, Chippewa, Luce, Mackinac, and Schoolcraft counties*	Phone: 906-293-5168 Fax: 906-293-3331
Stormwater relation concerns at rest areas should be directed to the region Stormwater Coordinator, Dan Hamlin	Phone: (906) 786-1830
Garden Corners Rest Area 247 US-2 EB and WB	Delta County
Ironwood Welcome Center 101 US-2, EB and WB	Gogebic County
Iron Mountain Welcome Center 103 US-2	Dickinson County
Menominee Welcome Center 116	Menominee County

1343 10th Ave, Menominee, MI 49858	
Marquette Welcome Center 154 US-41	Marquette County
Naubinway Rest Area 213 US-2 EB and WB	Mackinac County
Saint Ignace Rest Area 241 1-75 SB, Mile Marker 348	Mackinac County Just north of St. Ignace.
Saint Ignace Welcome Center 223 I-75 NB, Mile Marker 344	Mackinac County Just past toll booths on northeast side of bridge.
Seney Rest Area 239 M-28 EB and WB, East end of Seney Stretch	Schoolcraft County East end of Seney Stretch.
Sault Sainte Marie Welcome Center 237 I-75 NB, Mile Marker 394	Chippewa County
Sault Sainte Marie Rest Area 236 I-75 NB, Mile Marker 389	Chippewa County

Ann Arbor Urbanized Area



Legend

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- Streams and Rivers
- Lakes
- MDOT Roads
- Urbanized Area
- IDEP Field Investigation Locations

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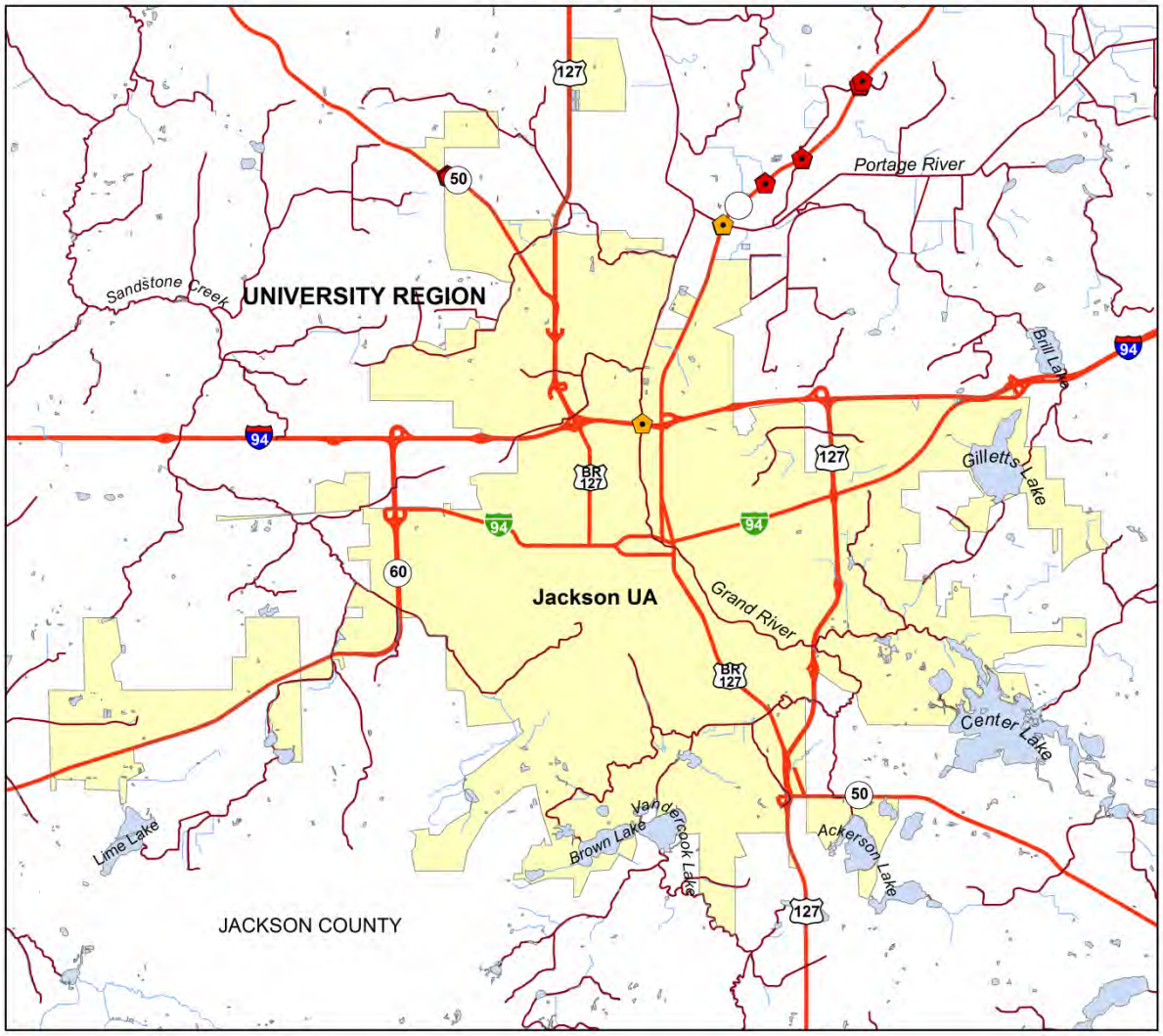
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Jackson Urbanized Area



Legend

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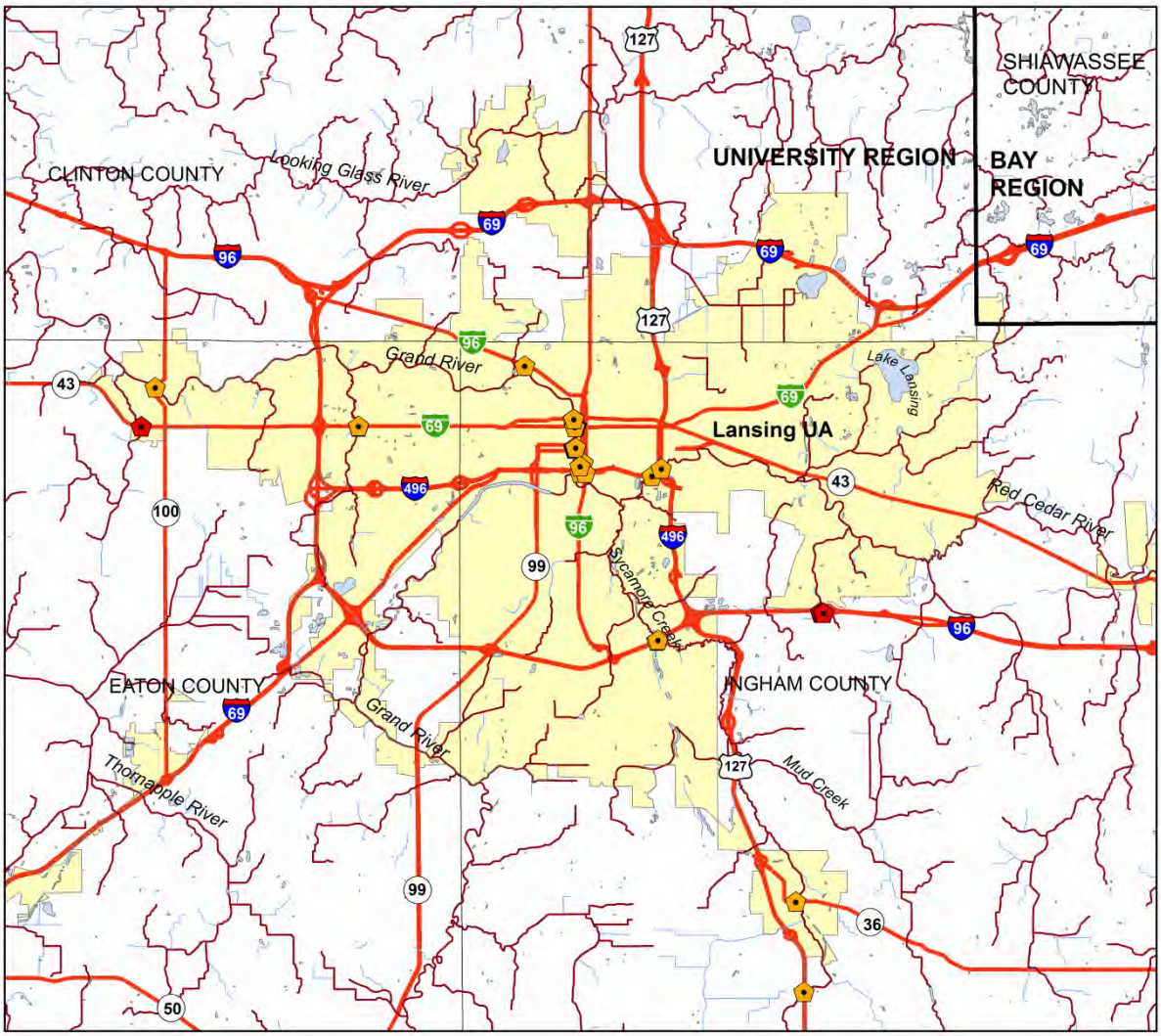
N

0 0.75 1.5 3 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Lansing Urbanized Area



Legend

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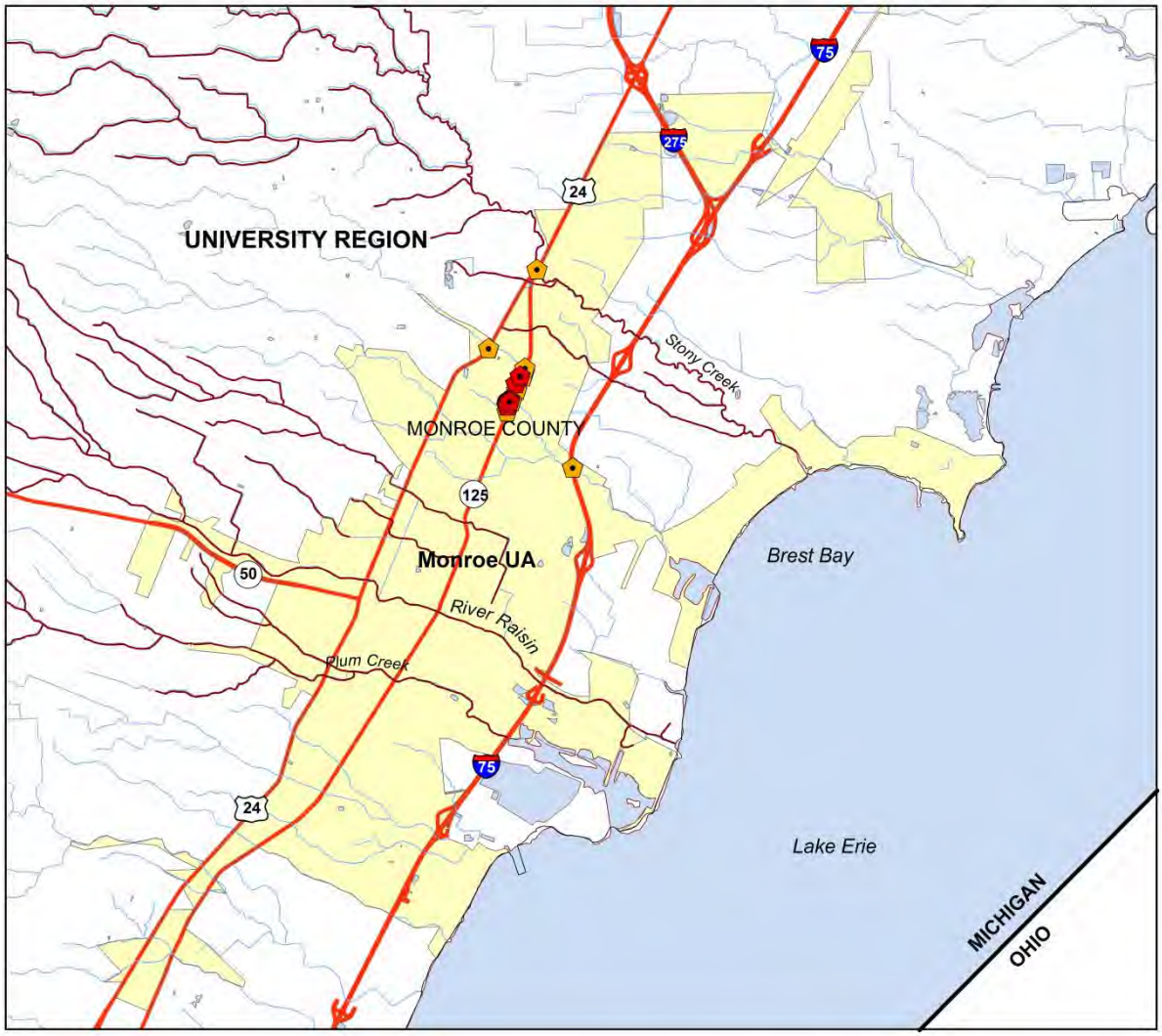
N

0 1.25 2.5 5 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Monroe Urbanized Area



Legend

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- IDEP Field Investigation Locations
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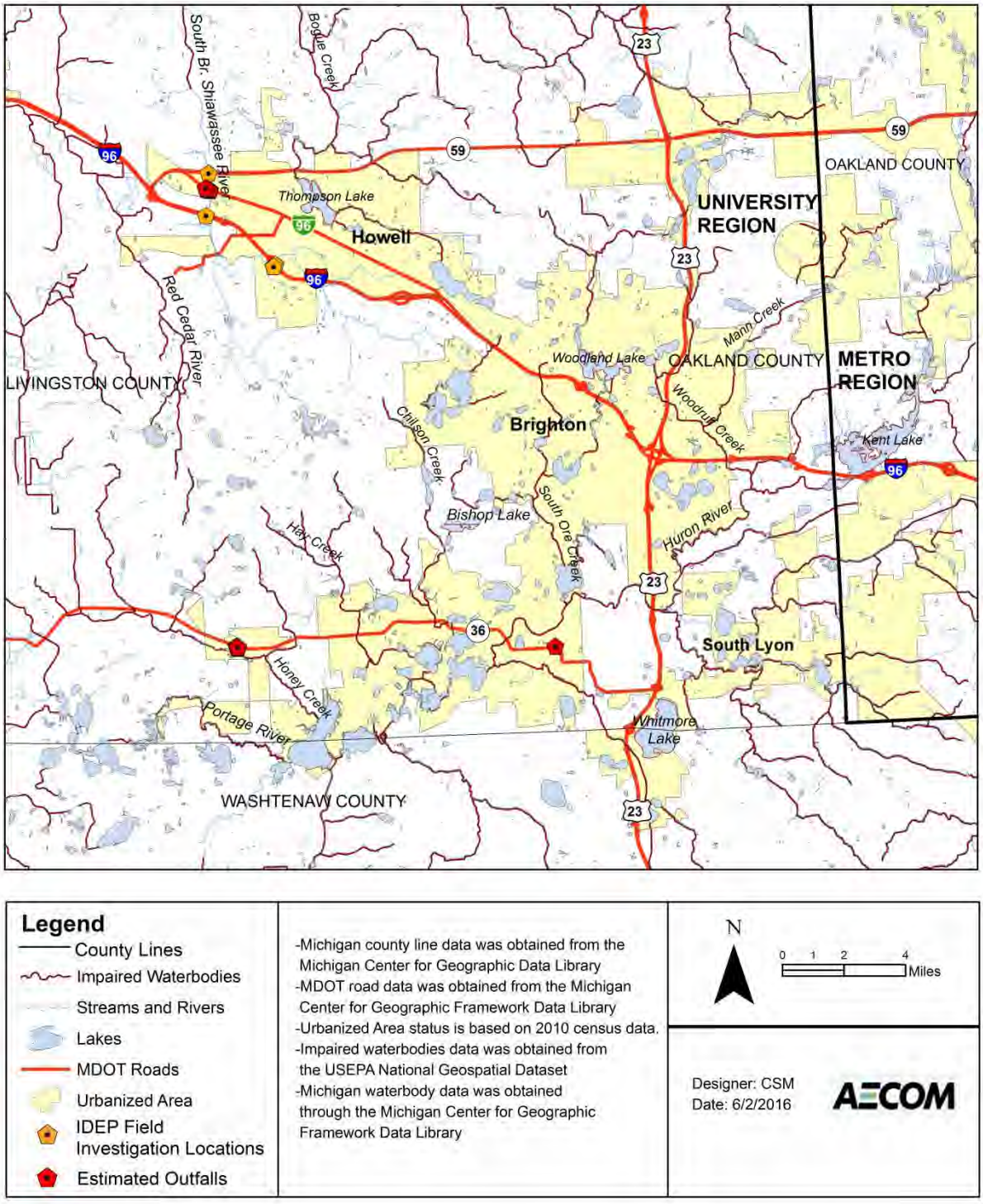
N

0 0.75 1.5 3 Miles

Designer: CSM
Date: 6/2/2016

AECOM

South Lyon-Howell-Brighton Urbanized Area



Legend

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- IDEP Field Investigation Locations
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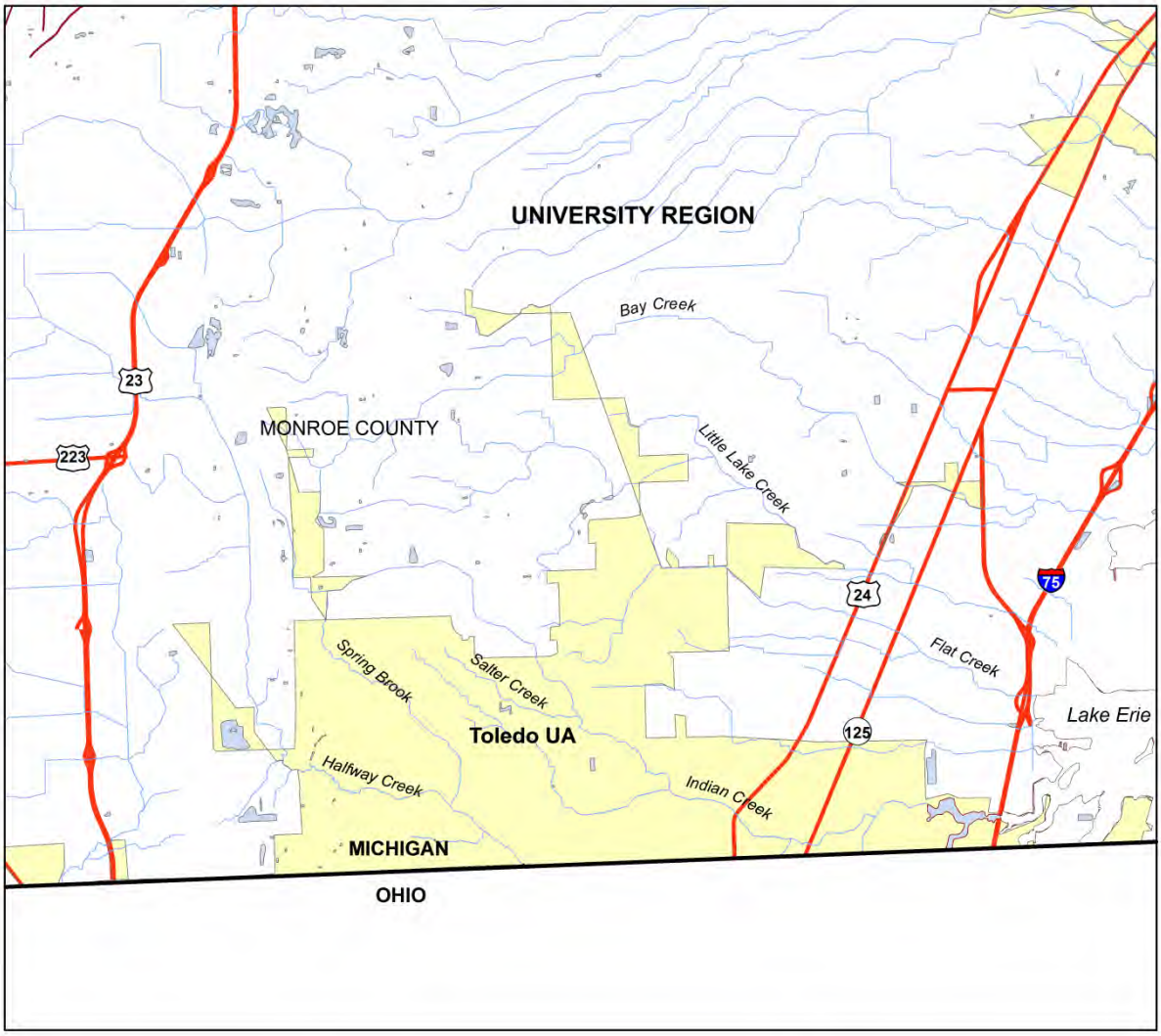
N

0 1 2 4 Miles

Designer: CSM
Date: 6/2/2016

AECOM

Toledo Urbanized Area



Legend

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N

0 0.5 1 2 Miles

Designer: CSM
Date: 6/2/2016

AECOM

ACTIVITY IDEP 3: CONTINUE TO IDENTIFY ILLICIT DISCHARGE CONNECTIONS AND CONDUCT DRY WEATHER SCREENING PILOT PROJECT

MONITORING YEAR: 2020

Minimum Control Measure : Illicit Discharge Elimination Program Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: Urbanized Area	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • IDEP 4: Notification of EGLE of Illicit Discharges • IDEP 5: Procedure for Determining Effectiveness of the IDEP • EDUCATION 4: Develop MS4 Training Module for Designers

OBJECTIVE

To identify illicit discharges and connections from the MDOT storm sewer system within 2010 Census urbanized areas as prioritized in the IDEP Plan.

DESCRIPTION

MDOT will continue to identify illicit discharges and illicit connections. This can be done through dry weather screenings. The Red Cedar River Dry Weather Screening project will be used as a pilot program used to determine feasibility of using dry weather screenings to identify illicit discharges and connections.

ANNUAL REPORTING

- Number and location of confirmed outfalls.
- Total number of suspected illicit connections/discharges identified.
- Number and location of manholes tested for each suspected illicit connection/discharge
- Results of sample analysis.
- Description and number of illicit connections/discharges verified.
- Estimated amount and type of pollutant removed.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Follow illicit discharge procedure for 100% of illicit discharges found in order to eliminate illicit connections and discharges.	Follow up with persons who reported illicit discharge to ensure protocol was followed appropriately.
Annual Assessment: AECOM performed illicit discharge inspections in August and September, 2020. Areas of coverage are indicated on the attached figure 1, covering approximately 52.98 miles. The list of encountered hard discharge points (drain tiles or culverts) is attached. No suspected illicit connections were noted or referred for further investigation.	
Update EGLE of the areas selected for dry weather screening.	Updated list of dry weather screenings sent to the appropriate person at EGLE by the Stormwater Program Manager.
Annual Assessment: The areas for dry weather screening were chosen in 2020 and EGLE notified.	
Desktop analysis for dry weather screening	Preparing storm sewer maps, stormwater system map, developing dry weather screening procedures

Annual Assessment: The desktop analysis was completed in 2016.	
Review outfalls identified in desktop analysis	Field work such as verification of drainage system components and locating stormwater outfalls.
Annual Assessment: MDOT received known outfalls from counties and cities within the dry weather screening project area.	
Results of dry weather screenings will be used to identify and eliminate illicit discharges	The effectiveness of the program will be assessed at the end of the program, in 2021.
Annual Assessment: During the dry weather screening field work in 2020, there were no suspected illicit connections that required further reference to the EGLE for investigation.	
The effectiveness of the dry weather screening will be assessed at the end of the first pilot project.	Report to be given to the Stormwater Program Manager at the conclusion of the dry weather screening pilot project
Annual Assessment: The first pilot project was completed in 2020. This effort will be addressed in 2021.	
Develop a guide on prioritized areas for non-stormwater discharges based on findings from the first dry weather screening pilot project.	Guide to be completed and distributed to relevant MDOT employees and job-related public.
Annual Assessment: The first pilot project was completed in 2020. This effort will be addressed in 2021.	
Develop a plan and schedule for re-inspecting stormwater point sources for the inspection of stormwater point sources in conjunction with the plan to ensure point sources are inspected every five years.	A plan and schedule will be developed with coordination from a consultant and the Stormwater Program Manager. The final plan to be given to the Stormwater Program Manager for implementation.
Annual Assessment: The first pilot project was completed in 2020. This effort will be addressed in 2021.	

ACTIVITY IDEP 4: REVIEW AND UPDATE PROCEDURE FOR RECEIVING AND NOTIFYING EGLE OF ILLICIT DISCHARGES AND ACTIONS TAKEN

MONITORING YEAR: 2020

Minimum Control Measure: Illicit Discharge Elimination Program Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • IDEP 3: Identify Illicit Connects/ Dry Weather Screening

OBJECTIVE

To receive reports and notify EGLE of illicit discharges, statewide, to the MDOT storm sewer system. To take action toward removing these discharges.

DESCRIPTION

Procedure for receiving and responding to reports of illicit discharges is established as part of Section 1512.71 of the Construction Permit Manual. Training to effectively implement the procedure will be conducted. Procedure for receiving reports from construction site runoff is already in place as part of the SESC Manual.

ANNUAL REPORTING

- Track the number of notices received and the follow-up actions taken.
- Track the number of illicit connections/discharges identified and removed.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review the procedure for receiving the notice of an illicit discharge. (As stated in Activity IDEP-3, follow the illicit discharge protocol for 100% of the illicit discharges identified).	A notification of procedure method will be posted on the MDOT Stormwater website.
Annual Assessment: The procedure was reviewed in 2019 by the stormwater Program Manager, Stormwater Steering Committee, and Region IDEP coordinators. The process was adjusted to fit current methodologies and updated instructions and flow charts were submitted for inclusion in the Construction Permit Manual.	
Update procedure for notifying EGLE of illicit connections and discharges.	The developed procedure will be sent in a notice to appropriate MDOT staff, identified in the responsible party, by the Stormwater Program Manager.
Annual Assessment: The procedure was reviewed in 2019 by the stormwater Program Manager, Stormwater Steering Committee, and Region IDEP coordinators. The process was adjusted to fit current methodologies and updated instructions and flow charts were submitted for inclusion in the Construction Permit Manual.	

ACTIVITY IDEP 5: DEVELOP PROCEDURE FOR EVALUATING AND DETERMINING THE OVERALL EFFECTIVENESS OF THE IDEP

MONITORING YEAR: 2020

Minimum Control Measure : Illicit Discharge Elimination Program Activities **Statewide or Urbanized Area:** Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • IDEP 3: Identify Illicit Connects/ Dry Weather Screening • IDEP 4: Notification of EGLE of Illicit Discharges

OBJECTIVE

Develop a procedure that will determine the effectiveness of the IDEP program to effectively eliminate illicit discharges.

DESCRIPTION

A procedure for assessing the effectiveness of the IDEP program will be developed. The procedure will be put in place and evaluated annually.

ANNUAL REPORTING

- Report number of illicit connection and discharge notices and resolutions
- Report trends in the number of notices and resolutions

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Report number of notices and resolutions per year.	Notices to be reported in the Annual Report

Annual Assessment: The following Illicit Discharges were reported in 2020:

-Bay Region: None.

-Grand Region: None.

-Metro Region:

- I-75 Modernization Segment 2 – On September 3, 2020, MDOT has observed a green, sulfur smelling liquid contamination appearing to come from the embankment construction at southbound I-75 near Big Beaver Road. Lab tests revealed the leachate did not contain gasoline or diesel fuel, but it does contain several heavy metals including Chromium, Arsenic, Vanadium, Lead, Iron, Manganese, Molybdenum and Selenium at concentrations that exceeded the EGLE cleanup criteria. The road contractor installed a trench/perforated pipe collection system with periodic pumping and disposal of the non-hazardous/contaminated leachate.

- I-96 at abandoned RR bridge west of the Schaefer ramp – on September 16, 2020, it was reported that Detroit Maintenance Garage staff noticed an area that had dead vegetation and an orange like substance at the bottom of the slope. Investigation confirmed seepage and accumulated trash along the abandoned railroad bridge as possible source. Samples were collected for lab analysis. Test results revealed pH was 7.4, with a few elevated metals, and high iron levels leading to the conclusion the orange was iron bacteria.

-North Region: None.

-**Southwest Region:**

- I-196/JB Hunt Transportation Services, Hagar Township, Berrien County (carryover from 2019)
  - JB Hunt site drainage discharges onto I-196 ROW
  - No permit on file
  - Discharge has resulted in a large erosion issue located during 2019 MDOT construction
  - Awaiting assessment from TSC to determine a remedy

- US-131/Village of Constantine, St. Joseph County
  - Sewage discharge to the ROW
  - Cleaned up by the Village of Constantine
  - Reported to PEAS
  - Remedied

- US-131/City of Kalamazoo, Kalamazoo County
  - The City of Kalamazoo drained a water tower for inspection resulting in a large volume of water discharging to the US-131 ROW
  - Determined to be exempt from the Illicit Discharge Elimination Program

- 4025 M-63, Hagar Township, Berrien County
  - Water discharging onto the roadway causing icing
  - Believed to be a washing machine, sump pump, or similar
  - Remedied

-Superior Region: None

-University Region: None

If any feedback on the program is given through stormwater contacts provided on the MDOT website, they will be forwarded to the Stormwater Program manager to compile in an archive. This archive can be monitored over time to determine the evolving comments and effectiveness of the program.	Stormwater contacts to forward any feedback on the stormwater program to the Stormwater Program Manager

Annual Assessment: No feedback was received in 2020.

Appendix D – Post Construction Stormwater Management Activities

ACTIVITY POST CONSTRUCTION 1: UPDATE MAP OF KNOWN STRUCTURAL BMPS AND DEVELOP PROCESS FOR TRACKING NEW STRUCTURAL BMPS

MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINSTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 2: Review and Update BMP Maintenance Requirements

OBJECTIVE

To develop a more complete map of the existing BMPs in Michigan and a system for reporting newly constructed BMPs.

DESCRIPTION

A map containing the most up to date BMPs installed in Michigan & system for tracking newly installed BMPs.

ANNUAL REPORTING

- Newly constructed BMPs to be included in the annual report.
- Updated map of known BMPs

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Develop map of all known BMPs in the state	Map will appear in the Annual Report
Annual Assessment: A map of all BMPs in the state was compiled in 2018. This map has been updated to reflect BMPs that were constructed in 2020 and reported to the storm water program manager to compile the annual report. The map is available on the following page.	
Develop form of means for communicating newly constructed BMPs to the Stormwater Program Manager	Form to be distributed to all TSC Region offices by the Stormwater Program Manager.
Annual Assessment: PC-BMPs constructed in the previous year are reported to the Stormwater Program Manager during the annual report information gathering period.	
Newly constructed BMPs will be submitted using the developed form to the Stormwater Program Manager.	Form given to the Stormwater Program Manager by the TSC Region Managers on an annual basis. New BMPs to be listed in the Annual Report.
Annual Assessment: New BMPs that were constructed in 2020 have been identified in the attached table.	
Update map of known BMPs in the state	Map will appear in the Annual Report
Annual Assessment: The most recent version of the BMP map is available on the following page.	


MDOT BMP INSTALLATIONS
0 35 70
Miles
Marquette
Sault Ste Marie
Sault Ste Marie
Green Bay
Lake Michigan
Fond du Lac
Sheboygan
Midland
Michigan
Milwaukee
Racine
Kenosha
Flint
Lansing
Ann Arbor
Detroit
Portage
LEGEND
BMP INSTALLED IN 2020
BMP INSTALLED BEFORE 2020
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Table D1: 2020 BMP Construction Projects		
Region	Location	Type
Bay	US-23 @ M13	Basin (detention)
North	M-22 (east side of road, across from Lambkin Lane)	Underground infiltration
North	M-22 (east side of road, across from Phillip St.)	Underground infiltration
North	M-22 (west side of road, under Phillip St.)	Underground infiltration
Metro	M-59 @ Garfield Rd	Basin (detention)
Metro	M-59, east of Ronin Dr.	Basin (detention)
Metro	M-59 @ River Ridge Dr.	Basin (detention)
Metro	M-59 @ Heydenreich	Basin (detention)
Metro	M59, 1000' west of Elizabeth St.	Basin (detention)
Metro	M59, 500' west of Tilch Rd.	Basin (detention)
Metro	M59, 500' east of Tilch Rd.	Basin (detention)
Metro	M59, 1550' west of Romeo Plank Rd.	Basin (detention)
Metro	M59, 700' west of Romeo Plank Rd.	Basin (detention)

ACTIVITY POST CONSTRUCTION 2: REVIEW AND UPDATE MAINTENANCE REQUIREMENTS FOR MDOT BMPS

MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 1: Update Map of Structural BMPs • POLLUTION PREVENTION 4: Track Road Maintenance Activity

OBJECTIVE

To protect receiving water quality statewide by reviewing and updating maintenance requirements for permanent MDOT-approved BMPs.

DESCRIPTION

Updated procedures for the continued maintenance of BMPs.

ANNUAL REPORTING

- Discuss updates to the maintenance requirements

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review Maintenance Activity Guides and update accordingly.	Develop recommendations based on the review. To be given to the Stormwater Program Manager and documented in the Annual Report.
Annual Assessment: Developing a process to review and update the Maintenance Activity Guides was discussed by the Stormwater Steering Committee in 2019. A process was agreed upon and the group began piloting the process on various Activity Guides in 2020. This measurable goal will be a focus for 2021.	
Develop and implement procedures for maintaining permanent BMPs not already having a maintenance procedure.	Newly developed procedures will be documented by the Stormwater Program Manager
Annual Assessment: Design guides are being developed for various post construction stormwater BMPs. Each guide will have a section specific to the maintenance for the BMP. This process is occurring concurrently with the Maintenance Activity Guide updates.	
Develop and implement a procedure for maintaining permanent BMPs after acceptance of BMP for use on MDOT projects	Newly developed procedures will be documented by the Stormwater Program Manager
Annual Assessment: For each new BMP constructed in 2020, current maintenance practices were followed.	
Notify appropriate staff of changes to guides.	Notification to be sent out to the appropriate staff via email as needed.
Annual Assessment: As guides are created/updated, appropriate staff will be notified.	
Maintain existing permanent BMPs according to existing MDOT procedures.	BMPs will be inspected every 5 years by a consultant to ensure proper maintenance.
Annual Assessment: BMPs are maintained according to the maintenance plans and are inspected on a rotating five-year basis. In 2020, 26 BMPs were inspected to ensure proper maintenance.	

ACTIVITY POST CONSTRUCTION 3: DEVELOP PROCEDURE TO SELECT AND APPLY BEST MANAGEMENT PRACTICES (BMPs) FOR STORM WATER MANAGEMENT ACTIVITIES (POST-CONSTRUCTION) AND IMPLEMENT PROCEDURES
MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINSTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 1: Update Map of Known Structural BMPs and Develop Process for Tracking new Structural BMPs • POST CONSTRUCTION 2: Review and Update Maintenance Requirement for MDOT BMPs • POST CONSTRUCTION 4: Achieve Water Quality and Channel Protection Compliance • POST CONSTRUCTION 6: Update Drainage Manual • POLLUTION PREVENTION 1: BMP Inspections

OBJECTIVE

To develop a procedure for selecting, applying and maintaining permanent BMPs for selected MDOT projects statewide. Implementing these procedures will protect receiving water quality.

DESCRIPTION

Development of selection procedure for applying BMPs for storm water management activities.

ANNUAL REPORTING

- Report completion of BMP selection and pollutant discharge reduction estimate tools.
- Track the permanent BMPs selected for earth-disturbing projects using existing databases.
- Track permanent BMP installations, maintenance, and modifications.
- Track employee training on BMP selection and maintenance.
- Report pollutant discharge education based on theoretical BMP performance.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Update procedures for selecting permanent BMPs.	A selection tool for selecting BMPs will be posted on the MDOT Storm Water website.
Annual Assessment: A draft version of the BMP selection tool has been completed and is being tested for accuracy with MDOT projects.	
Develop a procedure to estimate pollutant discharge reduction based on theoretical BMP performance.	The BMP selection tool will incorporate a procedure for estimating pollutant discharge reductions.
Annual Assessment: The version of the BMP selection tool distributed to MDOT designers suggests structural BMPs based on the pollutant reduction requirements onsite.	
Issue staff guidance for the selection tool.	A document outlining the instructions for the tool will be distributed to the appropriate storm water related staff.
Annual Assessment: This was completed during 2017 and is being monitored for effectiveness & accuracy.	

Implement procedures to select permanent BMPs.	Procedures will go into effect on the first of the year.
Annual Assessment: This was completed in 2017.	
Evaluate existing procedures for applying and maintaining permanent BMPs.	Recommendations based on the evaluations will be given by the responsible party to the Stormwater Program Manager.
Annual Assessment: This was completed in 2017.	
Update and/or develop procedures for applying and maintaining permanent BMPs.	Approved recommendations will be implemented into procedures.
Annual Assessment: There were no changes to procedures as to when PC-BMPs are required on projects. This measurable goal is ongoing.	
Document procedures and issue staff guidance.	Updated procedures and guidance will be emailed to stormwater related staff.
Annual Assessment: There were no new procedures developed for the stormwater program in 2020. This measurable goal is ongoing.	
Implement procedures to select, apply, and maintain permanent BMPs.	Updated or new procedures will be implemented for the selection, application, and maintenance of BMPs.
Annual Assessment: The BMP selection tool was issued to relevant MDOT staff in 2017 and involves the procedure of how to select and apply structural BMPs. The maintenance of BMPs will be an ongoing goal.	
All projects will be evaluated for permanent stormwater BMP inclusion during scoping and early design.	BMPs identified for inclusion in new projects will be outlined in the Stormwater Annual Report.

Annual Assessment: There were several projects which incorporated permanent, structural BMPs in 2020:

- JN 116377, US-131, Three Rivers, Check Dams
- JN 132613 M-59 east of Cullen Rd, sediment removal in 500 ft ditch.
- JN124027 (M37 & US31 to Sullivan Road), infiltration ditches, culvert jack and bored under railroad.
- JN126968 (US-31), 4 ft sumps.
- JN24011-131799 (M119 and US31), extra deep sumps and sediment basin
- JN200005 (Banwell Road at Smith Road in the southeast quadrant), two large retention/detention/infiltration wetland areas were constructed.
- Bay City, 16415 Brady Rd, French drain installation
  13230 Gratiot Rd French drain installation
- JN 125967: M-91 reconstruct in Montcalm County. Check dams, inlet protection including fabric drops and sediment traps, sediment removal, silt fence, mulch blanket and sand bags.
- JN 202669: US-131 100th street, Detention basins
- SB M-44 and 3 Mile rd, Lagoon pumping and sediment removal
- US-41 across from Baraga State Park and North of Baraga, 2600 tons of Heavy Riprap along the Lake Superior Shoreline
- US-41 south of Old US-41 and Jurmu Road, 97 tons of riprap at outlet to prevent scour/erosion
-

There were several other projects which incorporated temporary measures or general stormwater improvements in 2020 including:

- Traverse City- 1262 basins being cleaned, 2 rock retention basins were reconstructed, 550 feet of rip-rap shoreline protection projects
- Alpena - Cleaned 700 catch basins
- Gaylord - Cleaned 1530 catch basins and manholes in Antrim, Cheboygan, Charlevoix, and Emmet counties, 80 man/woman hours were spent fixing major washouts on I-75 in Otsego county. 120 man/woman hours were spent fixing shoreline erosion problems in Charlevoix county
- Bay region – 4,999 catch basins cleanout. 10 catch basins repaired, 15,040 feet of ditch cleanout, 16 washout repairs.

- Culvert repair on M-46 to Thomas Rd-replaced all cross culverts in the median.
- Culvert repair in the NE quad of M-46 and Raucholz Rd
- Culvert repair at M-52 and Wolf Cree rd.
- Culvert repair M47 just north of 150 N. Main St.
- Washout repair at M-46 over the Tittabawassee River
- Washout repair of M-47 NB just south of the railroad bridge

- JN 200049: M-115 utilized silt fence and Seed Mixture CR
- Basin and downspout repair for washout on M-11 and Chamberlin.
- Slope repair and basin construction at EB I-96 and 36th Street
- M-185 on Mackinac Island, 800' of highwater washout and slope repairs by emergency contract
- M-123 Lake Superior armor stone repair (north of Tahquamenon River), 540' of highwater washout and slope repairs by TWA
- US-2 Manistique turnout repair armor stone repair (west of Manistique), 425' of highwater washout and slope repairs by TWA

For more information, see Activity Post Construction 1.

ACTIVITY POST CONSTRUCTION 4: COMPLY WITH PERFORMANCE STANDARDS FOR NEW DEVELOPMENT AND RE-DEVELOPMENT PROJECS TO THE MAXIMUM EXTENT PRACTICABLE
MONITORING YEAR: 2020

Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION1: Program Assessment and Reporting • POST CONSTRUCTION 3: Develop Selection Procedure for BMPs • POST CONSTRUCTION 5: Review Projects Discharging to Impaired Waters • POST CONSTRUCTION 7: Site Plan Review for Post Construction Projects

OBJECTIVE

Achieve compliance standards for water quality and channel protection issued by the United States Environmental Protection Agency (EPA) for all new development and redevelopment projects.

DESCRIPTION

As designated by the EPA, all new development and redevelopment projects must comply with water quality and channel protection standards. Compliance with channel protection and water quality standards will be estimated, per project, using the BMP selection tool as a preliminary analysis tool, as described in Activity Post Construction 3.

ANNUAL REPORTING

- Post construction projects achieving standards will be documented in the Annual Report
- All newly constructed BMPs (as well as modifications, replacements, or enhancements of BMPs) will be documented in the Stormwater Annual Report

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Desktop assessment of new development and redevelopment projects using the BMP screening tool in preliminary analysis.	Results from the analysis will be submitted for each project to the Stormwater Program Manager.

Annual Assessment: The BMP screening tool has been completed and distributed to MDOT designers. Throughout 2019, the tool was be tested for future projects, with the goal of this tool being used in the preliminary analyses of all projects. The tool was tested on several projects with reasonable results. In 2020, there was no formal training on the BMP screening tool. There were 1713 hits on the MDOT stormwater internet page. However, a Microsoft analytical glitch on the MDOT intranet site prevented the coalition of page hits for the BMP screening tool and other job-related intranet items.

Meet compliance standards goals to the maximum extent practicable. Compliance standard goals include: • BMPs are designed based on site constraints to reduce post development suspended solids loadings • Treat runoff from the 90% non-exceedance storm • When impervious area is increased, post-construction runoff rate and volume match pre-development conditions as closely as possible for storms up to the two-year, 24-hour event • Addressing specific pollutants on a site specific basis	Results from the analysis will be submitted for each project to the Stormwater Program Manager.

Annual Assessment: All newly constructed BMP projects listed in Activity Post-Construction 1 meet either the water quality or channel protection standards prior to 2020.

Document the modification, replacement, or enhancement of BMPs.	A description of the work done will be given to the Stormwater Program Manager for inclusion in the Annual Report

Annual Assessment: No BMP modifications were done in 2020.

ACTIVITY POST CONSTRUCTION 5: REVIEW PROJECTS WITH STORMWATER DISCHARGES TO WATER BODIES WITH PROMULGATED TOTAL MAXIMUM DAILY LOADS (TMDLs)

MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINSTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 3: Procedure to Select BMPs • POST CONSTRUCTION 4: Water Quality and Channel Protection • POST CONSTRUCTION 6: Update Drainage Manual

OBJECTIVE

To develop a procedure for the review of projects with stormwater discharges to water bodies with a promulgated TMDL and to and implement stormwater controls statewide to meet responsibilities established by TMDLs to the MEP.

DESCRIPTION

An interactive map showing trunklines crossing 303(d) listed water bodies will be beneficial in the planning of MDOT projects to ensure compliance with water quality standards of discharges. All new development and redevelopment projects will use this map as a tool to assess if stormwater discharges to TMDL water bodies.

ANNUAL REPORTING

- Report completion of interactive mapping system on MDOT Stormwater Website
- Track location of projects discharging to waters with TMDL
- Track compliance with TMDL requirements.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Develop interactive mapping system on the MDOT Stormwater Web Site showing MDOT trunklines crossing 303(d)-listed water bodies.	Completed tool available to MDOT staff.
Annual Assessment: This measurable goal was completed in 2016 and is available to MDOT design staff. This newly created GIS tool allows users to enter their project limits and see if they intersect with 303(d) listed waters.	
Review all new projects that discharge to waters of the state with a promulgated TMDL.	Projects to be reviewed by environmental staff as necessary.
Annual Assessment: 199 projects were reviewed in 2020 that could discharge to a waters of the state. Each was reviewed for applicable TMDL requirements.	
Evaluate various options to mitigate projects discharging to TMDL water bodies. BMPs are to be implemented to comply with stormwater related requirements to meet TMDLs.	Projects to be evaluated by environmental staff and an internal stormwater committee as needed.
Annual Assessment: In 2020, there were 58 projects within TMDL areas for Sediment, Dissolved Oxygen, and Nitrates. All projects were reviewed for compliance with TMDL requirements.	
Install and maintain BMPs on projects intersecting TMDL waterbodies.	Projects to be evaluated by environmental staff and an internal stormwater committee as needed.
Annual Assessment: All projects constructed in 2020 that were in TMDL attainment areas included appropriate BMPs to address the given TMDL.	

ACTIVITY POST CONSTRUCTION 6: PERIODICALLY UPDATE DRAINAGE MANUAL

MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • PUBLIC INVOLVEMENT 3: Coordinate with MPOs • POST CONSTRUCTION 3: Selection Procedure for BMPs • POST CONSTRUCTION 4: Water Quality and Channel Protection • POST CONSTRUCTION 5: Review Projects Discharging to Impaired Waters

OBJECTIVE

To update MDOT's policies and procedures for the design of BMPs. Other fields to be reviewed include the construction, maintenance, and demolition of BMPs as outlined in the manual.

DESCRIPTION

The existing Drainage Manual will be reviewed and revised as needed to include the latest details of the stormwater management program. Notification and guidance will be given to appropriate MDOT employees and job-related public.

ANNUAL REPORTING

- Track changes made to the Drainage Manual.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Assess the need to update the Drainage Manual. The first update of the Drainage Manual will include the new source of rainfall data of EGLE's 2006 memo providing the 90 percent annual non-exceedance storm statistics.	Proposed changes to be drafted by the environmental staff.
Annual Assessment: The Drainage Manual was assessed in 2016. The result of the assessment is that the manual needs to be updated to reflect the current status of the MDOT stormwater program.	
Update the Drainage Manual. Changes to manual must be approved by the Engineering Operations Committee (EOC).	Proposed changes to be delivered to the EOC for approval.
Annual Assessment: Instead of updating the Drainage Manual, a document named the Post-Construction Stormwater BMP Design Guidance has been created to supplement the Drainage Manual and aid MDOT designers in the design of structural stormwater BMPs. A draft version of the document was further developed in 2020 and reviewed by the SSC.	
Notify appropriate staff of changes to the manual.	Updated drainage manual will be distributed to the appropriate staff.
Annual Assessment: Once the document is completed, MDOT staff will be notified.	

ACTIVITY POST CONSTRUCTION 7: SITE PLAN REVIEW FOR PROJECTS

MONITORING YEAR: 2020

Minimum Control Measure: Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 4: Compliance with Water Quality and Channel Protection Standards

OBJECTIVE

Ensure compliance with post-construction stormwater requirements through a review process of site plans for installation, operation, and maintenance.

DESCRIPTION

As designated by the EGLE MS4 Permit, MDOT must submit site plans for approval for each project subject to the post-construction stormwater runoff control requirements. Reviews will allow MDOT to ensure that the finished project will sufficiently meet post-construction stormwater runoff program requirements and long-term operation and maintenance of BMPs.

ANNUAL REPORTING

- Document number of projects submitted for review

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Initial site plans of post-construction stormwater BMPs shall be submitted for review to MDOT stormwater staff.	Site plan reviews by stormwater staff.
Annual Assessment: In 2020, 187 projects were reviewed by the MDOT Aquatic Resource Analyst for the inclusion of stormwater PC_BMPs.	
Develop procedure for the site plan review and approval process. Procedure shall include a checklist of specific criteria to be used by plan reviewers.	Procedure shall be distributed to appropriate staff by the MDOT Stormwater Program Manager.
Annual Assessment: During the environmental clearance process, all projects are reviewed for appropriate PC-BMPs. The Stormwater Steering Committee is developing a process for staff to follow when a project doesn't fully meet the post construction treatment goals but has met them to the maximum extent practicable (MEP). Projects have been run through the draft process and a draft MEP form is being finalized	

Appendix E – Construction Stormwater Runoff Control Activities

ACTIVITY CONSTRUCTION 1: REVIEW INTERNAL QUALITY ASSURANCE/QUALITY CONTROL (QAQC) PROTOCOL FOR CONSTRUCTION STORMWATER RUNOFF CONTROL

MONITORING YEAR: 2020

Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • POST CONSTRUCTION 4: Water Quality and Channel Protection • POST CONSTRUCTION 5: Review Projects Discharging to Impaired Waters • IDEP 1: List of Construction Projects and Maintenance Activities

OBJECTIVE

To improve the effectiveness of temporary BMPs statewide through internal QAQC for construction stormwater control.

DESCRIPTION

Development of the QAQC protocol is underway and will be submitted to the Environmental Committee for approval.

ANNUAL REPORTING

- Track number and result of internal reviews
- Track actions taken per MDOT/SESC Manual.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Review the QAQC protocol for construction stormwater control.	Revisions given to the Stormwater Program Manager by the responsible party.
Annual Assessment: 75 QAQC reviews were completed on plans and 27 reviews were done for construction.	
Update the QAQC protocol for construction stormwater control as necessary.	Final QA/QC protocol given to the Stormwater Program Manager by the responsible party.
Annual Assessment: This effort was done for the reviews completed in 2020. The MDOT SESC manual has been updated and is awaiting final approval from FHWA.	
Notify the appropriate staff of changes to the protocol.	Notification and guidance documents to be distributed to staff members.
Annual Assessment: There were no changes to protocol in 2020. Once the SESC manual is approved, notification will be sent out.	

Appendix F – Pollution Prevention/Good Housekeeping Activities

ACTIVITY POLLUTION PREVENTION 1: BMP INSPECTIONS MONITORING YEAR: 2020	
Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting
OBJECTIVE	
Routine inspections of MDOT structural BMPs to ensure compliance with various components of the permit.	
DESCRIPTION	
BMPs will undergo inspection to ensure that facilities comply with developed maintenance procedures.	
ANNUAL REPORTING	
• Summary of all inspections done and recommendations for each BMP.	
MEASURABLE GOALS	
MEASURABLE GOAL	**MEASURE OF ASSESSMENT**
An inspection of BMPs shall be conducted at least once every five years to ensure appropriate maintenance.	Inspection reports to be given to the Stormwater Program Manager.
Annual Assessment: 26 BMPs were inspected during the 2020 monitoring period. See attached BMP Inspection Summary. See map in the inspection report for a BMP inspections schedule for all years in the permit cycle.	
Items identified during inspections as needing attention shall be addressed.	Stormwater Program Manager to notify maintenance crews and follow up, as necessary.
Annual Assessment: Recommendations provided in the 2020 summary will be addressed during 2021.	
As needed, identify BMPs to be modified, replaced, or enhanced.	BMPs identified for modification, replacement, or enhancement will be outlined in the annual report.
Annual Assessment: On an as needed basis throughout the permit cycle, BMPs will be modified, replaced or enhanced.	

Stormwater Best Management Practices - 2020 Inspections Summary

Stormwater BMPs are inspected every 5 years on a rotating basis. 26 of these BMPs were inspected in 2020. **Figure 1** shows the locations of BMPs inspected in 2020.

Each components of the BMP such as fencing, inlet and outlet conditions, mowing, trash and debris, etc. is inspected and scored on a scale from 1-9. An average score is then taken and documented for each BMP. This value is used to track the BMP's condition over time. Recommendations are also given based on the condition of the BMP. A summary of each of the BMPs inspected in 2020 is listed in **Table 1**.

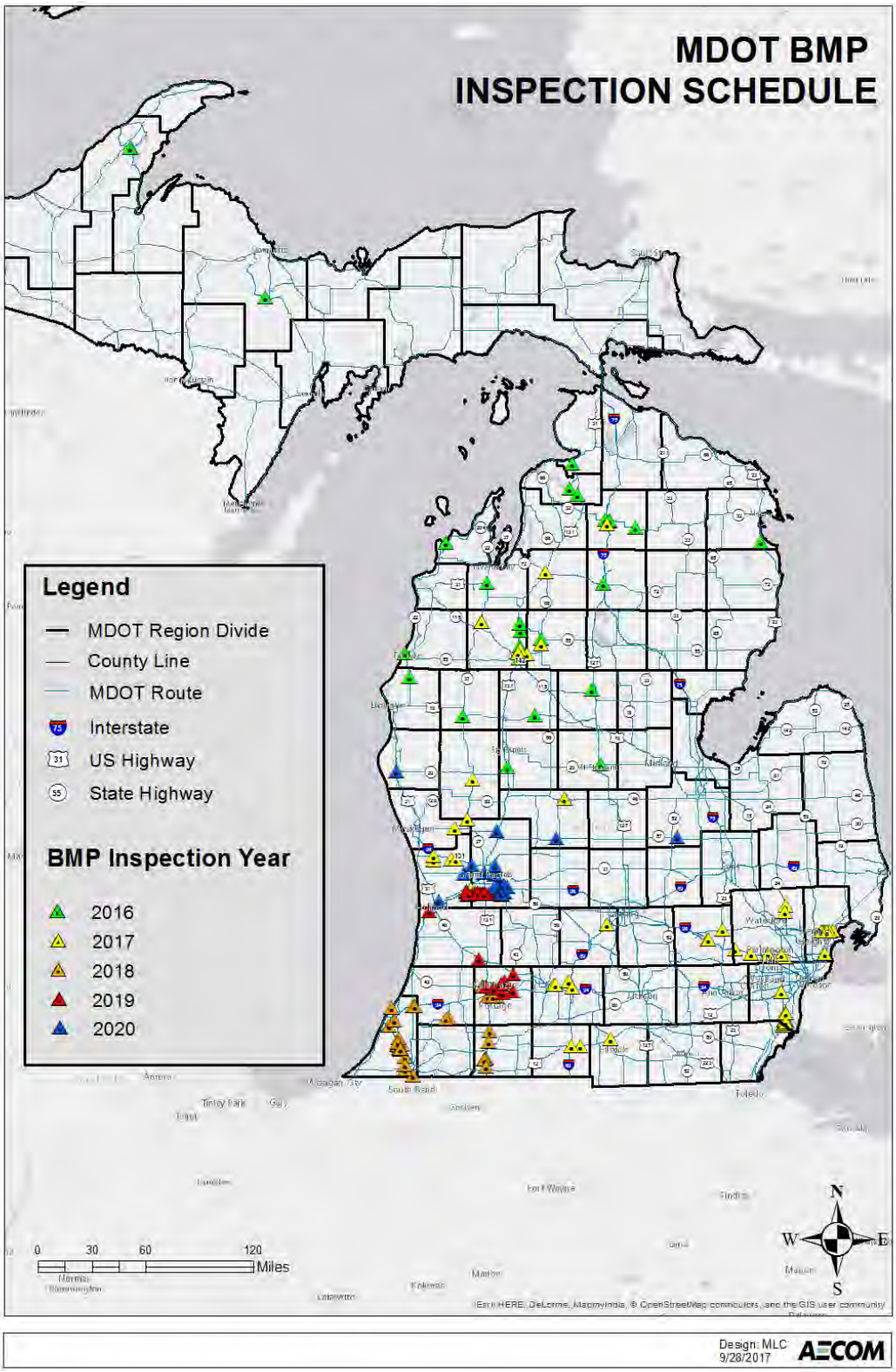


Figure 1 - BMP Inspection Schedule

Table 1: Field Inspection Summary				
County	Location	Structures Inspected	Scoring Summary 2020	Recommendations
Ionia	EB I-96 Rest Area 1 Mile Sign	Detention Basin	6.8	Repair erosion around basin and monitor. Remove dead trees from basin.
Kent	I-96 at 36th St in Median-S of 36th St Ramp	Detention Basin with Forebay	6.5	Clear sediment blocking inlet to forebay. Replace broken inlet 5. Remove sediment from Inlet 2,3,4.
Kent	I-96 at 36th St in SE Quad	Detention Basin with Forebay	6.2	Remove sediment from Inlet #2, 3, 4 and 5.
Kent	I-96 at Forest Hill Ave in SW Quad	Retention Basin	6.2	Repair erosion at channel inlet 3. Repair end section at outlet 1. Monitor the orange colored water at the outlet
Kent	I-96 between Fruit Ridge Ave and 8th Ave in Median	Infiltration Basins (2)	5.0	This BMP has been abandoned per MDOT TSC. Mow the site and lock the gate.
Kent	M-37 at M-6 WB On-Ramp - North Side	Detention Basin (wet bottom)	6.2	Remove trash on site. Clear vegetation covering inlets. Remove sediment accumulation from inlet 1 and Inlet 6.
Kent	M-37 at 500 ft south of 32nd St west side	Detention Basin	5.8	Clear out sediment accumulation in basin. Mow areas around basin and embankment. Lock the gate.

Table 1: Field Inspection Summary				
County	Location	Structures Inspected	Scoring Summary 2020	Recommendations
Kent	M-37 @ Plaster Creek in SW quadrant (250 ft N of 44th Street)	Retention Basin	5.3	Remove any trash present around the perimeter of the basin. Remove trash accumulating at the inlet grates. Re-stabilize severely eroded channel 1. Remove collapsed tree in channel 1 channel obstructing flow.
Kent	M-37 at 600 ft NW of Patterson Ave (NW quadrant of Fisk Drain)	Retention Basin	5.3	Remove scattered trash on site. Replace the rusted lock on the gate. Clean out the sediment accumulation in outlet 1 pipe. Mow area around basin for easy accessibility.
Kent	M-37 between 60th St and Patterson Ave-South	Detention Basin (wet bottom)	6.9	Replace the rusted lock on the gate. Clear vegetation blocking the entrance of the inlets and remove accumulated sediment from inlets.
Kent	M-37 between 68th St and M-6 - West Side	Detention Basin (wet bottom)	4.8	Lock the gate. Clear vegetation around basin and blocking inlets. Remove accumulated sediments from the inlets.
Kent	M-37 N. of Fulton St. - Church Lake Drain	Weir	6.5	Monitor and repair erosion downstream of inlet 1. Inspect/ test the water with oil sheen downstream of inlet 1.
Kent	M-44, .55 miles north of Knapp St NE	Detention Basin	4.7	Clean out forebay and pond. Pump out water from the pond and surrounding areas. Remove accumulated sediment from inlets and outlet. The gate should be locked.

Table 1: Field Inspection Summary				
County	Location	Structures Inspected	Scoring Summary 2020	Recommendations
Kent	M-44 at 0.35 mile north of 3 Mile Rd. on west side	Detention Basin	5.2	The basin is in critical condition and water is seeping into neighboring property. Dig out any accumulated sediment in the basin and inlets. Continue on site pumping of water in neighbor's property. 9/2020 update from MDOT TSC: Maintenance activities performed at the site. The basins have been dug out and the accumulated sediments removed. This has allowed lateral seepage to decrease significantly. MDOT is also planning to install aerators on site to help with evaporation from the Basins
Kent	M-6 at I-96 Interchange	Det. Basin/Overflow Drop Struct (2)	7.4	Clear vegetation at inlets. Observe and repair minor erosion at channel inlet 1. Remove accumulating sediments in the inlets. Remove trash from outlet.
Kent	M-6 at 60th St in NW Quad	Detention Basin (wet bottom)	6.4	Clear sediment from inlets, repair or remove broken concrete swale, and replace wood piece in weir if actually missing.
Kent	M-6 at M-37 Ramp D in NW Quad	Infiltration Basin	6.0	Remove debris a and trash from inlet 1 and 5.
Kent	M-6 at M-37 Ramp B in SE Quad	Detention Basin with Two Forebays	6.2	Remove sediment from Basin. Mow embankment.

Table 1: Field Inspection Summary				
County	Location	Structures Inspected	Scoring Summary 2020	Recommendations
Kent	M-6 at M-37 Ramp C in SW Quad	Infiltration Basin	6.2	Repair channel erosion at inlet 3.
Kent	US-131 at M-46 in NE quadrant	Detention Basin	5.9	Remove sediment build up in inlet 1,2 and 5. Clear all trash on site. Replace broken PVC pipe at inlet 3 and 4. Repair fracture in spillway.
Kent	I-196/US 131 Interchange Ramps, Corner of Third and Turner Street	Rain Garden	5.5	Provide soil erosion protection at they side slope at inlet 1. Replace rusting pipe bracket at inlet 5. Replace cracked pipe at inlet 6. Remove trash from inlet 7 manhole cover. Clear sediment from inlet 8 manhole grate.
Montcalm	M-57 west of Derby Rd. EB near Beth Haven Church (1158 W Carson City Rd.)	Detention Basin	7.3	Clear sediment from inlet 1.
Ottawa	Bus I-196 at Paw Paw in SW quadrant	Detention Basin	7.0	Remove sediment from inlet 1. Remove algae partially blocking outlet 1.
Ottawa	M-45 @ Sand Creek Dr (west of Sand Creek)	Retention Basin	4.7	Replace riprap at channel inlet 1. Remove trash and debris on inlet 2 catch basin cover. Clear sediment from inlet 3. Clear area around Basin where possible.
Saginaw	M-57 over Shiawassee River	Rain Gardens	7.6	Remove sediment build up at inlet 1. Repair erosion around riprap at inlet 4, 5 and 6.

Table 1: Field Inspection Summary				
County	Location	Structures Inspected	Scoring Summary 2020	Recommendations
Shiawassee	M-52 in Owosso	Stormwater Treatment Device	7.2	Clear trash and debris in structure.

ACTIVITY POLLUTION PREVENTION 2: AUDIT THE POLLUTION INCIDENT PREVENTION PLAN (PIPP) REQUIREMENTS

MONITORING YEAR: 2020

Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting

OBJECTIVE

Assure that vehicle maintenance activities statewide do not pollute stormwater runoff to the maximum extent practicable.

DESCRIPTION

Internal auditing of the PIPP will continue to be conducted and implemented.

ANNUAL REPORTING

- Summary of PIPP audits
- Document new programs, policies, procedures and information.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Conduct an audit of the PIPP requirements every three years.	Results of audit reported to Stormwater Program Manager

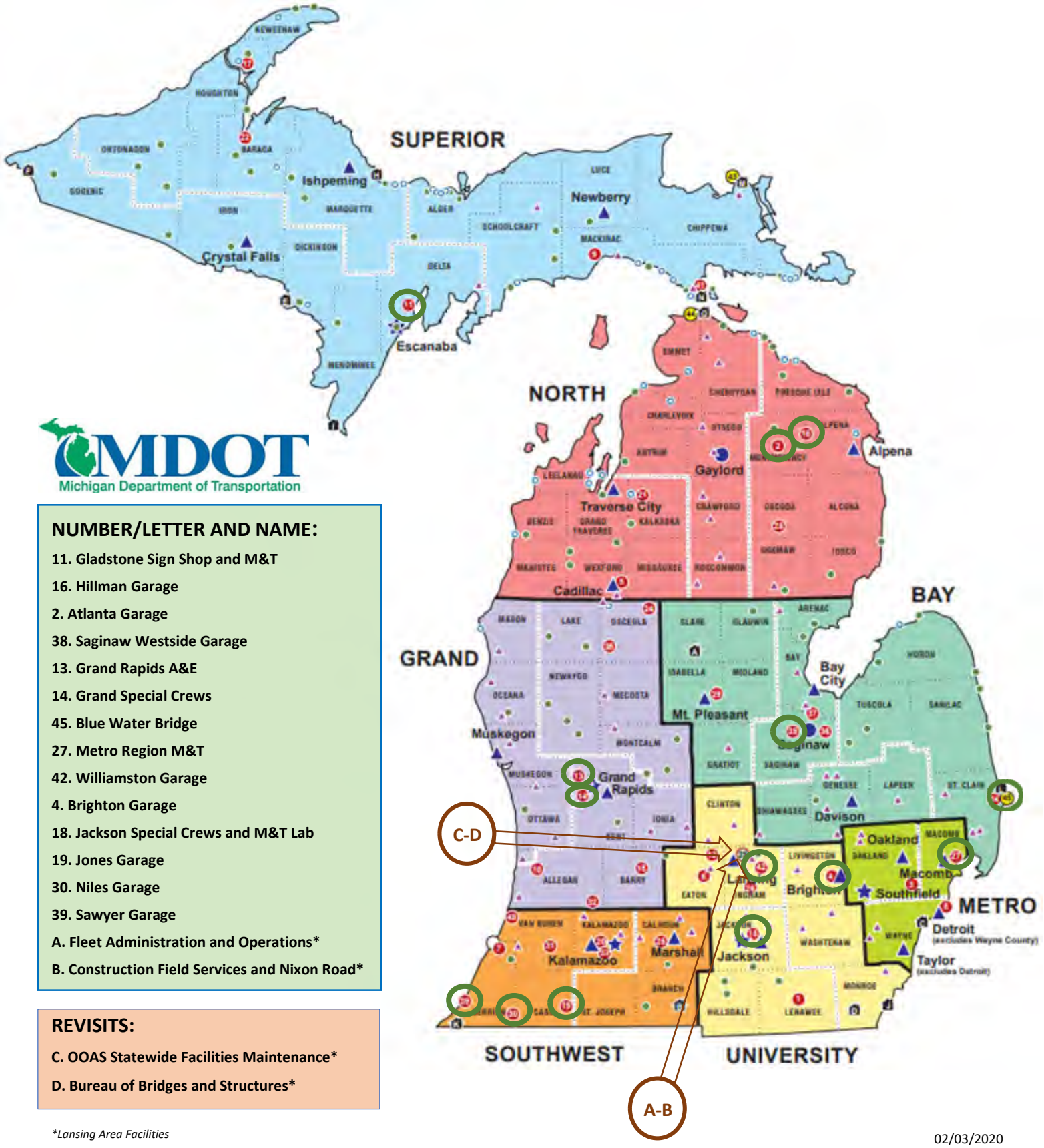
Annual Assessment:
Throughout 2020, the Safety and Security Administration conducted 17 environmental audits at various MDOT garages/facilities around the state. Environmental audits are required to be conducted at MDOT maintenance facilities at least once every three years to ensure environmental compliance and consistency with all State and Federal regulations. Part of the audit process includes looking at stormwater discharges and protection measures for polluting materials in place at each of the facilities. Every garage is required to have a site plan which includes information regarding the location of floor, roof and storm drains as well the direction of flow and discharge location. All wastewater coming from inside and around the facility is monitored by its direction of flow and where it is discharged to ensure that polluting materials do not reach the waters of the US. Major bodies of water, if any, that are in close proximity to the garages are noted on the site plan as well. Polluting materials that could cause harm to persons or the environment that are stored and/or used at garages are all documented in the PIPP which includes the name, location, quantity and pollution prevention measures in place for that specific material. If a large spill were to occur and polluting materials reached waters of the State, employees would follow the Environmental Emergency Spill Response Flowchart and contact the appropriate personnel. Protection of the environment and human health remains a top priority at all MDOT facilities.

Facilities visited included:

1. Williamston Garage
2. Jackson Special Crews
3. Jackson M&T
4. Brighton TSC
5. Grand Special Crews
6. Grand A&E
7. Blue Water Brid
8. Niles Garage
9. Jones Garage
10. Sawyer Garage
11. Metro M&T / C&T
12. Saginaw Westside Garage

13. Blue Water Bridge Garage 14. Atlanta Bridge 15. Hilman Garage 16. C&T and Nixon Rd. 17. OOAS Fleet 18. Gladstone Garage (Virtual)	
Follow-up on any delinquent plan requirements and revise appropriately.	Follow up to be confirmed to Stormwater Program Manager
Annual Assessment: The MDOT Safety and Security Administration provided guidance when corrective measures were requested.	
Formally accept the changes made to the PIPP.	To be made by the Stormwater Program Manager
Annual Assessment: There were no formal changes to the overall PIPP process in 2020	

2020 Year 3 Environmental Facility Audits
(3 Year Cycle 2018-2020)



MDOT
Michigan Department of Transportation

NUMBER/LETTER AND NAME:

11. Gladstone Sign Shop and M&T
16. Hillman Garage
2. Atlanta Garage
38. Saginaw Westside Garage
13. Grand Rapids A&E
14. Grand Special Crews
45. Blue Water Bridge
27. Metro Region M&T
42. Williamston Garage
4. Brighton Garage
18. Jackson Special Crews and M&T Lab
19. Jones Garage
30. Niles Garage
39. Sawyer Garage
A. Fleet Administration and Operations*
B. Construction Field Services and Nixon Road*

REVISITS:

C. OOAS Statewide Facilities Maintenance*
D. Bureau of Bridges and Structures*

**Lansing Area Facilities*

02/03/2020

ACTIVITY POLLUTION PREVENTION 3: CONDUCT INSPECTIONS OF MAINTENANCE FACILITIES **MONITORING YEAR: 2020**	
Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINISTRATION 1: Program Assessment and Reporting • POLLUTION PREVENTION 2: Audit PIPP Requirements
OBJECTIVE	
Routine inspections of MDOT maintenance facilities to ensure compliance with various components of the permit.	
DESCRIPTION	
Maintenance facilities will undergo inspection to ensure that facilities comply with: good housekeeping for salt and sand storage, compliance with discharges from cutting, grinding, drilling, or hydro demolition of concrete or asphalt, and fleet maintenance activities.	
ANNUAL REPORTING	
• Summary of all inspections done and recommendations for each facility.	
MEASURABLE GOALS	
MEASURABLE GOAL	**MEASURE OF ASSESSMENT**
An inspection of maintenance facilities shall be conducted at least once every five years. Salt and sand storage facilities, cross connections between storm sewer and sanitary sewer, the washing of vehicles, and labelling of outfall structures shall be inspected.	Reporting of each inspection provided to the Stormwater Program Manager
Annual Assessment: 6 maintenance facilities were inspected during the 2020 monitoring year. See attached summary for details and for a schedule of all inspections during the permit cycle.	
Recommendations shall be presented if practices are not in compliance with the permit.	Reporting of each inspection provided to the Stormwater Program Manager
Annual Assessment: In 2020, there were several issues found during inspections which were presented to the stormwater program manager. All maintenance facilities with noted issues were notified by the Stormwater Program Manager to schedule corrective actions.	
Maintenance facilities with provided recommendations shall address concerns within one year of the inspection.	The Stormwater Program Manager will work closely with maintenance facility personnel to ensure recommendations are incorporated.
Annual Assessment: Recommendations given for issues found during the 2020 inspections should be addressed in 2021.	

Maintenance Facilities – 2020 Inspections Summary

MDOT's Maintenance Facilities are inspected every 5 years on a rotating basis. Six maintenance facilities were inspected in 2020. A map of the garages inspected in 2020 as well as the future inspection schedule is presented in **Figure 1**.

Maintenance Facilities were inspected for cross connections between the storm sewer and sanitary sewer systems as well as functionality and maintenance of each of these systems. Items identified as a risk during inspections were assessed for the probability of failure and the consequence of failure. Based on the scores given for each of these categories, items were determined to be high, moderate, or low risks. Recommendations for each of the findings are presented in the **Tables 1 -3**.

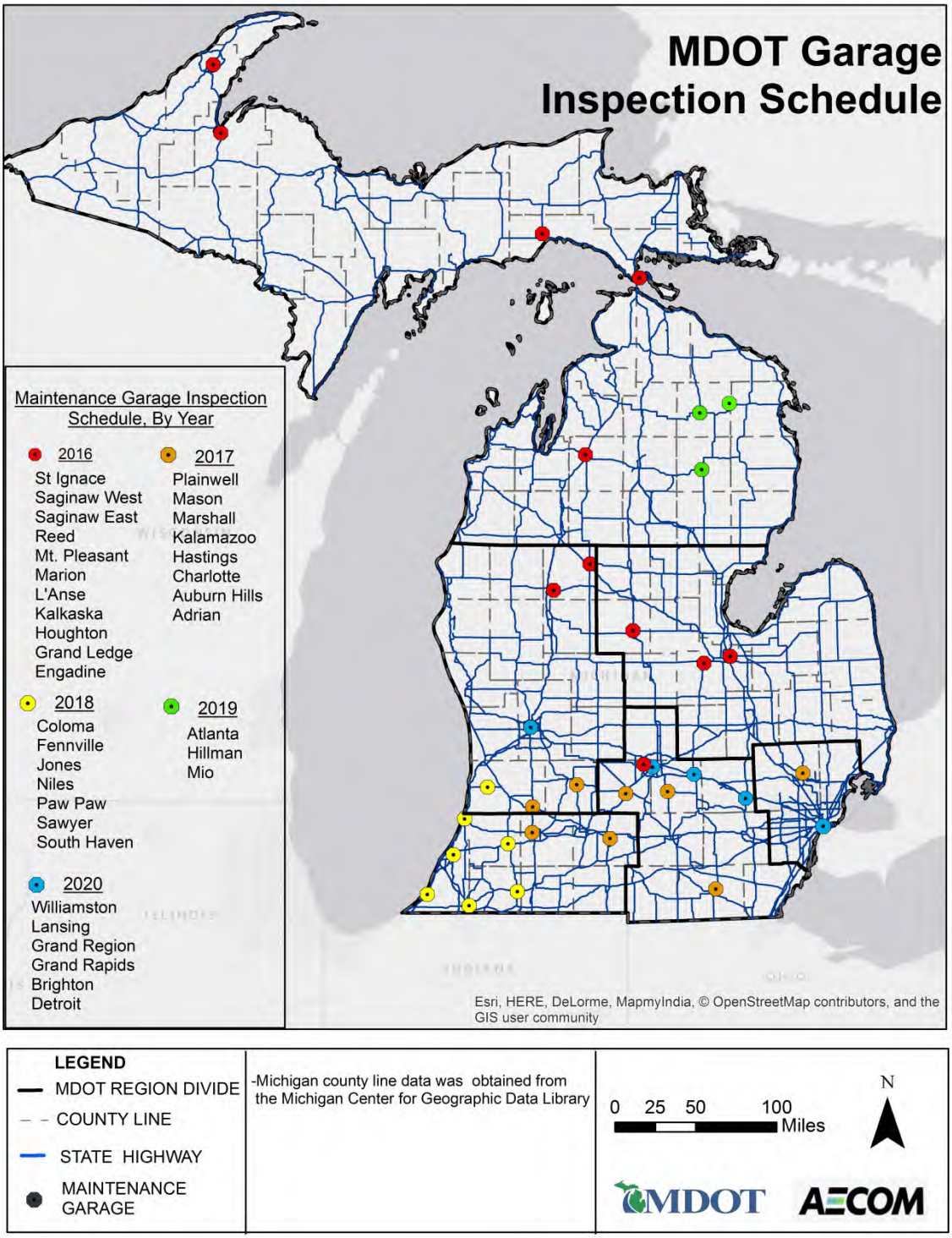


Figure 1 - Maintenance Facility Inspection Schedule

Table 1: Locations and Items with High Risk Ratings		
Location	**High-Risk Items**	**Recommendations**
Grand Rapids	The northwest, northeast, and southeast floor drains in the maintenance garage are connected to the storm sewer.	Reroute to the sanitary sewer.

Table 2: Locations and Items with Moderate Risk Ratings		
Location	**Moderate- Risk Items**	**Recommendations**
Brighton	Two of the six roof drains on Building A discharge to the sanitary sewer rather than to the storm sewer or yard surface.	Modify the roof drain piping for these two roof drains such that the piping connects to the outfall of one of the other roof drains. If rain exceeds the capacity of the pipe this will cause back-up on the roof. MDOT should confirm that the roof has an overflow.
Brighton	The cover of sanitary manhole SS1 is rusted shut.	Freed the cover from the frame so SS1 can be accessed in the future.
Brighton	The grate of catch basin CB1 is resting on loose material without a frame.	A frame should be attached so the grate is secured.
Detroit	CB5 had a large amount of debris at the bottom, which completely submerged the outlet pipe.	This catch basin should be cleaned.
Grand Rapids	The two roof drains on the north side of the building flow to the floor drains.	Reroute to the storm sewer or discharge to the asphalt on the north side of the building.
Lansing	The roof drains on the offices and maintenance garage flow to the sanitary sewer.	Reroute to the storm sewer or discharge to the asphalt on the west side of the building.
Lansing	There is a pipe to the northeast in sanitary manhole SS1 identified as a pulver drain that could not have its source confirmed by smoke testing.	Identify the source by running a sewer CCTV camera through the pipes.
Williamston	There is a pipe in ST1 that also was not shown on any plans and could not have its source confirmed by smoke testing.	Identify the sources by running a sewer CCTV camera through the pipes.

Table 2: Locations and Items with Moderate Risk Ratings		
Location	**Moderate- Risk Items**	**Recommendations**
Williamston	There are three pipes in storm manhole ST3 that aren't shown on any plans and could not have their sources confirmed by smoke testing.	Identify the sources by running a sewer CCTV camera through the pipes.

Table 3: Locations and Items with Low Risk Ratings		
Location	**Low-Risk Items**	**Recommendation**
Brighton	Floor drains FD6 and FD10 drain very slowly.	The discharge pipes from these floor drains should be cleaned.
Detroit	FD15 and FD16 flow to a sump which discharges to the surface on the northeast side of the storage building.	If any sort of washing takes place in the storage building, a storage tank should be installed to contain the sump discharge.
Grand Rapids Special Crews	Catch basin CB3 has some minor sediment build-up.	Clean the catch basin.
Williamston	The cover of sanitary manhole SS3 is rusted shut.	The cover should be freed from the frame so SS3 can be accessed in the future.

ACTIVITY POLLUTION PREVENTION 4: DOCUMENTATION OF ROAD MAINTENANCE ACTIVITIES

MONITORING YEAR: 2020

Minimum Control Measure : Construction, Post Construction, Good Housekeeping **Statewide or Urbanized Area**: Statewide **Implemented in Regions**: All Regions	**Related Activities** • ADMINSTRATION 1: Program Assessment and Reporting

OBJECTIVE

Document road maintenance activities related to stormwater and stormwater pollution control.

DESCRIPTION

Road maintenance activities include catch basin cleaning and street sweeping will be documented and reported to the Stormwater Program Manager on an annual basis for inclusion in the Stormwater Annual Report. MDOT roadways will be operated and maintained and storage facilities will be constructed to reduce pollutants washing into surface waters statewide.

ANNUAL REPORTING

- Estimate actual quantity of salt used for de-icing versus maximum calculated amount based on Maintenance Performance Guide 14100.
- Track hours of street sweeping and catch basin cleaning conducted.

MEASURABLE GOALS

MEASURABLE GOAL	MEASURE OF ASSESSMENT
Street sweeping will be completed and time commitments will be determined annually, based on annual budgets.	Reported by TSC Region Manager to the Stormwater Program Manager on an annual basis.
Annual Assessment: Refer to Figure F1 for recorded street sweeping activity, by region.	
Catch-basin cleaning will be completed and time commitments will be determined annually, based on annual budgets.	Reported by TSC Region Manager to the Stormwater Program Manager on an annual basis.
Annual Assessment: Refer to Figure F2 for recorded catch basin cleaning activity, by region.	
Follow MDOT Maintenance Performance Guide for all maintenance activities (road maintenance, street sweeping, catch basin cleanout, bridge, unpaved road maintenance, right of way, culvert, underdrain and edge cleaning, facility and truck washing, deicing, cold weather)	Maintenance Staff Manager to ensure all employees follow procedures.
Annual Assessment: All regions have been in compliance with the maintenance performance guidelines for 2020. A summary of winter maintenance including salt, sand, and liquid treatment statewide, per county, and per MDOT region is presented in the following pages. Refer to Figure F3 for recorded washout repairs per MDOT region, as well.	

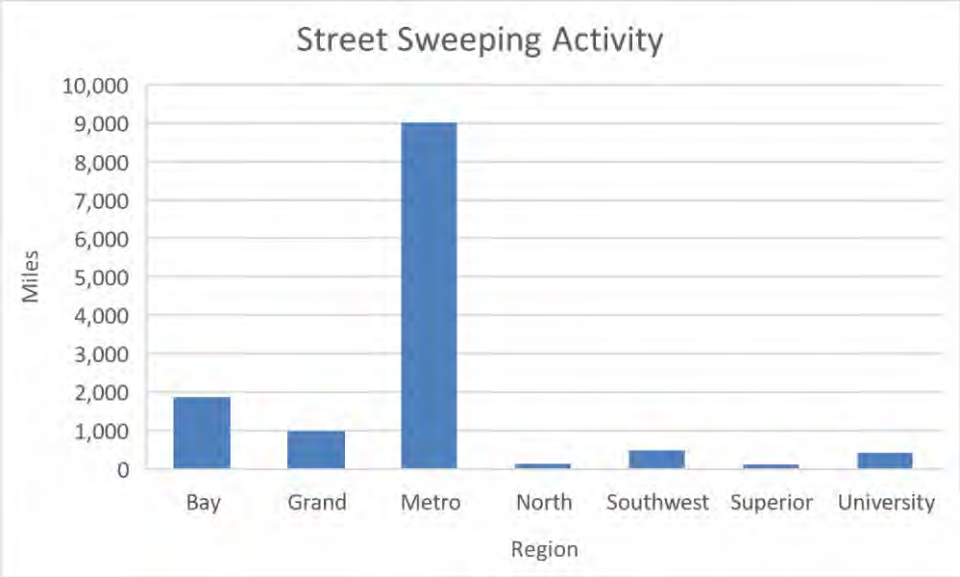


Figure F1 – 2020 Street Sweeping By Region

Figure F2 – 2020 Catch Basin Cleaning By Region

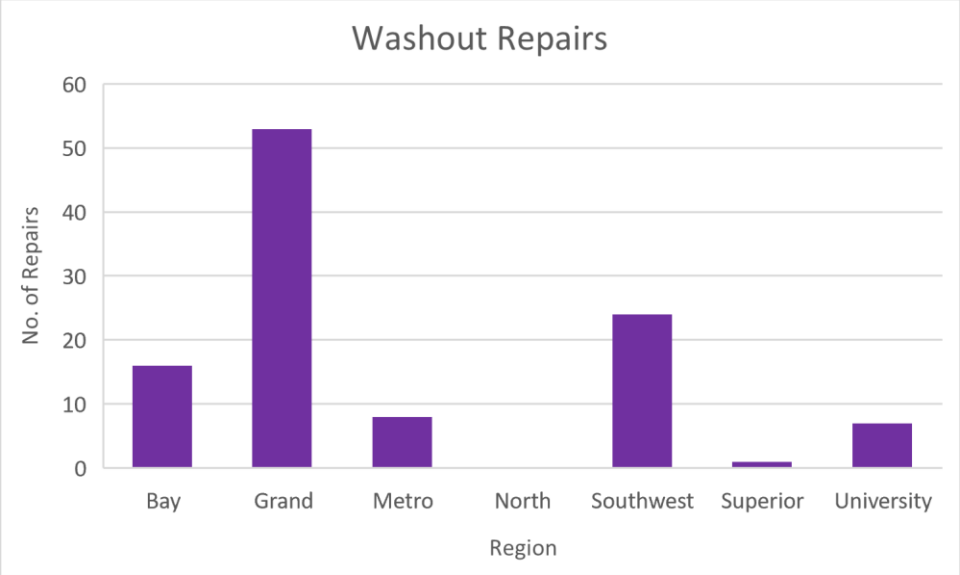


Figure F3 – 2020 Washout Repairs By Region