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National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Application Form (Reissuance)

version 1.4

(Submission #: 2EG-QK7F-YS9B, version 5)

Details

Submission ID 2EG-QK7F-YS9B
Submission Reason Renewal
Status Submitted

Form Input

Existing Permit Details

Existing Permit ID (Read Only)
NONE PROVIDED
Existing Permit Number (Read Only)
NONE PROVIDED

Section 1. Applicant Information

Applicant Information

Prefix NONE PROVIDED		
First Name NONE PROVIDED	Last Name NONE PROVIDED	
Title NONE PROVIDED		
Organization Name City of Westland		
Phone Type Other	Number 734-728-1770	Extension
Email relgharib@cityofwestland.com		
Fax 734-422-1218		
Address 36300 Warren road Westland, Michigan 48185 United States		

Section 2. MS4 Location Information

Municipal Entity Name (e.g., City of Lansing)

City of Westland

Identify the Primary Municipal Facility or the Mailing Address Location

A site needs to be identified as part of the application. Identify the physical address for the municipal entity, such as the primary municipal facility (e.g., City Hall).

Facility Location

42.339716,-83.397177

Section 3. MS4 Contacts (1 of 1)

CONTACTS

A contact must be provided for each of the roles listed below. You may assign more than one role to a single contact by holding down the 'Ctrl' key while selecting each role. Use the "+" (repeat section) button to add an additional contact.

Contact

Application Contact

Contact**Prefix**

Mr.

First Name

Ramzi

Last Name

El-Gharib

Title

Director of Public Service

Organization Name

NONE PROVIDED

Phone Type

Other

Number

734-728-1770

Extension**Email**

relgharib@cityofwestland.com

Fax

734-422-1218

Address

36300 Warren Road

Westland, Michigan 48185

United States

Section 4: Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdictions (1 of 1)

Regulated Area

Identify the urbanized area within the applicant's jurisdictional boundary as defined by the 2010 Census. The regulated MS4 means an MS4 owned or operated by a city, village, township, county, district, association, or other public body created by or pursuant to state law and the nested MS4 identified below that is located in an urbanized area and discharges storm water into surface waters of the state. The 2010 Census maps are located at the Urbanized Area Link below.

[Urbanized Area Link](#)**Select an Urbanized Area**

Detroit

Outfall and Point of Discharge Information

Provide the following information for each of the applicant's MS4 outfalls and points of discharge within the regulated area: identification number, description of whether the discharge is from an outfall or point of discharge, and the surface water of the

state that receives the discharge.

An outfall means a discharge point from an MS4 directly to surface waters of the state.

A point of discharge means a discharge from an MS4 to an MS4 owned or operated by another public body. In the case of a point of discharge, the surface water of the state is the ultimate receiving water from the final outfall.

Please note that an MS4 is not a surface water of the state. For example, an open county drain that is a surface water of the state is not an MS4.

An example table is available at the link below.

[Outfall and Point of Discharge example table link](#)

OUTFALL AND POINT OF DISCHARGE INFORMATION

Appendix A -List of Westland Outfalls_withCoordinates sorted_jmUpdated.pdf - 07/13/2018 01:39 PM

Comment

NONE PROVIDED

Nested Jurisdictions

Submit the name and general description of each nested MS4 for which a cooperative agreement has been reached to carry out the terms and conditions of the permit for the nested jurisdiction. The applicant shall be responsible for assuring compliance with the permit for those nested jurisdictions with which they have entered into an agreement and listed as part of the Application. If the primary jurisdiction and the nested jurisdiction agree to cooperate so that the terms and conditions of the permit are met for the nested MS4, the nested jurisdiction does not need to apply for a separate permit. A city, village, or township shall not be a nested jurisdiction.

Use the "+" (repeat section) button to add an additional Jurisdiction contact.

Nested Jurisdiction

Prefix

NONE PROVIDED

First Name

NONE PROVIDED

Last Name

NONE PROVIDED

Title

NONE PROVIDED

Organization Name

NONE PROVIDED

Phone Type

Number

Extension

NONE PROVIDED

Email

NONE PROVIDED

Fax

NONE PROVIDED

Address

[NO STREET ADDRESS SPECIFIED]

[NO CITY SPECIFIED], [NO STATE SPECIFIED] [NO ZIP CODE SPECIFIED]

[NO COUNTRY SPECIFIED]

Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program

STORM WATER MANAGEMENT PROGRAM (SWMP)

This Application requires a description of the Best Management Practices (BMPs) the applicant will implement for each minimum control measure and the applicable water quality requirements during this permit cycle. The applicant shall incorporate the BMPs to develop a SWMP as part of the Application. The SWMP shall be developed, implemented, and enforced to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable and protect water quality in accordance with the appropriate water quality requirements of the NREPA 451, Public Acts of 1994, Part 31, and the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq.). The Maximum Extent Practicable may be met by implementing the BMPs identified

in the SWMP and demonstrating the effectiveness of the BMPs. The applicant shall attach any appropriate and necessary documentation to demonstrate compliance with the six minimum control measures and applicable water quality requirements as part of the Application.

The applicant shall complete this Application to the best of its knowledge and ensure that it is true, accurate, and meets the minimum requirements for a SWMP to the Maximum Extent Practicable.

Several minimum control measures include a statement requesting the applicant to indicate in the response if you are, or will be, working collaboratively with watershed or regional partners on any or all activities to meet the minimum control measure requirements. If the applicant chooses to work collaboratively with watershed or regional partners to implement parts of the SWMP, each applicant will be responsible for complying with the minimum permit requirements.

For purposes of this Application, a procedure means a written process, policy or other mechanism describing how the applicant will implement minimum requirements.

When answering the questions in this section of the Application, the applicant's MS4 encompasses what the applicant identified in Sections 4. The applicant shall include a measurable goal for each BMP. Each measurable goal shall include, as appropriate, a schedule for BMP implementation (months and years), including interim milestones and the frequency of the action. Each measurable goal shall have a measure of assessment to measure progress towards achieving the measurable goal. A United States Environmental Protection Agency (USEPA) guidance document on measurable goals is available at the link below.

[USEPA measurable goals guidance document link](#)

Enforcement Response Procedure (ERP)

The applicant shall describe the current and proposed enforcement responses to address violations of the applicant's ordinances and regulatory mechanisms identified in the SWMP. The following question represents the minimum requirement for the ERP. Please complete the question below.

ERP

[Appendix B -ERP Westland-ver1.2.pdf - 07/11/2018 03:20 PM](#)

Comment

NONE PROVIDED

Public Participation/Involvement Program (PPP)

The applicant shall describe the current and proposed BMPs to meet the minimum control measure requirements for the PPP to the maximum extent practicable, which shall be incorporated into the SWMP. Please indicate in your response if you are, or will be, working collaboratively with watershed or regional partners on any or all activities in the PPP during the permit cycle (i.e., identify collaborative efforts in the procedures). The following questions represent the minimum control measure requirements for the PPP. Please complete all the questions below. A measurable goal with a measure of assessment shall be included for each BMP, and, as appropriate, a schedule for implementation (months and years), including interim milestones and the frequency of the BMP. The responses shall reflect the nested MS4s identified in Section 4.

Proposing to work collaboratively on any or all activities in the PPP during the permit cycle?

Yes

PPP Procedures

[Appendix C-FINAL APPROVEDcolPPP22717.pdf - 07/11/2018 02:56 PM](#)

Comment

NONE PROVIDED

2. Provide the reference to the procedure submitted above for making the SWMP available for public inspection and comment. The procedure shall include a process for notifying the public when and where the SWMP is available and of opportunities to provide comment. The procedure shall also include a process for complying with local public notice requirements, as appropriate. (page and paragraph of attachments): e.g., Attachment A, Page 3, Section b. Appendix C, Section B

3. Provide the reference to the procedure submitted above for inviting public involvement and participation in the implementation and periodic review of the SWMP. (page and paragraph of attachments):
Appendix C, Section D

Section 6. Public Education Program

Proposing to work collaboratively on any or all activities in the PEP during the permit cycle?

Yes

PEP Procedures

[Appendix D -FINALAPPROVEDCoIPEP32117.pdf - 07/11/2018 02:58 PM](#)

Comment

NONE PROVIDED

4. PEP activities may be prioritized based on the assessment of high priority, community-wide issues and targeted issues to reduce pollutants in storm water runoff. If prioritizing PEP activities, provide the reference to the procedure submitted above with the assessment and list of the priority issues (e.g., Attachment A, Section 1).

Appendix D, Section A

5. Provide the reference to the procedure submitted above identifying applicable PEP topics and the activities to be implemented during the permit cycle. If prioritizing, prioritize each applicable PEP topics as high, medium, or low based on the assessment in Question 4.

For each applicable PEP topic below, identify in the procedure the target audience; key message; delivery mechanism; year and frequency the BMP will be implemented; and the responsible party. If a PEP topic is determined to be not applicable or a priority issue, provide an explanation.

An example PEP table is available at the link below.

[PEP table example link](#)

A. Promote public responsibility and stewardship in the applicant's watershed(s). Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High Appendix D, Section C

B. Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

D. Promote preferred cleaning materials and procedures for car, pavement, and power washing. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

Medium, Appendix D, Section C

E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

G. Identify and promote the availability, location, and requirement of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

I. Educate the public on, and promote the benefits of, green infrastructure and low impact development. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

High, Appendix D, Section C

J. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to storm water runoff. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.

Low, Appendix D, Section C

6. Provide the reference to the procedure submitted above for evaluating and determining the effectiveness of the overall PEP. The procedure shall include a method for assessing changes in public awareness and behavior resulting from the implementation of the PEP and the process for modifying the PEP to address ineffective implementation. e.g., Attachment A, Page 3, Section b.

Appendix D, Section D

Section 7. Illicit Discharge Elimination Program

[>>Click here to access the MDEQ IDEP Compliance Assistance Document](#)

[>>Click here to access the Center for Watershed Protection guide](#)

Proposing to work collaboratively on any or all BMPs in the IDEP during the permit cycle?

Yes

Illicit Discharge Elimination Program Procedures

Appendix E Attachment E.pdf - 04/01/2016 04:16 PM

Appendix E -FINALAPPROVEDCollIDEP09292017.pdf - 07/11/2018 02:59 PM

Comment

NONE PROVIDED

Storm Sewer System Map

7. Provide the location where an up-to-date storm sewer system map(s) is available. The map(s) shall identify the following: the storm sewer system, the location of all outfalls and points of discharge, and the names and location of the surface waters of the state that receive discharges from the permittee's MS4 (for both outfalls and points of discharge). A separate storm sewer system includes: roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, and man-made channels. A storm sewer system map(s) may include available diagrams, such as certification maps, road maps showing rights-of-way, as-built drawings, or other hard copy or digital representation of the storm sewer system. (e.g., The Department of Public Works office)

DPS Office Marquette St Westland, Mi 48185

Illicit Discharge Identification and Investigation

8. The MS4 may be prioritized for detecting non-storm water discharges during the permit cycle. The goal of the prioritization process is to target areas with high illicit discharge potential. If prioritizing, provide the reference to the procedure submitted above with the process for selecting each priority area using the list below. (e.g., Attachment A, page 3, Section b.)

- Areas with older infrastructure
- Industrial, commercial, or mixed use areas
- Areas with a history of past illicit discharges
- Areas with a history of illegal dumping
- Areas with septic systems
- Areas with older sewer lines or with a history of sewer overflows or cross-connections
- Areas with sewer conversions or historic combined sewer systems
- Areas with poor dry-weather water quality
- Areas with water quality impacts, including waterbodies identified in a Total Maximum Daily Load
- Priority areas applicable to the applicant not identified above

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix E, Section C

9. If prioritizing dry-weather screening, provide the reference to the document submitted above with the geographical location of each prioritized area using either a narrative description or map and identify the prioritized areas that will be targeted during the permit cycle.

Appendix E, Section C

10. Provide the procedure for performing field observations at all outfalls and points of discharge in the priority areas as identified in the procedure above or for the entire MS4 during dry-weather at least once during the permit cycle. The procedure shall include a schedule for completing the field observations during the permit cycle or more expeditiously if the applicant becomes aware of a non-storm water discharge.

As part of the procedure, the applicant may submit an interagency agreement with the owner or operator of the downstream MS4 identifying responsibilities for ensuring an illicit discharge is eliminated if originating from the applicant's point(s) of discharge. The interagency agreement would eliminate the requirement for performing a field observation at that point(s) of discharge. Areas not covered by the interagency agreement shall be identified with a schedule for performing field observations

included in the procedure.

The focus of the field observation shall be to observe the following:

- Presence/absence of flow
- Water clarity
- Deposits/stains on the discharge structure or bank
- Color
- Vegetation condition
- Odor
- Structural condition
- Floatable materials
- Biology, such as bacterial sheens, algae, and slimes

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix E, Section D

11. Provide the reference to the procedure submitted above for performing field screening if flow is observed at an outfall or point of discharge and the source of an illicit discharge is not identified during the field observation. Field screening shall include analyzing the discharge for indicator parameters (e.g., ammonia, fluoride, detergents, and pH). The procedure shall include a schedule for performing field screening.

Appendix E, Section D

12. Provide the reference to the procedure submitted above for performing a source investigation if the source of an illicit discharge is not identified by field screening. The procedure shall include a schedule for performing a source investigation.

Appendix E, Section D

13. Provide the reference to the procedure submitted above for responding to illegal dumping/spills. The procedure shall include a schedule for responding to complaints, performing field observations, and follow-up field screening and source investigations as appropriate.

Appendix E, Section D

14. If prioritizing, provide the reference to the procedure submitted above for responding to illicit discharges upon becoming aware of such a discharge outside of the priority areas. The procedure shall include a schedule for performing field observations, and follow-up field screening and source investigation as appropriate. If not prioritizing, enter ☐ Not Applicable.

Appendix E, Section D

15. Provide the reference to the procedure submitted above which includes a requirement to immediately report any release of any polluting materials from the MS4 to the surface waters or groundwaters of the state, unless a determination is made that the release is not in excess of the threshold reporting quantities in the Part 5 Rules, by calling the appropriate MDEQ District Office, or if the notice is provided after regular working hours call the MDEQ's 24-Hour Pollution Emergency Alerting System telephone number: 800-292-4706. (Example threshold reporting quantities: a release of 50 pounds of salt in solid form or 50 gallons in liquid form to waters of the state unless authorized by the MDEQ for deicing or dust suppressant.)

Appendix H - Spill Response, Section C

16. If the procedures requested in Questions 8 through 14 do not accurately reflect the applicant's procedure(s), provide the reference to the procedure(s) submitted above describing the alternative approach to meet the minimum requirements.

This Collaborative and Alternative approach meets and/or exceeds the expected results from minimum control measure requirements as described in Attachment E, Section B.

17. Provide the reference to the procedure submitted above for responding to illicit discharges once the source is identified. The procedure shall include a schedule to eliminate the illicit discharge and pursue enforcement actions. The procedure shall also address illegal spills/dumping.

Appendix E, Section E

IDEP Training and Evaluation

18. Provide the reference to the program submitted above to train staff employed by the applicant, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge to the regulated MS4, on the following topics. The program shall include a training schedule for this permit cycle. It is recommended that staff be trained more than once per permit cycle.

- Techniques for identifying an illicit discharge or connection, including field observation, field screening, and source

investigation.

- Procedures for reporting, responding to, and eliminating an illicit discharge or connection and the proper enforcement response.

- The schedule and requirement for training at least once during the term of this permit cycle for existing staff and within the first year of hire for new staff.

Provide the reference to the program submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix E, Section D

19. Provide the reference to the procedure submitted above for evaluating and determining the overall effectiveness of the IDEP. The procedure shall include a schedule for implementation. Examples of evaluating overall effectiveness include, but are not limited to, the following: evaluate the prioritization process to determine if efforts are being maximized in areas with high illicit discharge potential; evaluate the effectiveness of using different detection methods; evaluate the number of discharges and/or quantity of discharges eliminated using different enforcement methods; and evaluate program efficiency and staff training frequency.

Appendix E, Section F

Illicit Discharge Ordinance or Other Regulatory Mechanism

20. Provide the reference to the in effect ordinance or regulatory mechanism submitted above that prohibits non-storm water discharges into the applicant's MS4 (except the non-storm water discharges addressed in Questions 21 and 22).

Appendix E, Attachment E, Table 1

21. Provide the reference to the ordinance or other regulatory mechanism submitted above that excludes prohibiting the discharges or flows from firefighting activities to the applicant's MS4 and requires that these discharges or flows only be addressed if they are identified as significant sources of pollutants to waters of the State. The ordinance shall not authorize illicit discharges; however, the applicant may choose to exclude prohibiting the discharges and flows from firefighting activities if they are identified as not being significant sources of pollutants to waters of the state.

Appendix E, Attachment E, Table 1

22. Provide the reference to the ordinance or other regulatory mechanism submitted above that excludes prohibiting the following categories of non-storm water discharges or flows if identified as significant contributors to violations of Water Quality Standards. The ordinance shall not authorize illicit discharges; however, the applicant may choose to exclude prohibiting the following discharges or flows if they are identified as not being a significant contributor to violations of Water Quality Standards.

a. Water line flushing and discharges from potable water sources

b. Landscape irrigation runoff, lawn watering runoff, and irrigation waters

c. Diverted stream flows and flows from riparian habitats and wetlands

d. Rising groundwaters and springs

e. Uncontaminated groundwater infiltration and seepage

f. Uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits

g. Foundation drains, water from crawl space pumps, footing drains, and basement sump pumps

h. Air conditioning condensation

i. Waters from noncommercial car washing

j. Street wash water

k. Dechlorinated swimming pool water from single, two, or three family residences. (A swimming pool operated by the permittee shall not be discharged to a separate storm sewer or to surface waters of the state without NPDES permit authorization from the MDEQ.)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix E, Attachment E, Table 1

23. Provide the reference to the ordinance or regulatory mechanism submitted above that regulates the contribution of pollutants to the applicant's MS4 in the attachment above.

Appendix E, Attachment E, Table 1

24. Provide the reference to the ordinance or regulatory mechanism submitted above that prohibits illicit discharges, including illicit connections and the direct dumping or disposal of materials into the applicant's MS4 in the attachment above.

Appendix E, Attachment E, Table 1

25. Provide the reference to the ordinance or regulatory mechanism submitted above with the authority established to inspect, investigate, and monitor suspected illicit discharges into the applicant's MS4 in the attachment above.

Appendix E, Attachment E, Table 1

26. Provide the reference to the ordinance or regulatory mechanism submitted above that requires and enforces elimination of illicit discharges into the applicant's MS4, including providing the applicant the authority to eliminate the illicit discharge in the attachment above.

Appendix E, Attachment E, Table 1

Section 8. Construction Storm Water Runoff Control Program

Proposing to work collaboratively on any or all requirements of the Construction Storm Water Runoff Control Program during the permit cycle?

No

Qualifying Local Soil Erosion and Sedimentation Control Programs

[Click here to access the list of approved Part 91 Agencies](#)

27. Is the applicant a Part 91 Agency?

Yes

If yes, choose type

Municipal Enforcing Agency

No the applicant relies on the following Qualifying Local Soil Erosion and Sedimentation Control Program (Part 91 Agency)

NONE PROVIDED

Construction Storm Water Runoff Control

Construction Storm Water Runoff Control Program Procedure Attachment

[Appendix F -Westland_CSWRC-ver1.1.pdf - 04/01/2016 04:22 PM](#)

Comment

NONE PROVIDED

28. Provide the reference to the procedure submitted above with the process for notifying the Part 91 Agency or appropriate staff when soil or sediment is discharged to the applicant's MS4 from a construction activity, including the notification timeframe. The procedure shall allow for the receipt and consideration of complaints or other information submitted by the public or identified internally as it relates to construction storm water runoff control. For non-Part 91 agencies, consideration of complaints may include referring the complaint to the qualifying local Soil Erosion and Sedimentation Control Program as appropriate. Construction activity is defined pursuant to Part 21, Wastewater Discharge Permits, Rule 323.2102 (K). The applicant may consider as part of their procedure when and under what circumstances the Part 91 Agency or appropriate staff will be contacted.

Appendix F, Section B

29. Provide the reference to the procedure submitted above with the requirement to notify the MDEQ when soil, sediment, or other pollutants are discharged to the applicant's MS4 from a construction activity, including the notification timeframe. Other pollutants include pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. The applicant may consider as part of their procedure when and under what circumstances the MDEQ will be contacted.

Appendix F, Section D

30. Provide the reference to the procedure submitted above for ensuring that construction activity one acre or greater in total earth disturbance with the potential to discharge to the applicant's MS4 obtains a Part 91 permit, or is conducted by an approved Authorized Public Agency as appropriate. Note: For applicants that conduct site plan review, the procedure must be triggered at the site plan review stage.

Appendix F, Section B

31. Provide the reference to the procedure submitted above to advise the landowner or recorded easement holder of the property where the construction activity will occur of the State of Michigan Permit by Rule (Rule 323.2190).

Appendix F, Section E

Section 9. Post-Construction Storm Water Runoff Program

[Click here to access the Low Impact Development Manual for Michigan. Chapter 9 of the manual provides a methodology for addressing post-construction storm water runoff.](#)

The MDEQ has the following resources available to assist with development of a Post-Construction Storm Water Runoff Program.

[Click here to access the Post-Construction Storm Water Runoff Program Compliance Assistance Document](#)

Post-Construction Storm Water Runoff Program Procedures, Ordinances, and Regulatory Mechanisms

Appendix G - Westland_Post Construction-v1.1.pdf - 04/01/2016 04:24 PM

Appendix G- Attachment.pdf - 04/01/2016 04:24 PM

Comment

NONE PROVIDED

Ordinance or Other Regulatory Mechanism

32. Provide the reference to the in-effect ordinance or regulatory mechanism submitted above to address post-construction storm water runoff from new development and redevelopment projects, including preventing or minimizing water quality impacts. The ordinance or other regulatory mechanism shall apply to private, commercial, and public projects, including projects where the applicant is the developer. This requirement may be met using a single ordinance or regulatory mechanism or a combination of ordinances and regulatory mechanisms. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

Appendix G

33. Provide the reference to the ordinance or other regulatory mechanism submitted above that applies to projects that disturb at least one or more acres, including projects less than an acre that are part of a larger common plan of development or sale and discharge into the applicant's MS4. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

Appendix G

Federal Facilities

Federal facilities are subject to the Energy Independence and Security Act of 2007. Section 438 of this legislation establishes post-construction storm water runoff requirements for federal development and redevelopment projects.

34. Is the applicant the owner or operator of a federal facility with a storm water discharge

No, skip to Question 36

35. Provide the reference to the regulatory mechanism submitted above with the requirement to implement the post-construction storm water runoff control requirements in Section 438 of the Energy Independence and Security Act. If not available at this time, provide the date the regulatory mechanism will be available.

The United States Environmental Protection Agency (USEPA) has a technical guidance available at the following link.

[USEPA Technical Guidance on Implementing the Stormwater Runoff Requirements](#)

Provide the reference to the regulatory mechanism submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

NONE PROVIDED

Water Quality Treatment Performance Standard

36. Does the ordinance or other regulatory mechanism include one or more of the following water quality treatment standards?

Treat the first one inch of runoff from the entire project site. Provide the ordinance or regulatory mechanism reference in the attachment above (page and paragraph of attachments): e.g., Attachment A, Pages 1-15

NONE PROVIDED

Treat the runoff generated from 90 percent of all runoff-producing storms for the project site. Provide the ordinance or regulatory mechanism reference in the attachment above (page and paragraph of attachments): e.g., Attachment A, Pages 1-15

See Wayne County Stormwater Management Standards, Chapter 6

If no, provide the date the ordinance or regulatory mechanism will be submitted.

NONE PROVIDED

37. If the applicant has chosen the water quality treatment standard of requiring treatment of the runoff generated from 90 percent

of all runoff-producing storms, what is the source of the rainfall data?

The MDEQ memo included in the sources below is available at the following link.

[March 24, 2006 MDEQ memo providing the 90 percent annual non-exceedance storm statistics](#)

Sources

NONE PROVIDED

Other rainfall data source (page and paragraph of attachments)

See Wayne County Stormwater Management Standards, Chapter 6

38. Provide the reference to the ordinance or regulatory mechanism submitted above with the requirement that BMPs be designed on a site-specific basis to reduce post-development total suspended solids loadings by 80 percent or achieve a discharge concentration of total suspended solids not to exceed 80 milligrams per liter. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

See Wayne County Stormwater Management Standards, Chapter 6

Channel Protection Performance Standard

39. Provide the reference to the ordinance or regulatory mechanism submitted above with the requirement that the post-construction runoff rate and volume of discharges not exceed the pre-development rate and volume for all storms up to the two-year, 24-hour storm at the project site. At a minimum, pre-development is the last land use prior to the planned new development or redevelopment. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

A MDEQ spreadsheet is available to assist with these calculations at the following link.

[Calculations for Storm Water Runoff Volume Control Spreadsheet](#)

Provide the reference to the ordinance or regulatory mechanism submitted above.

See Wayne County Stormwater Management Standards, Chapter 8

If pursuing an alternative approach, provide the reference to the ordinance or other regulatory mechanism submitted above describing the alternative to meet the minimum requirements, including an explanation as to how the channel protection standard will prevent or minimize water quality impacts.

NONE PROVIDED

40. The channel protection performance standard is not required for the following waterbodies: the Great Lakes or connecting channels of the Great Lakes; Rouge River downstream of the Turning Basin; Saginaw River; Mona Lake and Muskegon Lake (Muskegon County); and Lake Macatawa and Spring Lake (Ottawa County). If applicable, provide the reference to the ordinance or regulatory mechanism submitted above that excludes any waterbodies from the channel protection performance standard. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

N/A.

Site-Specific Requirements

41. Provide the reference to the procedure submitted above for reviewing the use of infiltration BMPs to meet the water quality treatment and channel protection standards for new development or redevelopment projects in areas of soil or groundwater contamination in a manner that does not exacerbate existing conditions. The procedure shall include the process for coordinating with MDEQ staff as appropriate.

See Wayne County Stormwater Management Standards, Chapter 8

42. Provide the reference to the ordinance or regulatory mechanism submitted above that requires BMPs to address the associated pollutants in potential hot spots as part of meeting the water quality treatment and channel protection standards for new development or redevelopment projects. Hot spots include areas with the potential for significant pollutant loading such as gas stations, commercial vehicle maintenance and repair, auto recyclers, recycling centers, and scrap yards. Hot spots also include areas with the potential for contaminating public water supply intakes. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

See Wayne County Stormwater Management Standards, Chapter 8

Off-Site Mitigation and Payment in Lieu Programs

43. An applicant may choose to allow for the approval of off-site mitigation for redevelopment projects that cannot meet 100 percent of the performance standards on-site after maximizing storm water retention. Off-site mitigation refers to BMPs implemented at another location within the same jurisdiction and watershed/sewershed as the original project. A watershed is the geographic area included in a 10-digit Hydrologic Unit Code and a sewershed is the area where storm water is conveyed by the applicant's MS4 to a common outfall or point of discharge. If proposing to allow for off-site mitigation, provide the reference to the ordinance or regulatory mechanism submitted above with the off-site mitigation requirements. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

Not pursuing this option.

44. An applicant may choose to allow for the approval of payment in lieu for projects that cannot meet 100 percent of the performance standards on-site after maximizing storm water retention. A payment in lieu program refers to a developer paying a fee to the applicant that is applied to a public storm water management project within the same jurisdiction and watershed/sewershed as the original project in lieu of installing the required BMPs onsite. The storm water management project may be either a new BMP or a retrofit to an existing BMP and shall be developed in accordance with the applicant's performance standards. A watershed is the geographic area included in a 10-digit Hydrologic Unit Code and a sewershed is the area where storm water is conveyed by the applicant's MS4 to a common outfall or point of discharge. If proposing to allow for payment in lieu, provide the reference to the ordinance or regulatory mechanism submitted above with the payment in lieu requirements. If not available at this time, provide the date the ordinance or regulatory mechanism will be available. If not pursuing the options available in Questions 43 and 44, skip to Question 52.

Not pursuing this option.

45. Provide the reference to the ordinance or regulatory mechanism submitted above that establishes criteria for determining the conditions under which off-site mitigation and/or payment in lieu are available and require technical justification as to the infeasibility of on-site management. The determination that performance standards cannot be met on-site shall not be based solely on the difficulty or cost of implementing, but shall be based on multiple criteria related to the physical constraints of the project site, such as: too small of a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical analysis; a site use that is inconsistent with the capture and reuse of storm water; too much shade or other physical conditions that preclude adequate use of plants. The criteria shall also include consideration of the stream order and location within the watershed/sewershed as it relates to the water quality impacts from the original project site (e.g., the water quality impact from a project site with a discharge to a small-sized stream would be greater than a project site on a large river and an offset downstream of the project site may provide less water quality benefit.) The highest preference for off-site mitigation and in lieu projects shall be given to locations that yield benefits to the same receiving water that received runoff from the original project site. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

NONE PROVIDED

46. Provide the reference to the ordinance or regulatory mechanism submitted above that establishes a minimum amount of storm water to be managed on-site as a first tier for off-site mitigation or payment in lieu. A higher offset ratio is required if off-site mitigation or payment in lieu is requested for the amount of storm water identified as the first tier. For example, a minimum of 0.4 inches of storm water runoff shall be managed on-site as a first tier. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

NONE PROVIDED

47. Provide the reference to the ordinance or regulatory mechanism submitted above that requires an offset ratio of 1:1.5 for the amount of storm water above the first tier (identified in Question 46) not managed on-site to the amount of storm water required to be mitigated at another site or for which in-lieu payments shall be made. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

NONE PROVIDED

48. Provide the reference to the ordinance or regulatory mechanism submitted above requiring that if demonstrated by the developer to the applicant that it is completely infeasible to manage the first tier of storm water identified in Question 47 on-site, the offset ratio for the unmanaged portion is 1:2. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

NONE PROVIDED

49. Provide the reference to the ordinance or regulatory mechanism submitted above that requires a schedule for completing off-site mitigation and in-lieu projects. Off-site mitigation and in-lieu projects should be completed within 24 months after the start of the original project site construction. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

NONE PROVIDED

50. Provide the reference to the ordinance or regulatory mechanism submitted above that requires that offsets and in-lieu projects be preserved and maintained in perpetuity, such as deed restrictions and long-term operation and maintenance. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NONE PROVIDED

51. Describe the tracking system implemented, or to be implemented, to track off-site mitigation and/or in-lieu projects.
NONE PROVIDED

52. If there are any other exceptions to the performance standards (other than off-site mitigation and payment in lieu) being implemented or to be implemented during the permit cycle, provide the reference to the document submitted above describing the exception(s). The applicant shall demonstrate how the exception provides an equivalent or greater level of protection as the performance standards.
No.

Site Plan Review

53. Provide the reference to the ordinance or regulatory mechanism submitted above that includes a requirement to submit a site plan for review and approval of post-construction storm water runoff BMPs. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
See Appendix G Attachments Article 12:4.8

54. Provide the reference to the procedure submitted above for site plan review and approval. If not available at this time, provide the date the procedure will be available.
See Appendix G Attachments Article 12

55. Provide the reference to the site plan review and approval procedure submitted above describing the process for determining how the developer meets the performance standards and ensures long-term operation and maintenance of BMPs in the attachment above. If not available at this time, provide the date the procedure will be available.
See Appendix G Attachments Article 12

Long-Term Operation and Maintenance of BMPs

56. Provide the reference to the ordinance or regulatory mechanism submitted above that requires the long-term operation and maintenance of all structural and vegetative BMPs installed and implemented to meet the performance standards in perpetuity. If not available at this time, provide the date the procedure will be available.
See Appendix G Attachments Article 12

57. Provide the reference to the ordinance or regulatory mechanism submitted above that requires a maintenance agreement between the applicant and owners or operators responsible for the long-term operation and maintenance of structural and vegetative BMPs installed and implemented to meet the performance standards. If not available at this time, provide the date the procedure will be available.
See Appendix G Attachments Article 12:2.11

**58. Does the maintenance agreement or other legal mechanism allow the applicant to complete the following?
(Check if yes)**
NONE PROVIDED

If any of the boxes above were not checked, provide a response explaining how the maintenance agreement or other legal mechanism allows the applicant to verify and ensure maintenance of the BMP.
See Wayne County Stormwater Management Standards, Chapter 9

59. Provide the reference to the procedure submitted above for tracking compliance with a maintenance agreement or other legal mechanism to ensure the performance standards are met in perpetuity in the attachment above.
See Wayne County Stormwater Management Standards, Chapter 9

Section 10. Pollution Prevention and Good Housekeeping Program

Pollution Prevention and Good Housekeeping Program Procedures

[Appendix H -P2GH-Spill Response ver.1.2.pdf - 07/11/2018 03:13 PM](#)

[Appendix H - P2GH-Golf CourseWL-ver1.2.pdf - 07/13/2018 01:45 PM](#)

[Appendix H - P2GH-DPS-ver1.2.pdf - 07/13/2018 01:51 PM](#)

[Appendix H - Westland-P2GH-ver1.3.pdf - 10/22/2018 01:14 PM](#)

[2019.05.01 MDEQ Permit - FINAL_City of Westland Golf Course.pdf - 06/28/2019 11:36 AM](#)

Comment

The operations selection box in 77 kept selecting all bridge, unpaved roads, and right-of-way should NOT be highlighted.

Municipal Facility and Structural Storm Water Control Inventory

60. Provide the reference to the up-to-date inventory submitted above identifying applicant-owned or operated facilities and storm water structural controls with a discharge of storm water to surface waters of the state. The inventory shall include the location of each facility. Provide an estimate of the number of structural storm water controls throughout the entire MS4 for each applicable category below (e.g., 100 catch basins and 7 detention basins). For example, Attachment A, Page 3, Section B.

Appendix H - P2GH, Table 1

Facilities that may have the high potential to discharge pollutants:

Equipment storage and maintenance facilities

Fleet maintenance facilities

Materials storage and Public Works yards

Salt storage facilities

Check all applicant-owned or operated facilities with a discharge of storm water to surface waters of the state:

Administration buildings and libraries

Fire Stations

Parks

Police Stations

Public golf courses

Recycling facilities

Vehicle storage

Check all applicant-owned or operated structural storm water controls with a discharge of storm water to surface waters of the state:

Catch basins

Detention basins

Oil/water separators

Pump Stations

Secondary containment

Underground storage vaults or tanks

Vegetated swales

61. Provide the location where an up-to-date map (or maps) is available with the location of the facilities and structural storm water controls identified in Question 60. The location of the facilities and structural storm water controls may be included on the storm sewer system map maintained for the IDEP. The map (or maps) is available at the following location: (e.g., The Department of Public Works office)

Department of Public Services. 37137 Marquette St, Westland, MI 48185

62. Provide the reference to the procedure submitted above for updating and revising the inventory in Question 60 and map (or maps) identified in Question 61 as facilities and structural storm water controls are added, removed, or no longer owned or operated by the applicant in the attachment above. A suggested timeframe for updating/revising the inventory and map(s) is 30 days following adding/removing a facility or structural storm water control.

Appendix H - P2GH General Procedures, Section C

Facility-Specific Storm Water Management

63. Provide the reference to the procedure submitted above for assessing each facility identified in Question 60 for the potential to discharge pollutants to surface waters of the state. The procedure shall include a process for updating and revising the assessment. A recommended timeframe for updating/revising the assessment is 30 days prior to discharging storm water from a new facility and within 30 days of determining a need to update/revise the facility assessment.

The applicant should consider the following factors when assessing each facility:

- Amount of urban pollutants stored at the site (e.g., sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides,

chlorides, trash, bacteria, or other site-specific pollutants)

- Identification of improperly stored materials
- The potential for polluting activities to be conducted outside (e.g., vehicle washing)
- Proximity to waterbodies
- Poor housekeeping practices
- Discharge of pollutants of concern to impaired waters

If the applicant does not own a facility that discharges storm water to surface waters of the state in the urbanized area, skip to Question 71.

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH General Procedures, Section B

If not applicable

NONE PROVIDED

64. Provide the reference to the list of prioritized facilities submitted above using the assessment in Question 63. Each facility shall be prioritized based on having the high, medium, or low potential to discharge pollutants to surface waters of the state. Facilities with the high potential for pollutant runoff shall include, but are not limited to, the applicant's fleet maintenance and storage yards. The applicant may choose to demonstrate how a fleet maintenance/storage yard has the low potential to discharge pollutants to surface waters of the state. If demonstrating a low potential, provide the reference to the demonstration submitted above for the fleet maintenance and/or storage yard.

Appendix H - P2GH General Procedures, Section D

65. Is a site-specific standard operating procedure (SOP) available identifying the structural and non-structural storm water controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff? The SOP shall be available at each facility with the high potential for pollutant runoff and upon request from the MDEQ. The SOP shall identify the person responsible for oversight of the facility. The MDEQ may request the submission of the SOP during the application review process.

Yes, a site-specific SOP is available at each facility with the high potential for pollutant runoff

66. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the following: the list of significant materials stored on-site that could pollute storm water; the description of the handling and storage requirements for each significant material; and the potential to discharge the significant material. (SOP Reference Example: DPW Yard SOP ♦ Section 2)

Appendix H - P2GH DPS Facility; Appendix H - P2GH Municipal Golf Course

67. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, identifying the good housekeeping practices implemented at the site. Good housekeeping practices include keeping the facility neat and orderly, properly storing and covering materials, and minimizing pollutant sources to prevent or reduce pollutant runoff. (SOP Reference Example: DPW Yard SOP ♦ Section 2)

Appendix H - P2GH DPS Facility; Appendix H - P2GH Municipal Golf Course

68. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the description and schedule for conducting routine maintenance and inspections of storm water management and control devices to ensure materials and equipment are clean and orderly and to prevent or reduce pollutant runoff. A biweekly schedule is recommended for routine inspections. (SOP Reference Example: DPW Yard SOP ♦ Section 2)

Appendix H - P2GH DPS Facility; Appendix H - P2GH Municipal Golf Course

69. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the description and schedule for conducting a comprehensive site inspection at least once every six months. The comprehensive inspection shall include an inspection of all structural storm water controls and a review of non-structural storm water controls to prevent or reduce pollutant runoff. (SOP Reference Example: DPW Yard SOP ♦ Section 2)

Appendix H - P2GH DPS Facility; Appendix H - P2GH Municipal Golf Course

70. Provide the reference to the procedure submitted above identifying the BMPs currently implemented or to be implemented during the permit cycle to prevent or reduce pollutant runoff at each facility with the medium and lower potential for the discharge of pollutants to surface waters of the state using the assessment and prioritized list in Questions 63 and 64.

Appendix H - P2GH General Procedures, Sections G and I

Structural Storm Water Control Operation and Maintenance Activities

71. Provide the reference to the procedure submitted above for prioritizing each catch basin for routine inspection, maintenance, and cleaning based on preventing or reducing pollutant runoff. The procedure shall include assigning a priority level for each catch basin and the associated inspection, maintenance and cleaning schedule based on preventing or reducing pollutant runoff. The procedure shall include a process for updating/revising the priority level for a catch basin giving consideration to inspection findings and citizen complaints. A recommended timeframe for updating/revising the procedure is 30 days following the construction of a catch basin or a change in priority level. If the applicant does not own or operate catch basins skip to Question 75.

Appendix H - P2GH General Procedures, Section F

72. Provide the reference to the narrative description or map submitted above with the geographic location of the catch basins in each priority level.

Appendix H - P2GH General Procedures, Section F

73. Provide the reference to the procedure submitted above for inspecting, cleaning, and maintaining catch basins to ensure proper performance. Proper cleaning methods include ensuring accumulated pollutants are not discharged during cleaning and are removed prior to discharging to surface waters of the state. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link.

[Catch Basin Cleaning Activities Guidance Document](#)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH General Procedures, Section G

74. Provide the reference to the procedure submitted above for dewatering, storage, and disposal of materials extracted from catch basins. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link.

[Catch Basin Cleaning Activities Guidance Document](#)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH General Procedures, Section H

75. If the applicant owns or operates structural storm water controls identified in Question 60, excluding the structural storm water controls included in an SOP as part of Question 65 and catch basins, provide the reference to the procedure submitted above for inspecting and maintaining the structural storm water controls. The procedure shall include a description and schedule for inspecting and maintaining each structural storm water control and the process for disposing of maintenance waste materials. The procedure shall require that controls be maintained to reduce to the maximum extent practicable the contribution of pollutants to storm water. The procedure shall include a process for updating/revising the procedure to ensure a maintenance and inspection program for each structural storm water control. A recommended timeframe for updating/revising the procedure is 30 days following the implementation of a new structural storm water control.

Appendix H - P2GH General Procedures, Section J

76. Provide the reference to the procedure submitted above requiring new applicant-owned or operated facilities or new structural storm water controls for water quantity be designed and implemented in accordance with the post-construction storm water runoff control performance standards and long-term operation and maintenance requirements.

Appendix H - P2GH General Procedures, Section K

Municipal Operations and Maintenance Activities

77. Provide the reference to the procedure(s) submitted above with the assessment of the following operation and maintenance activities, if applicable, for the potential to discharge pollutants to surface waters of the state. The assessment shall identify all pollutants that could be discharged from each applicable operation and maintenance activity and the BMPs being implemented or to be implemented to prevent or reduce pollutant runoff. The procedure shall include a process for updating and revising the assessment. A suggested timeframe for updating/revising the assessment is 30 days following adding/removing BMPs to address new and existing operation and maintenance activities.

At a minimum, the procedure shall include assessing the following municipal operation and maintenance activities if applicable (check all that apply):

Road, parking lot, and sidewalk maintenance (e.g., pothole, sidewalk, and curb and gutter repair)

Bridge maintenance

Right-of-way maintenance

Unpaved road maintenance

Cold weather operations (e.g., plowing, sanding, application of deicing agents, and snow pile disposal)

Vehicle washing and maintenance of applicant-owned vehicles (e.g., police, fire, school bus, public works)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH DPS Facility

78. Provide the reference to the procedure submitted above for prioritizing applicant-owned or operated streets, parking lots, and other impervious infrastructure for street sweeping based on the potential to discharge pollutants to surface waters of the state. The procedure shall include assigning a priority level for each parking lot and street and the associated cleaning schedule (i.e., sweeping frequency and timing) based on preventing or reducing pollutant runoff. The procedure shall include a process for updating/revising the priority level giving consideration to street sweeping findings and citizen complaints. A recommended timeframe for updating/revising the prioritization is 30 days following the construction of a new street, parking lot, or other applicant-owned or operated impervious surface or within 30 days of identifying a need to revise a priority level. If the applicant does not own or operate any streets, parking lots, or other impervious infrastructure, skip to Question 82.

Appendix H - P2GH General Procedures, Section I

79. Provide the reference to the narrative description or map submitted above with the geographic location of the streets, parking lots, and other impervious surfaces in each priority level.

Appendix H - P2GH General Procedures, Section I

80. Provide the reference to the procedure submitted above identifying the sweeping methods based on the applicant's sweeping equipment and use of additional resources in sweeping seasonal leaves or pick-up of other materials. Proper sweeping methods include operating sweeping equipment according to the manufacturers' operating instructions and to protect water quality.

Appendix H - P2GH General Procedures, Section I

81. Provide the reference to the procedure submitted above for dewatering, storage, and disposal of street sweeper waste material. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link and includes information on street sweeping requirements.

[Catch Basin Cleaning Activities Guidance Document](#)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH General Procedures, Section H

Managing Vegetated Properties

82. If the applicant's pesticide applicator does not exclusively use ready-to-use products from the original container, provide the reference to the procedure submitted above requiring the applicant's pesticide applicator to be certified by the State of Michigan as an applicator in the applicable category, to prevent or reduce pollutant runoff from vegetated land. A description of the certified applicator categories is available at the following link. If the applicant only applies ready-to-use products from the original container, enter "Not Applicable."

[Commercial Pesticide Application Certification Categories](#)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

Appendix H - P2GH General Procedures, Section L

Contractor Requirements and Oversight

83. Provide the reference to the procedure submitted above requiring contractors hired by the applicant to perform municipal operation and maintenance activities comply with all pollution prevention and good housekeeping BMPs as appropriate. The procedure shall include the process implemented for providing oversight of contractor activities to ensure compliance.

Appendix H - P2GH General Procedures, Section N

Employee Training

84. Provide the reference to the employee training program submitted above to train employees involved in implementing or overseeing the pollution prevention and good housekeeping program. The program shall include the training schedule. At a minimum, existing staff shall be trained once during the permit cycle and within the first year of hire for new staff.

Appendix H - P2GH General Procedures, Section M

Section 11. Total Maximum Daily Load Implementation Plan

The USEPA has a document to assist with developing a TMDL Implementation Plan available at the following link.
[Understanding Impaired Waters and Total Maximum Daily Load \(TMDL\) Requirements for Municipal Stormwater Programs](#)

Total Maximum Daily Load Implementation Plan

Approved Rouge River Collaborative TMDL 9-5-19.pdf - 09/20/2019 01:44 PM

Comment

NONE PROVIDED

Proposing to work collaboratively on any or all activities in the TMDL Implementation Plan during the permit cycle.
Yes

85. If a TMDL(s) was included in the applicant's application notice, provide the name(s) below. If no TMDL was identified, skip to the next section.

Rouge River Watershed (Biota, E. coli)

86. Provide the reference to the procedure submitted above describing the process for identifying and prioritizing BMPs currently being implemented or to be implemented during the permit cycle to make progress toward achieving the pollutant load reduction requirement in each TMDL identified in Question 85. The procedure shall include a process for reviewing, updating, and revising BMPs implemented or to be implemented to ensure progress in achieving the TMDL pollutant load reduction.

See Appendix I

87. Provide the reference to the TMDL BMP Priority List submitted above with prioritized BMPs currently being implemented or to be implemented during the permit cycle to make progress toward achieving the pollutant load reduction requirement in each TMDL identified in Question 85. Each BMP shall include a reference to the targeted TMDL pollutant.

See Appendix I

88. Provide the reference to the TMDL Monitoring Plan submitted above for assessing the effectiveness of the BMPs currently being implemented, or to be implemented, in making progress toward achieving the TMDL pollutant load reduction requirement, including a schedule for completing the monitoring. Monitoring shall be specifically for the pollutant identified in the TMDL. Monitoring may include, but is not limited to, outfall monitoring, in-stream monitoring, or modeling. At a minimum, monitoring shall be conducted two times during the permit cycle or at a frequency sufficient to determine if the BMPs are adequate in making progress toward achieving the TMDL pollutant load reduction. Existing monitoring data may be submitted for review as part of the plan to meet part of the monitoring requirement.

See Appendix I

Section 12. Phase I only Industrial Facility Inspection Program

Industrial Facility Inspection Program Procedures

NONE PROVIDED

Comment

NONE PROVIDED

89. Provide the reference to the procedure submitted above describing the process for identifying existing industrial facilities, as defined below, within the applicant's jurisdiction that discharge stormwater to the applicant's MS4.

Industrial facilities include, but are not limited to, the following:

- Industrial facilities that the applicant determines are contributing a substantial pollutant loading to the MS4
- Industrial facilities subject to the Superfund Amendments and Reauthorization Act (SARA)
- Hazardous waste treatment, disposal, storage, and recovery facilities

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

NONE PROVIDED

90. Provide the reference to the inventory of industrial facilities submitted above using the procedure in Question No. 89.

NONE PROVIDED

91. Provide the reference to the procedure submitted above for prioritizing the industrial facilities identified in Question No. 90 for inspection. Each industrial facility shall be evaluated and prioritized based on having a high, medium or low potential to discharge pollutants to the applicant's MS4. The procedure shall include a process for updating and revising the prioritization, including modifying the priority level based on contribution of significant pollutant loading to the MS4, inspection findings, and the potential to discharge pollutants.

The applicant should consider the following factors when prioritizing an industrial facility:

- Pollutant sources stored on site
- Pollutants of concern
- Proximity to impaired surface waters of the state
- The applicant's violation or complaint history with the facility

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

NONE PROVIDED

92. Provide the reference to the list of the prioritized industrial facilities for inspection submitted above.

NONE PROVIDED

93. Provide the reference to the procedure submitted above for inspecting industrial facilities based on the prioritized list in Question No. 92 to evaluate pollutant source controls. The number or percentage of facilities to be inspected (e.g., 20% annually) or the inspection frequency for the different priority levels (e.g., high priority facilities inspected annually) shall be identified with the highest priority facilities receiving more frequent inspections. The procedure shall include a process for inspecting facilities based on complaints concerning pollutants discharged to the applicant's MS4.

At a minimum, inspections shall include an evaluation of BMPs implemented and maintained to control pollutant sources at the industrial facility and for evidence of unauthorized discharges, illicit connections, and potential discharges of pollutants to the applicant's MS4.

The procedure shall include notifying the applicable Water Resources Division District Office if an industrial facility appears to be in violation of the NPDES industrial stormwater program.

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.

NONE PROVIDED

94. Provide the reference to the employee training program submitted above to train employees whose primary job duties are to implement the industrial facility inspection program. The program shall include the training schedule. At a minimum, existing staff shall be trained once during the permit cycle and new hires within the first year of their hire date. The training shall cover facility inspection procedures.

[Click here to access the State of Michigan Industrial Stormwater program page](#)

Provide the reference to the program submitted above (page and paragraph of attachments): e.g., Attachment A, Page 3, Section b.

NONE PROVIDED

Section 13. Certify and Submit

Comments (As needed)

NONE PROVIDED

Additional Documents (As needed)

NONE PROVIDED

Comment

NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
9/20/2019 1:44 PM	Approved Rouge River Collaborative TMDL 9-5-19.pdf	Attachment	John Deslippe

Date	Attachment Name	Context	User
6/28/2019 11:36 AM	2019.05.01 MDEQ Permit - FINAL_City of Westland Golf Course.pdf	Attachment	Elizabeth Thacker
10/22/2018 1:14 PM	Appendix H - Westland-P2GH-ver1.3.pdf	Attachment	Elizabeth Thacker
7/13/2018 1:51 PM	Appendix H - P2GH-DPS-ver1.2.pdf	Attachment	Elizabeth Thacker
7/13/2018 1:45 PM	Appendix H - P2GH-Golf CourseWL-ver1.2.pdf	Attachment	Elizabeth Thacker
7/13/2018 1:39 PM	Appendix A -List of Westland Outfalls_withCoordinates sorted_jmUpdated.pdf	Attachment	Elizabeth Thacker
7/11/2018 3:20 PM	Appendix B -ERP Westland-ver1.2.pdf	Attachment	Elizabeth Thacker
7/11/2018 3:13 PM	Appendix H -P2GH-Spill Response ver.1.2.pdf	Attachment	Elizabeth Thacker
7/11/2018 2:59 PM	Appendix E -FINALAPPROVEDColIDEP09292017.pdf	Attachment	Elizabeth Thacker
7/11/2018 2:58 PM	Appendix D -FINALAPPROVEDColPEP32117.pdf	Attachment	Elizabeth Thacker
7/11/2018 2:56 PM	Appendix C-FINAL APPROVEDcolPPP22717.pdf	Attachment	Elizabeth Thacker
4/1/2016 4:24 PM	Appendix G- Attachment.pdf	Attachment	John Deslippe
4/1/2016 4:24 PM	Appendix G - Westland_Post Construction-v1.1.pdf	Attachment	John Deslippe
4/1/2016 4:22 PM	Appendix F -Westland_CSWRC-ver1.1.pdf	Attachment	John Deslippe
4/1/2016 4:16 PM	Appendix E Attachment E.pdf	Attachment	John Deslippe

Status History

	User	Processing Status
6/28/2019 11:34:41 AM	Elizabeth Thacker	Draft
9/20/2019 1:45:32 PM	John Deslippe	Submitted

Revisions

Revision	Revision Date	Revision By
Revision 1	4/1/2016 4:45 PM	John Deslippe
Revision 2	7/2/2018 1:10 PM	John Deslippe
Revision 3	7/16/2018 1:51 PM	Elizabeth Thacker
Revision 4	10/22/2018 1:13 PM	Elizabeth Thacker
Revision 5	6/28/2019 11:34 AM	Elizabeth Thacker

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00001	Middle Rouge River	Outfall	13382220.16	307394.4338
SWOF-00009	Willow Creek	outfall	13380892.66	303891.2272
SWOF-00010	Deer Drain	Outfall	13377297.43	311244.2735
SWOF-00011	Deer Drain	Outfall	13377573.92	311500.7586
SWOF-00012	Deer Drain	Outfall	13377570.76	311272.6711
SWOF-00028	Discharges to wetland	Outfall	13383030.35	306523.5602
SWOF-00029	Willow Creek	outfall	13381129.83	304391.9841
SWOF-00032	Willow Creek	outfall	13381377.96	305042.8434
SWOF-00033	Willow Creek	outfall	13381266.25	302393.8952
SWOF-00034	Middle Rouge River	Outfall	13383004.75	308370.7589
SWOF-00040	Middle Rouge River	Outfall	13392650.74	309262.6407
SWOF-00041	Middle Rouge River	Outfall	13392406.9	310032.188
SWOF-00042	Middle Rouge River	Outfall	13392515.3	309992.3121
SWOF-00043	Middle Rouge River	Outfall	13392203.01	310239.6647
SWOF-00045	Middle Rouge River	Outfall	13382259.91	306482.0842
SWOF-00046	Morgan Drain	Outfall	13384932.43	309023.696
SWOF-00047	Morgan Drain	Outfall	13385321.34	308467.682
SWOF-00048	Willow Creek	outfall	13380600.96	301076.1384
SWOF-00051	Middle Rouge River	Outfall	13390332.2	310531.8613
SWOF-00052	Middle Rouge River	Outfall	13390291.55	310524.3793
SWOF-00053	Middle Rouge River	Outfall	13390290.02	310531.9987
SWOF-00054	Middle Rouge River	Outfall	13390230.08	310286.8903
SWOF-00055	Middle Rouge River	Outfall	13390631.47	310773.0389
SWOF-00056	Deer Drain	Outfall	13376716.42	308409.8094
SWOF-00060	Deer Drain	Outfall	13379851.68	306231.1792
SWOF-00061	Deer Drain	Outfall	13379809.22	306382.6484
SWOF-00065	Tonquish Creek	Outfall	13376583.47	304670.8172
SWOF-00066	Tonquish Creek	Outfall	13376802.25	304681.184
SWOF-00068	Butler Drain	outfall	13401049.84	283368.5468
SWOF-00069	Butler Drain	outfall	13401087.79	283413.4437
SWOF-00070	Butler Drain	outfall	13401027.66	283330.3628
SWOF-00071	Butler Drain	outfall	13400523.29	281764.095
SWOF-00074	Butler Drain	outfall	13399654.64	282267.2455
SWOF-00075	Butler Drain	outfall	13399458.91	282266.0969
SWOF-00076	Butler Drain	outfall	13399656.15	282520.9435
SWOF-00092	Middle Rouge River	Outfall	13382182.03	306472.5298
SWOF-00096	Middle Rouge River	Outfall	13384120.89	311237.8474
SWOF-00097	Middle Rouge River	Outfall	13384293.28	310998.8639
SWOF-00098	Middle Rouge River	Outfall	13383260.86	310851.8311
SWOF-00101	Middle Rouge River	Outfall	13383680.52	309654.5015
SWOF-00103	Middle Rouge River	Outfall	13393404.1	310083.3917
SWOF-00106	Middle Rouge River	Outfall	13384199.96	311678.1011
SWOF-00107	Middle Rouge River	Outfall	13384211.99	311639.5782
SWOF-00108	Middle Rouge River	Outfall	13384197.3	311621.8722
SWOF-00111	Middle Rouge River	Outfall	13384200.77	311607.2492
SWOF-00112	Middle Rouge River	Outfall	13384213.45	311589.0058

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00113	Middle Rouge River	Outfall	13384175.37	311446.3584
SWOF-00114	Discharges to wetland	Outfall	13396699.51	289916.5728
SWOF-00115	Discharges to wetland	Outfall	13395787.27	289803.3515
SWOF-00116	Lower Rouge	Outfall	13397343.87	290017.1972
SWOF-00117	Lower Rouge	Outfall	13397350.35	290024.7087
SWOF-00118	Willow Creek	Outfall	13380942.01	301777.7426
SWOF-00119	Willow Creek	Outfall	13380897.3	301791.5821
SWOF-00120	Willow Creek	Outfall	13380348.27	300743.0603
SWOF-00121	Discharges to wetland	Outfall	13396188.99	289775.033
SWOF-00122	Lower Rouge	Outfall	13397723.98	289627.5113
SWOF-00123	Discharges to wetland	Outfall	13395352.67	289530.8327
SWOF-00124	Lower Rouge	Outfall	13401328.14	289552.0463
SWOF-00125	Lower Rouge	Outfall	13401305.67	289530.2953
SWOF-00126	Discharges to wetland	Outfall	13395117.46	289305.988
SWOF-00127	Lower Rouge	Outfall	13398211.55	289348.9391
SWOF-00128	Lower Rouge	Outfall	13397313.6	289241.3208
SWOF-00129	Lower Rouge	Outfall	13400799.64	289442.3693
SWOF-00135	Tonquish Creek	Outfall	13379703.24	305288.3901
SWOF-00136	Tonquish Creek	Outfall	13379674.46	305496.6564
SWOF-00137	Tonquish Creek	Outfall	13379599.5	305676.6475
SWOF-00139	Deer Drain	Outfall	13379044.72	307711.3803
SWOF-00140	Deer Drain	Outfall	13379038.72	307671.1754
SWOF-00142	Storm Drain	Outfall	13379557.25	306903.7737
SWOF-00146	Deer Drain	Outfall	13378833.42	307679.3105
SWOF-00147	Deer Drain	Outfall	13378912.31	307665.9903
SWOF-00153	Deer Drain	Outfall	13378991.39	308291.4927
SWOF-00154	Deer Drain	Outfall	13378993.86	308295.1879
SWOF-00155	Deer Drain	Outfall	13378994.87	308239.6044
SWOF-00156	Deer Drain	Outfall	13378985.25	308112.933
SWOF-00157	Morgan Drain	Outfall	13384942.84	309006.9227
SWOF-00158	Discharges to wetland	Outfall	13395685.62	289724.2729
SWOF-00160	Morgan Drain	Outfall	13385086.63	300992.3682
SWOF-00161	Morgan Drain	Outfall	13385080.73	300997.6425
SWOF-00170	Middle Rouge River	Outfall	13382522.81	307454.5954
SWOF-00174	Middle Rouge River	Outfall	13389035.93	312611.1255
SWOF-00175	Middle Rouge River	Outfall	13389220.77	312520.1877
SWOF-00176	Middle Rouge River	Outfall	13387293.09	310435.1416
SWOF-00177	Middle Rouge River	Outfall	13387253.95	310476.2797
SWOF-00178	Middle Rouge River	Outfall	13386449.74	311500.4246
SWOF-00180	Lower Rouge	Outfall	13399543.48	289109.9871
SWOF-00181	Lower Rouge	Outfall	13399375.95	289228.544
SWOF-00182	Lower Rouge	Outfall	13399414.04	289172.1924
SWOF-00183	Lower Rouge	Outfall	13399892.34	289250.5974
SWOF-00184	Lower Rouge	Outfall	13399911.72	289254.7847
SWOF-00188	Butler Drain	outfall	13399654.58	282545.0672
SWOF-00189	Discharges to wetland	Outfall	13396923.12	290107.5793

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00190	Butler Drain	outfall	13401050.53	283453.6251
SWOF-00191	Butler Drain	outfall	13401223.51	283455.6336
SWOF-00192	Butler Drain	outfall	13400854.41	283442.9551
SWOF-00193	Butler Drain	outfall	13400282.07	283322.5951
SWOF-00194	Butler Drain	outfall	13400272.7	283322.8018
SWOF-00195	Butler Drain	outfall	13400936.11	282111.5733
SWOF-00196	Butler Drain	outfall	13400875.71	282097.7682
SWOF-00197	Butler Drain	outfall	13400136.36	283130.9282
SWOF-00199	Butler Drain	outfall	13401657.6	283011.6013
SWOF-00200	Butler Drain	outfall	13401344.22	282979.3166
SWOF-00201	Butler Drain	outfall	13401412.47	282983.3885
SWOF-00202	Butler Drain	outfall	13401421.12	282988.71
SWOF-00203	Butler Drain	outfall	13401425.88	282996.9301
SWOF-00204	Butler Drain	outfall	13401028.56	282938.5657
SWOF-00205	Butler Drain	outfall	13401746.21	282984.5417
SWOF-00206	Butler Drain	outfall	13401755.59	282991.0751
SWOF-00207	Butler Drain	outfall	13399663.78	282526.3756
SWOF-00208	Willow Creek	outfall	13377479.95	299559.2884
SWOF-00209	Willow Creek	outfall	13379886.74	300622.5819
SWOF-00210	Willow Creek	outfall	13379758.9	300555.6853
SWOF-00211	Willow Creek	outfall	13379770.83	300523.6372
SWOF-00215	Willow Creek	outfall	13380727.44	301271.9037
SWOF-00216	Willow Creek	outfall	13380822.31	301575.1794
SWOF-00217	Willow Creek	outfall	13379195.46	299944.9628
SWOF-00219	Morgan Drain	Outfall	13385591.89	307868.1983
SWOF-00220	Morgan Drain	Outfall	13385122.13	300044.6496
SWOF-00221	Middle Rouge River	Outfall	13394629.4	310050.7723
SWOF-00222	Middle Rouge River	Outfall	13394827.91	309531.8925
SWOF-00224	Middle Rouge River	Outfall	13399070.77	307380.5513
SWOF-00225	Middle Rouge River	Outfall	13399007.55	307355.0937
SWOF-00226	Middle Rouge River	Outfall	13398833.48	307032.7912
SWOF-00227	Middle Rouge River	Outfall	13398981.85	307077.0194
SWOF-00228	Middle Rouge River	Outfall	13398776.19	307698.1563
SWOF-00229	Middle Rouge River	Outfall	13398596.33	306927.5545
SWOF-00230	Middle Rouge River	Outfall	13398587.95	306930.9216
SWOF-00232	Middle Rouge River	Outfall	13403593.31	308645.721
SWOF-00236	Middle Rouge River	Outfall	13388054.1	311878.5105
SWOF-00238	Middle Rouge River	Outfall	13389454.81	312409.1561
SWOF-00244	Morgan Drain	Outfall	13385117.27	300460.8053
SWOF-00248	Middle Rouge River	Outfall	13390830.26	311076.6469
SWOF-00249	Morgan Drain	Outfall	13385127.87	299703.73
SWOF-00250	Middle Rouge River	Outfall	13392201.13	311212.2513
SWOF-00254	Deer drain	Outfall	13376769.35	311185.042
SWOF-00255	Deer Drain	Outfall	13377559.58	312075.4707
SWOF-00256	Deer Drain	Outfall	13377543.57	312066.0586
SWOF-00257	Deer Drain	Outfall	13377539.61	311843.7943

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00258	Deer Drain	Outfall	13378646.49	309853.2468
SWOF-00259	Deer Drain	Outfall	13378540.63	309507.7229
SWOF-00268	Middle Rouge River	Outfall	13398047.32	308386.8511
SWOF-00269	Middle Rouge River	Outfall	13398756.66	308676.0051
SWOF-00270	Middle Rouge River	Outfall	13398596.96	308630.4864
SWOF-00271	Middle Rouge River	Outfall	13402444.52	308695.8935
SWOF-00272	Middle Rouge River	Outfall	13398810.24	308927.953
SWOF-00273	Middle Rouge River	Outfall	13402350.79	308687.6222
SWOF-00274	Middle Rouge River	Outfall	13406503.2	310690.8429
SWOF-00275	Middle Rouge River	Outfall	13405792.83	312546.8897
SWOF-00276	Middle Rouge River	Outfall	13406835.42	312477.2747
SWOF-00277	Middle Rouge River	Outfall	13406562.58	312725.8277
SWOF-00278	Middle Rouge River	Outfall	13406324.41	312731.3257
SWOF-00279	Butler Drain	outfall	13403950.22	283789.2143
SWOF-00281	Butler Drain	outfall	13402551.45	283747.6025
SWOF-00282	Butler Drain	outfall	13402553.3	284098.8918
SWOF-00286	Middle Rouge River	Outfall	13406899.5	311707.4042
SWOF-00288	Middle Rouge River	Outfall	13406434.43	309752.0656
SWOF-00289	Middle Rouge River	Outfall	13406391.6	309869.4827
SWOF-00292	Middle Rouge River	Outfall	13392855.88	310875.2254
SWOF-00293	Middle Rouge River	Outfall	13392810.81	310923.2171
SWOF-00296	Middle Rouge River	Outfall	13395609.31	308199.028
SWOF-00297	Middle Rouge River	Outfall	13396686.58	308447.8854
SWOF-00298	Middle Rouge River	Outfall	13393398.78	310184.5808
SWOF-00299	Middle Rouge River	Outfall	13391871.33	311876.6873
SWOF-00300	Middle Rouge River	Outfall	13391978.91	311792.5864
SWOF-00301	Middle Rouge River	Outfall	13391906.4	311716.9862
SWOF-00302	Middle Rouge River	Outfall	13391945.89	311787.7938
SWOF-00303	Middle Rouge River	Outfall	13391421.32	311458.28
SWOF-00304	Middle Rouge River	Outfall	13392250.18	311592.1495
SWOF-00305	Middle Rouge River	Outfall	13392223	311589.8372
SWOF-00306	Middle Rouge River	Outfall	13392220.19	311571.4179
SWOF-00307	Middle Rouge River	Outfall	13397323.58	308375.5618
SWOF-00308	Middle Rouge River	Outfall	13397033.64	308764.4872
SWOF-00309	Middle Rouge River	Outfall	13397192.88	308712.6293
SWOF-00311	Middle Rouge River	Outfall	13392708.91	309210.0161
SWOF-00312	Middle Rouge River	Outfall	13395043.22	308935.1364
SWOF-00314	Middle Rouge River	Outfall	13393656.04	309104.3493
SWOF-00315	Middle Rouge River	Outfall	13393868.08	309218.0509
SWOF-00316	Middle Rouge River	Outfall	13406992.1	310617.2912
SWOF-00317	Middle Rouge River	Outfall	13403793.61	308730.0256
SWOF-00318	Middle Rouge River	Outfall	13406055.17	312531.3783
SWOF-00319	Middle Rouge River	Outfall	13406829.2	312462.7754
SWOF-00320	Middle Rouge River	Outfall	13403098.86	309102.5423
SWOF-00322	Middle Rouge River	Outfall	13398458.87	308516.1094
SWOF-00323	Middle Rouge River	Outfall	13399021.32	308183.1681

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00324	Middle Rouge River	Outfall	13398734.57	307980.8614
SWOF-00325	Middle Rouge River	Outfall	13399755.53	307186.0176
SWOF-00326	Middle Rouge River	Outfall	13405060.51	309102.1974
SWOF-00327	Middle Rouge River	Outfall	13404648.56	309295.4402
SWOF-00329	Middle Rouge River	Outfall	13405480.24	310238.2565
SWOF-00330	Middle Rouge River	Outfall	13405496.12	310379.2352
SWOF-00333	Middle Rouge River	Outfall	13404200.18	308884.9311
SWOF-00334	Middle Rouge River	Outfall	13407851.27	311131.3368
SWOF-00335	Middle Rouge River	Outfall	13407844.88	311123.0628
SWOF-00336	Middle Rouge River	Outfall	13400287.32	307061.4082
SWOF-00337	Middle Rouge River	Outfall	13400252.46	307025.6275
SWOF-00338	Middle Rouge River	Outfall	13406870.66	311985.9584
SWOF-00339	Middle Rouge River	Outfall	13406898.89	311810.0342
SWOF-00340	Middle Rouge River	Outfall	13408258.54	311031.6306
SWOF-00341	Middle Rouge River	Outfall	13408267.65	310874.0003
SWOF-00342	Middle Rouge River	Outfall	13408288.34	310901.6765
SWOF-00343	Middle Rouge River	Outfall	13400842.83	307785.3415
SWOF-00344	Tonquish Creek	Outfall	13379712.46	305179.8615
SWOF-00346	Tonquish Creek	Outfall	13379018.97	305427.9404
SWOF-00354	Willow Creek	Outfall	13380996.57	302190.375
SWOF-00355	Willow Creek	Outfall	13380996.06	302187.3501
SWOF-00358	Morgan Drain	Outfall	13384760.84	301273.3063
SWOF-00359	Morgan Drain	Outfall	13384757.6	301375.6004
SWOF-00367	Tonquish Creek	Outfall	13376917.53	304757.0444
SWOF-00368	Tonquish Creek	Outfall	13377304.21	304728.6097
SWOF-00369	Deer Drain	Outfall	13379975.6	306015.6154
SWOF-00374	Morgan Drain	Outfall	13385743.98	307368.9368
SWOF-00375	Morgan Drain	Outfall	13385539.63	308286.6266
SWOF-00380	Middle Rouge River	Outfall	13388343.55	312061.4061
SWOF-00381	Middle Rouge River	Outfall	13388470.93	312110.303
SWOF-00382	Middle Rouge River	Outfall	13388433.97	312042.9803
SWOF-00391	Middle Rouge River	Outfall	13390139.56	310005.8154
SWOF-00392	Middle Rouge River	Outfall	13390152.91	309999.1081
SWOF-00394	Middle Rouge River	Outfall	13383664.82	309072.3898
SWOF-00395	Middle Rouge River	Outfall	13384751.86	309254.873
SWOF-00399	Morgan Drain	Outfall	13384841.25	301599.906
SWOF-00413	Middle Rouge River	Outfall	13383427.63	306049.4719
SWOF-00417	Morgan Drain	Outfall	13385599.07	307981.8604
SWOF-00424	Deer Drain	Outfall	13376775.01	310859.2048
SWOF-00427	Middle Rouge River	Outfall	13390144.77	312378.3244
SWOF-00428	Middle Rouge River	Outfall	13400922.12	307654.8086
SWOF-00429	Middle Rouge River	Outfall	13400897.08	307795.789
SWOF-00430	Middle Rouge River	Outfall	13400896.11	307809.244
SWOF-00431	Middle Rouge River	Outfall	13401714.5	308345.9066
SWOF-00432	Middle Rouge River	Outfall	13401786.15	308257.1201
SWOF-00433	Middle Rouge River	Outfall	13398446	308536.5628

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00434	Middle Rouge River	Outfall	13398437	308541.2501
SWOF-00435	Butler Drain	outfall	13399651.36	282528.3746
SWOF-00436	Ecourse Creek	outfall	13409053.55	281813.2622
SWOF-00437	Ecourse Creek	outfall	13409086.45	281802.3098
SWOF-00438	Ecourse Creek	outfall	13409509.61	282388.5025
SWOF-00439	Butler Drain	outfall	13401757.08	282994.0171
SWOF-00440	Butler Drain	outfall	13401287.43	282827.8707
SWOF-00441	Butler Drain	outfall	13401280.06	282824.0413
SWOF-00448	Road ditch	Discharge Points	13395577.11	291766.8706
SWOF-00449	Road ditch	Discharge Points	13395091.9	291752.3549
SWOF-00450	Butler Drain	outfall	13400282.48	283134.815
SWOF-00451	Butler Drain	outfall	13400770.76	283434.2009
SWOF-00453	Butler Drain	outfall	13401711.59	282940.2376
SWOF-00461	Lower Rouge	Outfall	13398795.05	289075.1427
SWOF-00462	Lower Rouge	Outfall	13398766.79	289073.1007
SWOF-00463	Lower Rouge	Outfall	13398956.5	289089.8959
SWOF-00464	Lower Rouge	Outfall	13399129.29	289111.349
SWOF-00465	Lower Rouge	Outfall	13398791.85	289134.825
SWOF-00466	Lower Rouge	Outfall	13398693.51	289144.9099
SWOF-00467	Butler Drain	outfall	13403586.71	281645.0345
SWOF-00468	Butler Drain	outfall	13403577	281714.9399
SWOF-00469	Butler Drain	outfall	13403736.52	281714.9113
SWOF-00471	Hunter drain	Outfall	13381699.51	288981.5609
SWOF-00472	Hunter drain	Outfall	13381727.74	288981.8939
SWOF-00473	Hannan Drain	Outfall	13377790.93	288656.4795
SWOF-00475	Hannan Drain	Outfall	13377670.53	289455.4634
SWOF-00477	Hannan Drain	Outfall	13377516.52	289823.7409
SWOF-00479	Hannan Drain	Outfall	13377537.43	289819.7839
SWOF-00480	Discharges to Ditch on Palmer F	Discharge Points	13385299.23	291274.8512
SWOF-00481	Discharges to Ditch on Palmer F	Discharge Points	13385077.47	291260.6842
SWOF-00482	Discharges to Ditch on Palmer F	Discharge Points	13384913.36	291254.6826
SWOF-00484	McPhee Drain	Outfall	13392949.77	288831.5441
SWOF-00486	Discharges to wetland	Outfall	13392696.97	291174.2661
SWOF-00487	Discharges to wetland	Outfall	13392702.59	291171.6916
SWOF-00488	Discharges to wetland	Outfall	13392679.08	291187.5463
SWOF-00491	McPhee Drain	Outfall	13392045.52	291566.078
SWOF-00492	Lower Rouge Trib	Outfall	13386864.96	288809.1914
SWOF-00493	Lower Rouge Trib	Outfall	13386866.3	288954.9182
SWOF-00498	Willow Creek	outfall	13379192.83	299939.3559
SWOF-00500	Willow Creek	outfall	13379389.71	300275.5251
SWOF-00502	Willow Creek	outfall	13379287.25	299801.8456
SWOF-00504	Willow Creek	outfall	13380459.49	300905.3746
SWOF-00505	Willow Creek	outfall	13380551.83	300944.844
SWOF-00507	Willow Creek	outfall	13379997.5	300629.47
SWOF-00508	Willow Creek	outfall	13379386.39	299618.0186
SWOF-00541	Butler Drain	outfall	13400682.64	283362.5517

City of Westland
Outfall List

ID	Receiving Water	Type	POINT_X	POINT_Y
SWOF-00544	Butler Drain	outfall	13400282.4	283312.8786
SWOF-00545	Butler Drain	outfall	13400992.21	282182.5449
SWOF-00546	Butler Drain	outfall	13400847.61	282222.5294
SWOF-00547	Butler Drain	outfall	13403982.06	283829.1296
SWOF-00548	Butler Drain	outfall	13403748.48	281632.2885
SWOF-00549	Butler Drain	outfall	13403766.26	281605.6881

STANDARD OPERATING PROCEDURE ENFORCEMENT RESPONSE

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN ROAD, WESTLAND, MICHIGAN 48185



UPDATED JULY 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a procedure for Enforcement Response to address violations of the ordinance(s) or regulatory mechanism(s) identified in the Stormwater Management Plan.

SECTION B – GENERAL PENALTY; MUNICIPAL CIVIL INFRACTIONS

Chapter 1.8 of Title 1 General Provision of the City of Westland Code of Ordinances defines the penalties levied by the City for ordinance violations. The section specifically defines penalties and continuing violations.

B.1 Chapter 1.8 – General Penalty for Violation of Code; Continuing Violations

(a) “Unless another penalty is expressly provided by this Code for any particular provision or section, every person convicted of a violation of any provision of this Code shall be punished by a fine of not more than \$500.00, or by imprisonment for not more than 90 days, or by both such fine and imprisonment. Each act of violation and every day upon which any such violation shall occur shall constitute a separate offense. In the event that a provision of this Code is identical or substantially similar to a state offense for which the only punishment is a fine, such provision of this Code shall be punishable by a fine not exceeding the fine imposable under state law.”

(b) “In addition to the penalties provided in subsection (a) of this section, the city may enjoin or abate any violation of this Code by appropriate action.”

(c) “Every person concerned in the commission of an offense or violation of this Code which is not designated as a civil infraction and which is punishable upon conviction by a fine not designated a civil fine or by imprisonment or by both such fine and imprisonment, whether he directly commits the act constituting the violation or offense or procures, counsels, aids, or abets in its commission, may be prosecuted and on conviction shall be punished as if he had directly committed such offense.”

SECTION C – IDEP ENFORCEMENT RESPONSE PROCEDURE

The enforcement response procedure related to IDEP enforcement can be found in Section E of the River Rouge Collaborative Illicit Discharge and Elimination Plan.

SECTION D – POST CONSTRUCTION STORMWATER RUNOFF CONTROL ENFORCEMENT RESPONSE PROCEDURE

The enforcement response procedure related to the site plan approval application process, implementation of the approved site plan, long-term maintenance, and the enforcement thereof, can be found in Post Construction Stormwater Runoff Control Standard Operating Procedure.

SECTION E – PART 91 MUNICIPAL ENFORCEMENT AGENCY

The City of Westland is an approved Municipal Enforcement Agency under the Part 91 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as Amended. As an enforcing agency, the City is responsible for implementing and enforcing Article IV. Soil Erosion, Sedimentation, and Land Grading Control.

C.1 Chapter 42.120 – Authority

“This section is adopted pursuant to the authority granted to the City of Westland by Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 PA 451.”

C.2 Chapter 42.109 – Failure to Complete Work

“In the event of failure to complete the work or failure to comply with all the requirements, conditions, and terms of the permit issued under this article, the local enforcing agency may order such work as is necessary to eliminate any danger to persons or property and to leave the site in a safe condition, and he may authorize completion of all necessary temporary or permanent soil erosion control measures. The permittee and the surety executing the bond or the person making the cash deposit shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the city in causing any and all such work to be done, including any incidental administrative and legal costs. In case of a cash deposit, any unused portion thereof shall be refunded to the permittee.”

C.3 Chapter 42.117a – Enforcement of Article

“The requirements of this article shall be enforced by the city engineer. The city engineer shall inspect the work and shall require adequate inspection of compaction by a soil engineer or by a soil testing agency approved by the city engineer, unless he determines that such inspection requirements may be waived due to the nonhazardous nature of the grading. The cost of all such tests shall be borne by the permittee.”

C.4 Chapter 42.119 Violations and Penalties

(a) *“Whenever, by the provisions of this article, the performance of any act is required, or the performance of any act is prohibited, a failure to comply with such provisions shall constitute a violation of this article. The failure, neglect or refusal to comply with a cease and desist order of the city engineer shall constitute a violation of this article.”*

(b)

- (1) *A person who violates this article is responsible for a municipal civil infraction and may be ordered to pay a civil fine of not more than \$2,500.00.*

(2) An employee of the municipal enforcing agency may issue a municipal civil infraction.

(3) A person who knowingly violates this article or knowingly makes a false statement in an application for a permit or in a soil erosion and sedimentation control plan is responsible for the payment of a civil fine of not more than \$10,000.00 for each day of violation.

(4) A person who knowingly violates this article after receiving a notice of determination under section 42-109 or section 42-110 is responsible for the payment of a civil fine of not less than \$2,500.00 or more than \$25,000.00 for each day of violation.

(5) A default in the payment of a civil fine or costs ordered under this section or an installment of the fine or costs may be remedied by any means authorized under the Revised Judicature Act of 1961, 1961 PA 236, MCL 600.101 to 600.9948.

(6) In addition to a fine assessed under this section, a person who violates this article is liable to the state for damages for injury to, destruction of or loss of natural resources resulting from the violation. The court may order a person who violates this article to restore the area or areas affected by the violation to their condition as existing immediately prior to the violation.

SECTION F – ENFORCEMENT TRACKING

City will track all violations and issued permits. The following information will be collected and used for tracking records for each violation that is imposed by the City.

1. Name
2. Date
3. Location of the Violation (address, cross streets, etc.)
4. Business, Agency, Organization as applicable
5. Description of the Violation
6. Applicable Correspondence
7. Follow-up Actions
8. Key Dates
9. Descriptions of the City's Enforcement Response
10. Schedules for Achieving Compliance
11. Date the Violation was Resolved

SECTION G – PROCESS FOR REVISION

Any questions on this policy and procedure should be directed to the Stormwater Manager or the DPS Director. This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

ROUGE RIVER COLLABORATIVE PUBLIC PARTICIPATION/INVOLVEMENT PROGRAM (PPP)



Prepared by:



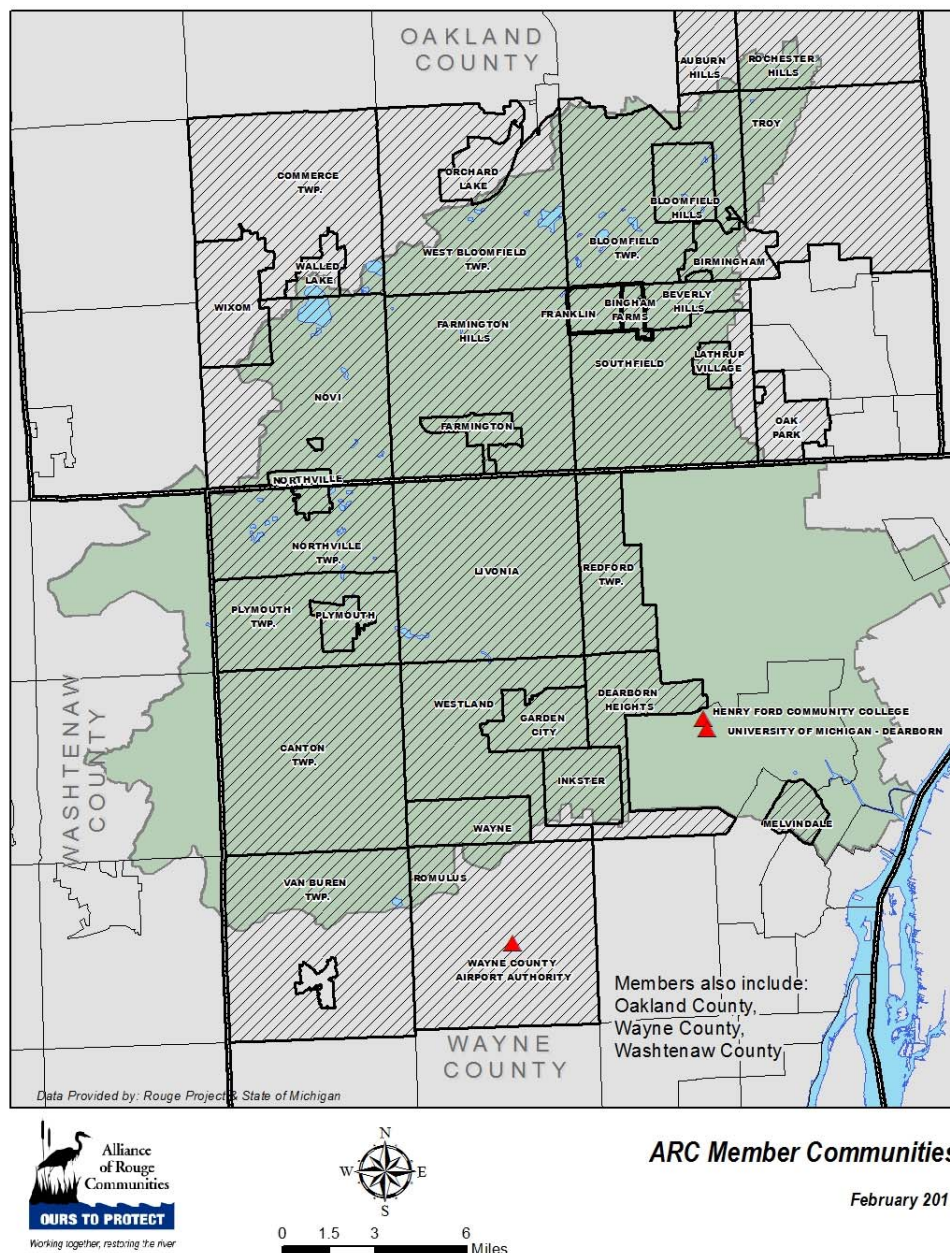
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*Approved by MDEQ on
March 28, 2017*

INTRODUCTION

The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners (see Figure 1) as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.

Figure 1: ARC Members



The two primary goals of the Rouge River Watershed Management Plan (RRWMP) are Protect Public Health and Reduce Stormwater Runoff Impacts. Bacteria is one of the priority pollutants identified in the RRWMP. The ARC's collaborative program presents a watershed-wide plan that is being implemented to effectively and efficiently address *E. coli* levels in the Rouge River watershed caused by stormwater runoff. This plan consists of existing and planned activities and strategies that members of the Alliance of Rouge Communities (ARC) are individually and collectively implementing.

This plan was developed by the ARC through its Public Involvement and Education Committee (PIE) in coordination with the ARC Technical Committee in response to the findings and recommendations of the RRWMP as well as the Michigan Department of Environmental Quality's (MDEQ) Total Maximum Daily Load (TMDL) assessment for *E. coli* in the Rouge River Watershed. This plan is intended to meet the Public Participation/Involvement Program (PPP) element required by ARC members' NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s). Those entities that are submitting a separate NPDES permit application, in lieu of this collaborative document, will continue to promote and participate in the activities identified in this plan as a member of the ARC.

This plan will be implemented collaboratively by the ARC participating communities and partners through September 30, 2022, which is the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan include:

Beverly Hills, Village of	Lathrup Village	Walled Lake
Bingham Farms, Village of	Livonia	Wayne
Birmingham	Melvindale	Westland
Bloomfield Hills	Northville	West Bloomfield Twp.
Bloomfield Twp.	Northville Twp.	Oakland County*
Canton Twp.	Novi	Washtenaw County*
Dearborn Heights	Oak Park	Wayne County
Farmington	Plymouth	Henry Ford College
Farmington Hills	Plymouth Twp.	<i>*Participating but this plan is</i>
Franklin, Village of	Redford Twp.	<i>not part of their pending</i>
Garden City	Southfield	<i>permit application.</i>
Inkster	Troy	

The Rouge River Watershed communities have long realized that the public must be engaged in order to have successful restoration activities in the Rouge River watershed. Public involvement and education has been the foundation of Rouge River restoration activities since the inception of the Rouge River National Wet Weather Demonstration Project in 1992 and continues today through the ARC and its members.

SECTION A – PURPOSE

This plan is to establish procedures for the ARC's Public Participation/Involvement Program (PPP) as required in the Application. The procedure includes a description of the opportunities for the public to participate, comment, and become involved with the implementation of the Stormwater Management Plan.

SECTION B – PROCEDURE FOR PUBLIC INSPECTION AND COMMENT

As required, the approved Stormwater Management Program (SWMP) will be made available to the public via the ARC website and links on each community's websites throughout the permit cycle. Friends of the Rouge (FOTR) will inform its membership of the link to review the SWMP. The public will also be informed through the ARC's and community's social media that the plan is available for inspection and comment. The ARC will be identified as the point of contact to receive public comments. The ARC will survey its members regarding any local public notice requirements and will meet them as appropriate.

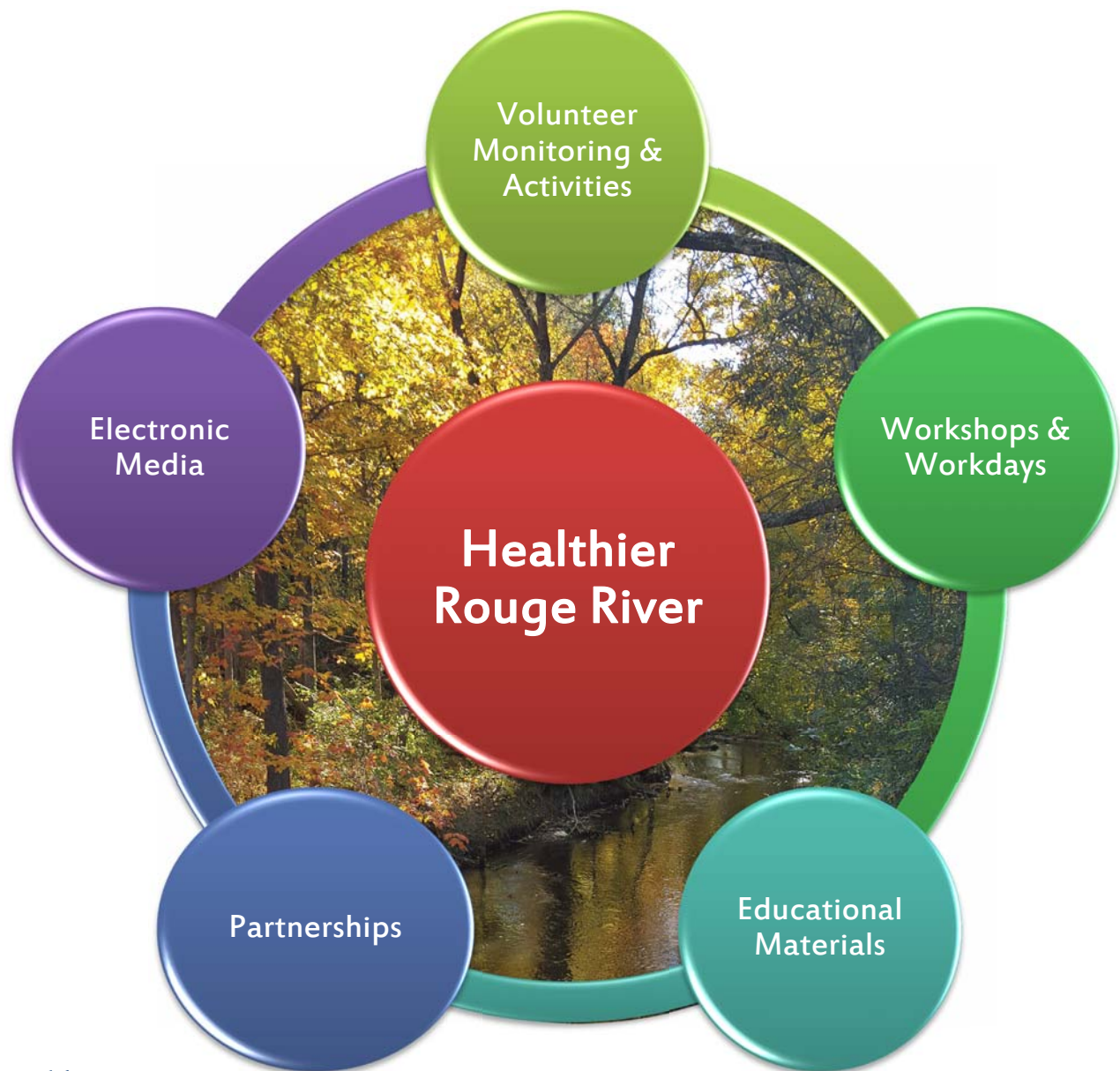
SECTION C – MEASURABLES

The ARC staff will compile and track comments from the public by documenting the commenter's name, date, and synopsis of the comment. ARC staff will document SWMP posting dates on both the ARC and community's websites along with recording links to the SWMP documents and collaborative plans. ARC staff will document dates that the public was invited to participate in implementation and review of the SWMP.

SECTION D – PROCEDURE FOR PUBLIC PARTICIPATION IN IMPLEMENTATION AND REVIEW

Links to the SWMP and the collaborative plans will be available on both the community's website and the ARC's website and will be available for public comment throughout the permit cycle. Specifically, the ARC and its members will invite the public to participate in the implementation and periodic review of the SWMP at least 2 times during the permit cycle. This will be advertised on the ARC website and links on the community's websites. The ARC will also use social media to promote the public's involvement and will periodically request FOTR to invite its members to participate in the implementation and periodic review of the SWMP during the permit cycle.

ROUGE RIVER COLLABORATIVE PUBLIC EDUCATION PROGRAM (PEP)



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*Approved by MDEQ
on March 28, 2017*

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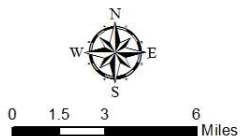
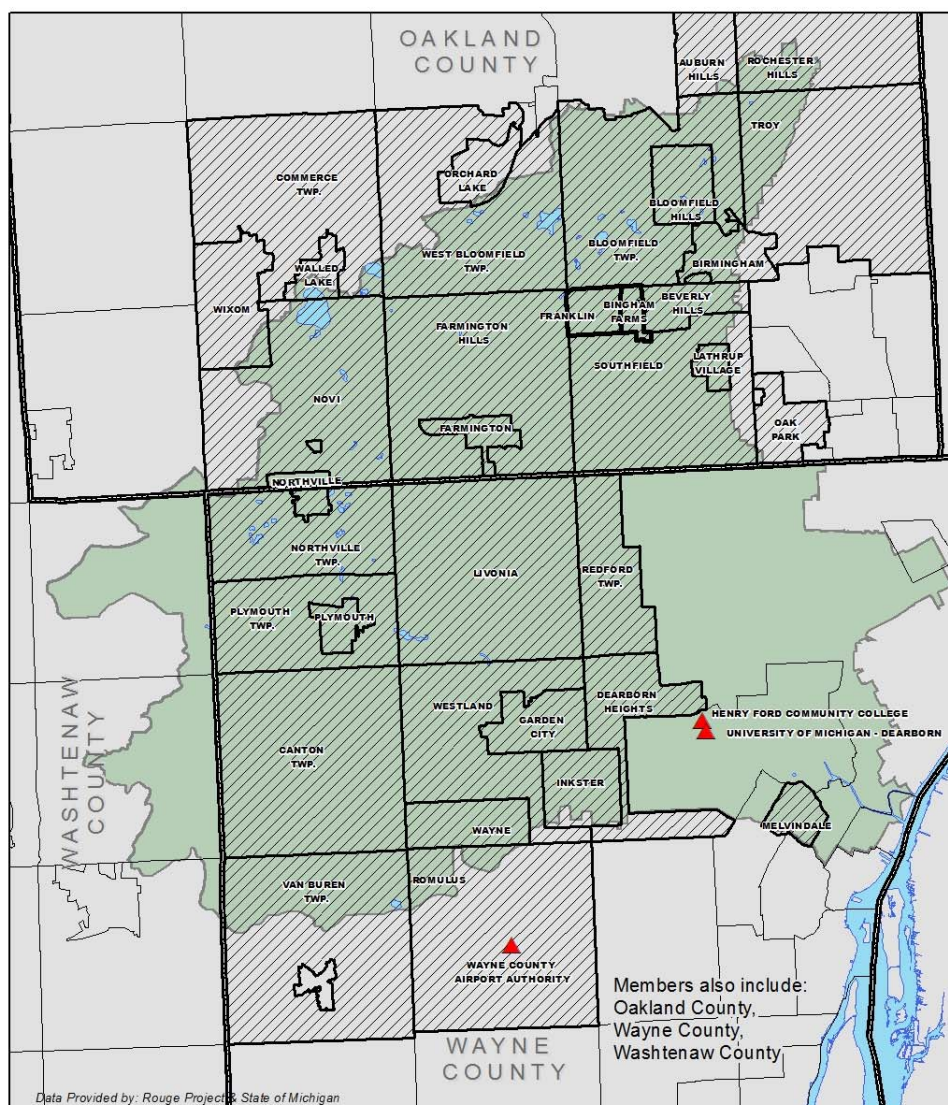
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Attachment A: Responsible Communities

INTRODUCTION

The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners (see Figure 1) as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.

Figure 1: ARC Members



ARC Member Communities

February 2017

The two primary goals of the Rouge River Watershed Management Plan (RRWMP) are Protect Public Health and Reduce Stormwater Runoff Impacts. Bacteria is one of the priority pollutants identified in the RRWMP. The ARC's collaborative program presents a watershed-wide plan that is being implemented to effectively and efficiently address *E. coli* levels in the Rouge River watershed caused by discharges from MS4s. This plan consists of existing and planned activities and strategies that members of the Alliance of Rouge Communities (ARC) are individually and collectively implementing.

This plan was developed by the ARC through its Public Involvement and Education Committee (PIE) in coordination with the ARC Technical Committee in response to the findings and recommendations of the RRWMP as well as the Michigan Department of Environmental Quality's (MDEQ) Total Maximum Daily Load (TMDL) assessment for *E. coli* in the Rouge River Watershed. This plan is intended to meet the Public Education Program (PEP) element required by ARC members' NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s). Those entities that are submitting a separate NPDES permit application, in lieu of this collaborative document, will continue to promote and participate in the activities identified in this plan as a member of the ARC.

ARC members and ARC staff continue to participate and collaborate with partners throughout the region, state and nation in an effort to coordinate stormwater permit related public education and other stormwater related initiatives when possible.

This plan will be implemented collaboratively by the ARC participating communities and partners through September 30, 2022 which is the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in Attachment A.

SECTION A – PROCEDURE FOR HIGH-PRIORITY, COMMUNITY-WIDE AND TARGETED ISSUES

The Rouge River Watershed communities have regularly conducted public opinion surveys to gauge the public's knowledge of watershed-related issues and concerns. Surveys were conducted in 1992 and 1999 by the Rouge River National Wet Weather Demonstration Project and in 2004 by SEMCOG. In 2008, the ARC conducted a survey to assess the public's opinion about the goals for the RRWMP. The survey asked the public:

- To rank the goals in order of importance
- To rank issues, such as flooding, streambank erosion and water quality in order of importance, and
- To discuss any concerns about the river

Using these past surveys, this plan outlines the priority, community-wide and targeted issues that are of most significance to the ARC communities. By focusing on those elements, the ARC will have the greatest impact on public education of watershed issues and will in turn have the greatest behavioral changes to reduce their effects in the Rouge River watershed.

In addition to public awareness, the PEP topics were prioritized based on known targeted issues within the watershed. Table 1 shows the applicable PEP Topics and their priority ranking for the ARC. Table 2 beginning on page 17 summarizes the PEP BMPs.

Table 1: PEP Topics and Priority

PEP TOPICS FROM SW DISCHARGE PERMIT APPLICATION	PRIORITY RANKING
A. Promote public responsibility and stewardship in the Rouge River watershed	High
B. Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the State	High
C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4	High
D. Promote preferred cleaning materials and procedures for car, pavement, and power washing	Medium
E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers	High
F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4	High
G. Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids	High
H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure	High
I. Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development	High
J. Identify and educate commercial, industrial, educational and institutional entities likely to contribute pollutants to stormwater runoff	Medium

SECTION B – ACTION STRATEGY

The ARC's overall action strategy is to protect and maintain what is healthy, identify and restore what is degraded, and keep working together to continuously improve environmental conditions. The ARC will look to use cost-effective outreach methods and maintain the efficiency of activities by using currently available resources when possible and collaborating with other potential partners.

These activities are consistent with and help realize the goals of the RRWMP and address the *E. coli* and biota TMDLs within the Rouge River watershed.

SECTION C – COLLABORATIVE PEP BMP ACTIVITIES

Each PEP topic from the Stormwater Discharge Permit Application is addressed with various BMP activities and will be implemented collaboratively and parallel to the Collaborative IDEP. These action items are described below and include the target audience, key message, delivery mechanism, year and

frequency implemented, and responsible party (or parties), measurable goal and measures of assessment.

BMP Identifier: 1

BMP Descriptor: Distribute pollution prevention literature on various topics through brochures, educational materials, and other media

Addresses PEP Topic:

A, B, C, D, E, F, G, H, I, J

Target Audience:

Public

Key Message:

The key message is to educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have and the importance of pollution prevention and watershed restoration and stewardship. It may also educate the public on reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Items may also include information on septic system maintenance and how to recognize system failure and may promote preferred cleaning materials and procedures for car, pavement, and power washing. In addition materials may inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Materials may also include the benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, educational, and institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:

ARC members will be provided copies of materials to be displayed at their facilities or used at community events or will be provided electronic material to use on their community website. With ARC oversight, Wayne County and ARC staff will facilitate the selection, procurement and distribution of various watershed restoration and pollution prevention public education materials to support ARC member public education permit compliance. Other or additional copies of some handout materials are available at cost through the Wayne County Publication Clearinghouse. Materials will also be available to view on the ARC's website. The ARC will also promote its message using electronic media outlets which could include cable TV, social media and billboards.

Year/Frequency BMP Implemented:

Current brochures and materials will be provided to ARC members throughout the permit cycle.

Responsible Party:

- ARC Staff will design/distribute materials and make available on the ARC website and develop ARC facebook posts
- Wayne County will assist with material content when appropriate
- Oakland County will assist with material content when appropriate
- Washtenaw County will assist with material content when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website and promote ARC facebook posts

Measurable Goal:

ARC staff, with input from Wayne, Oakland, and Washtenaw County and ARC members, will create at least two (2) new brochures/materials during the permit cycle. The topic of one of the new brochures/material will educate commercial, industrial, educational and institutional entities likely to contribute pollutants to stormwater runoff. ARC staff will develop at least 24 posts annually during the permit cycle on the ARC Facebook page. ARC Communities will make existing and new brochures and materials available for public events and at facilities such as city/township halls, libraries, etc., and provide a link to the ARC's website on their website.

Measures of Assessment:

- Number of materials distributed, topic, location of distribution and event name annually by the ARC and member communities.
- Number of posts/views on the ARC's website and Facebook.
- Viewer numbers will be requested from electronic media companies when used.

BMP Identifier: 2

BMP Descriptor: Coordinate and distribute community articles and ad graphics on pollution prevention and watershed restoration and stewardship

Addresses PEP Topic:

A, B, C, D, E, F, G, H, I, J

Target Audience:

Public and businesses

Key Message:

Articles and ad graphics may include the following topics: The connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary

wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, educational, and institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:

With ARC oversight, ARC staff will facilitate the selection (based on an annual theme) and distribution of various articles and/or ad graphics that support watershed restoration and pollution prevention public education themes. Other existing articles or ad graphics will be made available upon request by ARC members. Articles and ad graphics will also be posted on the ARC's website and through social media. ARC members will repost articles and ad graphics to their own social media outlets.

Year/Frequency BMP Implemented:

Five articles will be written during the permit cycle to be promoted on the ARC's website, member websites, social media outlets, and at facilities. Five ad graphics will be created during the permit cycle to be promoted through the ARC's website, member websites, social media outlets, and other means.

Responsible Party:

- ARC Staff will coordinate existing material and develop new materials
- Wayne County will assist with material content and coordination when appropriate
- Oakland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website, and promote ARC facebook posts

Measurable Goal:

ARC Staff, Wayne, Oakland, and Washtenaw County and ARC member communities will coordinate and distribute existing articles and ad graphics and will develop one (1) new article (total of five (5) during the permit cycle) and one (1) new ad graphic (total of five (5) during the permit cycle) per year that will be distributed by the ARC Staff and ARC member communities through avenues such as newsletters and/or other publications, websites, and social media. The ARC website and facebook page shall show an increase in views annually.

Measures of Assessment:

- List of articles/ad graphics with title, topic and date distributed by ARC members listed in Attachment A
- List of articles/ad graphics promoted on the ARC's website and Facebook page
- Number of views on the ARC's website and Facebook page

BMP Identifier: 3

BMP Descriptor: Provide static displays and posters on pollution prevention and watershed restoration and stewardship

Addresses PEP Topics:

A, B, C, D, E, F, G, H, I

Target Audience:

Public

Key Message:

Displays and posters may include the following topics: The connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure, Low Impact Development, and methods for managing riparian lands to protect water quality.

Delivery Mechanism:

Wayne County has various pollution prevention and/or watershed awareness displays available for loan to ARC members. The ARC plans to update existing and/or create new static displays during the permit cycle. The ARC may create new static displays using SEMCOGs "What You Can Do . . ." series or other topic that will be made available for loan to ARC member communities to use at their facilities or community events in each of the subwatersheds. ARC staff may also be requested to staff displays at community events. The ARC Staff may create new displays if a particular topic is deemed necessary. The ARC is also creating seasonal posters covering a variety of the PEP Topics which will be provided to ARC members for display in their facilities.

Year/Frequency BMP Implemented:

Four (4) seasonal posters will be distributed beginning in 2016 to be displayed at ARC member facilities. Static displays will be created upon permit approval. ARC Staff will promote the use of displays at community events and facilities throughout each subwatershed during the permit cycle.

Responsible Party:

- ARC Staff will create posters and update/create static displays

- Wayne County will assist with material content and coordination when appropriate
- Oakland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate and display posters at facilities and promote static displays at watershed events.

Measurable Goal:

ARC staff will make available four (4) distinct seasonal posters (winter, spring, summer and fall) which will be distributed to ARC member communities to post and rotate during each season. ARC member will post and rotate these posters a minimum of three (3) out of the five (5) years during the permit cycle at highly visible locations such as city/township buildings, libraries, etc. ARC staff will review and update as necessary at least three (3) static displays to be displayed at a minimum of 3-4 ARC member community events per year during the permit cycle. The static displays will be rotated at a minimum of two (2) events in each of the seven (7) subwatersheds during the permit cycle.

Measures of Assessment:

- Name of display, date, location and title of events that static displays were used at annually
- Number of posters distributed, location displayed annually by ARC member communities
- Number of static displays created annually during the permit cycle

BMP Identifier: 4

BMP Descriptor: Promote environmental hotlines to educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4

Addresses PEP Topic:

A, B, C, E, G, J

Target Audience:

Public, municipal employees and businesses

Key Message:

The message will educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have and the importance of pollution prevention and watershed restoration and stewardship. Promote awareness of environmental contaminants and encourage the reporting of observed and/or suspected pollutant sources. It will also include informing the public of collection/disposal sites of household hazardous waste, travel trailer sanitary wastes, chemicals and motor vehicle fluids along with proper disposal practices for grass clippings, leaf litter, and animal wastes.

Delivery Mechanism:

The environmental hotline numbers and collection/disposal information will be advertised by ARC members through available outlets such as the ARC website, county and local community websites, social media, through hotline brochure distribution, as well as being displayed on other topical brochures, distributed at display events and training sessions, electronic media, and other outlets.

Year/Frequency BMP Implemented:

Continuously promoted and distributed annually.

Responsible Party:

- ARC Staff will provide materials promoting hotline and promote hotline on ARC website and facebook page
- Wayne County will distribute materials promoting hotline and link to the ARC's website
- Oakland County will distribute materials promoting hotline and link to the ARC's website
- ARC members listed in Attachment A will distribute materials promoting hotline, link to the ARC's website and promote ARC facebook posts

Measurable Goal:

ARC Staff, Wayne, Oakland, and Washtenaw County, and ARC member communities will distribute materials annually with hotline numbers referenced and promote hotlines on the ARC and ARC member community websites and social media.

Measures of Assessment:

- Number of materials distributed annually with hotline number referenced.
- Number of views on ARC website and Facebook.

BMP Identifier: 5

BMP Descriptor: Distribution of "homeowner" materials to promote the importance of pollution prevention and watershed restoration and stewardship

Addresses PEP Topics:

A, B, C, D, E, F, G, H, I

Target Audience:

Public

Key Message:

The ARC will distribute an educational brochure for homeowners which will include topics regarding the connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit

discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality.

Delivery Mechanism:

The educational materials will be available to ARC members and the public through the ARC website and the ARC's Facebook. A homeowner educational brochure will be distributed and made available to ARC members to use as part of their welcome to the community new resident packets.

Year/Frequency BMP Implemented:

Homeowner brochure will be distributed annually during the permit cycle.

Responsible Party:

- ARC Staff will develop and distribute materials to ARC member communities
- Wayne County will assist with material content and coordination when appropriate
- Oakland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website, and promote ARC Facebook posts

Measurable Goal:

ARC Staff, Wayne and Oakland County, and ARC member communities will develop homeowner materials, including a homeowners brochure within 1 year of permit approval to be included in ARC member community new resident welcome packets.

Measures of Assessment:

- Completion of brochure
- Number of materials distributed annually to ARC member communities
- Number of materials distributed to new home owners by ARC member communities
- Number of views on ARC website and Facebook

BMP Identifier: 6

BMP Descriptor: Develop and promote educational workshops and presentations

Addresses PEP Topic:

A, B, C, D, E, F, G, H, I, J

Target Audience:

Public and businesses

Key Message:

The key message of the workshops and presentations could include the connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, and educational institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:

With ARC oversight, Friends of the Rouge (FOTR) and ARC staff will determine the topics, coordinate content, and present 6 workshops during the permit cycle. Workshop topics will vary based on annual education themes and/or needs as determined by the ARC . Workshops and presentations to business associations, chamber of commerce, business organizations, and focus groups could also be included. ARC members may host and participate in these workshops and presentations.

Year/Frequency BMP Implemented:

Six (6) workshops and presentations will be hosted during the permit cycle by ARC members.

Responsible Party:

- ARC staff will plan, coordinate and staff workshops and presentations when appropriate. Promote events on the ARC website and Facebook page
- Wayne County will assist in planning and coordinating and promote workshops and presentations when appropriate
- Oakland County will assist in planning and coordinating and promote workshops and presentations when appropriate

- Washtenaw County will assist in planning and coordinating and promote workshops and presentations when appropriate
- Friends of the Rouge will plan, coordinate, promote and staff workshops and presentations
- ARC members listed in Attachment A will assist in planning and coordinating workshops and presentations when appropriate and promote and/or host workshops and presentations

Measurable Goal:

ARC Staff, Wayne, Oakland and Washtenaw County, and FOTR will conduct six (6) workshops and presentations during the permit cycle; one (1) or more per year; and, at least one (1) per sub-watershed. Each workshop and presentation shall average at least 15 participants. ARC member communities will actively promote the events through various means such as their website calendars and social media and/or host the workshops and presentations. One or more workshops will target businesses.

Measures of Assessment:

- Sign-in sheets documenting number of attendees and communities or type of businesses represented at workshops/presentations.
- Number of materials handed out and documentation of topics presented.
- Results of surveys conducted at the end of workshop and presentation.
- Report of ARC member communities that hosted and promoted workshops/presentations.

BMP Identifier: 7

BMP Descriptor: Promote and support volunteer activities

Addresses PEP Topic:

A, B, C, D, E, F, G, H, I, J

Target Audience:

Public, businesses and schools

Key Message:

Promoting the importance of volunteer activities in the Rouge River Watershed such as River Day, Rouge Rescue, workdays, water festivals, and green schools programs will encourage public responsibility and stewardship in the Rouge River.

Delivery Mechanism:

The ARC members, Wayne, Oakland and Washtenaw County, FOTR and other partners will promote and implement Rouge River awareness and restoration projects such as Rouge Rescue, River Day, workdays, water festivals and green schools programs through websites, social media, distribution of materials and presentations. In addition, four (4) workdays may be organized and coordinated to implement watershed restoration stewardship activities at new or existing green infrastructure project sites during

the permit cycle. ARC members are encouraged to promote FOTR's Rouge Rescue and workdays that are held throughout the watershed.

Year/Frequency BMP Implemented:

ARC members will promote volunteer activities annually. The ARC may host up to 4 workdays during the permit cycle. Communities are encouraged to promote FOTR events in their communities annually.

Responsible Party:

- ARC staff will assist in planning and coordinating volunteer activities when appropriate and promote activities on the ARC website and Facebook page
- Wayne County will assist in planning and coordinating and promote volunteer activities when appropriate
- Oakland County will assist in planning and coordinating and promote volunteer activities when appropriate
- Washtenaw County will assist in planning and coordinating and promote volunteer activities when appropriate
- Friends of the Rouge will plan, coordinate, promote and staff volunteer activities
- ARC members listed in Attachment A will assist in planning and coordinating volunteer activities when appropriate and promote and/or host volunteer activities

Measurable Goal:

ARC Staff, Wayne County and FOTR will coordinate four (4) work days at GI sites during the permit cycle. ARC member communities will promote volunteer and other watershed events. ARC member communities will host, participate or promote volunteer/watershed events.

Measures of Assessment:

- Number of views on ARC website and Facebook annually
- Sign-in sheets showing number of volunteers attending the various events
- Results of surveys conducted at the end of activities
- Report of ARC member communities that hosted/participated/promoted events

BMP Identifier: 8

BMP Descriptor: Promotion of and support for volunteer monitoring activities within the Rouge River Watershed

Addresses PEP Topics:

A, B, C, I, J

Target Audience:

Public and businesses

Key Message:

Promote the importance of pollution prevention and watershed restoration and stewardship through volunteer monitoring. This monitoring may include general macroinvertebrates, stoneflies, and frogs and toads, and/or fish. Volunteer monitoring will provide education, build stewardship, and provided valuable data for the protection and restoration of the Rouge River.

Delivery Mechanism:

The ARC and Oakland and Washtenaw County will promote and support Wayne County and the Friends of the Rouge to implement a watershed-wide volunteer monitoring program through websites, social media, distribution of materials, and presentations. ARC members will actively promote public and business participation and lend support to FOTR as appropriate. ARC members will host monitoring activities at their facilities when appropriate.

Year/Frequency BMP Implemented:

Annually with one (1) Winter Stonefly Search in the winter and one (1) Bug Hunt in the spring or other like programs, and two (2) other volunteer monitoring training exercises and/or workshops. This monitoring may occur on a rotating basis.

Responsible Party:

- ARC staff will assist with planning and coordinating volunteer monitoring activities and promote on the ARC website and Facebook page
- Wayne County will plan, coordinate, promote and staff monitoring activities
- Oakland County will assist in planning and coordinating and promote monitoring activities when appropriate
- Washtenaw County will assist in planning and coordinating and promote monitoring activities when appropriate
- Friends of the Rouge will plan, coordinate, promote, and staff monitoring activities
- ARC members listed in Attachment A will assist in planning and coordinating monitoring activities when appropriate and promote and/or host monitoring activities

Measurable Goal:

FOTR will annually conduct one (1) Winter Stonefly Search, one (1) Bug Hunt and two (2) other volunteer monitoring training exercises. ARC member communities will host, participate or promote volunteer monitoring/training exercises.

Measures of Assessment:

- Number of views on ARC website and Facebook annually
- Sign-in sheets showing number of volunteers attending the various events
- Results of surveys conducted at the end of activities
- Report showing ARC member communities that hosted/participated/promoted events

BMP Identifier: 9

BMP Descriptor: Rouge River Watershed signage

Addresses PEP Topic:

A, B, F, I

Target Audience:

Public

Key Message:

Watershed signage will continue to be made available to ARC members including *River/Road Crossing* signs, *Don't Feed the Geese/Waterfowl* signs, and *Grow Zone* signs. ARC Staff will create one new sign and/or sticker for community use during the permit cycle regarding disposal practices of animal waste or other pollution prevention topic. This activity helps to educate and increase public awareness about the interconnectedness of the watershed and the storm sewer system.

Delivery Mechanism:

Passing vehicles, people biking, walking or running will view the signs and stickers when in the watershed.

Year/Frequency BMP Implemented:

Signage will be offered annually. One new sign and/or sticker or other item will be created during the permit cycle and will be provided to ARC members.

Responsible Party:

- ARC Staff will develop new sign/sticker or other item. Survey signage in watershed, create map and recommendations
- Wayne County will assist in development of new sign/sticker or other item and survey of watershed when appropriate
- Oakland County will assist in development of new sign/sticker or other item and survey of watershed when appropriate
- ARC members listed in Attachment A will assist in development of new sign/sticker or other item and survey of watershed when appropriate. Begin implementing high priority maintenance needs and new signage where appropriate

Measurable Goal:

ARC Staff will develop at least one (1) new sign or sticker during the permit cycle. During 2017 and 2018 ARC Staff, with assistance from Wayne County, Oakland County and ARC member communities, will survey the watershed to 1) document current signage to determine if maintenance is needed, and 2) document where future signage placement would be beneficial. A map will be created during the first permit cycle to document type of sign, location, and condition of signs in the watershed. During the first

permit cycle, ARC Staff, Wayne County, Oakland County, and ARC member communities will implement maintenance needs and/or new signage at high-priority locations, consistent with the findings of the survey.

Measures of Assessment:

- Completion of new sticker/sign or other item
- Number of signs/stickers or other item distributed annually
- Survey results, map and recommendations
- Number of signs maintained and new signage installed

SECTION D – PROCEDURE FOR EVALUATING AND DETERMINING EFFECTIVENESS

The ARC will conduct a public awareness survey during the permit cycle and compare it to the previous survey results to evaluate changes in public awareness/behavior. After comparing the results from the surveys, the ARC PIE Committee will determine if any modifications should be made to the PEP to address ineffective implementation.

In addition to analyzing the survey results, the ARC will use the evaluations that are done at all workshops, presentations, workdays, water festivals and other activities hosted by ARC member communities and partners. This will allow the ARC to make any necessary adjustments to the information presented at the ARC supported workshops and presentations during the permit cycle.

Lastly, continued participation in regional partnership activities will allow the ARC Staff to make recommendations if these partnerships provide avenues to assist with implementing and improving the PEP.

STORM WATER DISCHARGE PERMIT APPLICATION

Table 2: Public Education Program Best Management Practices (BMPs)

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
A B C D E F G H I J	1	Distribute pollution prevention literature on various topics through brochures, educational materials and other media	ARC member communities, counties and cooperative partners	General public, businesses	Educating on public connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing.	Brochures, educational materials and electronic media	Ongoing	Current and new items annually	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Create at least 2 brochures/materials during permit cycle including one to educate commercial/industrial/educational & institutional entities Develop at least 24 Facebook posts Materials available at ARC member facilities <u>Assessment:</u> <ul style="list-style-type: none"> Number of materials distributed/topic/location/event name Number of posts/views on ARC Facebook Viewer numbers from electronic media when used
A B C D E F G H I J	2	Coordinate and distribute community articles and ad graphics on pollution prevention and watershed restoration and stewardship	ARC member communities, counties and cooperative partners	General public, businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing and educate commercial, industrial and educational institutional	Articles and ad graphics	Ongoing	Current items annually; five new articles and/or ad graphics during the permit cycle	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Coordinate/distribute existing articles/ad graphics Develop 1 new article/1 new ad graphic per year (total of 5 during permit cycle) Increase in ARC website traffic and Facebook views <u>Assessment:</u> <ul style="list-style-type: none"> List of articles/ad graphics with title, topic and date List of articles/ad graphics promoted on ARC website/Facebook Number of views on ARC website/Facebook

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
					entities about pollution prevention.					
A B C D E F G H I	3	Provide static displays and posters on pollution prevention and watershed restoration and stewardship	ARC member communities, counties and cooperative partners	General public	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing.	Static displays and posters in each subwatershed	Current displays – ongoing; new posters in 2016 and new displays during the permit cycle	Current displays annually; up to 4 new posters in 2016 and then annually; new static displays annually upon completion	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Distribute 4 seasonal posters, post & rotate seasonally at least 3 out of 5 years during permit cycle. Update/create at least 3 static displays and used at 3-4 ARC member community events per year during the permit cycle with a minimum of 2 events in each of the 7 subwatersheds during the permit cycle. <u>Assessment:</u> <ul style="list-style-type: none"> Report of display/date/location and title of events where displays were used Number of posters distributed and location Number of static displays created annually
A B C E G J	4	Promote environmental hotlines to educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4	ARC member communities, Wayne County, Oakland County, Washtenaw County, State of Michigan	General public, municipal employees and businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, public responsibility and stewardship in the Rouge River watershed, proper disposal of pesticides, herbicides and fertilizers, promote HHHW including trailer, motor vehicle and chemical waste, educate commercial, industrial and educational institutional entities about pollution prevention.	Websites, social media, brochures, electronic media, at events and trainings	Ongoing	Annually	ARC Staff Wayne County Oakland County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Distribute materials annually with hotline referenced Promote on ARC and ARC member community website and Facebook <u>Assessment:</u> <ul style="list-style-type: none"> Number of materials distributed annually Number of views on ARC website and Facebook
A B C D E F G H I	5	Development of “homeowner s” materials to promote the importance of pollution prevention and watershed	ARC member communities, counties and cooperative partners	General public	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and	Brochure	During the permit cycle	Annually	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Develop homeowner materials within 1 year of permit approval <u>Assessment:</u> <ul style="list-style-type: none"> Completion of brochure Number of materials distributed annually Number of materials distributed to new home

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
		restoration and stewardship			animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, and cleaning materials and proper car, pavement and power washing					owners by ARC member communities • Number of views on ARC website and Facebook
A B C D E F G H I J	6	Develop and promote educational workshops and presentations	ARC member communities, Friends of the Rouge and counties and cooperative partners	General public, businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing and educate commercial, industrial and educational institutional entities about pollution prevention.	Workshops and presentations	Ongoing	6 during the permit cycle	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> • Conduct six workshops/presentations during the permit cycle, 1 or more per year and at least 1 per sub-watershed. • Each event will average at least 15 participants. • ARC member communities will promote and/or host events • One or more will target businesses <u>Assessment:</u> • Sign-in sheets with number of attendees and type • Number and topics of materials handed out and presented • Survey results • Report of ARC member communities promoting/hosting events
A B C D E F G H I J	7	Promote and support volunteer activities	ARC member communities, Wayne County, Oakland County, Washtenaw County, Friends of the Rouge, Cranbrook Institute of Science, University of Michigan - Dearborn	General public, businesses and schools	Promoting the importance of volunteer activities in the Rouge River Watershed such as River Day, Rouge Rescue, workdays, water festivals and green schools programs will encourage public responsibility and stewardship in the Rouge River.	Website/social media, materials distributed and presentations and workdays	Ongoing	Promotion of activities will be annually and up to 4 workdays may be hosted during the permit cycle	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> • Coordinate 4 work days during permit cycle • ARC member communities will promote, participate or host volunteer and other watershed events <u>Assessment:</u> • Number of views on ARC website and Facebook annually • Sign-in sheets documenting volunteer attendance • Survey results • Report of ARC member communities that hosted, participated or promoted events

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
A B C I J	8	Promotion and support volunteer monitoring activities within the Rouge River Watershed	ARC member communities, Wayne County, Oakland County, Washtenaw County, Friends of the Rouge	General public and businesses	Promote the importance of pollution prevention and watershed restoration and stewardship through volunteer monitoring. This monitoring may include general macroinvertebrates, stoneflies, and frogs and toads and/or fish. Volunteer monitoring will provide education, build stewardship and provided valuable data for the protection and restoration of the Rouge River.	Website/social media, materials distributed and presentations	Ongoing	1 Winter Stonefly Search and 1 Bug Hunt or other like programs, and 2 other volunteer monitoring training exercises and/or workshops annually	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Conduct 1 winter stonefly search, 1 bug hunt and 2 other volunteer monitoring training exercises annually ARC member communities will promote, participate or host volunteer events <u>Assessment:</u> <ul style="list-style-type: none"> Number of views on ARC website and Facebook Sign-in sheets showing number of volunteers Survey results Report of ARC member communities that hosted, participated or promoted events
A B F I	9	Rouge River Watershed signage	ARC member communities, Wayne County, Oakland County, and Washtenaw County	General public	River/Road Crossing signs, Don't Feed the Geese/Waterfowl signs, and Grow Zone signs and disposal practices of animal waste or other pollution prevention topic. This activity helps to educate and increase public awareness about the interconnectedness of the watershed and the storm sewer system.	Signs and sticker	Ongoing and one new sign and/or bumper sticker during the permit cycle	Annually	ARC Staff Wayne County Oakland County ARC members listed in Attachment A	<u>Goals:</u> <ul style="list-style-type: none"> Develop at least 1 new sign or sticker during permit cycle During first 2 years survey watershed signage for maintenance and future sign needs Create map during permit cycle documenting survey results Implement maintenance and/or new signage at high-priority locations during the first permit cycle <u>Assessment:</u> <ul style="list-style-type: none"> Complete at least 1 new sign/sticker or other item Number of signs/stickers or other items distributed annually Survey results, map and recommendations Number of signs maintained and new signage installed

ATTACHMENT A

Responsible Communities and Partners

This Collaborative PEP is submitted on behalf of the below listed MS4 permit holders with support from the ARC Staff and its cooperating partners that participate in the Storm Water Education Program facilitated by the Alliance of Rouge Communities (ARC).

RESPONSIBLE PARTY	SPECIFIC BMP IDENTIFIER
ARC Staff (under contract to the ARC)	1, 2, 3, 4, 5, 6, 7, 8, 9
Friends of the Rouge (under contract to the ARC)	6, 7, 8
Communities	
Beverly Hills, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Bingham Farms, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Birmingham	1, 2, 3, 4, 5, 6, 7, 8, 9
Bloomfield Hills	1, 2, 3, 4, 5, 6, 7, 8, 9
Bloomfield Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Canton Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Dearborn Heights	1, 2, 3, 4, 5, 6, 7, 8, 9
Farmington	1, 2, 3, 4, 5, 6, 7, 8, 9
Farmington Hills	1, 2, 3, 4, 5, 6, 7, 8, 9
Franklin, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Garden City	1, 2, 3, 4, 5, 6, 7, 8, 9
Inkster	1, 2, 3, 4, 5, 6, 7, 8, 9
Lathrup Village	1, 2, 3, 4, 5, 6, 7, 8, 9
Livonia	1, 2, 3, 4, 5, 6, 7, 8, 9
Melvindale	1, 2, 3, 4, 5, 6, 7, 8, 9
Northville	1, 2, 3, 4, 5, 6, 7, 8, 9
Northville Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Novi	1, 2, 3, 4, 5, 6, 7, 8, 9
Oak Park	1, 2, 3, 4, 5, 6, 7, 8, 9
Plymouth	1, 2, 3, 4, 5, 6, 7, 8, 9
Plymouth Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Redford Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Southfield	1, 2, 3, 4, 5, 6, 7, 8, 9
Troy	1, 2, 3, 4, 5, 6, 7, 8, 9
Walled Lake	1, 2, 3, 4, 5, 6, 7, 8, 9
Wayne	1, 2, 3, 4, 5, 6, 7, 8, 9
Westland	1, 2, 3, 4, 5, 6, 7, 8, 9
West Bloomfield Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Counties	
Wayne County	1, 2, 3, 4, 5, 6, 7, 8, 9
Oakland County*	1, 2, 3, 4, 5, 6, 7, 8, 9
Washtenaw County*	1, 2, 3, 5, 6, 7, 8
Schools	
Henry Ford College	1, 2, 3, 4, 5, 6, 7, 8, 9

*Participating but this plan is not part of their pending permit application.

Table 1 – City Ordinances as they relate to IDEP enforcement

Permit Item	Permit Item Description	Corresponding Ordinance/ Code
20	Prohibits non-stormwater discharges.	66-10: Water pollution. 102-228: Wastewater Discharge permits.
21	Allows flows from firefighting activities unless they are significant pollution source to waters.	102-228: Wastewater Discharge permits.
22	Allows flows from various activities unless they are a significant pollution source to an MS4.	66-10: Water pollution. 102-228: Wastewater Discharge permits.
23	Regulates the contribution of pollutants.	42-40: Litter in lakes and other bodies of water. 66-10: Water pollution. 102-07: Installation or connection- permits required. 102-226: Discharge prohibitions. 102-228: Wastewater Discharge permits.
24	Prohibits IDs and direct dumping to the MS4.	66-10: Water pollution. 102-07: Installation or connection- permits required. 102-228: Wastewater Discharge permits.
25	Establishes authority to inspect, investigate, and monitor suspected IDs to the MS4.	42-202: Authority. 102-07: Installation or connection- permits required. 102-178: Inspections. (cross connections) 102-182: Right of entry. 102-229: Monitoring facilities. 102-230: Inspection, sampling, and record keeping.
26	Requires the elimination of ID and provide the MS4 authority for enforcement.	01-08: General penalty for violation of code. 42-202: Authority. 102-07: Installation or connection- permits required. 102-183: Discontinuing water service. 102-228: Wastewater discharge permits.

ROUGE RIVER COLLABORATIVE ILLICIT DISCHARGE ELIMINATION PLAN (IDEP)



Prepared by:

***46036 Michigan Ave., Suite 126
Canton, Michigan 48188***

***Approved by MDEQ on
September 29, 2017***

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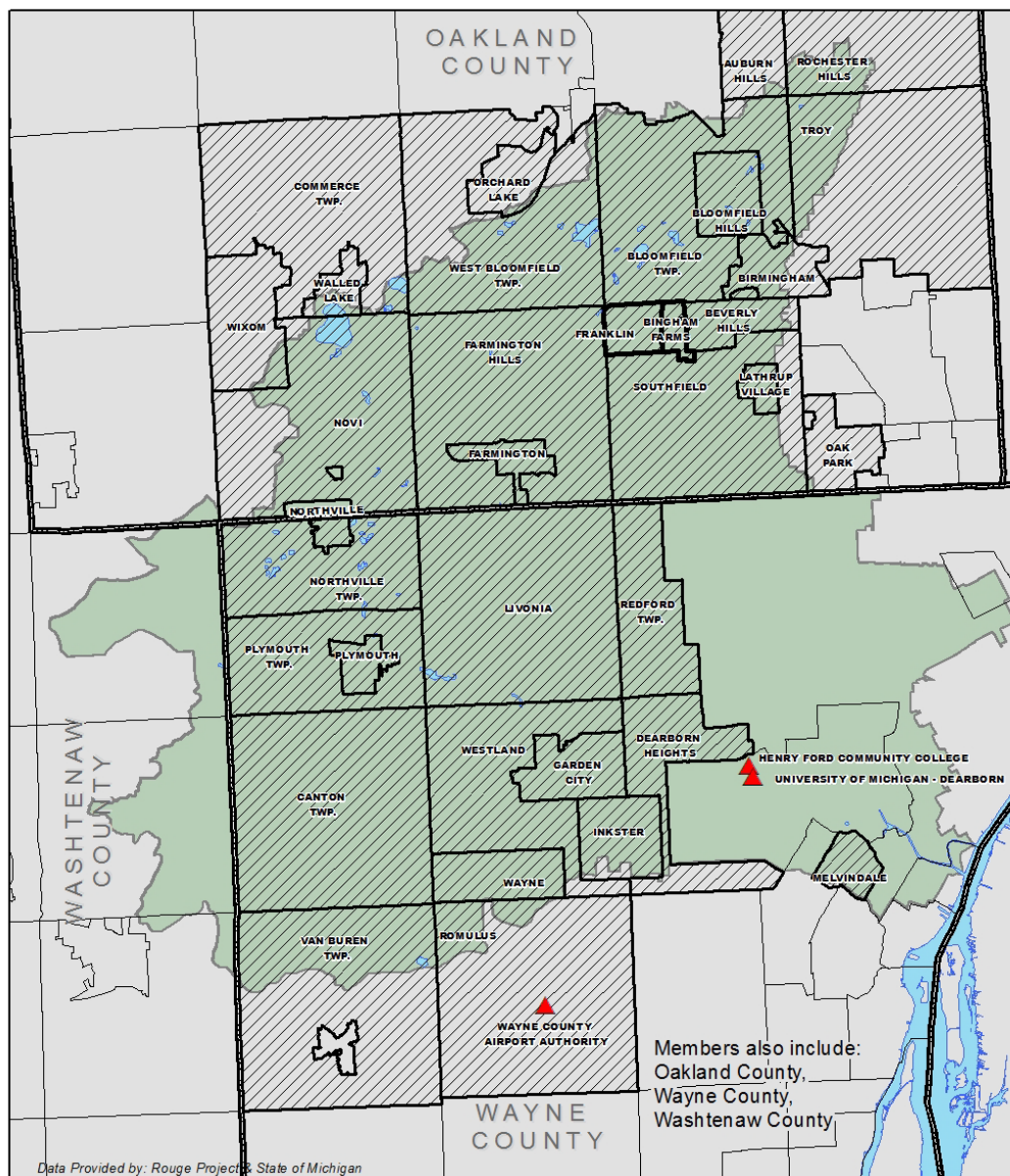
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Attachments

Attachment A	Participating ARC Members
Attachment B	Rationale for Initial Priority Areas
Attachment C	Outfall Screening Procedure for Identifying Potential Illicit Discharges
Attachment D	Advanced Investigations Procedure for Locating the Source of Suspicious Discharges
Attachment E	Southeast Michigan Regional IDEP Training Plan
Attachment F	Pollution Complaint Tracking Form and Suspicious Observation Form
Attachment G	State and Federal Regulatory Mechanisms

A. Introduction

The Alliance of Rouge Communities¹ (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.



¹ The ARC is currently exploring a merger with Friends of the Rouge. Regardless of the outcome of those investigations, the permittees intend to fulfill the activities outlined in this plan with the assistance of the ARC or the yet to be determined new organization.

This Collaborative Illicit Discharge Elimination Plan (Plan) presents the watershed wide approach that is being implemented to effectively and efficiently address illicit discharges in the Rouge River watershed. This Plan was developed by the Technical Committee of the ARC in response to requirements under the State of Michigan's Permit Application for Discharges of Storm Water to Surface Waters of the State from a Municipal Separate Storm Sewer System (MS4) revised October 2015. This Plan is intended to meet the illicit discharge elimination program (IDEP) elements required by the permit. Specifically, this Plan covers questions 7 – 14, and 16 – 26 within the permit application. Item 15 will be addressed in each permittee's individual stormwater management plan.

The two primary goals of the Rouge River Watershed Management Plan (WMP) are Protect Public Health and Reduce Stormwater Runoff Impacts. Bacteria is one of the priority pollutants identified in the WMP and prevents 1.35 million watershed residents from safely recreating (swimming, boating, etc.) in the river and its tributaries. Due to the potential human health impacts indicated by elevated bacteria levels, identifying human sources of *Escherichia coli* (*E. coli*) is the primary focus of this Plan, although other pollutant sources will be investigated as issues are identified.

This Plan will be implemented by the participating communities through the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in **Attachment A**.

For the purposes of this plan, "ARC staff" will mean the consultant or individual completing the Executive Director Services contract for the ARC. "ARC contractor" will mean consulting firms, municipal agencies or others contracted by the ARC to complete specific tasks. As an example, ARC contractors may include Oakland and Wayne counties and Friends of the Rouge.

B. Background

From 1992 through 2014, the Rouge Project successfully controlled numerous sources of *E. coli* in the watershed. This includes the construction of 88 combined sewer overflow/sanitary sewer overflow control projects, the identification of over 2,008 illicit discharges that have been or are in the process of elimination, and the identification and correction of 898 failed septic systems (RPO, 2014). Nonetheless, there is evidence that human sewage is still impacting the Rouge River and its tributaries based on the data contained in the following studies:

- Total Maximum Daily Load for *E. coli* for the Rouge River (MDEQ, 2007), and
- Alliance of Rouge Communities Bacterial Source Tracking (BST) Final Report (RPO, 2006).

From 2010 through 2015, ARC members have been collaboratively conducting advanced IDEP investigations in targeted areas to locate human sources of *E. coli*. These efforts have led to the identification of 33 illicit connections and 9 illicit discharges that contributed approximately **2.2 million gallons** of untreated wastewater to the river annually (ARC, 2014). Based on our previous success, the ARC recommends this collaborative approach to conducting IDEP activities in the Rouge River watershed.

The ARC's recent IDEP successes build upon the accomplishments of the Rouge River Wet Weather Demonstration Project (Rouge Project) where, since 1987, we have prevented more than **1 billion gallons** of polluted water from entering surface waters just through our facility dye-testing program. This estimate does not include the results of Wayne County's septic system time-of-sale inspection, household hazardous waste, illegal dumping, complaint response, field staff training, monitoring, public education, and pollution prevention good housekeeping (e.g. road sweeping, catch basin cleaning, drain trash rack cleaning, etc.) programs. In 2014 alone, these efforts resulted in more than **13,000 tons** of material being properly disposed of or recycled; and an estimated **4 million gallons** of polluted water being prevented from entering waters of the state county-wide (WCDPS, 2016).

Since 2000, **2,329 municipal staff and thousands of volunteers have been trained** on how to identify and report illicit discharges through the efforts of the ARC, Rouge Project, and Friends of the Rouge (WCDPS, 2016). This has resulted in hundreds of pollution complaint calls from the public and municipal staff which led to the identification of numerous illicit discharges. For example, in 2013, Wayne County responded to 39 pollution complaint calls resulting in the identification of eight illicit discharges (ARC, 2014).

Beyond being a collaborative approach, this Plan meets the Michigan Department of Environmental Quality's (MDEQ) definition of an Alternative Approach as defined within the current permit application guidelines. The primary reason that this Plan is classified Alternative is because it covers multiple permittees who will pool their resources to investigate suspected illicit discharges.

As allowed by the permit, permittees will identify, screen and sample high priority outfalls instead of all outfalls. This will allow for more resources to be targeted to conduct investigations to locate illicit discharge sources. This is being suggested because our experience indicates that individual outfall surveys are inefficient: they identified very few illicit discharges while being very expensive (ARC, 2007). Nonetheless, the permit requires outfall surveys to be completed, so the approach offered herein is a compromise between the permittees and MDEQ.

C. Priority Areas

The ARC has identified several initial priority areas to target which were selected based on available water quality data as described in **Attachment B**. The priority areas are as follows (See **Figures 1 and 2**) and cover almost 25,700 acres which represents 14% of the watershed (based on the separate sewer areas for communities participating in this plan):

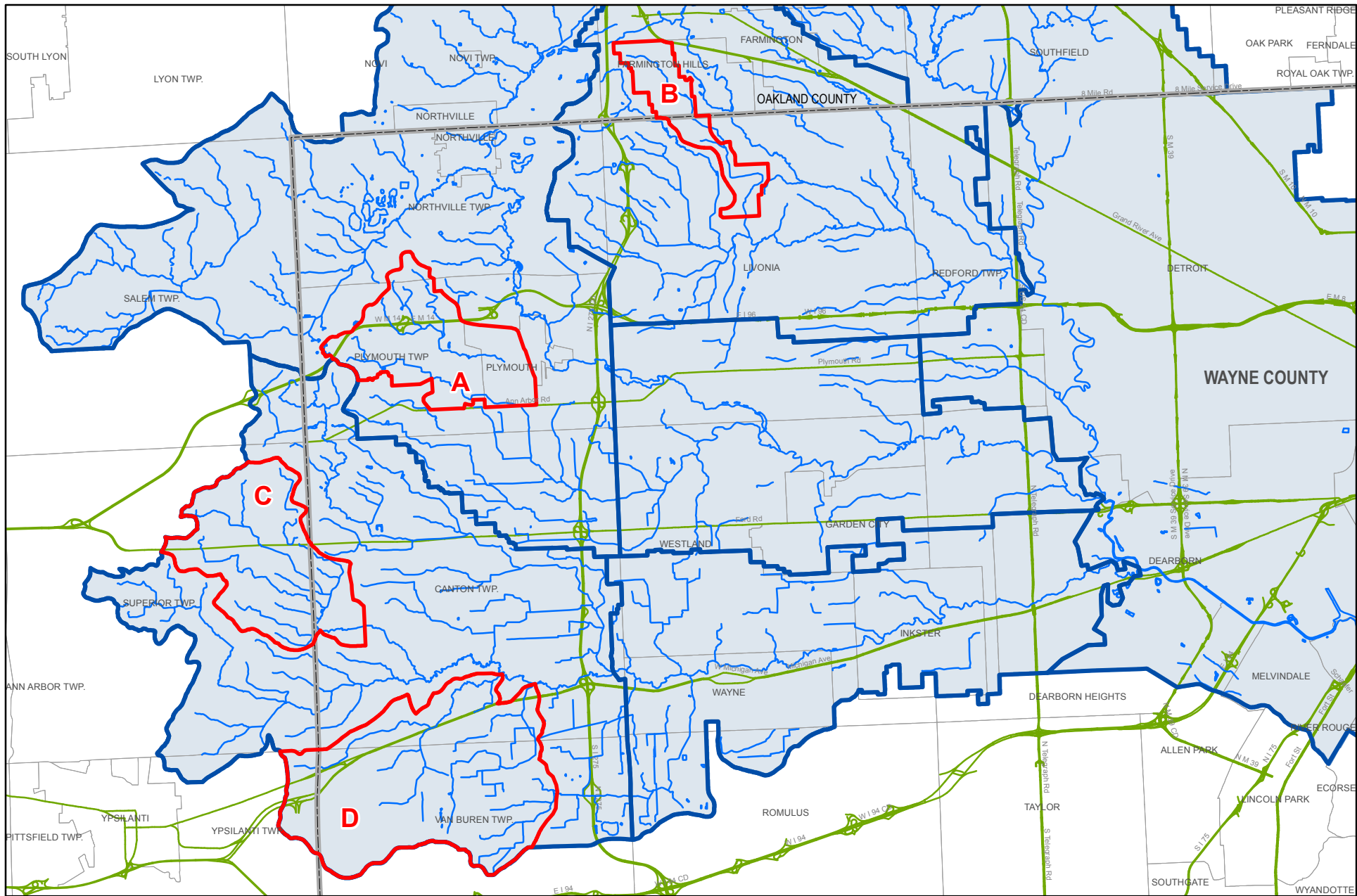
- Initial Wayne County Priority Areas (Figure 1):
 - A. North Branch Tonquish Creek and the Middle Rouge in Plymouth/Plymouth Township from the north side of Joy Road just west of Lilley Road (4,163 acres).
 - B. Tributary to the Bell Branch at the north end of Bicentennial Park which north of 7 Mile Road and west of Gill Road in Livonia (1,730 acres).

- C. Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township (5,241 acres).
- D. Sines and Arnold Drain in Canton Township at Sheldon Road 0.5 miles north of Michigan Ave and the McKinstry Drain in Canton Township south of Michigan Ave between Lilley and Beck roads including Van Buren and possibly Ypsilanti townships (9,290 acres).
- Initial Oakland County Priority Areas (Figure 2):
 - E. US 16 drainage area in Farmington (200 acres),
 - F. Claude Stevens No. 1, 3, 4 and 10, Bloomfield Highlands and Devonshire drainage areas in Bloomfield Township (784 acres).
 - G. Austin, Eight Mile Road, Fracassi, Flannery and Owens Relief drainage areas in Southfield (3,661 acres)

The ARC is currently in the process of collecting instream *E. coli* data at 90 sites across the watershed. This data will provide the most comprehensive assessment of bacteria conditions in the watershed since 2005. This data will be evaluated and new priority areas will be selected as described in IDEP# 2.

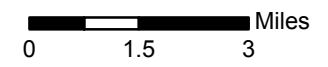
Every 5 years, ARC staff will review available water quality data, outfall screening data and outfalls investigations and reassess the priority areas. ARC staff will identify the priority outfalls and seek input from ARC members. County and municipal staff will review the priority outfalls and their complaint files and add any sites where they suspect the presence of illicit connections/discharges. The draft list will be presented to the Technical Committee for review. Technical Committee input will be addressed and a final priority list will be submitted to the MDEQ for review and approval. The final approved list shall then be distributed for investigations.

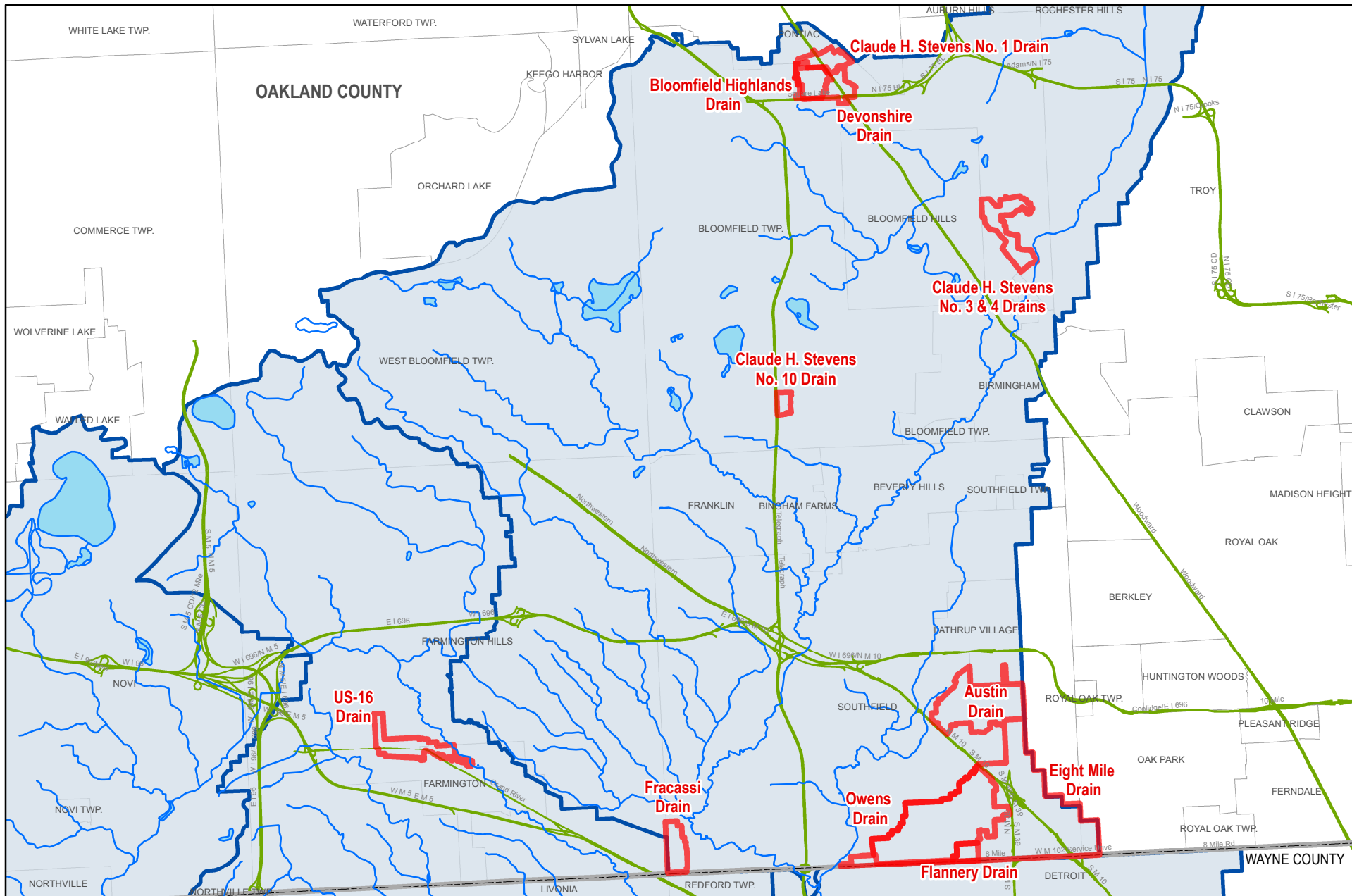
In addition, permittees will have an opportunity to request areas for inclusion on the priority outfall list outside the 5-year cycle. This will occur annually at a Technical Committee meeting and include rationale for inclusion. Committee members will review the request and determine if it should be granted. Considerations for adding a site would include: suspected or known impact to water quality and history of the issue.



Wayne County Rouge River Watershed
 IDEP Priority Areas
 June 2016

- | | |
|---------------------------|------------------------------|
| Rouge River & Tributaries | Main Roads |
| Priority Areas | Rouge Subwatersheds |
| County Boundary | Township and City Boundaries |





Oakland County Rouge River Watershed
IDEP Priority Areas
May 2017

- | | |
|---------------------------|------------------------------|
| Rouge River & Tributaries | Main Roads |
| Priority Areas | Rouge Subwatersheds |
| County Boundary | Township and City Boundaries |

0 1 2 Miles



ECT Environmental Consulting & Technology, Inc.

D. Action Strategies

Each strategy listed in this section includes a description, responsibility and schedule for completion. The Counties, Cities, Villages, Townships, and Schools listed in the Responsibility Sections refer to those who are participating in this Plan as listed in **Attachment A**. The timelines presented herein are contingent on plan approval by October 1, 2017.

IDEP #1: Mapping of Storm Sewer Systems

Description: Storm sewer maps for individual jurisdictions are available in various formats and at various levels of detail. For the purposes of this Plan, a storm sewer map will include the location of outfalls, enclosed and open storm drains, roads, and waters of the state. For each permittee, the physical location of these maps is provided in **Table 1**.

In addition, a watershed-wide GIS database of the storm sewer system maps will be developed. This activity will centralize data and facilitate source-tracking investigations and ease reporting to the MDEQ over time.

For Wayne and Oakland counties, this requirement will be dealt with under their individual stormwater management plans.

ARC Member Responsibilities and Schedule:

- ARC staff:
 - Update the watershed's Storm Sewer GIS by July 30, 2020.
- Cities, Villages, Townships:
 - Convert hard copy storm sewer system maps to GIS format. See schedule in **Table 1**.
 - Provide GIS layers to ARC staff within 6 months of completion or major update of GIS database.

Table 1 – Individual Permittee Storm Sewer System Map and Schedule for GIS

Permittee	Physical Location of Storm Sewer Map(s)	Timeline for GIS Storm Sewer Layer
Municipalities		
Beverly Hills	Oakland County WRC	Spring 2020
Bingham Farms	Oakland County WRC	Complete
Birmingham	Oakland County WRC	Complete
Bloomfield Hills	Department of Public Works	Complete
Bloomfield Twp.	Dave Payne Public Services Building	Complete
Canton Twp.	Department of Public Works	On-going (50% complete)
Dearborn Heights	Department of Public Works	Complete (2007)
Farmington	Department of Public Works	Ongoing, complete by 12/30/19
Farmington Hills	Engineering Department	Complete
Franklin	Oakland County WRC	Spring 2020
Garden City	Department of Public Works	Complete
Inkster	Department of Public Works	Complete
Lathrup Village	Oakland County WRC	Complete
Livonia	Department of Public Works	Complete (2015)

Permittee	Physical Location of Storm Sewer Map(s)	Timeline for GIS Storm Sewer Layer
Melvindale	Department of Public Works	Complete
Northville	Department of Public Works	Ongoing, complete by 12/30/19
Northville Twp.	Department of Public Works	Complete
Novi	Department of Public Works	Complete
Oak Park	Department of Public Works	Complete
Plymouth	Department of Public Works	Complete
Plymouth Twp.	Department of Public Works	Complete
Redford Twp.	Department of Public Works	Spring 2023
Southfield	Department of Public Works	Complete
Troy	Department of Public Works	Complete (updates in progress)
Walled Lake	Department of Public Works	Complete
Wayne	Department of Public Works	Complete
West Bloomfield Twp.	Department of Development Services	Complete
Westland	Department of Public Works	Complete (2015)
Schools		
Henry Ford College	HFC Facilities Building	Spring 2020

BMP goals:

- 100% of IDEP Plan participant outfalls in one GIS database

Measures of assessment:

- Portion of watershed (area) where known outfalls are mapped in GIS.

IDEP #2: Outfall Prioritization and Dry Weather Screening

Description: The goal of this activity is to identify and screen priority outfalls in each city and village. Priority outfalls are those that have a high potential to convey an illicit discharge. ARC staff will review outfall information from each city and village to identify at least 20% of their outfalls for screening. This will be done on an individual community basis. The information reviewed will include the previous outfall screening report, size of the outfall, receiving water quality, age of infrastructure and history of the outfall (past illicit discharges, conversion from combined sewer system, etc.).

The prioritization process will be as follows:

1. Identify waterbodies with dry weather geometric mean *E. coli* > 1,000 cfu/100 mL based on most recent data.
2. Identify the outfalls discharging to these waterbodies including outfall size and drainage area, if available. These outfalls will generally be considered priorities.
3. Identify outfalls that discharge within 2,500 feet of public recreation areas (ex: beaches and paddling sites). These outfalls will generally be considered priorities.
4. Review previous outfall screening reports looking for signs of suspicious discharges that were not resolved. These outfalls will generally be considered priorities.
5. Discuss the history of the outfall with local staff.
 - o The history will include age of infrastructure, any previous complaints, illicit discharges or sanitary sewer overflows, and whether it was part of a combined sewer system.
6. Prepare a list of priority outfalls that are most likely contributing to the water quality problem with rationale for inclusion.

Screen the priority outfalls for signs of an illicit discharge following the procedures outlined in **Attachment C**. If dry weather flow is present, sample for *E. coli* or other parameters of concern, unless the source of the flow is identified during the inspection. The sampling will likely occur at the time of the inspection, but there may be instances when the inspectors need to come back to the outfall to collect the sample in order to meet sample collection and analysis protocols. In these cases, the outfall will be revisited within 10 days of discovering the dry weather discharge. If the outfall is not discharging upon the subsequent visit, it will be revisited twice more within 30 days. If there is no discharge after three visits, the outfall will not be screened further.

The outfall screening procedure provided above will also be followed when any new outfalls are discovered or constructed.

Based on the screening results, the outfalls will be divided into four categories as follows:

- Category A. - Outfalls with *E. coli* >10,000 cfu/100 mL or unexplained physical characteristics
- Category B. - Outfalls with *E. coli* between 5,001 and 10,000 cfu/100 mL
- Category C. - Outfalls with *E. coli* between 1,001 and 5,000 cfu/100 mL
- Category D. - Outfalls with *E. coli* ≤1,000 cfu/100 mL

Unexplained physical characteristics include:

- Sanitary debris in the flow or near the outfall structure;
- Colored or turbid discharge;

- Discharges with foul odors;
- Unusual stains or deposits on or near the outfall structure;
- Unusual bacterial sheens, algae or slimes; or
- Dead vegetation immediately downstream of the outfall.

Based on the inspection and sample results, the presence of a suspicious discharge will be determined. A suspicious discharge is presumed when an outfall has unexplained elevated *E. coli* counts (>5,000 cfu/100 ml) or unexplained physical characteristics. These characteristics correspond to the Category A and B outfalls which will be subject to advanced investigations as described in IDEP# 3.

Category C outfalls will be resampled up to two more times within 12 months. If any sample is >5,000 cfu/100 mL, it will be elevated to Category B and investigated accordingly. Category D outfalls will not be further investigated without cause.

For Wayne and Oakland counties, this requirement will be dealt with under their individual stormwater management plans.

ARC Member Responsibilities and Schedule:

- ARC staff:
 - Identify priority outfalls by March 30, 2018
- Cities, Villages
 - Perform dry weather screening (inspection and sampling) of priority outfalls by December 30, 2018.
 - Determine outfalls with suspicious discharges within 30 days of completion of screening of all outfalls in a municipality.
- Cities, Villages, Townships
 - Perform dry weather screening of new outfalls within 6 months of construction, taking ownership or discovery.

BMP goals:

- Screen 100% of priority outfalls

Measures of assessment:

- Number priority outfalls identified
- Number of priority outfalls screened and sampled
- Number of suspicious discharges identified (based on outfall screening results)

IDEP #3: Advanced Investigations

Description: The goal of this activity is to locate the source of the suspected illicit discharge(s). The same process will be followed for the initial priority areas specified in Section C and the priority outfalls identified during dry weather screening. Except in the initial priority areas, the tributary MS4 outfalls will first need to be located and screened for suspicious discharges.

The permittees will lead advanced investigations in their respective jurisdictions. Unless an issue is emanating from township property, investigations within townships will be coordinated with the road agency or their designee. When a potential IDEP issue is suspected outside the participating members' jurisdictions, then it will be referred to the appropriate jurisdiction for their follow-up. The referral will occur in writing and include the rationale for the referral.

Once the priority outfall screening data is available, Category A outfalls will be subject to advanced investigations first as their discharges are expected to have the greatest impact on water quality. The investigation of Category B outfalls will begin when at least 50% of the Category A outfalls in the watershed are investigated.

Advanced investigations will include manhole inspection or sampling, dye-testing sewers or structures, smoke testing sewers, or televising sewers to locate the illicit discharge. These investigations will be conducted according to the procedures outlined in **Figure 3** and **Attachment D**.

In order for a priority outfall to be considered investigated, the following efforts must be completed:

- The tributary MS4 has been sampled/inspected at at least ½ mile intervals;
- Advanced investigations have been conducted for drain segments with *E. coli* >10,000 cfu/100 mL or have physical signs of sewage;
- Sources have been identified in drains segments where *E. coli* is >10,000 cfu/100 mL; and
- Referrals have been made to upstream MS4s when *E. coli* counts from their systems are >10,000 cfu/100 mL; and
- Referrals to other MS4 owners have been investigated by the MS4 owner with documentation sent back to the downstream MS4.

Advanced investigations will be tracked using maps and narrative descriptions of the field work which will be summarized annually in a report to the ARC Technical Committee.

Schedule: Investigate initial priority areas through December 30, 2018.
Investigate priority outfalls through the end of the permit.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
ARC staff	
Review and approve annual budgets and county (or contractor) work plans to ensure resources are directed to the appropriate areas.	By Nov. 1 st each year
WCDPS and OCWRC	
Participate in ARC Technical Committee discussions and provide feedback on the appropriateness of the selected priority areas.	Two times per year

Entity/Task	Schedule
Lead advanced investigations in priority areas to the point where the suspicious discharge is narrowed down to the smallest storm sewer segment as practicable by sampling at manhole and outfall locations. (as contracted by the ARC)	Ongoing
Provide recommended next steps to the MS4 owner for continuing the investigations. This will be done in writing (email is a suitable for this purpose).	Within 2 weeks of completing investigations
Track investigation efforts described above.	Ongoing
WCDPS, OCWRC, Cities, Villages, Townships	
Assist the ARC in conducting advanced investigations by providing maps and staff knowledge of the local system.	As needed
Follow-up on the investigation recommendations of the ARC to identify illicit discharge sources within their jurisdiction. This may include televising, smoke testing, dye testing or other investigation measures as the situation requires.	Begin within 4 weeks of receiving the referral from the ARC/county
Report back to ARC on the status of the investigations.	By Dec 30 th each year
Cities, Villages, Townships	
Notify property owners of the presence of an illicit discharge.	Within 2 weeks of verification
Work with property owners to eliminate identified sources per local ordinances/ codes and track correction measures.	As needed
Lead enforcement measures as appropriate.	As needed
Report back to ARC on the number and type of identified illicit discharges.	By Dec 30 th each year
Schools	
Follow-up on the investigation recommendations of the county/community to identify illicit discharge sources. This may include televising, smoke testing, dye testing or other investigation measures as the situation requires.	Begin within 4 weeks of receiving the referral from the county/community
Eliminate identified sources and track correction measures.	As needed
Report back to referring agency on the status of the investigations and the number and type of identified illicit discharges.	By Dec 30 th each year

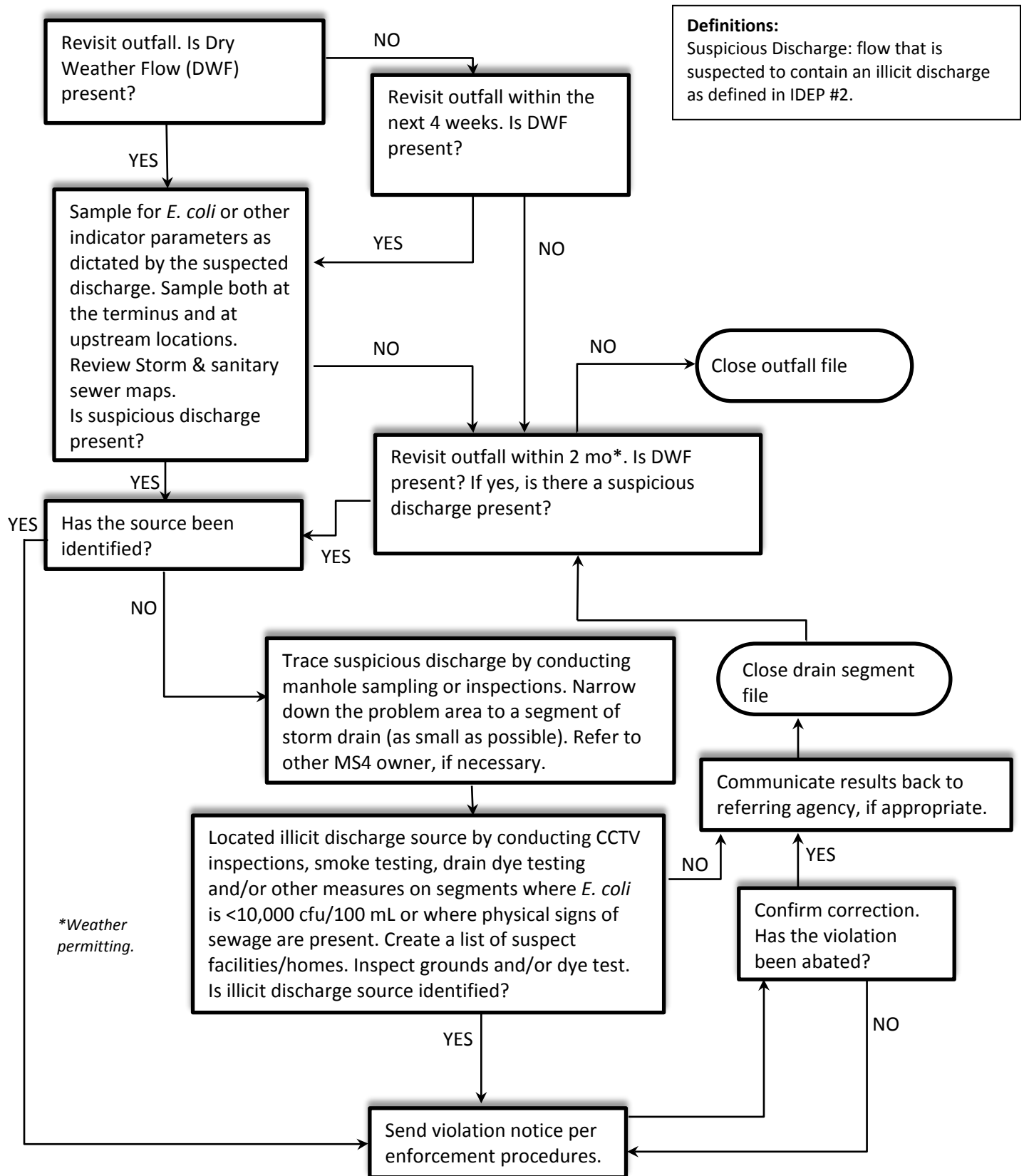
BMP goals:

- Follow the advanced investigation protocol for initial priority areas and priority outfalls.
- 100% of illicit connections/discharges resolved or a plan in place for elimination.

Measures of assessment:

- Portion (square miles/acres) of priority outfall drainage areas in Categories A and B and portion investigated.
- Number and type of illicit connections/discharges identified and resolved.

Figure 3 – Advanced Investigation Protocol



IDEP #4: Staff Training

Description: There are several mechanisms available for IDEP training for various competencies as described below. Each permittee will have at least one person trained at the Investigator Level and 50% of field staff at the Alert Observer Level. Field staff is defined as those working at least 50% of their day out-of-the-office and includes Department of Public Works/Services staff and community building/plumbing inspectors.

Investigator Level

The Wayne County Illicit Discharge Investigator Training (a half day training workshop) where attendees are taught how to identify and investigate the sources of illicit discharges including failing septic systems, seepage from sanitary sewers, illegal dumping, and suspicious discharges from outfalls. A competency exam is also administered at the end of the workshop.

Alert Observer Level

Training at this level can consist of one of the following:

- The Alert Observer IDEP Training (a 30 minute to 1 hour workshop) which provides the goals of the IDEP program, how to recognize illicit discharges and conduct field screenings, and the mechanisms to report suspicious discharges.
- The *Working for Clean Water* municipal staff training (a 15-minute video) where attendees are provided a general overview of the IDEP program, how to recognize illicit discharges, encouraged to report suspicious discharges, and provides pollution prevention and good housekeeping best management practices.

In addition, an IDEP Tip Card for Municipal Staff, which was developed by the Southeast Michigan IDEP Work Group, will be provided to field staff for both training programs. The Tip Card provides photographic examples of illicit discharges and phone numbers to report complaints.

Each community and county already has at least one person who is trained at the Investigator Level. This level of training will be maintained. Wayne County and ARC staff will continue to offer the Investigator Training Workshop to ARC member staff and its regional partners every other year according to the Southeast Michigan Regional IDEP Training Plan (See **Attachment E**). ARC staff will look to extend the training plan another 5 years.

The Working for Clean Water video is available on the ARC's website (<http://www.allianceofrougecommunities.com/activitiesevents.html>) or by searching "IDEP Municipal Training" on www.YouTube.com. The Alert Observer Training Workshop will be included in the municipal pollution prevention training every other year according to the IDEP Training Plan (See **Attachment E**). Additional training opportunities can be arranged if demand warrants. The Tip Card will be distributed at the Investigator and Alert Observer trainings and can be obtained on the ARC's website (see previous link) or by emailing ARC staff, if customization is desired.

Schedule: One person trained at the Investigator Level, confirm annually by July 30th.
50% of field staff will be trained at the Alert Observer Level by March 31, 2021.
Remind staff of *E. coli* problems in Priority Areas and encourage reporting, once a year.

ARC Member Responsibilities:

- ARC staff

- Provide trainers for the Investigator and Alert Observer training workshops per the IDEP Training Plan or every year (rotating the workshops every other year)
- Customize the Tip Card, if requested by a permittee.
- Maintain a list of IDEP Investigator contacts.
- Seek to extend the Southeast Michigan Regional Training Plan through 2022. Complete by December 30, 2017.
- Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools
 - Provide IDEP training to field staff.
 - Provide ARC staff the name of the person trained at the Investigator Level.
 - Provide field staff the IDEP Tip Card for Municipal Staff in conjunction with the training sessions.
 - Document and track staff training needs.
 - For permittees in Priority Areas, remind staff of the *E. coli* problem and encourage the reporting of pollution complaints.

BMP goals:

- 1 person per MS4 trained at Investigator Level.
- 50% of field staff trained at the Alert Observer Level.

Measures of assessment:

- Number of staff trained at various competencies.

IDEP #5: Pollution Complaint Response

Description: Oakland, Wayne, and Washtenaw counties operate environmental hotline numbers and respond to environmental complaints including illegal dumping, spills and suspicious discharges. Local communities also receive pollution complaints directly from residents. As discussed in the ARC Collaborative PEP, local communities (cities, villages, and townships) will promote the use of the hotline numbers to their residents and general public and assist with and/or perform follow up complaint response as appropriate. Community staff may identify a potential pollution issue during their day-to-day activities. These issues will be reported, investigated and tracked just like a pollution complaint from a resident. It should be noted that suspicious discharges within townships, not on township property, will be handled by the county road agency or their designee.

Investigative responses will range from a site visit that fails to confirm a problem to full scale advanced investigation to identify the source of the illicit discharge. When responding to complaints staff will use the Advanced Investigation process outlined in **Figure 3**. For non-emergency spills, the initial complaint response will begin within 48 hours of notification and within regular working hours. Emergency spills will be handled immediately. The spill response protocol for handling complaints, spills and illegal dumping is permittee-specific and, as such, is outlined in each permittee's Stormwater Management Plan.

Any other nonpriority area investigations will also be handled as described in **Figure 3**.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
ARC staff	
Maintain a list of IDEP community contacts and update.	By July 30 th each year
Cities, Villages, Townships, Road Agencies and Schools	
Provide ARC staff with a contact person for addressing pollution complaints.	By July 30 th each year
Track status of complaints using the Spill Notification & Complaint Response form (See Attachment F) or similar form. This will include complaints handled internally or those referred by the county.	As they arise.
Investigate and resolve complaints within their MS4.	As they arise.
WCDPS and OCWRC	
Provide technical guidance as requested by local communities.	As requested
Track the status of any pollution complaints that they investigate.	As they arise.
Investigate and resolve complaints within their MS4.	As they arise.

BMP goals:

100% of complaints addressed

Measures of assessment:

- Number of complaints received and referred or investigated.
- Number of issues identified.
- Number of issues resolved.

IDEP #6: Inspection of ARC Member-Owned Facilities

Description: Dye-testing will be conducted on ARC member-owned or operated facilities (within the watershed) for the purpose of identifying any illicit connections or illicit discharges. Each facility will be tested at least once. Facilities that undergo major renovation or reconstruction will be re-dye tested, as well. Any identified issues will be corrected by owner.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools	
Dye test permittee-owned/operated facilities.	See Table 2
Dye test permittee-owned/operated facilities that undergo major renovation.	Within 6 months of completion of construction
Repair/correct illicit connections/discharges that were revealed during the site inspection. If the discharge is significant, take immediate steps to stop the illicit discharge.	As needed

Table 2 – Schedule for Initial Municipal Facility Dye Testing

Permittee (listed alphabetically)	Timeline
Municipalities	
Beverly Hills	By Dec 30, 2018
Bingham Farms	NA-1
Birmingham (golf courses only)	By Dec 30, 2018
Bloomfield Hills	By Dec 30, 2018
Bloomfield Twp.	Completed
Canton Twp.	Completed
Dearborn Heights	Completed
Farmington	Completed
Farmington Hills	Completed
Franklin	Completed
Garden City	Completed
Inkster	Completed
Lathrup Village	By Dec 30, 2018
Livonia	Completed
Melvindale	Completed
Northville	Completed
Northville Twp.	Completed
Novi	By Dec 30, 2018
Oak Park	NA-2
Plymouth	Completed
Plymouth Twp.	Completed
Redford Twp.	Completed
Southfield	Completed
Troy	NA-2
Walled Lake	By Dec 30, 2018
Wayne	Completed

Permittee (listed alphabetically)	Timeline
Westland	Completed
Counties	
Wayne County	Completed
Schools	
Henry Ford College	Completed

NA-1=Not applicable because there are no municipal facilities.

NA-2=Not applicable because municipal facilities are not located in the watershed.

BMP goals:

- 100% of ARC Member existing facilities dye tested.
- 100% of issues addressed.

Measures of assessment:

- Number of facilities dye tested.
- Number of issues identified.
- Number of issues resolved.

IDEP #7: IDEP Work Group

Description: A work group will meet twice per year to discuss IDEP-related topics including the annual advanced investigations work plan, progress of advanced investigations, lessons learned, any road blocks encounter with implementing the plan, and recommendations for improving the plan. The group will be comprised of MS4 permittees and be facilitated by ARC staff. Permit participation will be tracked with a sign-in sheet. A summary of the meeting will be prepared and distributed to the group.

Schedule: Two work group meetings per year.

ARC Member Responsibilities:

- ARC staff
 - Schedule and facilitate meetings in cooperation with the Technical Committee Chair
- Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools
 - Participate in meetings.

BMP goals:

- Hold at least 2 work group meetings per year.
- 80% member participation.
- 2 meeting summaries per year.

Measures of assessment:

- Number of meetings per year.
- Number of members in attendance at meetings.
- Number of meeting summaries.

IDEP #8: Legal Authority

Description: The legal authority that allows permittees to prohibit, investigate and/or enforce the correction of illicit discharges varies depending on the nature of the discharge in question and the jurisdiction of the MS4. For discharges to city and village MS4s, the legal authority is granted via the Plumbing Code, Sewer Use Ordinances, Nuisance Ordinances, and Municipal Civil Infraction Ordinances. Schools and county departments will follow their written policies or codes, as appropriate. **Table 3** provides the list of regulatory mechanisms by type of illicit discharge that are available to local, school and county agencies to investigate and eliminate illicit discharges. In some cases, permittees can seek the assistance of state and federal agencies to investigate and eliminate illicit discharges. Examples include sewage discharges from mobile home parks, discharges from non-municipal facilities that have a NPDES permit and agricultural properties as shown in **Table 4**.

Table 3 – IDEP Regulatory Mechanisms available to Permittees

Discharge Type or Source	Lead Enforcement Agency	Regulatory Authority
Discharges to city and village MS4s (except as noted below)	Local DPWs and Building Depts.	Varies by community. See individual stormwater management plans.
Discharges to school or township MS4s	School or Township	See individual stormwater management plans.
Sanitary sewage and waste matter into County Drains	County Drain or Water Resource Commissions	<p>Section 280.423 of the Michigan Drain Code of 1956, as amended. Under the Michigan Drain Code, pollution of a county drain is a criminal misdemeanor and punishable by a fine of \$25,000 or imprisonment.</p> <p>See Items 1-10 of Chapter 18, Section 280.423 of the Michigan Drain Code at: http://legislature.mi.gov/doc.aspx?mcl-280-423</p> <p>See also Section 280.421: Obstructions; removal; expenses, notice; livestock; criminal complaint of Chapter 18 of the Drain Code at: http://www.legislature.mi.gov/%28S%28fpcdzixcmfe3wvtvqmyto3x%29%29/mileg.aspx?page=getObject&objectName=mcl-280-421.</p>
Discharges to County Road Drains	Road Agencies	Public Highways and Private Roads Act 283, 1909 Sect. 224.19b
Soil Erosion from Construction Sites	Part 91 Authority	Part 91, Soil Erosion and Sedimentation Control (SESC), of NREPA, Public Act 451 of 1994

Discharge Type or Source	Lead Enforcement Agency	Regulatory Authority
Discharges from Onsite Sewage Disposal Systems (OSDS)	Wayne County Dept. of Health, Veterans & Community Wellness Oakland County Health Division	<p>Wayne County: http://www.waynecounty.com/hhs/onsite_sewage.htm <i>Specifications Governing On-Site Disposal of Sanitary Sewage and Human Excreta</i> as follows: -Prohibit discharges: Article III, Sec. 3.1-3.2 -Right to inspect: Article IV, Sec. 4.3 -Corrective action: Article IV, Sec. 4.5-4.7 -Penalties: Article XVI, Sec. 16.1 <i>Wayne County On-Site Sewage Disposal Operation and Maintenance Ordinance</i> as follows: -Right to inspect: Sec. 803 -Corrective action: Sec. 802 -Penalties: Sec. 804-815</p> <p>Oakland County: Oakland County Sanitary Code -Article III, Sect 2.1-2.2 Public Health Code, Public Act 306 of 1927, Sect. 327.201</p>

Source: Modified from a table included in the Oakland County's MS4 permit application

Table 4 – IDEP Regulatory Mechanisms available to State and Federal Agencies to assist Permittees

Discharge Type or Source	State or Federal Enforcement Agency	Regulatory Authority
Discharges from Mobile Home Parks	MDLEG	Mobile Home Commission Act Public Act 96 of 1987 http://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-96-of-1987.pdf
Discharges from Part 5 facilities and industrial NPDES regulated facilities	MDEQ-WRD	Part 31, NREPA, PA 451 of 1994
Discharges from agricultural properties and livestock facilities	MDARD	Michigan Right to Farm Act, Public Act 93 of 1981
Releases of Oil and Polluting Materials, Sewage, Flammable and Combustible Liquids, Hazardous Materials, Hazardous Substances, Infectious Substances, Hazardous Wastes, Leaking Above Ground and Underground Storage Tanks, Bulk Commercial Fertilizers and Pesticides, and Liquid Industrial Wastes	MDEQ - WRD & RRD, USEPA, USCG, NRCS, USDOT, MSP, Local Police & Fire Depts., LEPC, LARA, MDARD, Local Health Dept., and CDC	See Attachment G for appropriate regulatory authority

Notes: CDC = Center for Disease Control, LARA= Michigan Dept. of Licensing and Regulatory Affairs, LEPC=Local Emergency Planning Commission, MDA=Michigan Dept. of Agriculture & Rural Development, MDEQ WRD=Michigan Dept. of Environmental Quality Water Resources Division, MDEQ RRD= MDEQ Remediation and Redevelopment Division, MDLEG=Michigan Dept. of Labor and Economic Growth, MSP=Michigan State Police, NRCS=Natural Resources Conservation Service, USCG=US Coast Guard, USDOT=US Dept. of Transportation, USEPA=US Environmental Protection Agency. Source: Oakland County Water Resources Commissioner's Office

E. Corrective Action Notification

The procedure for responding to illicit discharges will vary depending on the nature of the discharge (ex: illicit connection to a storm sewer, failing septic system, illegal dumping, etc.) and jurisdiction of the discharge. Similarly, the timeline for eliminating a discharge will vary depending on the geographic extent of the issue, the complexity of the corrective action, responsible party's financial constraints, etc. Deviations to the procedures below may be made on a case by case basis and will be documented in the IDEP record and in the Permit Progress Report. In all cases, corrective action measures will be implemented to the maximum extent practicable and as soon as practicable. The status of corrective actions will be included in the Permit Progress Report to the MDEQ.

E.1. Discharges from Private Sources to MS4s

If the source of an illicit discharge has been determined to be privately owned, discharging to a MS4 and regulated by the MS4, the MS4 owner (city, village, county) will use the procedure below to notify and correct the illicit discharge.

It should be noted that discharges to drains within townships are typically under the jurisdiction of the county road agency. However, corrective action and enforcement for discharges to their MS4 is handled under the local jurisdiction's codes and ordinances, the county health department's sanitary code or other appropriate regulatory authority. In these situations, corrective action notification and enforcement will be led by the township who will coordinate with the health department or other agencies, as needed.

First Notice: Notification of Problem and Correction Needed

Once the source(s) of an illicit discharge has been identified, the MS4 owner will provide the first written notice to the responsible party of the illicit discharge by registered mail within 7 days. The first written notice will notify the responsible party of the illicit discharge, the MS4 owner's regulatory authority to require correction, and the potential enforcement actions if the discharge is not addressed. The responsible party will be required to contact the MS4 owner regarding plans for correction within 14 days. Tracking of all notifications and documentation of registered mail receipts shall be retained by the MS4 owner.

Final Notice

If 14 days have passed from the date of the 1st written notice and no response has been received from the responsible party, a second written notice will be sent. The second written notice will remind the responsible party of the illicit discharge, the prior notice, the regulatory authority to require correction, and the potential enforcement actions that will occur if the discharge is not addressed. The responsible party will be given an additional 14 days to contact the MS4 owner regarding plans for correction.

Enforcement

If 30 days have passed from the date of the first written notice, a citation will be issued. The MS4 owner will issue civil infractions as described in the Enforcement Response Procedure (ERP) for the violation of the applicable IDEP-related ordinances as listed in individual permittee stormwater management plans. A citation shall include fines and may require a court appearance.

Corrections/Repairs

In the event that the owner does not contact the MS4 owner within 14 days of the Final Notice and/or the discharge is not addressed by the owner 30 days after civil infractions have been issued, the MS4 owner will pursue other enforcement actions such as: discontinue water service to the property and designate the property uninhabitable, place a lien on the property, and initiate efforts to complete the necessary repairs, as authorized by law.

E.2. Discharges from Public Properties to MS4s

If the discharge is emanating from a public property (other than the permittee's property), the MS4 owner will request correction or a written corrective action plan be submitted within 60 days of notification. If the discharge cannot be corrected within 60 days of notification, interim measures shall be implemented, as practical, to reduce the impact of the discharge on the receiving water. The corrective action plan will include a schedule for completion with a goal of completion within 18 months of plan approval. The plan will be reviewed by the MS4 owner within 60 days and approved or denied with explanation. Approval of the plan will not waive any local permitting requirements of the community.

E.3. Discharges from Permittee's Properties

For discharges emanating from the permittee's own property, a corrective action plan will be developed within 60 days of discovery of the discharge. The plan will include a schedule for completion with a goal of completion within 18 months of plan completion. If the discharge cannot be corrected within 60 days of discovery, interim measures shall be implemented, as practical, to reduce the impact of the discharge on the receiving water.

E.4. Discharges from Septic Systems

For illicit discharges from failed septic systems, the corrective action procedures of the respective county health departments will be followed. These procedures are documented in the counties' stormwater management plans.

For all other types of discharges, the notification and corrective action procedures will be handled by the lead state or federal agency as identified in **Table 4**.

F. Evaluating Effectiveness

Records for each of the previous IDEP activities will be kept and a summary report will be prepared by ARC staff documenting the tracking metrics indicated in Section D and summarized in **Table 5**. This information will be included in the permittee's Progress Report to the MDEQ. The findings contained within the summary report will also be discussed at a IDEP Work Group meeting.

Table 5 – Tracking Metrics for Evaluating Effectiveness

Item	BMP	Goal	Tracking Measure
A.	IDEP #1: Mapping	100% of permittee outfalls in one GIS database	Portion of watershed (area) where known outfalls are mapped in GIS
B.	IDEP #2: Outfall Prioritization and Dry Weather Screening	Screen 100% of priority outfalls.	Number priority outfalls identified. Number of priority outfalls screened and sampled. Number of suspicious discharges identified (based on outfall screening results).
C.	IDEP #3: Advanced Investigations	Follow the advanced investigation protocol for initial priority areas and priority outfalls. 100% of illicit connections/discharges resolved	Portion (square miles/acres) of priority outfall drainage areas in Categories A and B and portion investigated. Number and type of Illicit connections/discharges identified and resolved.
D.	IDEP #4: Staff Training	1 person per MS4 trained at the Investigator level. 50% of field staff trained at the Alert Observer Level.	Number of staff trained at various competencies.
E.	IDEP #5: Pollution Complaints	100% of complaints addressed	Number of complaints received and referred or investigated. Number of issues identified. Number of issues resolved.
F.	IDEP #6: Inspection of Member Facilities	100% of existing facilities dye tested. 100% of issues addressed.	Number of facilities dye tested. Number of issues identified. Number of issues resolved.
G.	IDEP #7: IDEP Work Group	2 meetings per year. 80% member participation. 2 meeting summaries per year.	Number of meetings per year. Number of members in attendance at meetings. Number of meeting summaries.

Schedule: Metric Summary Report: Due biennially by February 28th starting in 2018.
 Watershed-wide Assessment Report: Due every 10 years by June 30th starting in 2018.

ARC Member Responsibilities:

- ARC staff
 - Keep records on Items A, B and H and incorporate into the a biennial IDEP progress report.
 - Collect tracking metrics data from permittees as described below and produce a biennial IDEP progress report.

- Counties (road agencies, WCDPS and OCWRC)
 - Keep records of Items #C, D, E, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress report.
- Cities and Villages
 - Keep records of Items #D, E, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress report.
- Townships and Schools
 - Keep records of Items #D, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress Report.

G. References

- Alliance of Rouge Communities (ARC). *Comparison Analysis of Alternatives to finding Illicit Discharges to Storm Water Systems Final Report*. RPO-WMGT-TR66. February 2007.
- Alliance of Rouge Communities (ARC). *ARC-Funded IDEP Activities: Summary of Efforts* (presentation to the Full ARC). May 19, 2014.
- Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 1, 2011.
- Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 7, 2012.
- Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 21, 2013.
- Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 10, 2014b.
- Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 18, 2015.
- Michigan Department of Environmental Quality (MDEQ). *Total Maximum Daily Load for the Rouge River, Wayne and Oakland Counties, Michigan*. August 2007.
- Michigan Department of Environmental Quality (MDEQ) and Michigan Department of Licensing & Regulatory Affairs (LARA). *Michigan Guide to Environmental, Health, and Safety Regulations, 8th Edition*. June 2014.
- Rouge Program Office (RPO). *Alliance of Rouge Communities Bacterial Source Tracking Final Report*. (URBSW7.27). December 2006.
- Rouge Program Office (RPO). *Rouge River Restoration Summary: Wayne County Rouge River National Wet Weather Demonstration Project 1992 - 2014*. Undated.
- Wayne County Department of Public Services. *Compliance Report: January 1, 2014 – December 31, 2015 Wayne County Certificate of Coverage (COC) MIG610040 General Storm Water Discharge Permit MIG619000 - Draft*. February 29, 2016.

Attachment A

Participating ARC Members

Permittees	
Communities	
Beverly Hills, Village of	Northville, City of
Bingham Farms, Village of	Northville Township
Birmingham, City of	Novi, City of
Bloomfield Hills, City of	Oak Park, City of
Bloomfield Township	Plymouth, City of
Canton Township	Plymouth Township
Dearborn Heights, City of	Redford Township
Farmington, City of	Southfield, City of
Farmington Hills, City of	Troy, City of
Franklin, Village of	Walled Lake, City of
Garden City, City of	Wayne, City of
Inkster, City of	Westland, City of
Lathrup Village, City of	West Bloomfield Township
Livonia, City of	
Melvindale, City of	
Counties	
Oakland County*	
Wayne County*	
Schools	
Henry Ford College	

**Participating in this Plan, but their commitments are outlined in their individual stormwater management plan which is pending MDEQ approval.*

Attachment B

Rationale for Initial Priority Areas

The Rouge River *E. coli* TMDL was reviewed and water quality data collected by Oakland County Water Resources Commissioners Office (OCWRC) and Wayne County Department of Public Services (WCDPS) were analyzed by ARC staff to determine the initial priority areas for illicit discharge investigations. The process used for each county was the similar; however, OCWRC had a more robust data set than WCDPS. The detailed approaches and results are described below for each county.

Wayne County

In 2015, WCDPS sampled the river for *E. coli*. The sampling locations was based on the data from the Rouge River *E. coli* TMDL which identified three sites in Wayne County with elevated dry weather *E. coli* counts with human DNA biomarkers present. These sites were:

- U15-Bell Branch u/s of 6 Mile Road, within Livonia,
- D62-Tonquish Creek u/s of Joy Road within Plymouth and Plymouth Twp,
- G97-Lower Branch u/s of Henry Ruff Road within Wayne, Westland, Romulus and the Lower 1 communities of Canton Twp, Plymouth Twp and Van Buren Twp.

Approximately 50 samples were collected at and upstream of these locations during dry conditions (see Appendix A). Several sites had *E. coli* counts above 1,000 cfu/100 mL as shown in Table 1. These sites have been grouped into four areas (Tonquish Creek, Bell Branch Tributary, Lower Rouge, and McKinstry and Sines and Arnold Drains) totaling 21,054 acres (33 sq miles).

Table 1. Wayne County Locations with *E. coli* above 1,000 cfu/100 mL (data from 2015)

Site ID	<i>E. coli</i> Count (cfu/100 mL)	Site Description
Tonquish Creek (4,163 acres)		
D62	1,483	Tonquish Creek at Joy Rd
D62A	1,145 3,255	N. Branch Tonquish at Ford St
D62C	3,654 6,867	S. Branch Tonquish at Main St
D62C.1	>24,196 72,700	Outfall N. side of S. Branch at Harvey St.
D62C.2	>24,192	Crestwood Condos E. of Sheldon
D62D	1,210	S. Branch at Ann Rd (west of Sheldon).
Bell Branch Tributary (1,730 acres)		
U15B	2,187	Tributary to the Bell Branch at the north end of Bicentennial Park which north of 7 Mile Road and west of Gill Road in Livonia
Lower Rouge (5,241 acres)		
G200	1,314	Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township
G200.1	4,106	Lower Rouge west of Ridge Rd. (DeStanCo property)
McKinstry Drain and Sines and Arnold Drain (9,920 acres)		
L51	4,884	McKinstry Drain at Michigan Ave.
L51A	1,336	McKinstry Drain at Sheldon Rd.
G94A	1,046	Sines and Arnold Drain at Beck Rd.

Based on this data, the following priority areas are recommended for illicit discharge investigations in Wayne County (Figure 1):

- A. Tonquish Creek upstream of Joy Road in Plymouth and Plymouth Township. This includes the South Branch from the confluence to Plymouth Park and North Branch from the confluence to Sheldon Road.
- B. Tributary to the Bell Branch at the north end of Bicentennial Park which is north of 7 Mile Road and west of Gill Road in Livonia.
- C. Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township.
- D. Sines and Arnold Drain in Canton Township at Sheldon Road 0.5 miles north of Michigan Ave and the McKinstry Drain in Canton Township south of Michigan Ave between Lilley and Beck roads including Van Buren and possibly Ypsilanti townships.

Oakland County

OCWRC has been collecting *E. coli* data at select locations since 1999. Samples are collected during dry weather conditions and prioritized (Category A, B, C, or D) for additional sampling according to OCWRC's Dry Weather Screening and Prioritization Criteria (Appendix B). The resulting dry weather screening data are shown in Appendix C. Waterbodies that fell into Categories C and D are shown in Table 2.

Table 2. Oakland County Locations in OCWRC Prioritization Categories C and D

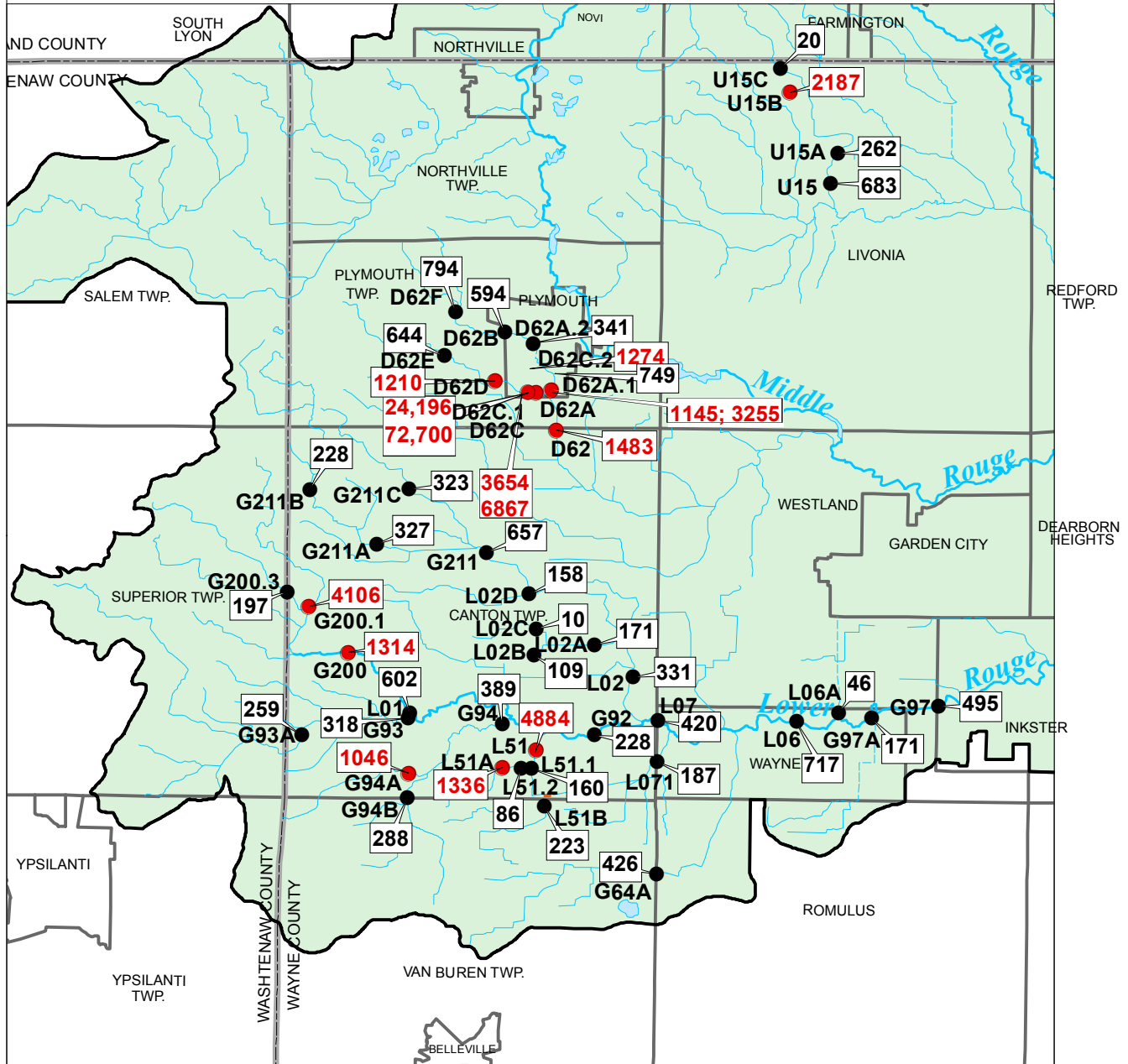
OCWRC Category	Waterbody	Average <i>E. coli</i> (cfu/100 mL)	Notes
CAT D	AUSTIN DRAIN	2,005	
CAT C	BLOOMFIELD HIGHLANDS DRAIN	2,121	
CAT D	CLARENCEVILLE DRAIN	1,666	[1]
CAT C	CLAUDE H. STEVENS NO.1 DRAIN	1,371	
CAT C	CLAUDE H. STEVENS NO.10 DRAIN	1,748	
CAT D	CLAUDE H. STEVENS NO.3 DRAIN	7,194	
CAT C	CLAUDE H. STEVENS NO.4 DRAIN	10,909	
CAT C	DEVONSHIRE DRAIN	1,181	
CAT C	EIGHT MILE DRAIN	1,940	
CAT C	FLANNERY DRAIN	1,765	
CAT C	FRACASSI	14,240	
CAT D	HAZEL DRAIN	309	[1]
CAT D	LAW DRAIN	351 – 20,671	[1]
CAT C	OWENS RELIEF DRAIN (BRANCH B)	7,095	
CAT D	OXFORD AVE. DRAIN	4,432	[1]
CAT D	PEARL STREET DRAIN	87,739	[1]
CAT D	U.S. 16 DRAIN	2,269	

[1] Illicit discharges investigated and removed. No further investigations are warranted at this time.

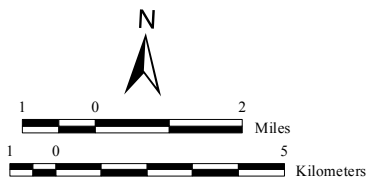
Except for those waterbodies that have already been investigated, the locations in Table 2 require further investigations to determine the presence and location of any illicit discharges. Therefore, the following areas, totaling 4,645 acres (7.3 sq. miles), are recommended for illicit discharge investigations in Oakland County:

Waterbody	Community	Acres
Austin Drain	Southfield	481
Bloomfield Highlands	Bloomfield Twp	116
Claude H. Stevens No. 1 Drain	Bloomfield Twp	102
Claude H. Stevens No. 10 Drain	Bloomfield Twp	41
Claude H. Stevens No. 3 & 4 Drains	Bloomfield Twp	318
Devonshire Drain	Bloomfield Twp	207
Eight Mile Drain	Southfield	2131
Flannery	Southfield	53
Fracassi Drain	Southfield	124
Owens Relief Drain (3 Branches)	Southfield	872
US-16 Drain	Farmington	200

Appendix A. WAYNE COUNTY ARC IDEP 2015 IDEP Screening *E. coli* Results



LEGEND



- Rouge watershed boundary
- Rouge River main branch
- Tributary
- - - Enclosed drain
- Lake
- County boundary
- Community boundary

- 2015 ARC IDEP sampling locations
- *E. coli* value
- *E. coli* values > 1000 in red

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
G00.2	Dunhill Way and Hauk Park Lower Rouge west of Ridge	09/25/15	13:45	9.37	1.938	20.5	97	11199	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		sample taken at Dunhill way and Hauk Park Riversedge sub	conductivity over 1.000
G200	Lower Rouge/Proctor/Denton	07/24/15	11:20	8.32	0.83	22.2	1314	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc	Sunny		E.coli over 1000
G200.1	Lower Rouge west of Ridge Rd (DeStaCo property)	09/17/15	12:00	6.53	1.149	16.6	4106	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	None		sample taken at the bridge at the DeStaCo property	E. coli over 1000 and conductivity over 1000 in followup sample
G200.3	3211 Napier Rd unknown tributary	09/25/15	14:05	7.95	0.826	17.5	197	17329	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at 3211 Napier Rd; some tires and springs in creek	
G211	Fellows Creek/Ford Rd	08/17/15	12:50	8.72	0.934	24.1	657	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some tires at site	
G211A	Fellows Creek at Fairborn Rd Ford Rd east of Ridge Rd	08/17/15	13:05	7.71	0.814	22.7	327	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G211B	Fellows Creek crossing at Poppleton Blvd east of Ridge south of Warren	08/17/15	13:30	8.22	0.795	22.3	228	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G211C	Fellows Creek at Warren Rd/Beck-upstream is LR-9 bug hunt site	08/17/15	13:35	7.87	1.317	23.9	323	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1000
G64A	McClagherty Drain/Hannan Rd	08/06/15	13:00	6.53	1.78	24	426	>24196	Lower	Romulus	Moderately Turbid	Clear	None/Natural	Natural(leaves, limbs etc		floating green scum present	conductivity over 1000
G64A	McClagherty Drain/Hannan Rd	08/06/15	13:30	6.05	1.517	20.1	262	>24196	Lower	Romulus	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some fixed trash present	conductivity over 1000
G92	Lower Rouge/Haggerty	07/24/15	10:45	8.47	0.936	20.1	228	17329	Lower	Canton Township	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		
G93	Fowler Creek at Beck Rd	08/17/15	11:00	5.25	0.67	22.7	318	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		riprap present upstream of bridge low flow	
G93A	Fowler Creek at Geddes Rd	08/17/15	9:30	5.98	0.824	22.5	259	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G94	Sines Drain at Sheldon Rd	08/17/15	10:50	5.73	1.064	22	389	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		tire and riprap also present at site	conductivity over 1.000
G94A	Sines and Arnold Drain/Beck Rd	08/17/15	9:45	0.95	1.27	23.2	1046	17329	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		riprap on upstream side of culvert is causing flow blockage	E. coli over 1000, conductivity over 1.000, DO below 5.0mg/L
G94B	Apple Run Drain at Beck Rd	08/17/15	10:05	3.98	0.999	25.1	288	15531	Lower	Canton Township	Opaque	Gray	None/Natural	Natural(leaves, limbs etc			DO below 5.0mg/L

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
G97	Lower Rouge/Henry Ruff Rd	07/24/15	10:05	8.08	1.056	20.8	495	>24196	Lower	Westland	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		conductivity over 1.000
G97A	outfall enclosed tributary east of Venoy Rd north of Michigan Avenue	08/06/15	13:55	10	2.321	17.2	171	>24196	Lower	Westland	Highly Turbid	Brown: Light	Musty-Faint	Natural(leaves, limbs etc		some floating and fixed trash in trash rack in outfall lots of dry weather flow	conductivity over 1.000
L02	Fellows Creek/Palmer Rd	08/17/15	11:45	4.83	1.11	22.6	331	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Trash-Fixed		boards dumped at site	conductivity over 1.00 DO below 5.0mg/L
L02A	Fellows Creek/Haggerty Rd	08/17/15	12:00	5.35	0.874	24.1	171	4611	Lower	Canton Township	Clear	Clear	None/Natural	Trash-Fixed			
L02B	Fellows Creek/Morton Taylor Rd	08/17/15	12:15	1.12	0.883	20.7	109	17329	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		washing machine other trash at site sample taken at enclosed drain outlet	DO below 5.0mg/L
L02C	Fellows Creek/Cherrystone	08/17/15	12:30	4.32	0.941	27.6	10	7270	Lower	Canton Township	Highly Turbid	Brown: Light	None/Natural	None			DO below 5.0mg/L
L02CR	Fellows Creek/Cherrystone	08/17/15	12:30	4.32	0.941	27.6	10	7270	Lower	Canton Township	Highly Turbid	Brown: Light	None/Natural	None		replicate taken at L02C	DO below 5.0mg/L
L02D	Fellows Creek north of Cherry Hill	08/17/15	12:40	0.92	1.442	23	158	8121	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.00 DO below 5.0mg/L
L06	Lower Rouge/Wayne Rd	07/24/15	10:20	8.05	1.03	20.3	717	24196	Lower	Wayne	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		conductivity over 1.000
L06A	Lower Rouge tributary in Glenwood Cemetery	08/17/15	11:30	1.1	2.351	17.1	41	15531	Lower	Wayne	Clear	Clear	None/Natural	Natural(leaves, limbs etc		very low flow light film and water stagnant	conductivity over 1.00 DO below 5.0mg/L
L07	Lower Rouge/Hannan	07/24/15	10:35	8.16	0.37	19.7	420	>24196	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		
L51	McKinstry Drain at Michigan Ave	08/17/15	10:40	3.77	1.17	22.4	4884	>24196	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	None			E.coli over 1,000, DO below 5.0mg/L, and conductivity over 1.000
L51	McKinstry Drain at Michigan Ave	09/17/15	11:00	4.43	1.035	15.8	122	15531	Lower	Canton Township	Highly Turbid	Brown: Medium	None/Natural	None			conductivity over 1.00 DO below 5.0mg/L
L51.1	McKinstry Drain at end of Morton Taylor	09/17/15	11:10	9.42	0.977	16	160	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		end of Morton Taylor Rd. There is some flow here. Beware of dog	
L51.2	McKinstry Drain at Washburn Rd	09/17/15	11:30	6.68	1.535	17	86	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the end of Washburn Rd (past gate)	conductivity over 1.000
L51A	McKinstry Drain at Sheldon Rd	08/17/15	10:30				1336	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		extremely low water levels, temperature, DO and conductivity could not be measured	E. coli over 1000
L51B	McKinstry Drain at Van Born Rd	08/17/15	10:20	1.03	0.685	22.7	223	>24196	Lower	Van Buren Township	Opaque	Green	None/Natural	Natural(leaves, limbs etc		duckweed, algae present	
LO1	Lower Rouge/Beck	07/24/15	11:05	6.5	0.866	21.3	602	24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc	Sunny		

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
LO71	Lower Rouge tributary at Hannan south of Michigan Ave	08/06/15	13:20	7.2	2.168	20.4	187	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		floating and fixed trash present	conductivity over 1.000
NA		09/25/15	13:50	5.14	4.083	17			Lower	Canton Township	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		Napier at Cherry Hill. Unmapped drain. This sample was not submitted to the lab	conductivity over 1.000
U15	Six Mile/east of Farmington	07/24/15	14:30	7.19	1.247	19.7	683	>24196	Upper	Livonia	Clear	Clear	Musty-Faint	Natural(leaves, limbs etc		sample taken on downstream side of Six Mile. Water low at site. Iron bacteria present at seeps	conductivity over 1.000
U15A	Curtis, west of Farmington, north of Six Mile	07/24/15	14:20	7.91	0.958	20.8	262	24196	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken upstream of enclosure	
U15B	north end of Bicentennial Park	07/24/15	14:00	3.46	0.754	21.2	2187	19863	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
U15C	Memorial Gardens/Eight Mile	07/24/15	13:50	9.33	0.796	27	20	7701	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at base of dam in cemetery. Stream rerouted south of 8 Mile in Glen Eden memorial gardens	
D62	Tonquish Creek/Joy Rd	07/24/15	11:50	7.58	1.843	20.4	1483	>24196	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some floating trash	E.coli over 1000, conductivity over 1.000
D62A	North Branch Tonquish Creek at Ford St	07/24/15	12:05	8.07	2.375	20.4	3255	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
D62A	North Branch Tonquish Creek at Ford St	09/17/15	12:30	8.49	2.119	18.2	1145	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
D62A.1	Tonquish Creek at Kellogg Street outlet	09/17/15	12:45	9.13	2.003	17.7	749	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the south end of Kellogg St outlet	
D62A.2	Tonquish Creek at Harvey St	09/17/15	13:00	8.8	1.752	17.4	341	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the upstream side of enclosure at Harvey/north of Ann Arbor Trail	conductivity over 1.000
D62B	Tonquish Creek/Sheldon Rd south of Penniman Rd	07/24/15	13:15	10.51	1.033	23.9	594	>24196	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.000
D62B-R	Tonquish Creek/Sheldon Rd south of Penniman Rd	07/24/15	13:15				644	>24196	Middle	Plymouth Township						field replicate taken of D62B	
D62C	South Branch Tonquish at Main St	07/24/15	12:15	8.36	1.074	20.7	3654	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some dripping from outfall right bank	E.coli over 1000, conductivity over 1.000*
D62C	South Branch Tonquish at Main St	09/17/15	13:10	8.15	1.374	18.6	6867	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Main St at Rite Aid. Very steep banks	E.coli over 1000, conductivity over 1.000*
D62C.1	outfall north side of South Branch Tonquish Creek at Harvey St	09/17/15	13:30	7.26	1.206	19.1	>24196	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample collected at Harvey outfall in culvert from Norh side	E. coli elevated (sewage source), conductivity over 1.000

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
D62C.1	outfall north side of South Branch Tonquish Creek at Harvey St	09/25/15	14:35		0.982	20.7	72700	141360	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Harvey Street outfall lots of small fish. Surfactant: >0.25ppm; Ammonia 0.5 ppm	E. coli elevated (sewage source), conductivity over 1.000
D62C.2	Crestwood Condos east of Sheldon (south branch Tonquish creek)	09/17/15	13:55	8.75	0.904	18.2	1274	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sampled in Crestwood condos, east of Sheldon Rd. lots of small minnows in deep pools	E. coli over 1000
D62C.2R	Crestwood Condos east of Sheldon (south branch Tonquish creek)	09/17/15	13:55	8.75	0.904	18.2	1259	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		replicate of site above	
D62D	S. branch Tonquish at Jo Ann Road west of Sheldon Rd	07/24/15	12:30	8.2	0.687	20.7	1210	19863	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		minnows at site	E. coli over 1000
D62E	South Branch Tonquish Creek in Plymouth Township Park	07/24/15	12:50	8.2	0.3668	21.4	644	9208	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		lots of little fish/minnows	
D62F	North Territorial Road west of Sheldon	07/24/15	13:05	8.04	1.856	21	794	>24196	Middle	Plymouth Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.000
City of Plymouth IDEP Harvey Street (with ALS Lab)																	Plymouth investigation samples below
Linden/Harvey	Linden/Harvey	09/29/15	10:15				130		Middle	Plymouth City	Clear	Clear	None/Natural	None		Ammonia >2.0, Surfactant <0.25	
1046 Palmer	1046 Palmer	9/29/2015	11:20				60		Middle	Plymouth City	Clear	Clear	Musty-Faint	None		surfactant 3.0ppm; Ammonia 0.75ppm	
1096 Palmer	1096 Palmer	09/29/15	11:00				TNTC		Middle	Plymouth City	Moderately Turbid	Milky/White	Sewage-Stong	Sewage Solids-Floating		toilet paper in storm; sanitary odor, sewage fungus present' TNTC with 100 dilutions Surfactant: <0.25, Ammonia <0.25	
1097 Hartsough	1097 Hartsough	09/29/15	14:15				NA		Middle	Plymouth City	Highly Turbid	Brown: Light	Musty-Faint	None	Overcast	rain intensifying, first flush starting in manhole; looks like old sanitary; storm sewer in middle of block. Hardly any flow	
1108 Beech	1108 Beech	09/29/15	9:45				80		Middle	Plymouth City	Clear	Clear	None/Natural	None		10 dilution of sample; Ammonia 0.25, Surfactant 1.5	
1124 Carol (West)	1124 Carol (West)	09/29/15	14:35				NA		Middle	Plymouth City	Clear	Clear	None/Natural	None	Raining	raining' sample not analyzed by the lab; water clear, some first flush	
656 Harvey	656 Harvey	09/29/15	10:30				10		Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Ammonia: 0ppm; Surfactant> 0.25	
918 Hartsough	918 Hartsough	09/29/15	14:06				NA		Middle	Plymouth City	Highly Turbid	Gray	Musty-Strong	Trash-Floating		lab sample at this loction not analyzed; cigarette butts, highly turbid water; Ammonia >2.0, Surfactant 1.0	

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
Beech/Harvey G62C.2	Beech/Harvey G62C.2	09/29/15	9:30				TNTC		Middle	Plymouth City	Slightly Turbid	Gray	Sewage-Stong	None		sewage fungus present; strong sewage odor; TNTC with 100 dilutions; Ammonia 0.25 ppm; Surfactant 0.25ppm	
1104 Sutherland		09/29/15					NA		Middle	Plymouth City						no sample analyzed at the lab	
																	*triggered follow up investigation

Appendix B. OCWRC Dry Weather Screening and Prioritization Criteria

The following is a portion of Oakland County's Stormwater Permit Application that was submitted in 2016.

Appendix J:

Attachment 2: WRC Alternative IDEP, Sampling Points and DWS Prioritization Criteria

IDEP Sampling Points

WRC has been collecting visual observation and water quality sampling data on County Drains since 1999. Dry weather Screening and water quality sampling procedures have been developed under the Voluntary Storm Water NPDES Permit for the Rouge Watershed in 1999 and the Oakland County General Stormwater NPDES Permit issued in 2003. Procedures are included in WRC Work instruction, EU 1702, "Illicit Discharge Elimination Program". (APPENDIX E)

Sampling points have been selected as to monitor the entire length of all open and enclosed County drains for illicit discharge sources. The following are taken into consideration when selecting sampling site locations; Drainage District and Oakland County boundaries; the length of the drain including significant branch and segment connecting points; points of discharge to surface waters or connected storm drains outside WRC's jurisdiction and; locations with a high potential for illicit discharge. The potential for illicit discharge is based on historical DWS and sampling results, complaints, historical discharges, spills or other water quality concerns. IDEP sampling points have been selected over time and are continually evaluated by the IDEP Coordinator. Sampling locations, DWS and sampling location and frequency can be adapted to meet the illicit discharge Investigation and water quality data needs of WRCs IDEP Program. Sampling point locations are subjective and can include MS4 Outfall and Discharge Point locations but are not mutually inclusive or exclusive of County Drain MS4 designations or MS4 Outfall or Discharge Point Locations. WRC currently performs routine DWS and sampling on 367 open and enclosed County Drains at 879 locations. A map and list of current 2014 sampling site locations are included as attachments.

Criteria for Prioritization and Scheduling of DWS and Illicit Discharge Investigations

Drains are prioritized and a frequency for DWS and scheduling of IDEP investigations on County Drains is established by on an ongoing review of current and historical DWS screening and sampling data, complaint investigation information and other surface water quality concerns received by WRC. A frequency for ongoing Dry Weather Screening and the need for IDEP Investigations are based on physical evidence of pollutants and or concentrations of *E.coli* found in the drain. A Table listing the criteria used for establishing DWS frequency and prioritizing of Illicit Discharge Investigation of the drains appears below. A schedule for going DWS of WRC IDEP Sampling points for the proposed permit period is attached.

Table 1 MS4 Sampling Categories & DWS Frequencies (based on average E. coli sampling values)

DWS Sampling Frequency	(1)Sampling Average	CAT-A	CAT-B	CAT-C	CAT-D	Sampling Criteria
1st Sampling						
5 years	1	X				No flow, <i>E. coli</i> less than 300, no visible pollutants
3 years	1	X				<i>E. coli</i> between 300 and 1,000
6 months	1	X				<i>E. coli</i> between 1,000 and 10,000
(2) Monthly	1	X	X			<i>E. coli</i> greater than 10,000 / other significant pollutant parameters
2nd sampling						
5 years	2	X				No flow, <i>E. coli</i> less than 300, no visible pollutants
1 years	2	X				<i>E. coli</i> between 300 and 1,000
6 months	2	X				<i>E. coli</i> between 1,000 and 10,000
Monthly	2	X	X	X		<i>E. coli</i> greater than 10,000 / other significant pollutant parameters
3rd sampling						
5 years	3	X				No flow, <i>E. coli</i> less than 300, no visible pollutants
1 year	3	X				<i>E. coli</i> between 300 and 1,000
6 months	3	X	X			<i>E. coli</i> between 1,000 and 10,000
Monthly	3	X	X	X	X	<i>E. coli</i> greater than 10,000 / other significant pollutant parameters

- (1) Ongoing DWS of County Drains and scheduling for IDEP Investigation are based on a minimum of 3 consecutive sampling cycles, except in cases where a discharge of pollutants is clearly evident and an immediate response is required (see below). Where consecutive samplings for averages E.coli exceed the minimum thresholds the frequency between DWS increases. Where 3 consecutive sampling indicate an average exceeding the E.coli threshold the Drain is scheduled for IDEP investigation
- (2) The Table does not apply to IDEP Investigations, Complaint Investigations and Emergency Spill Response situations. The presence of sewage or other significant pollutants automatically places the suspect Drain / MS4 in Categories B-D. Drains placed in IDEP Investigation categories are removed from the schedule for DWS until an IDEP Investigation has been completed, and any illicit discharges sources been corrected. Drains that have completed an illicit discharge Investigation are placed on the back on the DWS list on a monthly schedule until 3 consecutive samplings indicate no visible signs of pollutants and average E.coli concentration less than 300 CFU / 100 ml. The last 3 consecutive samplings will be used to evaluate and schedule the drain for DWS going forward.

Drain Categories

- A** – Continued DWS and monitoring, as scheduled.
- B** – Scheduled Segmentation of Drain and upstream sampling to identify MS4s / DPs with suspect discharges. Sampling plan required.
- C** – Scheduled Illicit Discharge Investigations to locate and identify sources of pollutant discharge(s). Plan and approved budget required.
- D** - Ongoing Advanced IDEP investigation, source Identification, and Illicit Discharge Elimination. Plan, schedule, budget and funding source are TBD (To Be Determined).

Appendix C. 1999 - 2015 Oakland County Dry Weather Screening Results (cfu/100 mL)

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
8614	AMY DRAIN	6/24/2008	36,521	6/26/2009	22,349	6/27/2008	24,081	6/29/2010	141	11/19/2014	50	2681	CAT A
5175	AUSTIN DRAIN	4/19/2008	984	8/16/2012	2,008	7/29/2013	4,079					2005	CAT D
0	Bingham Farms Extension No. 1 Drain	9/26/2000	NA										CAT A
1387	BLOOMFIELD HIGHLANDS DRAIN	11/6/2007	2,121	4/1/2010	NA							2121	CAT C
6094	BLUE HERON	5/1/2008	50	8/17/2015	250							112	CAT A
13319	BORDEN DRAIN	7/30/2003	NA	4/15/2010	50							50	CAT A
5525	BORDEN DRAIN	7/30/2003	NA	5/11/2010	948							948	CAT A
0	BRENON DRAIN	5/7/2008	50									50	CAT A
0	CADDELL DRAIN	12/18/2005	NA	12/21/2007	50							50	CAT A
14048	CADDELL DRAIN	12/18/2005	NA	12/21/2007	50	3/3/2009	1570	4/1/2010	100	7/23/2015	2368	369	CAT B
6070	CASE DRAIN	5/30/2008	472	1/20/2012	265							354	CAT A
0	CHESTER DRAIN (BRANCH A)	3/12/2008	100									100	CAT A
0	CHESTER DRAIN (BRANCH B)	7/6/2006	NA										CAT A
0	CHESTER DRAIN (BRANCH C)	3/12/2008	100									100	CAT A
5686	CLARENCEVILLE DRAIN	7/29/2016	1666									1666	CAT D
5567	CLAUDE H. STEVENS NO.1 DRAIN	6/23/2008	422	7/20/2012	1,078	10/11/2013	1,680	12/1/2014	4,623			1371	CAT C
6523	CLAUDE H. STEVENS NO.10 DRAIN	6/18/2008	50	10/11/2013	61,128							1748	CAT C
9050	CLAUDE H. STEVENS NO.11 DRAIN	6/18/2008	50	10/4/2013	100							71	CAT A
5700	CLAUDE H. STEVENS NO.3 DRAIN	5/1/2008	NA	10/11/2013	7,194							7194	CAT D
6558	CLAUDE H. STEVENS NO.4 DRAIN	5/1/2008	NA	10/11/2013	10,909							10909	CAT C
6099	CLAUDE H. STEVENS NO.5 DRAIN	5/30/2008	176	10/4/2013	50							94	CAT A
6159	CLAUDE H. STEVENS NO.6 DRAIN	5/1/2008	NA	10/11/2013	155							155	CAT A
6102	COY DRAIN	5/1/2008	745	10/15/2012	375	7/22/2015	1124					680	CAT B
5011	DALY DRAIN	6/18/2008	240									240	CAT A
8555	DECONICK DRAIN	1/0/1900	NA	4/1/2010	50	8/19/2015	50					50	CAT A
5417	DEVONSHIRE DRAIN	1/19/2005	4,401	2/6/2009	4,472	6/3/2009	1,974	3/31/2010	50			1181	CAT C
4670	DONAHUE DRAIN	9/11/2015	820									820	CAT A
82835	DONAHUE DRAIN	9/11/2015	394									394	CAT A
581844	DONAHUE DRAIN	9/11/2015	50									50	CAT A
0	DOROTHY WEBB DRAIN	6/19/2002	368	4/27/2010	200	8/19/2015	224					255	CAT A
0	EARLMOOR DRAIN	6/25/2008	219									219	CAT A
3279	EDWARDS RELIEF DRAIN	12/9/2005	640	5/1/2008	540	7/15/2010	1,032	8/4/2012	50			365	CAT A
905280	EIGHT MILE DRAIN	2/18/2005	252	6/2/2008	4,237	3/26/2010	493	7/8/2016	26,922			1940	CAT C
0	EVANS DRAIN	6/3/2008	6,411	7/1/2010	253							1274	CAT B
0	EVERGREEN RD. DRAIN	5/6/2008	50									50	CAT A
232	FLANNERY DRAIN	3/18/2009	352	7/12/2016	8,855							1765	CAT C
6217	FRACASSI DRAIN	4/25/2008	3,485	6/20/2008	3,453	10/20/2008	26,437	12/20/2013	2,427	12/22/2014	35,397	14240	CAT D
16069	FRANCIS DRAIN	7/22/2009	NA	6/15/2010	NA	8/15/2012	50	7/21/2015	612			175	CAT A

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
0	FRANCIS DRAIN	2/14/2008	NA	7/22/2009	2070	6/15/2010	1003	8/15/2012	466	7/21/2015	100	558	CAT B
	FRANKLIN SUBWATRESHED DRAIN	9/10/2015	375									375	CAT A
	FRANKLIN SUBWATRESHED DRAIN	9/10/2015	278									278	CAT A
6360	GRAVES DRAIN	6/19/2008	NA										CAT A
0	GRONKOWSKI DRAIN	4/28/2008	50									50	CAT A
6131	HAMLIN DRAIN	7/10/2001	2,128	2/2/2005	512	6/25/2008	1,605	3/31/2010	315	7/20/2012	158	614	CAT A
9514	HAZEL DRAIN	3/26/2009	255	7/29/2016	375							309	CAT D
0	HOLLANDAR DRAIN	8/6/2010	1,415									1415	CAT A
3357	JACOBS DRAIN	4/1/2010	500	9/10/2015	823							641	CAT A
3357	JAMIAN DRAIN	4/1/2010	50	9/10/2015	1,054							230	CAT A
0	JILBERT DRAIN	5/7/2008	100									100	CAT A
593737	KEMP DRAIN	4/27/2010	187	8/19/2015	265							223	CAT A
8223	KEMP DRAIN	4/27/2010	100	8/19/2015	250							158	CAT A
7565	KOLLAR DRAIN	5/1/2008	298	8/17/2015	2,652							889	CAT B
6609	LAW DRAIN	6/30/2005	NA	7/19/2010	1,232	11/20/2012	100					351	CAT A
6610	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6612	LAW DRAIN	6/30/2005	NA	7/19/2010	2,047							2047	CAT A
6608	LAW DRAIN	6/30/2005	NA	7/19/2010	NA	11/20/2012	1,151					1151	CAT A
6604	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6606	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6603	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6611	LAW DRAIN	6/30/2005	NA	7/19/2010									CAT A
6605	LAW DRAIN	6/30/2005	NA	7/19/2010	99,854	7/29/2013	682					8252	CAT B
6607	LAW DRAIN	6/30/2005	NA	7/19/2010	99,854	7/29/2013	4,279					20671	CAT D
0	LUEDERS DRAIN	7/30/2003	NA	6/27/2008	1,153	5/11/2010	2,688					1760	CAT B
0	LUZ DRAIN	11/15/2008	100									100	CAT A
5522	LYNN D. ALLEN DRAIN	6/18/2008	2,123	3/31/2010	198	7/29/2013	644					647	CAT A
8331	MAPLEHURST DRAIN	6/1/2005	NA	7/28/2010	755							755	CAT A
5643	MCCLUNG DRAIN	6/1/2008	653	7/1/2010	919	8/2/1012	4,213	7/30/2013	100	11/19/2014	50	417	CAT A
0	MCDONNEL DRAIN	4/25/2008	224									224	CAT A
1777	MCINTOSH DRAIN	4/30/2008	50	8/17/2015	100							71	CAT A
7575	MINNOW POND DRAIN	5/2/2008	873	8/15/2012	667							763	CAT B
6344	MINNOW POND DRAIN	5/2/2008	873	8/12/2012	1196							1022	CAT B
4620	MORGAN DRAIN	7/13/2007	NA	7/12/2016	278							278	CAT A
0	MORGAN DRAIN	7/13/2007	NA										CAT A
0	MORGAN DRAIN	7/13/2007	NA										CAT A
9688	MULLEN DRAIN	4/30/2008	584	9/10/2015	50							171	CAT A
42	MURPHY DRAIN	6/23/2008	100									100	CAT A
6146	NICHOLS DRAIN	1/25/2005	215	4/21/2005	446	5/30/2008	1,263	4/1/2010	1,479	11/19/2014	50	389	CAT A
7771	NORTHWESTERN DRAIN	4/1/2008	NA										CAT A
0	NORTHWESTERN DRAIN	4/1/2008	NA										CAT A
5631	OAK KNOB DRAIN	6/1/2008	50									50	CAT A
9551	OAKLAND HILLS ORCHARDS DRAIN	8/11/2009	NA	6/17/2010	124	8/15/2012	155	7/21/2015	100			124	CAT A
1316	OWENS DRAIN (BRANCH A)	4/4/2008	NA	7/11/2016	571							571	CAT A

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
1460	OWENS DRAIN (BRANCH B)	4/4/2008	NA	7/11/2016	7,095							7095	CAT C
5993	OWENS DRAIN (BRANCH C)	4/4/2008	NA	7/11/2016	960							960	CAT A
4969	OXFORD AVE. DRAIN	11/10/2009	NA	7/29/2026	4435							4435	CAT D
0	PEARL STREET DRAIN	2/1/2005	1002500	4/7/2008	7,679							87739	CAT D
7766	PEBBLE CREEK	6/30/2005	NA	8/12/2010	295	7/23/2015	155					214	CAT A
2871	PEBBLE CREEK	6/30/2005	NA	8/10/2010	NA	7/23/2015	400					400	CAT A
0	PERINOFF DRAIN	5/6/2008	747									747	CAT A
0	PETERSON DRAIN	5/5/2008	50									50	CAT A
1228	POWERS DRAIN	4/30/2008	690	8/17/2015	224							393	CAT A
7150	RANDOLPH STREET	7/22/2009	879	7/29/2015	4,380							1052	CAT A
400089	ROBERT A. REID DRAIN	6/18/2008	660									660	CAT A
0	ROBERT J. EVANS DRAIN	6/27/2008	367									367	CAT A
0	RUMMEL RELIEF DRAIN	5/7/2008	100									100	CAT A
8963	SHERMAN DRAIN	6/1/2008	50	7/8/2016	50							50	CAT A
0	SNYDER DRAIN	3/12/2009	200									200	CAT A
1361	SOUTHFIELD RD DRAIN	5/7/2008	100									100	CAT A
0	SPRAGUE BRANCH DRAIN	9/14/2004	NA	7/1/2006	NA								CAT A
0	SPRAGUE DRAIN	7/1/2006	NA										CAT A
0	SPRAGUE DRAIN NO. 2	8/23/1999	50	7/6/2010	1,307							256	CAT A
0	STEWART RELIEF DRAIN	5/5/2008	1,772	3/27/2010	50							298	CAT A
403780	SUMP DRAIN	12/1/2003	NA	7/29/2015	2260							2260	CAT B
7100	SUNKEN BRIDGE DRAIN	11/17/2009	NA										CAT A
0	TAYLOR DRAIN	4/1/2000	NA	6/4/2010	315							315	CAT A
0	TAYLOR DRAIN	4/1/2000	NA	6/4/2010	339							339	CAT A
7795	TOWNLINE DRAIN	7/22/2009	1823	6/17/2010	1177	7/23/2015	264					827	CAT B
0	TULANE DRAIN	11/19/2009	NA										CAT A
7801	U.S. 16 DRAIN	5/5/2008	2414	6/17/2010	1028	8/16/2012	5530	7/31/2013	1931			2269	CAT D
6701	VINEWOOD DRAIN	3/29/2005	NA	5/26/2010	100							100	CAT A
5560	WAGNER DRAIN	6/3/2008	992	8/3/2012	11,454	7/30/2013	155	11/18/2014	324			869	CAT A
8334	WARD DRAIN	4/27/2010	100	8/17/2015	NA							100	CAT A
0	WILCOX DRAIN	5/8/2008	71	4/1/2010	NA							71	CAT A

Attachment C

Outfall Screening Procedure for Identifying Potential Illicit Discharges

OUTFALL SCREENING PROCEDURE FOR IDENTIFYING POTENTIAL ILLICIT DISCHARGES

PREPARED FOR:

THE ALLIANCE OF ROUGE COMMUNITIES
46036 MICHIGAN AVE, CANTON, MICHIGAN 48188



SEPTEMBER 26, 2017

SECTION A – PURPOSE

The purpose of this procedure is to describe the protocols to inspect stormwater outfalls for the presence of illicit discharges. The Michigan Department of Environmental Quality (MDEQ) requires this procedure for stormwater discharges from municipal separate storm sewer systems (MS4) as part of an entity's National Pollutant Discharge Elimination System (NPDES) permit application.

SECTION B – PERFORMING FIELD OBSERVATIONS AT OUTFALLS

Outfalls will be assessed during dry weather conditions focusing on the criteria listed below. This assessment will be conducted following at least 48 hours with no precipitation.

1. Presence/absence of flow
2. Deposits/stains on the discharge structure or bank
3. Vegetation condition
4. Structural condition
5. Biology, such as bacterial sheens, algae, and slimes
6. Water clarity
7. Color
8. Odor
9. Floatable materials

A field form (See Figure 1) that documents the condition of the outfall and any discharge will be completed. In addition to the assessment of the field screening criteria, GPS positioning will be obtained for new or previously unscreened outfalls.

SECTION C – PERFORMING FIELD SCREENING

Only individuals that have been trained to do so will perform field screening activities. Acceptable training includes the following elements: goals of the IDEP program, how to recognize illicit discharges and sampling techniques. Four months of IDEP field experience consisting of outfall screening and/or advanced investigations can be substituted for classroom training.

If the visual observations indicate a potential illicit discharge, flow is observed and the source of the flow is not immediately identifiable then sampling will be performed. Based on the suspected discharge or the pollutant of concern, some or all of the following parameters will be assessed:

1. pH will be sampled if an industrial discharge is suspected. A pH measurement will be obtained using calibrated portable field meter such as pH pen or multi-parameter probe.
2. Detergents will be sampled if flow is observed to have foam or suds or if a sanitary discharge is suspected. The sample will be field screened for surfactants using a colorimetric method such as CHEMets kit # K-9400 (www.chemetrics.com). The operating range of the test should be between 0 and 3 mg/L.
3. *E. coli* will be sampled if a sanitary discharge is suspected. These samples will be collected in a sterile 100 mL bottle, stored on ice, and transported to a laboratory for analysis. The analytical range should be between 10 and approximately 24,000 colonies/100 mL. Care should be taken not to disturb any accumulated sediment when collecting the *E. coli* sample.

4. Other parameters – Additional samples may be collected depending on the suspected source.

Disposable gloves will be worn to collect all samples. Gloves will be changed out between sampling sites. *E. coli* samples must be collected directly into the laboratory container, while sample collection cups may be used for pH and surfactants. Decontamination procedures for reusable sample collection containers consists of a triple rinsed with site water prior to taking a measurement.

E. coli samples shall be delivered to the laboratory with sufficient time for the samples to be analyzed within the method specific hold time. Confirmation of method specific hold times shall be obtained from the laboratory at the onset of sampling efforts. For *E. coli* analysis, the goal of the sampling team will be to deliver samples to the laboratory within 6 hours of collection where sample processing will occur within 2 hours for a total hold time of 8 hours. However, as these samples are intended to be used for screening purposes, a total hold time of 24 hours will be acceptable if it is not cost effective to meet the shorter hold time.

If sample result exceeds the threshold(s) provided in Table 1, then additional investigations are recommended to locate the source of the suspicious discharge.

Field screenings will be conducted in conjunction with field observation procedures as described in Section B. Screenings may also be conducted on an as needed basis if suspicious discharges are discovered by field staff during day-to-day operations, or if a pollution complaint or referral is received from the public or other agencies.

Table 1 – Guidance for Screening Results

Parameter	Follow-up Threshold
<u>Typical Parameters</u>	
pH	>9 or <6.5
Surfactants (mg/L)	>0.75
<i>E. coli</i> (cfu/100 mL or MPN/100 mL)	>5,000
Physical signs	unusual odor, color, clarity, floatables, deposits, stains, vegetation change, outfall structural damage
<u>Additional Parameters</u>	
Ammonia (mg/L)	>1
Conductivity (uS/cm)	>1,000
Turbidity (NTU)	>5
TDS (mg/L)	>500
Dissolved oxygen (mg/L)	< 5
Temperature (°F)	+5 warm water stream [1] +2 cold water stream [1]

SECTION D – PROCESS FOR REVISION

Any questions on this procedure should be directed to the entity's Stormwater Manager. This procedure shall be reviewed once per permit cycle by ARC staff for any updates.

Figure 1 – Outfall Screening Form

Outfall Inventory Form			
(Logo)			
Date: _____		Field Crew: _____	
Weather: _____		<input type="checkbox"/> 48 hrs no precip	
1) IDENTIFICATION:			
Outfall ID: _____		Size: _____	
Location: _____		Material: _____	
2) OBSERVATIONS:			
Damage (circle all that apply): None Cracking Spalling Corrosion Other			
Describe: _____			
Vegetation (circle one): None Inhibited Excessive			
Describe: _____			
Flow: _____ Known industrial or commercial uses in drainage area: Yes or No			
Other: _____			
(Circle all that apply)			
Odor: None Sewage Detergents Sulfide Oil/Gas Rancid-Sour			
Other: _____			
Color: None Clear Gray Black Green Brown Other:			
Turbidity: None Cloudy Opaque			
Floatables: None Sewage Oil Sheen Algae Other:			
Biological: None Bacterial sheen Algae Slime			
Deposits: None Sediment Other: _____			
Sample Obtained: Yes or No			
Additional Observations: _____			
3) ANALYSES:			
Temperature: _____		Equipment used: _____	
Conductivity: μ S/cm		Equipment used: _____	
pH Value: _____		pH mV: _____	
Ammonia: ppm		Equipment used: _____	
Detergents: ppm		Equipment used: _____	
Follow up: Yes or No		Reason: _____	
4) PHOTOGRAPH:		5) COMMENTS:	
Photo ID: _____			

Attachment D

Advanced Investigation Procedure for Locating the Source of Suspicious Discharges

ADVANCED INVESTIGATION PROCEDURE FOR LOCATING THE SOURCE OF SUSPICIOUS DISCHARGES

PREPARED FOR:

THE ALLIANCE OF ROUGE COMMUNITIES
46036 MICHIGAN AVE, CANTON, MICHIGAN 48188



SEPTEMBER 25, 2017

SECTION A – PURPOSE

The purpose of this procedure is to describe the protocols to conduct advanced investigations in storm sewer systems to identify the source of a suspicious discharge. These investigations would be performed based on the results of field screening procedures or based on a pollution complaint. The Michigan Department of Environmental Quality (MDEQ) requires this procedure for stormwater discharges from municipal separate storm sewer systems (MS4) as part of an entity's National Pollutant Discharge Elimination System (NPDES) permit application.

SECTION B – PERFORMING SOURCE INVESTIGATIONS

Investigations will be carried out by someone who is trained as an IDEP Investigator. The minimum training requirements for an Investigator are 1) four hours of classroom instruction on how to identify and investigate sources of illicit discharges including failing septic systems, seepage from sanitary sewers, illegal dumping, and suspicious discharges from outfalls, and 2) knowledge of stormwater collection systems. Four months of IDEP advanced investigations field experience can be substituted for classroom training.

The investigation parameters will be selected based on the nature of the complaint or initial field screening results according to the parameters and threshold values indicated in the Field Screening Procedure for Identifying Potential Illicit Discharges Standard Operating Procedure. If working within a river/stream/open drain, then samples or observations will be taken at the origin of the suspicious discharge and at upstream locations. This will continue until the source is found or an enclosed storm sewer is located.

B.1 Determining Ownership

For complaint-based investigations, the owner/operator of the enclosed storm sewer will be determined. If it is suspected that a discharge originates from another jurisdiction, the other jurisdiction will be notified in writing of the suspicious discharge and any pertinent information about the discharge. This will occur within 10 working days of the discovery of the discharge from the other jurisdiction.

For investigations based on outfall screening results, the ownership step is not required because it is assumed that outfall screening was completed by the owner/operator.

For investigations based on instream sampling results and the owner/operator is participating in the Rouge River Collaborative IDEP Plan, the owner/operator will be notified of the suspicious discharge and storm and sanitary sewer maps will be obtained. Investigations will continue with the assistance of the owner/operator. If the owner/operator is not participating in the Rouge River Collaborative IDEP Plan, then they will be notified in writing of the suspicious discharge and any pertinent information about the discharge. This will occur within a timeframe ranging from immediately/within 24 hours (for sources posing an imminent threat) or for non-emergency issues up to 5 working days of the discovery of the discharge from the other jurisdiction.

B.2 Source Investigations

Enclosed drain investigations will proceed, following discovery of a suspicious discharge. The site of the discharge will be resampled during dry conditions for the appropriate indicator parameter. The sample parameters will be the same as those used during the initial field screening. If no flow is present, a second site visit will be conducted within 4 weeks of discovery, weather permitting. If no flow is present during

the second site, a third site visit will be conducted within 2 months of the date of the second visit, weather permitting.

Additional sampling/observations will be conducted upstream within the drainage system to narrow down the section of pipe from which the suspicious discharge is emanating. Sampling will be conducted as outlined in the Field Screening Procedure for Identifying Potential Illicit Discharges SOP.

Ideally, the sampling data or observations will allow staff to isolate a section of storm sewer to employ advanced investigation techniques. These techniques include televising the storm sewer, smoke testing, and conducting dye testing of homes, facilities, or sewers to verify a suspected illicit connection or discharge. The lead investigator will determine which of these techniques (or other technique) will be employed.

SECTION C – CLOSED CIRCUIT TELEVISION (CCTV)

CCTV inspections may be performed to determine if illicit connections are present in a storm drain. This allows for inspectors to identify suspicious taps to the drain. This work will be performed by a qualified staff or contractor. If possible, a video recording of the inspection will be performed. If possible, the lead investigator will be present during the CCTV inspection in order to direct additional efforts.

SECTION D – SMOKE TESTING

Smoke testing may be performed to determine if a residence or facility is illicitly connected to the storm drain. This work will be performed by a qualified staff or contractor. This testing requires homeowner notification to ensure all plumbing traps are filled with water and to make them aware of the potential intrusion of smoke into their homes. The local fire department should also be notified prior to testing. Non-toxic smoke is used. The drain may be plugged at various locations to ensure the testing is limited to the area of interest. Smoke found exiting a building plumbing vent indicates that the home is illicitly connected to the storm sewer. Care must be taken to perform this testing during the appropriate weather conditions in order not to mistaken steam from a heating system or fog as smoke. This testing may also identify improper connections between the storm and sanitary system.

SECTION E – DYE TESTING

Dye testing may be performed on plumbing fixtures (i.e. sinks, toilets, floor drains, etc.) within facilities/structures that are suspected of illicitly discharging non-stormwater flows into the MS4 to determine if they are properly connected to the appropriate sewer. Prior to administering a tracer dye, the lead investigator will submit a Notice of Intent to the MDEQ under General Rule 97 Certification of Approval Authorizing Tracer Dyes in Surface Waters. In addition, the following agencies shall be notified 48 hours prior to the application:

- Local Municipality
- Local Health Department
- Downstream Municipalities and Health Departments potentially affected
- Local Fire Department

Once approved, tracer dye will be applied to the appropriate plumbing fixture(s) per the manufacturer's recommendations and in a manner that will minimize potential effects to surface water. The following item will be documented when conducting a dye test:

- Facility or Building Name
- Date
- Location where dye is applied (i.e. second floor men's restroom)
- Time the dye is applied
- Time dye is observed in the field
- Location where dye is observed (i.e. sanitary manhole, northeast of building)
- Time of Travel
- Follow up action, if needed

SECTION F – PROCESS FOR REVISION

Any questions on this procedure should be directed to the entity's Stormwater Manager or ARC staff. This procedure shall be reviewed once per permit cycle by ARC staff for any updates.

Attachment E

Southeast Michigan Regional IDEP Training Plan

**Southeast Michigan Regional
Illicit Discharge Elimination Program Training Plan
February 19, 2013**

Introduction

Southeast Michigan is a seven county region with a population exceeding 4.7 million and comprising 16 watersheds. Five of the counties (Wayne, Washtenaw, St. Clair, Macomb and Oakland), comprising 11 watersheds, have a stormwater discharge permit. The permit requires training in various aspects of illicit discharge elimination. Recent audits of permittees by the Michigan Department of Environmental Quality have requested documentation of such training. This document lays out a plan for training municipal staff that is consistent with the language in the forth coming stormwater permit. The plan provides background information, objectives, details, and a cost-share arrangement to provide stormwater-related training to the permitted communities.

Background

The Alliance of Rouge Communities (ARC) has sponsored the Basic/Advanced IDEP Training for the last few years. This training was made available to ARC members without charge. The participation in the training has decreased over the years. Wayne County has provided training to non-ARC members in southeast Michigan on a cost recovery basis, e.g. contracts with Eastern Michigan University, Washtenaw County.

In 2011, SEMCOG sponsored five municipal training sessions across Southeast Michigan that targeted pollution prevention actions at municipal facilities. These ½ day sessions also included an illicit discharge identification component designed to educate a broad audience on basic recognition and reporting techniques. Staff from Washtenaw, Livingston, St. Clair, Oakland, Macomb and Wayne counties helped to develop the content of the training and co-host the session at one of their facilities. The sessions were also co-hosted by the DEQ, which provided Industrial Operator Training at no cost in the afternoon of each session. Over 350 people attended the five training sessions and 107 people took the DEQ Industrial Operator.

Objective

The goal of this plan is to provide training to the southeast Michigan region focused on illicit discharge elimination and storm water pollution prevention. There are three main objectives of this plan. The first objective is to establish a framework that shares responsibility and costs of training on a regional basis. The second objective is to be efficient by maximizing class size not duplicating efforts and spreading the costs over the region. The third objective is to make it unnecessary to charge a fee for the training.

Plan

The plan calls for an alternating five year schedule of training between Wayne County's IDEP training program and SEMCOG's municipal facility training and illicit discharge recognition training provided by the host county. The training would be provided once a year. The period covered by this plan is January 2013 through December 2017.

Every other year beginning with 2013, Wayne County's IDEP Training will be provided to the region. Table 1 lists the responsibilities and schedule for each IDEP training session. In 2014 and 2016, SEMCOG's municipal facility training with illicit discharge recognition training will be provided. Table 2 lists the responsibilities for the SEMCOG municipal facility and illicit discharge recognition training.

Note: This schedule is consistent with the language concerning training in the new State stormwater permit.

Cost Sharing

The goal is to distribute cost among the region by rotating sites for the training, so that the trainings can be offered at no charge. This would reduce the cost to the ARC since the IDEP training registration would be handled by others and since it would be offered every other year. This will also reduce the cost to other permittees, since the IDEP training charge would be offered at no charge (a savings of around \$75 per attendee).

Table 1: Traditional IDEP Training Schedule and Responsibilities

Year	Staff Cost ¹	Facility/Refreshments ²	Registration ³	Print and Mail Certificates
2013	ADW, ARC	Wayne County	Wayne County	Wayne County
2015	ADW, ARC	Washtenaw County	Washtenaw County	Wayne County
2017	ADW, ARC	Macomb County	Macomb County	Wayne County

- 1- Will provide trainers for the event at no charge to the municipalities or other counties.
- 2- Will arrange for a training location and provide refreshments/snack
- 3- Will handle advanced registration and sign-in the day of the event and create an advertisement for distribution to the region. Distribution will occur via email to the county stormwater coordinators.

Table 2: SEMCOG Municipal Facility and Illicit Discharge Training Schedule and Responsibilities

Year	Staff Cost	Facility/Refreshments ³	Registration ⁴
2014	Host County ¹ , SEMCOG ²	St. Clair County	SEMCOG
2016	Host County ¹ , SEMCOG ²	Oakland County	SEMCOG

- 1- Will provide or arrange for trainers for the event in collaboration with SEMCOG.
- 2- SEMCOG donated time
- 3- Will arrange for a training location and provide refreshments/snack
- 4- Will handle advanced registration and sign-in the day of the event and create an advertisement for distribution to the region. Distribution will occur via email to the county stormwater coordinators.

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

W. Mustertovich W. MUSTERTOVICH CHIEF DEPUTY MACOMB 05-17-2013
Signature Name/Title COUNTY PUBLIC WORKS Commissioner Date

Oakland County Representative

James A. Winkler JAMES WINKLER ASST. CHIEF ENG. 4/17/13
Signature Name/Title Date

Saint Clair County Representative

Steve French Steve French DIRECTOR 4-29-13
Signature Name/Title Date

Washtenaw County Representative

Evan Pratt EVAN PRATT Water Resources Commissioner 8/8/12
Signature Name/Title Date

Wayne County Representative

Kelly A. Cave KELLY A. CAVE WAYNE CO STORM WATER 11 APRIL 13
Signature Name/Title COORDINATOR Date

SEMOG Representative

Kathleen Lomako Kathleen Lomako 8/14/2013
Signature Name/Title Date

Alliance of Rouge Communities Representative

Kevin L. Buford Kevin Buford, ARC Chair 3/28/13
Signature Name/Title Date

Alliance of Downriver Watersheds Representative

Mark Gahry Mark Gahry, Chairman May 7, 2013
Signature Name/Title Date

Attachment F
Pollution Complaint Tracking Form
and
Suspicious Observation Documentation

Community Name

Pollution Complaint Tracking Form

Illicit Discharge Elimination Program

Complaint made by: _____

Phone #: _____

Date: _____ Time: _____

Location of Problem: _____ Offending Party (if known) _____

Nature of Problem (i.e. paper waste, odor, color, etc.): _____

Is this an Emergency? ☐ No

☐ Yes (then call 911)

Nature of Emergency: _____

Initial Contact made to:

- ☐ 911
☐ City Dept. _____
☐ Wayne County (888) 223-2363
☐ Oakland County (248) 858-0931
☐ PEAS Hotline (State) 1-800-292-4706
☐ Other _____

Additional Comments:

Investigation Summary

- ☐ Initial Investigation
☐ Follow-up Investigation

Date of Investigation: _____

Investigating Agency: _____

Location of Discharge: _____

Crew Members: _____

Investigation Location: _____

Observations (odor, color, volume, etc.): _____

Actions Taken (dye testing, notification letter, etc.): _____

Were photos taken: ☐ Yes ☐ No

Agency Referred to: _____

Agency Contact: _____

Method of Communication:

☐ E-mail* ☐ Letter/memo* ☐ Phone

*Attached copies

Content of Communication: _____

Date Corrected or Resolved: _____

Pollution Complaint Tracking Form

Illicit Discharge Elimination Program

Recommended Procedure

1. Take down complaint information.
2. Inform the caller that the problem will be further investigated and thank him/her for calling in.
3. If the problem is related to oil or fuel, please phone 911.
4. If the Problem is related to a construction site and there is sediment leaving that site, call Oakland County or Wayne County or the local soil erosion control enforcement agency.
5. All other types of complaints should be referred to the local public works department staff or their designee for investigation.
6. Please file completed form.
7. Every 2 years, provide the ARC with the number of complaints investigated, the type (sewage, oil, etc.) of illicit discharge found, if any, and the location (closest cross streets) of the discharge.

Attachment G

State and Federal Regulatory Mechanisms

Source: MDEQ, 2014

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
SARA Title III Section 304 40 CFR 355.40 (EHS & Hazardous Substances)	<p>Release of a CERCLA hazardous substance (40 CFR 302, Table 302.4) or Extremely Hazardous Substance (EHS) (40 CFR 355, Appendix A) from a facility (all buildings, equipment, etc. located on a single site or adjacent sites owned or operated by the same person) at which a hazardous chemical (as defined under 29 CFR 1910.1200(c)) is used, produced or stored (including motor vehicles, rolling stock, and aircraft) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hr period that migrates beyond the facility boundaries.</p> <p>Includes continuous release reportable under CERCLA Section 103.</p> <p>Excludes release that is federally permitted or that results in exposure to persons solely within the boundaries of the facility. See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions.</p> <p>Does not apply to the application, handling, and storage by an agricultural producer of a pesticide product registered under FIFRA.</p> <p>Excludes release < 1000 lbs of NOx released to the air from combustion or combustion-related activities.</p>	<p>Immediate (within 15 minutes after discovery): to LEPC(s) of any area(s) potentially affected, and SERC (DEQ PEAS line accepts notification on behalf of SERC) by owner or operator.</p> <p>Continuous releases must be identified as such and are reported initially and when there is a significant change in the release.</p> <p>See 73 FR 76948 (12/18/08): Only CAFOs are required to report continuous releases to the air from animal waste.</p> <p>Transportation related releases can be reported to 911.</p>	<p>As soon as practicable (within 30 days) after release: to LEPC(s) and SERC.</p> <p>Not required for releases that occur during transportation or from storage incident to transportation.</p> <p>For continuous releases: Initial written within 30 days after initial telephone notification: to LEPC(s) and SERC.</p> <p>Michigan SARA Title III Program accepts reports on behalf of the SERC.</p>	<p>PEAS: 800-292-4706</p> <p>Contact your LEPC for a phone number to report releases.</p> <p>Call 911 if your LEPC is not active.</p> <p>For further information & LEPC contact information, contact Michigan SARA Title III Program 517-284-7272</p>
CERCLA Section 103 40 CFR 302 (Hazardous Substances)	<p>Release into the environment of a CERCLA hazardous substance (40 CFR 302, Table 302.4) or hazardous constituent in a mixture or solution (including hazardous waste streams) from a vessel or facility (any building, structure, etc. including motor vehicles, rolling stock, aircraft, pipe, pipeline, well, pond, lagoon, impoundment, ditch, landfill, or site where a hazardous substance has come to be located) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hour period.</p> <p>Excludes petroleum, including oil, or any fraction thereof.</p> <p>See 40 CFR 302.6 for notification requirements for radionuclide releases.</p> <p>Includes continuous release: occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes.</p> <p>See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions. See 71 FR 58525 (10/4/06) re Exemption for NOx releases to the air of < 1000 lbs from combustion or combustion-related activities.</p> <p>Does not apply to the application, handling, and storage by an agricultural producer of a pesticide product registered under FIFRA.</p>	<p>Immediate (within 15 minutes after discovery): to NRC by person in charge of vessel or offshore or onshore facility.</p> <p>Continuous releases must be identified as such and are reported initially and when there is a significant change in the release.</p> <p>See 73 FR 76948 (12/18/08) re Exemption from reporting continuous releases to the air from animal waste.</p>	<p>For continuous releases only: Initial written within 30 days after initial telephone notification & Follow-up within 30 days of first anniversary of initial written notification: to EPA Region 5.</p>	<p>NRC 800-424-8802 or online at www.nrc.uscg.mil</p> <p>For further information contact Michigan SARA Title III Program 517-284-7272 or EPA's Superfund, TRI, EPCRA, RMP, and Oil Information Center 800-424-9346</p>

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.

*This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations.**

Additional reporting requirements might be found in **permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.



Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 201, Environmental Remediation	<p>(i) Unpermitted release into the environment over a 24-hour period of a hazardous substance (<i>July 1, 2012, edition</i> of the CERCLA list, 40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity.</p> <p>Does not include release solely from UST systems regulated under Part 213, and release solely from disposal area licensed under Part 115 and discovered through disposal area's hydrogeological monitoring plan.</p> <p>Release of substance regulated by MI Dept of Agriculture & Rural Development (MDARD) (fertilizer, soil conditioner, or pesticide) excluding normal agricultural practices: <i>also</i> report to MDARD.</p>	<p>Within 24 hours after discovery: to DEQ-RRD district office (PEAS after hours) by owner or operator or person holding easement interest.</p> <p>Report agricultural release to MDARD.</p>	<p>Upon request: Provide a response activity plan to DEQ-RRD district supervisor.</p>	<p>PEAS: 800-292-4706</p> <p>MDARD Agriculture Pollution Emergency Hotline: 800-405-0101</p> <p>For further information contact DEQ-RRD</p>
NREPA 1994 PA 451 Part 201, Environmental Remediation (Continued)	<p>(ii) The owner or operator has reason to believe that one or more hazardous substances are migrating or have migrated from his or her property and are present beyond the property boundary at a concentration in excess of cleanup criteria for unrestricted residential use.</p> <p>(iii) The release is a result of an activity that is subject to permitting under NREPA Part 615 and the owner or operator is not the owner of the surface property and the release results in hazardous substance concentrations in excess of cleanup criteria for unrestricted residential use.</p> <p>Hazardous substance means a hazardous substance defined in CERCLA (40 CFR 302), hazardous waste as defined in NREPA part 111, petroleum as defined in NREPA part 213, or any substance demonstrated to pose an unacceptable risk to public health, safety, welfare, or the environment.</p> <p>Cleanup criteria for unrestricted residential use means criteria that satisfy the requirements in section 20120a(1)(a) or (16); or as defined under NREPA part 213.</p>	<p>Within 30 days after discovery: to DEQ-RRD district office and owners of property to which hazardous substances migrated or owner of surface property by owner or operator of property where release occurred.</p> <p>Specific form required for: "Notice of Migration of Contamination" (Form EQP4482).</p>	<p>Upon request: Provide a response activity plan to DEQ-RRD district supervisor.</p>	<p>For further information contact DEQ-RRD</p>
NREPA 1994 PA 451 Part 83, Pesticide Control Regulation 640, Commercial Pesticide Bulk Storage (Agricultural)	<p>Release to the environment of a commercial pesticide >5 gallons or 100 pounds.</p> <p>Reportable agrichemical spills as defined in the provisions of SARA Title III section 304 and CERCLA section 103 shall be immediately reported to PEAS and the NRC.</p> <p>The term "release" excludes normal agricultural practices.</p>	<p>Immediate: to PEAS*</p> <p>Also notify NRC for spills reportable under SARA Title III & CERCLA.</p> <p>*MDARD prefers direct notification to their hotline. PEAS forwards all agriculture calls to MDARD.</p>	<p>Within 90 days: to MDARD Pesticide and Plant Pest Management Div. a revised site plan.</p>	<p>MDARD Agriculture Pollution Emergency Hotline: 800-405-0101</p> <p>PEAS: 800-292-4706</p> <p>NRC 800-424-8802 or online at www.nrc.uscg.mil</p> <p>For further information contact MDARD 517-284-5644</p>

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 85, Fertilizers Regulation 641 Commercial Fertilizer Bulk Storage Regulation 642, On Farm Fertilizer Bulk Storage (Agricultural)	Release to the environment of a commercial fertilizer >55 gallons liquid or 650 pounds dry, or tank overfills; or an on farm fertilizer > 55 gallons liquid. For storage tank with bladder system instead of diking: also report all overfills and internal spills. The term "release" excludes normal agricultural practices. The term "liquid fertilizer" excludes anhydrous ammonia.	Immediate: to MDARD by commercial bulk storage facility personnel (For farms, the regulation does not specify who makes the report.)	Not required.	MDARD Agriculture Pollution Emergency Hotline: 800-405-0101 For further information contact MDARD 517-284-5644
Fire Prevention Code 1941 PA 207 Section 29.5g	A fire, explosion, spill, leak, accident, or related occurrence that involves the transportation, storage, handling, sale, use, or processing of hazardous material by a firm, person, or vehicle. Hazardous material = explosives, pyrotechnics, flammable gas, flammable compressed gas, flammable liquid, nonflammable compressed gas, combustible liquid, oxidizing material, poisonous gas or liquid, LPG, or irritating, etiologic, radioactive, or corrosive material. Act 207 amended 6/19/2006. The State Fire Marshall is in LARA, Bureau of Fire Services.	Immediately following incident, report known details regarding incident: to LARA Bureau of Fire Services <i>and</i> organized local fire department by owner of firm or vehicle or the person <i>and</i> the chief of first police or organized fire dept upon scene of incident.	Not required.	Contact LARA Bureau of Fire Services by calling the MSP HazMat hotline: 800-525-5555 For further information: contact local fire department
Fire Prevention Code 1941 PA 207 Part 2 of Storage and Handling of Flammable and Combustible Liquids rules (FL/CL code)	A release from an AST system of > 55 gal of any flammable or combustible liquid (flash point < 200°F) to the ground or within a secondary containment area during any 24 hour period. Note: Many liquid pesticides are combustible (flash point between 100 and 200°F).	As soon as practicable after detection of release: to PEAS by owner or operator.	Within 10 days after release: to LARA Bureau of Fire Services, Storage Tank Division outlining cause, discovery, response to prevent recurrence.	PEAS: 800-292-4706 For further information: contact LARA Bureau of Fire Services, Storage Tank Division 517-335-7211

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.

*This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations.**

Additional reporting requirements might be found in **permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.



Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 171 (Transportation of Hazardous Materials)	<p>Initial verbal notice: Incident during transportation (including loading, unloading, temporary storage) involving (1) hazardous material and resulting in death, injury requiring hospitalization, public evacuation \geq 1 hour, major transportation artery or facility closure \geq 1 hour, or flight pattern alteration; (2) fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material; (3) fire, breakage, spillage or suspected contamination involving an infectious substance other than a regulated medical waste; (4) marine pollutant release exceeding 450 L (119 gal) liquid or 400 kg (882 lbs) solid; (5) other per judgment of person in possession of the hazardous material (e.g., continuing danger to life exists at scene of incident); (6) during transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat occurs as a direct result of a battery or battery-powered device.</p> <p>Hazardous material = CERCLA hazardous substance (40 CFR 302, Table 302.4), hazardous waste (40 CFR 262), marine pollutant (49 CFR 172.101 Appendix B), elevated temperature material, listed on Hazardous Materials Table (49 CFR 172.101), or meets criteria for hazard class/division in 49 CFR 173.</p> <p>Written follow-up report: Required for all of above, plus any unintentional release of hazardous material from a package (including tank); or any quantity of hazardous waste discharged during transportation; or structural damage to lading retention system, even if no release, on specification cargo tank with \geq 1000 gal capacity containing hazardous material; or undeclared hazardous material discovered.</p>	<p>As soon as practical but no later than 12 hours after occurrence of the incident: to NRC by each person in physical possession of the hazardous material.</p> <p>(A reportable incident <i>must</i> be reported by telephone, not online.)</p> <p>For infectious substances, notice may be given to the Director, Centers for Disease Control and Prevention, U.S. Public Health Service instead of NRC.</p>	<p>Within 30 days after discovery: to US DOT on DOT Form F 5800.1 (01-2004) "Hazardous Materials Incident Report."</p> <p>Report online at https://hazmatonline.phmsa.dot.gov/incident/</p> <p>Report must be updated w/i 1 year of incident if: Death results from injury; hazardous material or package info on prior report misidentified; damage, loss or cost not known on prior report becomes known or changes by \$25,000 or 10%.</p> <p>See regulation for exceptions to written report.</p>	<p>NRC 800-424-8802 or online at www.nrc.uscg.mil</p> <p>U.S. Public Health Service 800-232-0124</p> <p>For further information contact US DOT Hazardous Materials Information Center at 800-467-4922 or online at www.phmsa.dot.gov/hazmat</p>
NREPA 1994 PA 451 Part 31, Water Resources Protection (Release to surface of ground, surface water, groundwater or public sewer system)	<p>Unpermitted release directly or indirectly to public sewer system, surface of ground, surface water or groundwater from an oil storage facility or on-land facility of a "polluting material" (oil, salt, or any material specified in table 1 in R 324.2009) in excess of its threshold reporting quantity during any 24-hour period.</p> <p>See Part 5 rules, effective 8/31/01, for details and exemptions. HB 5586 effective 6/15/04 amended the reporting requirements.</p> <p><i>Rule revisions pending as of April 2014.</i></p>	<p>As soon as practicable after detection: to PEAS <i>and</i> 911 by owner, operator or manager.</p> <p>State agencies call 911 if release reported to them by another state or Canada.</p>	<p>Within 10 days after release: to DEQ-WRD district supervisor <i>and</i> to the local health department where the release occurred, outlining cause, discovery, response & prevention of recurrence.</p>	<p>PEAS: 800-292-4706</p> <p>For further information contact DEQ-WRD</p>

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
CWA Section 311 33 CFR 153 (Navigable waters – Coast Guard/DOT) Control of Pollution by Oil and Hazardous Substances, Discharge Removal	<p>Discharge of a harmful quantity of oil or a hazardous substance from a vessel or onshore or offshore facility into or upon navigable waters of the United States or adjoining shorelines.</p> <p>Harmful quantity = oil discharge that violates applicable water quality standards, or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines; or a CERCLA hazardous substance (40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity.</p> <p>Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.</p>	<p>Immediate: to NRC by person in charge of vessel or facility.</p> <p>If direct reporting to NRC not practicable, may report to district Coast Guard or EPA predesignated OSC.</p>	Not required.	<p>NRC 800-424-8802 or online at www.nrc.uscg.mil</p> <p>District 9 Coast Guard 216-902-6117</p> <p>EPA Region 5 for predesignated OSC 312-353-2318</p> <p>For further information contact EPA Region 5 at 312-353-8200 or District 9 Coast Guard at 216-902-6045</p>
CWA Section 311 40 CFR 110 (Discharge of Oil)	<p>Discharges of oil that violate applicable water quality standards, or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.</p> <p>Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.</p>	<p>Immediate: to NRC by person in charge of vessel or facility.</p>	Not required.	<p>NRC 800-424-8802 or online at www.nrc.uscg.mil</p> <p>For further information contact DEQ-WRD</p>
NREPA 1994 PA 451 Part 31, Water Resources Protection (Sewer Systems)	<p>Discharge of untreated sewage or partially treated sewage from a sewer system onto land or into the waters of the state.</p> <p>"Sewer system" means a sewer system designed and used to convey sanitary sewage or storm water, or both.</p>	<p>Immediate (within 24 hours): to DEQ-ODWMA district office (PEAS after hours); Local health depts.; Daily newspaper circulated in source & affected counties; & Affected municipalities.</p>	<p>At end of discharge: to same parties notified initially on Form EQP 5857 (Rev. 12/2011) "Report of Discharges of Untreated or Partially Treated Sewage." Includes results of E. coli testing.</p>	<p>PEAS: 800-292-4706</p> <p>For further information contact DEQ-ODWMA</p>
NREPA 1994 PA 451 Part 41, Sewerage Systems	<p>Discharges of pollutants from sewerage systems (which can include combined sewers) in excess of those authorized by a discharge permit issued by the DEQ to surface water or groundwater as a result of a facility breakdown or emergency.</p> <p>Sewerage systems handle sanitary sewage or other industrial liquid wastes.</p>	<p>Promptly: to DEQ-ODWMA district office (PEAS after hours) by owner.</p>	<p>Within 72 hours: to DEQ-ODWMA district supervisor, outlining cause, discovery, corrective actions taken to minimize impact, restore operations, and eliminate future unpermitted discharges.</p>	<p>PEAS: 800-292-4706</p> <p>For further information contact DEQ-ODWMA</p>

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.

*This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations.**

Additional reporting requirements might be found in **permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.



Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 211, Underground Storage Tanks Part 213, Leaking Underground Storage Tanks	Releases of a regulated substance of any amount from underground storage tank (UST) systems (includes the emergency shutoff valve on down) subject to registration; overfill from UST fillpipe or vent onto ground; release from aboveground pipe attached to UST system. Regulated substance = petroleum or CERCLA hazardous substance (40 CFR 302, Table 302.4) or substance listed in CAA title 1 part A sect 112. Petroleum includes, but is not limited to, crude oil, motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, and petroleum solvents.	(Part 211) Within 24 hours after discovery: to LARA Bureau of Fire Services, Storage Tank Division by email, or fax on Form EQP 3826 (Rev. 4/12) If free product, Form EQP 3800 (Rev 02/2003) required by UST owner or operator, or employee of owner or operator. Includes releases discovered years after UST system removed	(Part 213) At 180 days Initial Assessment Report on Form EQP3841 (Rev. 02/2003) if not closed; at 365 days Final Assessment Report on Form EQP3842 (Rev. 11/2006) if still not closed; at closure Closure Report on Form EQP3843 (Rev. 02/2003) to DEQ-RRD district project manager.	Email: deq-std-tanks@michigan.gov Fax: 517-335-2245 For further information contact DEQ-RRD or phone 800-MICHUST
NREPA 1994 PA 451 Part 111, Hazardous Waste Management (Generators; Treatment, Storage & Disposal Facilities (TSDF); Transporters)	Any amount of characteristic hazardous waste or listed hazardous waste (as defined in R 299.9203 "Hazardous Waste Rule 203") reaches the surface water or groundwater, or A fire, explosion, or other release of hazardous waste or hazardous waste constituent occurs that could threaten human health or the environment. or A release of >1lb (or ≤1lb if not immediately cleaned up) hazardous waste to the environment from a tank system or associated secondary containment system. Additional hazardous waste reporting requirements under NREPA Part 201 and CERCLA. NREPA Part 111 requires transporters to comply with 49 CFR 171 and 33 CFR 153.	Immediate: to PEAS (or for Tank systems/secondary containment, within 24 hours of discovery: to DEQ-OWMRP) and to NRC if threat to human health or environment outside facility by generator, or owner or operator of TSDF, or transporter.	For large quantity generators and TSDF: Within 15 days after incident IF the contingency plan had to be implemented: to DEQ-OWMRP. For tank/secondary containment systems: Within 30 days of discovery: to DEQ-OWMRP. For transporters: to US DOT if required per 49 CFR 171.	PEAS: 800-292-4706 NRC 800-424-8802 or online at www.nrc.uscg.mil For further information contact DEQ-OWMRP
NREPA 1994 PA 451 Part 121, Liquid Industrial Waste	The liquid industrial waste spill could threaten public health, safety, welfare, or the environment, or has reached surface water or groundwater. Liquid industrial waste includes nonhazardous brine, by-product, industrial wastewater, leachate, off-spec commercial chemical product, sludge, sanitary or storm sewer clean-out residue, grease trap clean-out residue, spill residue, used oil, or other liquid waste not regulated by other laws.	Immediate: to PEAS and local authorities by generator, transporter, or owner or operator of facility. Refer to MCL 324.12111(1) for required report elements	Prepare within 30 days after incident. Submit upon request: to DEQ-OWMRP district supervisor. Refer to MCL 324.12111(1) for required report elements	PEAS: 800-292-4706 For further information contact DEQ-OWMRP
NREPA 1994 PA 451 Part 55, Air Pollution Control	Abnormal condition, start-up, shutdown, or malfunction that results in emissions exceeding permissible (in rule, permit or order) levels of hazardous air pollutants (HAPs) (CAA Sect. 112(b)) or toxic air contaminants (as specified in permit) for > 1 hour, or any air contaminant for > 2 hours. Written follow-up report only required for emission exceedences lasting > 2 hours.	As soon as possible, but not later than 2 business days after discovery: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 10 days after start-up, shutdown, or abnormal condition, malfunction corrected. Or within 30 days of abnormal condition, malfunction discovery- whichever first: to DEQ-AQD district supervisor.	PEAS: 800-292-4706 For further information contact DEQ-AQD

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 55, Air Pollution Control (Permit to Install Exemptions)	Emergency venting of natural gas from transmission and distributions systems or field gas from gathering lines in amounts > 1,000,000 standard cubic feet per event. Emergency = unforeseen event that disrupts normal operating conditions and poses a threat to human life, health, property or the environment if not controlled immediately. See R 336.1285(mm), effective 6/20/2008, for details.	Within 24 hours of the event: to PEAS by owner or operator.	Not required.	PEAS: 800-292-4706 For further information contact DEQ-AQD
Public Health Code 1978 PA 368 Part 133, Dry Cleaning	Condition or incident presents a threat or hazard to public health or safety.	Immediate: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 30 days after incident: To DEQ-AQD district supervisor.	PEAS: 800-292-4706 For further information contact DEQ-AQD
NREPA 1994 PA 451 Part 615, Supervisor of Wells (oil and gas production fields)	A loss, spill or release of (1) any amount of brine, crude oil, or oil or gas field waste <i>unless</i> it is less than 42 gallons and occurs while an authorized representative is on site and is completely contained and cleaned up within 1 hour, or (2) any unpermitted amount of natural gas , or (3) chemicals used in association with oil and gas activities.	Within 8 hours after discovery of: 42 gallons or more of brine, crude oil, or oil or gas field waste, or any amount of chemical or natural gas, or; less than 42 gallons if the spill contacts surface water, groundwater, or other environmentally sensitive resources, or is not completely contained and cleaned up within 48 hours: to DEQ-OOGM district office (PEAS after hours) by permittee.	Within 10 days after discovery of loss or spill: to DEQ-OOGM district supervisor on Form EQP-7233 (Rev 1/2012) "Report of Loss or Spill." by permittee Written report only for less than 42 gallons of brine, crude oil, or oil and gas field waste if spill does not contact surface water, groundwater, or other environmentally sensitive resources, and is completely contained and cleaned up within 48 hours.	PEAS: 800-292-4706 For further information contact DEQ-OOGM
49 CFR 191 Transportation of Natural and Other Gas by Pipeline	An incident, meaning: (1) Event that involves a release of gas from a pipeline, or of liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility that results in: Death or hospitalization; or Property damage ≥ \$50,000; or estimated gas loss of ≥ three million cubic feet. (2) Event that results in emergency shutdown of LNG facility. (3) Significant event per operator. Written Incident reports not required for LNG facilities. Applies to pipeline systems and the transportation of gas through those systems in or affecting interstate or foreign commerce. (See 49 CFR 191.3 for details.)	Earliest practicable moment following discovery: to NRC by operator. Notification must be electronic unless there is a safety-related condition to report.	As soon as practicable, and within 30 days after discovery: to US DOT. on DOT Form PHMSA F 7100.1 "Incident Report – Gas Distribution System." or PHMSA F 7100.2 "Incident Report – Gas Transmission and Gathering Systems" or PHMSA F 7100.3 "Incident Report – Liquefied Natural Gas (LNG) Facilities" Supplemental report filed as necessary as soon as practicable.	NRC 800-424-8802 or online at www.nrc.uscg.mil For further information contact US DOT Pipeline Safety Information Center at 202-366-4595 or online at http://ops.dot.gov

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.

*This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations.**

Additional reporting requirements might be found in **permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.



Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 195 Transportation of Hazardous Liquids by Pipeline	Release of hazardous liquid (petroleum, petroleum products, or anhydrous ammonia) or carbon dioxide from a pipeline system that results in any of the following: (a) Explosion or fire; (b) Release of ≥ 5 gallons (except if < 5 barrels released due to maintenance and release not otherwise reportable, confined to property, does not pollute water, and cleaned up promptly); (c) Death of any person; (d) Injury requiring hospitalization; or (e) Property damage $> \$50,000$. (See 49 CFR 195.50, revised 1/8/02, for details) Applies to pipeline facilities and the transportation of hazardous liquids associated with those facilities in or affecting interstate or foreign commerce. (See 49 CFR 195.1 for details.)	Earliest practicable moment following discovery: to NRC by operator if Release caused: Death or hospitalization; Fire or explosion; Property damage; Water pollution; or was Significant per the operator.	As soon as practicable, and within 30 days after discovery: to US DOT on DOT Form PHMSA F 7000-1 "Accident Report – Hazardous Liquid Pipeline Systems" Supplemental report must be filed within 30 days after operator receives changes or additions to original report.	NRC 800-424-8802 or online at www.nrc.uscg.mil For further information contact US DOT Pipeline Safety Information Center at 202-366-4595 or online at http://ops.dot.gov
1978 PA 368 Part 135, Radiation Control	For any emergency. Or for incident involving naturally occurring or accelerator produced radioactive material - Immediate notice if: Incident may have caused or threatens to cause: dose to body 25 rems, to skin 150 rems, to extremities 375 rems (per rule 247); 24 hour concentration exceeds 5000 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 week, or property damage $> \$100,000$. Notice within 24 hours if: Incident may have caused or threatens to cause: dose to body 5 rems, to skin 30 rems, to extremities 75 rems (per rule 247); 24 hour concentration exceeds 500 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 day, or property damage $> \$1000$.	Immediate or within 24 hours (see reporting criteria): to DEQ-OWMRP Radiological Protection Section (PEAS after hours) or MSP Operations Division for all Power Plant related incidents (day or night). by licensee or registrant.	Within 30 days after release: to DEQ-OWMRP Radiological Protection Section by licensee or registrant. Written report also required if level of radiation or concentration of radioactive material in unrestricted area > 10 times any applicable limit. See Rule 250 (R 325.5250) for required report content.	DEQ-OWMRP Radiological Protection Section 517-284-5185 MSP Operations Div 517-241-8000 PEAS: 800-292-4706 For further information contact DEQ-OWMRP Radiological Protection Section
10 CFR 20 (Standards for Protection Against Radiation)	For incident involving source, by-product, or special nuclear radioactive material - Immediate notice if: Event that may have caused or threatens to cause: effective dose equivalent to individual 25 rems, lens dose equivalent 75 rems, shallow-dose equivalent to skin or extremities 250 rads; individual could receive 5 times annual limit on intake in 24 hours. OR Any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1000 times the quantity specified in appendix C to part 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas. Notice within 24 hours if: Event that may have caused or threatens to cause: an individual in 24 hours to receive effective dose equivalent > 5 rems, lens dose equivalent > 15 rems, shallow-dose equivalent to skin or extremities > 50 rems; individual could receive > 1 times annual limit on intake in 24 hours.	Immediate or within 24 hours (see reporting criteria): to USNRC by USNRC Licensee responsible for the incident.	Within 30 days of incident: to USNRC by licensee. Report content specified in 10 CFR 20.2003 Written report also required for occurrences as specified in 10 CFR 20 Section 20.2203 and after the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, and if at the time the report is filed all licensed material in a quantity greater than 10 times the quantity specified in appendix C to part 20 is still missing.	US Nuclear Regulatory Commission (USNRC) 301-816-5100 For further information contact DEQ-OWMRP Radiological Protection Section 517-284-5185
MIOSHA 1974 PA 154 Section 61, Records & Reports; Notice of Fatalities or Hospitalization	Any release that results in one death or the hospitalization of 3 or more persons.	Within 8 hours: to MIOSHA Hotline.	Not required.	MIOSHA Fatality or Catastrophe Hotline 800-858-0397 For further information contact LARA-MIOSHA 517-322-1831

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
TSCA 40 CFR 761.125 (PCBs)	Spills of PCBs at concentrations of 50 ppm or more and subject to decontamination requirements under TSCA that: contaminate surface water, sewers, drinking water supplies, grazing lands or vegetable gardens, or exceed 10 pounds. (TSCA specifies that these requirements are in addition to any under CWA or CERCLA. e.g. CERCLA requires spills of 1 pound or more to be reported to NRC.)	As soon as possible after discovery, and within 24 hours: to EPA Region 5.	Not required to be submitted. Records of cleanup and certification of decontamination shall be documented.	EPA Region 5 Corrective Action Section 312-886-7890 For further information contact EPA Region 5 Corrective Action Section
SARA Title III Section 313 40 CFR 372 (Toxic chemical release reporting)	Covered facilities as defined in 40 CFR 372 subpart B are subject to toxic chemical release reporting for toxic chemicals and chemical categories listed in 40 CFR 372 subpart D.	Not applicable.	Annually by July 1: to EPA & SERC on EPA's Form R "Toxic Chemical Release Inventory Reporting Form" (EPA Form 9350-1, Rev.10/2011) Report aggregate releases (permitted & unpermitted)	Michigan SARA Title III Program accepts reports on behalf of SERC For further information contact Michigan SARA Title III Program 517-284-7272

Acronyms used in table:

AQD = Air Quality Division
 AST = Above Ground Storage Tank
 CAA = Clean Air Act
 CAFO = Concentrated Animal Feeding Operation
 CERCLA = Comprehensive Environmental Response, Compensation and Liability Act of 1980
 CFR = Code of Federal Regulations

 CWA = Clean Water Act
 DEQ = Michigan Department of Environmental Quality
 DOT = Department of Transportation
 EHS = Extremely Hazardous Substance
 EPA = U. S. Environmental Protection Agency
 EPCRA = Emergency Planning & Community Right-to-Know Act
 FIFRA = Federal Insecticide, Fungicide, & Rodenticide Act
 FL/CL = Flammable and combustible liquids
 FR = Federal Register
 HAP = Hazardous Air Pollutant

HazMat = Hazardous Materials
 HB = House Bill
 LARA = Michigan Department of Licensing & Regulatory Affairs
 LEPC = Local Emergency Planning Committee
 LNG = Liquefied Natural Gas

 LPG = Liquefied Petroleum Gas
 MCL = Michigan Compiled Laws

MDARD = Michigan Department of Agriculture & Rural Development
 MIOSHA = Michigan Occupational Safety and Health Administration
 MSP = Michigan Department of State Police
 NRC = National Response Center (U.S. Coast Guard)
 NREPA = Natural Resources & Environmental Protection Act
 ODWMA = Office of Drinking Water & Municipal Assistance

 OOGM = Office of Oil, Gas, and Minerals
 OPS = Office of Pipeline Safety (US DOT)
 OSC = On Scene Coordinator
 OWMRP = Office of Waste Management & Radiological Protection

PA = Public Act (Michigan)
 PCB = Polychlorinated biphenyl
 PEAS = Pollution Emergency Alerting System
 PHMSA = Pipeline & Hazardous Materials Safety Administration
 RMP = Risk Management Program

RRD = Remediation and Redevelopment Division
 SARA = Superfund Amendments and Reauthorization Act of 1986
 SERC = State Emergency Response Commission
 TRI = Toxic Chemical Release Inventory
 TSCA = Toxic Substance Control Act
 TSDF = Treatment, Storage & Disposal Facility
 US DOT = U.S. Department of Transportation
 USNRC = U. S. Nuclear Regulatory Commission

UST = Underground Storage Tank
 WRD = Water Resources Division

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*This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations.**

Additional reporting requirements might be found in **permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.



STANDARD OPERATING PROCEDURE CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN RD., WESTLAND, MI 48185



APRIL 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the construction stormwater runoff control program to the maximum extent practicable. The City of Westland does administer a Part 91 program and is a designated municipal enforcement agency. The following standard operating procedure provides a description of the procedures the City employs for construction site runoff control that includes notification procedures and ensuring proper permits are obtained by those disturbing greater than one acre of soil.

SECTION B – APPLICATION PROCEDURE

Prior to any earth disturbance, the City of Westland will ensure that construction activity one acre or greater in total earth disturbance with the potential to discharge to the MS4 does obtain a Part 91 Permit and/or a State of Michigan Permit by Rule or is reviewed by an approved Authorized Public Agency through the site plan review process. These requirements are documented in both the City's Building Code and Grading and Soil Erosion Control Ordinances.

B.1 Chapter 42.106 – Permits and Fees

- a. *“Permit requirement. Unless exempted by Part 91 of 1994 Public Act 451, as amended, and the rules promulgated thereunder, it shall be unlawful prior to the commencement of an earth change without first having secured a permit from the municipal enforcing agency prior to the issuance of a building permit and commencement of an earth change which disturbs one or more acres of land, or if the earth change is within 500 feet of the water's edge of a lake or a stream.”*
- b. *“Application for permit. A separate application and SESC plan shall be required from the person proposing to undertake an earth change. The application can be obtained by the designated municipal enforcing agency. Plans, specifications, required standard details and timing schedules shall be submitted with each application for a SESC permit. The plans shall be prepared or approved and bear the signature and embossed seal of an engineer or architect licensed by the state who is trained and experiences in soil erosion and sedimentation control methods and techniques. The municipal enforcing agency may waive the preparation or approval and signature with the seal by a licenses engineer or architect when the work entails little hazard to the adjacent property and does not include the construction of a fill upon which a structure may be erected. Any earth changes on a site less than an acre and which involve the movement of more than 150 cubic yards of soil must comply with chapter 26, article V of the City Code unless a building permit has been obtained for such work.”*
- c. *“SESC plan information required. The plans and specifications accompanying the SESC permit application shall contain the following data:*

(1) A vicinity sketch at the maximum scale of one inch to 200 feet indicating the site location as well as the adjacent properties within 500 feet of the site boundaries.

(2) A soil survey map or a written description showing a soil series or texture, depth, natural soil drainage and full extent of the exposed area contemplated for the earth change.

(3) A certified boundary line survey by a land surveyor licensed by the state and a topographic survey of the site on which the work is to be performed. The surveys must have been performed within two years of the date of application.

(4) A detailed plan of the site at a maximum scale of one inch to 100 feet showing:

a. A complete legal description of the property and the location of the limits of all proposed earth changes.

b. The name, address and telephone number of the landowner, developer and petitioner. Proof of authorized agent must be submitted with application.

c. A timing schedule indicating the anticipated starting and completion dates of the development's construction sequence and the time of exposure of each area prior to the completion of effective erosion and sediment control measures.

d. A certified statement of the quantity of excavation and fill involved.

e. Grid elevations at maximum of 100-foot centers and all salient surface points showing existing and proposed contours at one-foot intervals. All elevations shall be based on county road commission or city sea level datum with two benchmarks shown and noted or immediately adjacent thereof.

f. The location of any structure or natural feature on the site and on the land adjacent to the site within 50 feet of the site boundary line.

g. The location of any proposed additional structures or development on the site.

h. All necessary elevations, dimensions, location, extent, and the slopes of all proposed grading including building, parking lot and driveway grades.

i. The estimated detail cost of all construction as set forth in the plan including the estimated cost of the required temporary and permanent soil erosion control measures.

j. All drainage provisions, retaining walls, cribbing, planting, erosion control measures to be constructed in connection with, or as a part of, the proposed work together with a map showing the drainage area of land tributary to the site and estimated runoff of the area served by any drains.

- k. A written program proposal attached for the continued maintenance of all permanent soil erosion control facilities which remain after project completion, including the designation of the person responsible for the maintenance. Maintenance responsibilities shall become a part of any sales or exchange agreement for the land on which the permanent soil erosion control measures are located.*
- l. The description and the location of all existing and proposed on-site drainage and dewatering facilities.*
- m. The location and description for installing and removing all proposed temporary soil erosion and sediment control measures,*
- n. The description and the location of all proposed permanent soil erosion and sediment control measures.”*

SECTION C – INSPECTIONS/COMPLAINTS

As the Part 91 regulating authority, the City will inspect active construction sites that have obtained a Soil Erosion and Sedimentation Control Permit from the City.

C.1 Chapter 42.117 – Enforcement of Article; Inspection and tests

- a. *“The requirements of this article shall be enforced by the city engineer. The city engineer shall inspect the work and shall require adequate inspection of compaction by a soil engineer or by a soil testing agency approved by the city engineer, unless he determines that such inspection requirements may be waived due to the nonhazardous nature of the grading. The cost of all such tests shall be borne by the permittee.”*
- b. *“The city engineer shall issue a signed written statement to the building official, prior to any certification, that all approved grading plans and other requirements have been satisfactorily executed. If the city engineer finds any existing conditions not as stated in any application, grading permit, or approved plan, he may refuse to approve further work and shall issue a cease and desist order on the site until approval of a revised grading plan which will conform to the existing conditions has been granted. The building official shall issue a stop work order on the remaining portion of the building construction and shall refuse to issue a certification.”*

Complaints regarding soil erosion and sedimentation issues made by the public will be forwarded to the City Engineer’s office. At that time, the City Engineer will direct a site inspection to document any violations of the soil erosion and sedimentation/grading permit within 2 to 48 hours and pursue enforcement actions as appropriate. See the Enforcement Response Procedure for a summary of the enforcement protocols to ensure compliance with the City’s Part 91 program.

SECTION D – MEASUREABLE GOALS

To demonstrate the effectiveness of the City's Part 91 program, the following metrics will be tracked for reporting purposes:

- Number of Part 91 related complaints received.
- Number of Part 91 permits issued by the City.
- Number of enforcement actions taken to achieve compliance with the City's Part 91 program.

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage for the MS4 Permit.

SECTION E – REPORTABLE DISCHARGES

The City will not report instances of *de minimis* soil discharges to MDEQ. For instances where the discharge of sediment cannot be immediately contained on site, or if there are other pollutants that include pesticides, petroleum derivatives, construction chemicals, and solid waste associated with the discharge in quantities that are consistent with the spill response plan as defined in Appendix H of the Stormwater Management Plan (SWMP), the City will notify the MDEQ within 24 hours through the Pollution Emergency Alert System (PEAS) at 1-800-292-4706.

SECTION F – STATE OF MICHIGAN PERMIT BY RULE

The City shall advise the landowner or recorded easement holder of the State of Michigan Permit by Rule (Rule 323.2190) for storm water discharge from construction activity if the area of the disturbance is greater than 5 acres. These criteria will be identified during the site plan review process and will be included in correspondence with the landowner as appropriate.

SECTION G – PROCESS FOR REVISION

Any questions on this policy and procedure should be directed to the Stormwater Manager or the DPS Director. This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE POST CONSTRUCTION STORMWATER RUNOFF CONTROL

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN RD., WESTLAND, MI 48185



APRIL 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the post-construction stormwater runoff control program to the maximum extent practicable. Post-construction stormwater runoff controls are necessary to maintain or restore stable hydrology in receiving waters by limiting surface runoff rates and volumes and reducing pollutant loadings from sites that undergo development or significant redevelopment.

SECTION B – ADOPTION OF COUNTY STANDARDS

The City of Westland intends to adopt the updated Wayne County Stormwater Management Standards. It is the City's understanding that the Standards will be available in the summer of 2016. The City will review the updated Standards when available. Any necessary updates to these standards will be drafted and adopted by the City of Westland by October 1, 2016.

SECTION C – MEASURABLE GOALS

To demonstrate the effectiveness of the post construction stormwater runoff control program, the following metrics will be tracked for reporting purposes:

- Number of stormwater site plan reviews requested and completed
- Number of maintenance violations of constructed BMPs
- Number of instances where the City had to undertake corrective measures

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION D – PROCESS FOR REVISION

This procedure shall be reviewed every two years by the Stormwater Manager for any updates to streamline the requirements.

WESTLAND ZONING ORDINANCE
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APPENDIX

ARTICLE I – TITLE _____ 1.0

1:1 TITLE

This ordinance shall be known, cited and referred to as the "City of Westland Zoning Ordinance."

ARTICLE II - INTENT AND PURPOSE _____ 2.0

2:1 This Zoning Ordinance of the City of Westland is adopted with the purpose of promoting and protecting the public health, safety, comfort, convenience, and general welfare of the people. The fulfillment of this purpose is to be accomplished by seeking:

2:1.1 To meet needs for places of residence, recreation, industry, trade, service, and other uses of land.

2:1.2 To ensure that uses of the land shall be situated in appropriate locations and relationships.

2:1.3 To limit inappropriate overcrowding of the land and congestion of population, transportation systems, and other public facilities.

2:1.4 To facilitate adequate and efficient provision for transportation systems, sewage disposal, water, energy, education, recreation, and other public facility and service needs.

2:1.5 To establish adequate standards for the provision of light, air, and open spaces.

2:1.6 To zone all properties with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the community.

2:1.7 To protect residential, commercial, and industrial uses alike from harmful encroachment by incompatible uses and to ensure that land allocated to a class of uses shall not be usurped by other inappropriate uses.

2:1.8 To provide for adequate drainage, curbing of erosion, and reduction of flood

damage.

- 2:1.9 To fix reasonable standards to which buildings and structures shall conform.
- 2:1.10 To prevent such additions to, and alterations or remodeling of, existing buildings or structures as would not comply with the restrictions and limitations imposed herein.
- 2:1.11 To isolate or control the location of unavoidable nuisance-producing uses.
- 2:1.12 To define the powers and duties of the administrative and enforcement officers and bodies.
- 2:1.13 To prescribe penalties for any violation of the provisions of this ordinance, or of any amendment thereto.
- 2:1.14 It is the specific intent of this ordinance to permit the uninterrupted, unimpaired use of land for public uses and essential services, including but not necessarily limited to, schools, parks, community centers, churches, cemeteries, hospitals, fire and police stations, and similar public uses for as long as deemed necessary by the residents or their elected representatives.

The standards and requirements contained in this Ordinance, and the district mapping reflected on the City of Westland Zoning Map are intended to further the implementation of the objectives of the Master Plan, as well as protect all desirable existing structures and uses.

ARTICLE III - ADMINISTRATION AND ENFORCEMENT _____ 3.0

3:1 ORGANIZATION

3:1.1 The administration of this Ordinance is hereby vested in six agencies of the government of the City of Westland as follows:

Planning Department
Building Department (with the Zoning Enforcement Officer)
Zoning Board of Appeals
City Planning Commission
City Council
Department of Public Service

This section shall first set out the authority of each of these six offices, and then describe the procedures and substantive standards with respect to the following administrative functions:

Issuance of zoning certificates
Issuance of occupancy and temporary certificates
Variance
Appeals
Amendments
Site plan approval
Special land use approval uses
Planned Unit Developments
Fees
Penalties

3:2 PLANNING DEPARTMENT

The Planning Director and such deputies or assistants that shall be duly appointed, shall enforce this Ordinance and any additions thereto, and in furtherance of such authority shall:

3:2.1 Have possession of permanent and current records of this Ordinance, including but not limited to, all maps, amendments, conditional uses, site plan approvals, special approvals, lot splits, subdivision plats, and applications therefor .

ARTICLE III - ADMINISTRATION AND ENFORCEMENT _____ 3.0

- 3:2.2 Assist in providing public information relative to this Ordinance.
- 3:2.3 Forward to the Planning Commission all applications for site plan approval, special land use approval, planned unit developments, and amendments to this Ordinance that are initially filed with the Planning Department.
- 3:2.4 Forward to the Zoning Board of Appeals applications for appeals, variances, nonlisted uses, or other matters on which the Board of Appeals is required to consider under this Ordinance.
- 3:2.5 Forward to the City Council recommendations of the Planning Commission on special land use approvals, planned unit developments, site plan approval and Zoning Ordinance amendments.

3:3 **BUILDING DEPARTMENT**

The Building Director, as the Zoning Enforcement Officer and such deputies or assistants that shall be duly appointed shall enforce this Ordinance and any additions thereto, and in furtherance of such authority shall:

- 3:3.1 Issue all zoning certificates and make and maintain records thereof.
- 3:3.2 Issue all certificates of occupancy and temporary certificates of occupancy, and make and maintain records thereof.
- 3:3.3 Conduct inspections of buildings, structures, and uses of land to determine compliance with the terms of this Ordinance, approved site plans, or special approvals.
- 3:3.4 Issue violation notices requiring compliance within 30 days, and advising suspected violators of right of appeal.
- 3:3.5 Require that all construction work of any type be stopped when such work is not in compliance with this Ordinance; and revoke any permit which was unlawfully issued, or any permit wherein work not in compliance with this Ordinance has been

performed, and such work has not been corrected within 30 days of notification of such defects.

3:3.6 Have possession of permanent and current records of all building permits, site plans, and other approvals relative to this Ordinance.

3:3.7 Assist in providing public information relative to this Ordinance.

3:3.8 Enforce all orders of the City Council and Zoning Board of Appeals regarding actions pertaining to this Ordinance.

3:3.9 Enforce all rules, regulations and standards of this Ordinance.

3:4 **ZONING BOARD OF APPEALS**

3:4.1 **Creation**

A Zoning Board of Appeals consisting of nine (9) members is hereby established having powers and duties in accordance with Section 5, Act 207, Public Acts of 1921, as amended. Hereinafter, the word "Board" shall mean the Zoning Board of Appeals.

3:4.2 **Membership**

The Zoning Board of Appeals shall consist of nine members appointed by the City Council to serve three-year terms. One of the nine members of the Board may also be a member of the City of Westland Planning Commission and one may be a member of the City Council. In addition to the nine members of the Board, the City Council may appoint one alternate member to serve a three-year term. The alternate member may be a member of the Planning Commission or the City Council provided that a regular member does not hold such a position. The alternate member shall attend all Zoning Board of Appeals meetings.

The alternate member shall be called by the Board Chair or a designated representative in the following instances:

ARTICLE III - ADMINISTRATION AND ENFORCEMENT _____ 3.0

- a. If a regular member is absent or unable to attend two (2) or more consecutive meetings.
- b. If a regular member notified the Chair of the Board that he/she will be absent or unable to attend a meeting for more than thirty (30) consecutive days.
- c. If a regular member has abstained from voting or has notified the Chair of the Board that he/she intends to abstain from discussion and voting on a case by reason of a conflict of interest. In such case the alternate member shall serve until a final decision has been made on that one case.

3:4.3 **Payment of Members**

The members and alternate members of the Zoning Board of Appeals shall be paid for attendance at meetings in accordance with a schedule established by the City Council, except that a member of the City Council who is also a member or alternate member of the Zoning Board of Appeals shall not be paid for attendance at Zoning Board of Appeals meetings. Alternates shall be paid for attendance whether or not they sit as regular members.

3:4.4 **Jurisdiction**

The Zoning Board of Appeals is hereby vested with the following jurisdiction and authority:

- a. To hear and decide appeals from and review any order, requirement, decision, or determination made under this Ordinance by the Enforcement Officer or any other administrative official or body except as provided in "e" below.
- b. To hear and pass upon the applications for variances from the terms provided in this Ordinance in the manner prescribed by and subject to the standards established herein;
- c. To interpret nonlisted uses; and

- d. To hear and decide all matters referred to it or upon which it is required to pass under this Ordinance.
- e. Decisions of the City Council pertaining to special land uses and special planned unit developments shall not be subject to Zoning Board of Appeals review.
- f. Nothing contained herein shall be construed to empower the Zoning Board of Appeals to change the terms of this Chapter, to effect changes in the Zoning Map or grant temporary uses.

3:4.5 Meetings and Rules

All meetings of the Zoning Board of Appeals shall be held at the call of the Board Clerk or designated representative, or at such times as the Board may determine. All hearings conducted by said Board shall be open to the public. Any person may appear and testify at a hearing either in person or by duly authorized agent or attorney. The Clerk, or if that person is absent the Acting Clerk may administer oaths and compel attendance of witnesses. The Board shall keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote, indicating such fact, and shall also keep records of its hearings and other official actions. A copy of every rule or regulation, order, requirement, decision, or determination of the Zoning Board of Appeals shall be filed immediately in the office of the City Clerk and shall be a public record. The Board shall adopt its own rules and procedures, not in conflict with this Ordinance or with the applicable Public Acts of Michigan, and select or appoint such officers as it deems necessary.

3:4.6 Required Vote

The concurring vote of five (5) members of the Board shall be necessary to reverse any order, requirement, decision, or determination of the Enforcement Officer or Planning Department, or to decide in favor of the applicant any matter upon which the Board is required to pass under this Ordinance or to effect any variance except that a concurring vote of two-thirds of the members of the Board shall be necessary to grant a variance from uses of land permitted in this Ordinance.

3:4.7 **Finality of Decision of the Zoning Board of Appeals**

All decisions and findings of the Zoning Board of Appeals on any appeal, or any application for a variance, after a public hearing, shall, in all instances, be the final administrative decision and shall be subject to judicial review as by law may be provided. However, the Board may decide to rehear a previously determined matter upon submission of an application with new evidence within thirty (30) days of the original decision.

3:5 **CITY PLANNING COMMISSION**

3:5.1 **Creation**

That the City Planning Commission, as established under the provisions of Act 285, 1931, as amended, is the Planning Commission referred to in this Ordinance. The Planning Commission shall also have the powers of a Zoning Commission as set forth in Section 301 of Public Act 110 of 2006. A Zoning Commission is thereby established by this Ordinance.

3:5.2 **Membership**

The Planning Commission shall consist of nine members who shall be representative of important segments of the community, such as the economic, governmental, educational and social development of Westland, in accordance with the major interests as they exist in Westland, such as agriculture, natural resources, recreation, education, public health, government, transportation, industry and commerce. The membership shall also be representative of the entire geography of the local unit of government to the extent practicable. All members shall be qualified electors, except one member may not be required to be an elector. All members of the Planning Commission shall serve as such with compensation and shall hold no other municipal office except that one of such members may be a member of the Zoning Board of Appeals. The term of each member shall be three years. All members shall hold office until their successors are appointed. Members, upon written charges, and after public hearing, may be removed by the City Council for malfeasance or nonfeasance in office. Vacancies occurring otherwise

than through the expiration of term shall be filled for the unexpired term as set forth herein.

3:5.3 Chair, Meetings, and Rules

The Commission shall elect a chairperson and secretary from its members and create and fill other offices as it considers advisable. The term of each officer shall be one year, with opportunity for reelection. The commission shall adopt bylaws for the transaction of business, and shall keep record of its resolutions, transactions, finding and recommendations.

The Commission shall make an annual written report to the legislative body concerning its operations and the status of planning activities, including recommendations regarding actions by the City council related to planning and development.

The Commission shall hold not less than four regular meetings each year, and by resolution, shall determine the time and place of the meetings. Unless the bylaws provide otherwise, a special meeting of the planning commission may be called by the chairperson or by two other members, upon written request to the secretary. Unless the bylaws provide otherwise, the secretary shall send written notice of a special meeting to planning commission members not less than 48 hours before the meeting.

3:5.4 Jurisdiction

The Planning Commission shall discharge the following duties under this Ordinance:

- a. Review all applications for amendments to this Ordinance (text or map), hold hearings thereon, and report findings and recommendations to the City Council.
- b. Review all applications for special land uses and planned unit developments, hold hearings thereon and report findings and recommendations to the City Council.

- c. Receive from the Enforcement Officer recommendations as related to the effectiveness of this Ordinance, and report findings and recommendations thereon to the City Council.
- d. Review all applications for site plan approval, hold hearings thereon and report findings and recommendations to the City Council.

3:6 CITY COUNCIL

3:6.1 Special Land Uses

The City Council shall review Planning Commission recommendations on all applications for special land uses, hold hearings thereon, and make final decisions to grant approval, deny approval, or grant approval with conditions, all as provided for in Article XIII. In so doing, the City Council shall function in an administrative capacity in accordance with duly adopted administrative rules of procedure. Decisions of the City Council pertaining to special land uses shall be in accordance with the standards set forth in this Ordinance.

3:6.2 Planned Unit Developments

The City Council shall review Planning Commission recommendations on all applications for planned unit developments, hold hearings thereon, and make final decisions to grant approval, deny approval, or grant approval with conditions, all as provided for in Article XIV. In so doing the City Council shall function in an administrative capacity in accordance with duly adopted administrative rules of procedure. Decisions of the City Council pertaining to planned unit developments shall be in accordance with the standards set forth in this Ordinance.

3:6.3 Site Plan Review Approval

The City Council shall review Planning Commission recommendations on all applications for site plan approval, hold hearings thereon, and make final decisions to grant approval, deny approval, or grant approval with conditions, all as provided for in Article XII. In so doing, the City Council shall function in an administrative capacity in accordance with duly adopted administrative rules of procedures.

Decisions rejecting, approving, or conditionally approving a site plan shall be based upon the standards and requirements contained in this Ordinance. A site plan shall be approved if it contains the information required by the Zoning Ordinance and is in compliance with the Zoning Ordinance and all conditions imposed thereunder, other applicable Ordinances, and state and Federal statutes.

3:6.4 Zoning Ordinance Amendments

The City Council shall enact such amendments to this Ordinance as it shall from time to time deem appropriate. However, the City Council shall not enact a proposed amendment until it has received and reviewed the report of the Planning Commission, including a summary of comments submitted at the Planning Commission's public hearing pertaining to the proposed amendment. After review of the Planning Commission's report, the City Council may adopt a proposed amendment with or without modifications, or may refer the proposed amendments again to the Planning Commission for a further report

3:7 DEPARTMENT OF PUBLIC SERVICE

The City Engineer and other duly appointed officials in the Department of Public Service shall enforce this Ordinance and any additions thereto, and in furtherance of such authority shall:

- 3:7.1 Enforce all rules, regulations and standards of this Ordinance, particularly those that deal with parking lot design, construction and maintenance; ingress and egress to sites; provision for water and sewer facilities; and, lot grading and drainage.
- 3:7.2 Conduct inspections of building sites, drainage, and utility structures, water and sewer facilities, property grading and off-street parking facilities to determine compliance with the terms of this Ordinance, approve engineering site plan, approve grade certificate prior to issuance of Certificate of Occupancy.
- 3:7.3 Enforce all rules, regulations and standards of related City Ordinances, particularly the Parking Lot Ordinance (No. 189) and the Subdivision Ordinance (No. 124).
- 3:7.4 Assist in providing public information relative to this Ordinance.

3:8 **ZONING CERTIFICATES**

3:8.1 **Zoning Certificates**

Except as hereinafter provided, no zoning certificate pertaining to the use of land or buildings shall be issued by any officer, department, or employee unless the application for such zoning certificate has been examined and approved by the Zoning Enforcement Officer, or his duly appointed representative, and, where appropriate, has received written approval from the Planning Director, or his duly appointed representative. The zoning certificate shall indicate that the proposed building or structure and site plan complies with all the provisions of this Ordinance and that all required Planning Commission, City Council, and Zoning Board of Appeals approvals have been obtained. Said zoning certificate shall be signed by the Zoning Enforcement Officer. The site plan shall provide the signature of the appropriate member of the Planning Commission, City Council, and Zoning Board of Appeals, acknowledging approval of the site plan. Any zoning certificate issued in conflict with the provisions of this Ordinance shall be null and void.

3:8.2 **Period of Validity for Zoning Certificates**

A zoning certificate shall be valid for a period of one (1) year from the date of the earliest approving signature thereon.

3:9 **OCCUPANCY CERTIFICATES**

No building or addition thereto, constructed after the effective date of this Ordinance and no addition to or expansion within a previously existing building shall be occupied, and no land, vacant on the effective date of this Ordinance, shall be used for any purpose until a Certificate of Occupancy has been issued by the Enforcement Officer. No change of use of any existing building or structure or land shall be made unless a Certificate of Occupancy has been issued by the Enforcement Officer. Every Certificate of Occupancy shall state that the use of the occupancy complies with the provisions of this Ordinance and whether there are any use restrictions or other provisions to be adhered to by the occupant.

3:9.1 **Application for Occupancy Certificates**

Every application for a building permit or zoning certificate shall be deemed to be an application for an occupancy certificate. Every application for an occupancy certificate for a new use of land where no building permit is required shall be made directly to the Enforcement Officer.

3:9.2 Issuance of Occupancy Certificate

No occupancy certificate for a building, portion thereof, or addition to an existing building, constructed after the effective date of this Ordinance shall be issued until the premises have been inspected and certified by the Enforcement Officer, Planning Department, Engineering Division, and Fire Department to be in conformity with the plans and specifications upon which the Zoning Certificate was based, and the building and site meet all applicable standards. No parcel of land shall be utilized or occupied until such site is inspected and certified by the Enforcement Officer, Planning Department, and Engineering Division to be in compliance with all appropriate Ordinance standards. In construction of new buildings, a Certificate of Occupancy may be issued on satisfactory final inspection. Where a land use requires site plan approval by the Council, a Certificate of Occupancy shall not be issued unless said site and structures thereon are in conformity with said approved site plan, including but not limited to:

- a. Completion of building(s) and structure(s), internally and externally in accordance with the approved dimensions and floor layout.
- b. Interior and exterior architectural design and style as approved.
- c. All landscaping in accordance with the approved size, type, quality, dimensions, and design including the provision of sod within the front, side and rear yards of each dwelling.
- d. Parking lots with delineation of all regular parking spaces, handicapped spaces, signs and ramps, as approved.
- e. Traffic signs, including but not limited to:

- (1) Entrance-exit signs.
 - (2) No left turn - no right turn signs.
 - (3) One way - do not enter-exit signs.
 - (4) Traffic control signs, such as stop or yield.
- f. Masonry and/or decorative walls to be installed.
 - g. Fences to be installed.
 - h. Lighting for building and /or parking area.
 - i. Dumpsters with approved screening on all sides.
 - j. Final grading plans and complete "as built" drawings for residential sites and "as built" transparencies for multifamily, commercial, and industrial sites shall be submitted to the Engineering Division.
 - k. All copies and /or originals of recorded documents for required dedications of easements and /or road rights-of-way shall be submitted to the City Clerk's office and to Engineering Division.
 - l. The occupancy certificate shall be issued or a written notice shall be given to the applicant stating the reasons why a certificate cannot be issued, not later than 30 days after the Enforcement Officer is notified in writing that the building or premises are ready for occupancy.
 - m. An electronic CAD (Computer Aided Design) copy of the property legal description and the legal description of all utility easements and all improvements to the site shall be provided to the Engineering Division for inclusion into the City of Westland GIS data base.

3:9.3 Issuance of Temporary Occupancy Certificates

The Enforcement Officer may issue a temporary occupancy certificate for a portion of a building and site in the process of erection or alteration provided that such certificate shall not be effective for longer than six months, provided further that

such portion of the building and site is in conformity with the provisions of this Ordinance and the City of Westland Building Code, and provided further that the applicant has agreed in writing to comply with all of such provisions as to the entire building and site and has posted cash, irrevocable letter of credit, or other acceptable financial guarantee, the form and amount approved by the, Building Official that the building and site shall be brought into full compliance with the terms of this Ordinance. Such financial guarantee shall be of sufficient amount to cover the cost of bringing the building and site into full compliance. The temporary occupancy certificate shall be issued, or written notice shall be given to the applicant stating the reasons why a certificate cannot be used, not later than 30 days after the Enforcement Officer is notified in writing that the building or premises are ready for occupancy.

3:9.4 **Revocation of Permit**

Any permit issued under the provisions of this Ordinance may be revoked by the Building Department at any time whenever the holder thereof:

- a. Shall have made any false or fraudulent statements in the application for such permit, or in the exercise of such permit.
- b. Shall have violated any of the provisions of this Ordinance.
- c. Shall have failed to satisfy the requirements of this Ordinance or of any rules adopted pursuant thereto.
- d. Shall have caused, created, or maintained, in the exercise of such permit, a menace or danger to the public health, safety, or welfare.
- e. Shall have failed to maintain the site as approved by the City Council or Zoning Board of Appeals, including but not limited to maintenance of:
 - (1) Buildings or structures.
 - (2) Architectural size or design of building.
 - (3) Walls and/or fences.
 - (4) Landscape areas.

(5) Parking lots.

f. Shall have altered a site plan area, as approved by the City Council or Zoning Board of Appeals.

3:9.5 Revocation Appeal Hearing; Zoning Board of Appeals

Any person, firm, or corporation aggrieved by the revocation of a building permit may request a violation appeal hearing before the Zoning Board of Appeals, in accordance with the Rules and Procedures of said Board of Appeals.

3:10 VARIANCES

3:10.1 Purpose

The Zoning Board of Appeals may, in passing on appeals, grant a variance or modify the regulations of this Ordinance only in the specific instances hereinafter set forth, where such Board makes findings of fact in accordance with the standards hereinafter prescribed. Such variances may be granted only when the Board finds that there are practical difficulties or unnecessary hardships in the way of carrying out the strict letter of the regulations of this Ordinance. Such variances may be granted only so that the spirit of the Ordinance shall be observed, public safety secured and substantial justice done.

3:10.2 Application for Variance and Notice of Hearing

An application for a variance shall be filed with the City Clerk. The application shall consist of a completed application form, fee, and the information required. The application shall contain the following information.

- a. Legal description, address, and tax parcel number of the subject property;
- b. An accurate, scaled drawing of the property, showing all property lines, dimensions, and bearings or angles correlated with the legal description; all existing and proposed structures and uses on the property; dimensions of

structures and their dimensioned locations; lot area calculations necessary to show compliance with the regulations of this Ordinance;

- c. Name and property of the applicant, property owner(s), and the interest of the applicant in the property.

3:10.3 Standards for Variances

The Zoning Board of Appeals shall not vary the regulations of this Ordinance except in accordance with the standards established in Act 207 of Public Act 1921, as amended, and unless it shall make findings based upon the evidence presented to it in each specific case that all of the following standards are met:

- a. Because of the particular physical surroundings, shape, or topographical conditions of the specific property involved, a particular hardship will result to the owner if the strict letter of the regulations is carried out. Inconveniences or increased development costs shall not be deemed hardships under the terms of this section.
- b. The conditions upon which an application for a variance is based are unique to the property for which the variance is sought, and are not applicable, generally, or to other property within the same zoning classification.
- c. The purpose of the variance is not based exclusively upon a desire to increase financial gain.
- d. The alleged difficulty or hardship is caused by this Ordinance and has not been created by any persons presently or previously having an interest in the property.
- e. The granting of the variance will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located.
- f. The proposed variance will not impair an adequate supply of light and air to adjacent property, or substantially increase the congestion of the public

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streets, or increase the danger of fire, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.

- g. The Zoning Board of Appeals may, at its discretion, grant a variance that shall be the minimum variance that will make possible a reasonable use of the land or structure.

3:10.4 **Conditions**

The Zoning Board of Appeals may impose such conditions and restrictions upon the premises benefited by a variance as may be necessary to comply with the standards established in this section and the objectives of this Ordinance.

3:10.5 **Authorized Variances**

No order of the Zoning Board of Appeals granting a variance shall be valid for a period longer than 12 months from the date of such order unless the building permit or zoning certificate is obtained within such period and the erection or alteration of a building is started or the use is commenced within such period.

3:11 **APPEALS**

3:11.1 **Scope of Appeals**

An appeal may be taken to the Zoning Board of Appeals by any person, firm, or corporation, or by any office, department, board, or bureau aggrieved by a decision of the Enforcement Officer, the City Planning Commission, or the City Council, except that decisions or actions of the City Council to deny special land use or planned unit developments approval shall not be subject to appeal. An appeal from any decision or action of the Enforcement Officer, the City Planning Commission, or the City Council shall be taken not later than 30 days after the start of construction or alterations or a change in use such as to make the use nonconforming, as authorized by any permit or Certificate issued by the Enforcement Officer, or within 30 days after the decision or the action complained of, by filing with the Enforcement Officer and the Board a notice of appeal specifying the grounds thereof. The Enforcement Officer shall forthwith transmit to

the Board all of the papers constituting a record upon which the action appealed from was taken.

3:11.2 **Stay of Proceedings**

An appeal shall stay all proceedings in furtherance of the action appealed from unless the Enforcement Officer certifies to the Board, after the notice of the appeal has been filed with him, that by reason of facts stated in the certificate, a stay would, in his opinions cause imminent peril to life and property. In such case the proceedings shall not be stayed other than by a restraining order which may be granted by the Board or by a court of record on application and with notice to the Enforcement Officer and on due cause shown.

3:11.3 **Public Hearing**

- a. Notice of the hearing shall be published in the official city newspaper, or a newspaper of general circulation within the City of Westland. Notice shall also be sent by mail or personal delivery to the owners of property for which approval is being considered. Notice shall also be sent to all persons to whom real property is assessed within 300 feet of the property and to the occupants of all structures within 300 feet of the property regardless of whether the property or occupant is located in the City of Westland. Notification need not be given to more than one occupant of a structure, except that if a structure contains more than one dwelling unit or spatial area owned or leased by different persons, one occupant of each unit or spatial area shall be given notice. If a single structure contains more than 4 dwelling units or other distinct spatial areas owned or leased by different persons, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure.
- b. The notice shall be given not less than 15 days before the date of the application will be considered for approval. If the name of the occupant is not known, the term "occupant" may be used in making notification under this subsection. The notice shall do all of the following:
 - i. Describe the nature of the request;

- ii. Indicate the property that is the subject of the request. The notice shall include a listing of all existing street addresses within the property. Street addresses do not need to be created and listed if no such addresses currently exist within the property. If there are not street addresses, other means of identification may be used.
- iii. State when and where the request will be considered.
- iv. Indicate when and where written comments will be received concerning the request.

3:11.4 Decision of the Zoning Board of Appeals

The Board shall thereafter reach its decision within 90 days from the date of the public hearing on the appeal. The decision of the Board shall not become final until the expiration of five (5) days from the date of the entry of such order unless the Board shall find the immediate effect of such order is necessary for the preservation of property or personal rights and shall so certify on the record.

3:11.5 Disposition of Appeals

For all matters assigned to it, the Board may affirm or may reverse, wholly or in part, or modify orders, requirements, decisions, or determinations of the Enforcement Officer, Planning Commission, or City. To that end, the Board shall have all the powers of the Enforcement Officer, Planning Commission, or City Council from whom the appeal is taken. The Enforcement Officer shall maintain records of all actions of the Board relative to appeals. Recourse from final decisions of the Board of Appeals shall be to the Circuit Court.

3:12 AMENDMENTS

3:12.1 Authority - Declaration of Public Policy

The City Council may, from time to time, in the manner hereinafter set forth, amend the regulations imposed in the districts created by this Ordinance or amend district boundary lines, provided that in all amendatory Ordinances adopted under the authority of this section, due allowance shall be made for existing conditions,

the conservation of property values, and the uses to which property is devoted at the time of the adoption of such amendatory Ordinance.

3:12.2 Initiation of Amendment

Text amendments may be proposed by any governmental body or any interested person or organization. Map amendments may be initiated by any governmental body or by persons having a freehold interest in the subject property, or a possessory interest entitled to exclusive possession, or a contractual interest which may become a freehold interest or an exclusive possessory interest entitled to exclusive possession, or a contractual interest which may become a freehold interest or an exclusive possessory interest and which is specifically enforceable.

3:12.3 Application for Amendment

An application for an amendment to this Ordinance shall be filed with the Planning Department in such form and accompanied by such information as required by the Planning Director. The Planning Director, upon receiving an application for amendment, shall transmit the application, along with all pertinent data filed herewith, to the Planning Commission.

3:12.4 Hearing on Application

The Planning Commission shall hold at least one public hearing on each application for an amendment to the Zoning Ordinance at such time and place as shall be established by the Planning Commission. The hearing shall be conducted and a record of such proceedings shall be preserved in such manner as the Planning Commission shall, by rule, prescribe from time to time, or as may be required by charter.

3:12.5 Notice of Hearing

- a. Notice of the hearing shall be published in the official city newspaper, or a newspaper of general circulation within the City of Westland. Notice shall also be sent by mail or personal delivery to the owners of property for which approval is being considered. Notice shall also be sent to all persons to

whom real property is assessed within 300 feet of the property and to the occupants of all structures within 300 feet of the property regardless of whether the property or occupant is located in the City of Westland. Notification need not be given to more than one occupant of a structure, except that if a structure contains more than one dwelling unit or spatial area owned or leased by different persons, one occupant of each unit or spatial area shall be given notice. If a single structure contains more than 4 dwelling units or other distinct spatial areas owned or leased by different persons, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure.

- b. The notice shall be given not less than 15 days before the date the application will be considered for approval. If the name of the occupant is not known, the term “occupant” may be used in making notification under this subsection. The notice shall do all of the following:
 - i. Describe the nature of the request;
 - ii. Indicate the property that is the subject of the request. The notice shall include a listing of all existing street addresses within the property. Street addresses do not need to be created and listed if no such addresses, other means of identification may be used.
 - iii. State when and where the request will be considered.
 - iv. Indicate when and where written comments will be received concerning the request.

3:12.6 Findings of Fact and Recommendation of the Planning Commission

The Planning Commission shall make written findings of fact and shall submit same together with its recommendations to the City Council within 60 days of receipt of the application, and at the conclusion of the public hearing. Where the purpose and effect of the proposed amendment is to change the zoning classification of particular property, the Planning Commission shall make findings based upon the evidence presented to it in each specific case with respect to the following matters:

- a. Existing uses of property within the general area of the property in question.

- b. The zoning classification of property within the general area of the property in question.
- c. The suitability of the property in question in the uses permitted under the existing zoning classification.
- d. The trend of development, if any, in the general area of the property in question, including changes, if any, which have taken place in its present zoning classification.
- e. The objectives of the City of Westland Master Plan.
- f. The Planning Commission shall not recommend the adoption of a proposed amendment unless it finds that the adoption of such amendment is not detrimental to the public interest.

3:12.7 Action by the City Council

- a. The City Council shall not act upon a proposed amendment to this Ordinance until it shall have received a written report and recommendation from the Planning Commission on the proposed amendment.
- b. The City Council may grant or deny any application for an amendment, provided, however, that in case of a written protest against any proposed amendment of the regulations or districts, signed and acknowledged and dated before a notary by the owners of 20 percent of the area of land to be altered, or by the owners of 20 percent of the area of land included within an area extending outward 100 feet from any point on the boundary of the land included in the proposed change, such amendment shall not be passed, except by the two-thirds (2/3) vote of the City Council.

3:12.8 Effect of Denial of Amendment

No application for a map amendment which has been denied by the City Council shall be resubmitted for a period of two (2) years from the date of the order of

denial, except on the grounds of new evidence of proof of change of condition found to be valid by the Planning Commission and the City Council.

3:12.9 Notice of Amendment Adoption

Following adoption of a Zoning Ordinance amendment by the City Council, one notice of adoption shall be published in a newspaper of general circulation in the City of Westland within 15 days after adoption. The notice shall include the following information:

- a. Either a summary of the regulatory effect of the amendment including the geographic area affected, or the text of the amendment.
- b. The effective date of the Ordinance amendment.
- c. The place and time where a copy of the Ordinance may be purchased or inspected.

3:13 SITE PLAN REVIEW

When required, a site plan review and approval shall be obtained from the City before issuance of a zoning certificate. Site plan review shall be carried out in accordance with the provisions of this Ordinance.

3:14 SPECIAL LAND USES

Special land use review and approval shall be obtained from the City Council after the Council has reviewed the recommendation of the Planning Commission. City Council approval shall be obtained before issuance of a zoning certificate for any special land use.

3:15 PLANNED UNIT DEVELOPMENTS

Planned unit developments shall be deemed to be an amendment to the Zoning Ordinance. Approval shall be obtained from the City Council after it has reviewed the recommendations of the Planning Commission.

3:16 FEES

Appeals, Variances, Amendments, Special Uses, Planned Unit Development Districts and Site Plan Reviews:

Any application for an amendment to the text of this Ordinance or for special land use, planned unit development approval, or site plan review and approval, shall be accompanied by a fee as established by resolution of the City Council. There shall be no fee, however, in the case of applications filed in the public interest by the city or any city official.

3:17 **PENALTIES**

Any person, firm, corporation, or agent, or any employee or contractor of same, who violates, destroys, omits, neglects, or refuses to comply with, or who resists enforcement of any provisions of this Ordinance, shall be subject to a fine of not more than five hundred dollars (\$500) or imprisonment for not more than ninety (90) days, or both, for each offense, and each day that a violation continues to exist shall constitute a separate offense. Costs of prosecution shall also be assessed.

3:18 **CIVIL REMEDIES**

Buildings erected, altered, razed or converted, or uses carried on in violation of any provision of this Ordinance are hereby declared to be a nuisance per se. The owner or agent in charge of the building or land, or both the owner and the agent may be adjudged guilty of maintaining a nuisance per se, and any court of competent jurisdiction may order the nuisance abated.

4:1 INTERPRETATION

4:1.1 Minimum Requirements

In their interpretation and application, the provisions of this Ordinance shall be held to be the minimum requirements for the promotion of the public health, safety, comfort convenience, and general welfare.

4:1.2 Higher Standards Govern

Where the conditions imposed by any provisions of this Ordinance, upon the use of land or buildings or upon the bulk of buildings, are either more restrictive or less restrictive than comparable conditions imposed by any other provision of this Ordinance or of any other law, ordinance, resolution, rule, or regulation of any kind, the regulations which are more restrictive or which impose higher standards or requirements shall govern.

4:1.3 Flexibility

Although the district requirements are very specific in most instances, reasonable flexibility is offered through such devices as special land use, planned unit developments and variances. A principal objective of this Ordinance is the encouragement of appropriate innovation.

4:1.4 Nonabrogation of Private Agreements

This ordinance is not intended to abrogate any easement, covenant, or any other private agreement, provided that where the regulations of this ordinance are more restrictive or impose higher standards or requirements than such easements, covenants, or other private agreements, the requirements of this Ordinance shall govern.

4:1.5 Unlawful Buildings, Structures, Site Plans and Uses

No building, structure, or use which was not lawfully existing at the time of the adoption of this Ordinance shall become or be made lawful solely by reason of the adoption of this Ordinance; and to the extent that, and in any manner that, said unlawful building, structure, or use is in conflict with the requirements of this Ordinance, said building structure, or use remains unlawful hereunder.

4:2 SEPARABILITY

It is hereby declared to be the intention of the Westland City Council that the several provisions of this Ordinance are separable, in accordance with the following:

4:2.1 Invalid Provisions of Ordinance

If any court of competent jurisdiction shall adjudge any provision of this Ordinance to be invalid, such judgment shall not affect any other provisions of this Ordinance not specifically included in said judgment.

4:2.2 Invalid Application of Provisions of Ordinance

If any court of competent jurisdiction shall adjudge invalid the application of any provision of this Ordinance to a particular property, building, or other structure, such judgment shall not affect the application of said provision to any other property, building, or structure not specifically included in said judgment.

4:3 SCOPE OF REGULATIONS

4:3.1 Application to All Buildings, Structure, Plans, and Uses

All buildings erected hereafter, all uses of land or buildings established hereafter, and all structural alteration or relocation of existing buildings occurring hereafter shall be subject to all regulations including parking, loading and site plan provisions of this

Ordinance which are applicable to the zoning districts in which such buildings, uses, or land shall be located.

4:3.2 Previously Approved Special District (SD), Special Planned Developments (SPD) and Other Special Developments

Areas indicated on zoning maps as land areas within developments which were approved by the City in accordance with Special District Regulations of Ordinance 129, 235 and other special developments shall be considered conforming under the terms of this Ordinance, subject to all terms or conditions imposed under said approval.

4:3.3 Timely Exercise of Variance

Where a variance has been granted pursuant to the provisions of this Ordinance such approval shall become null and void unless work thereon is substantially under way within twelve months of the date of the issuance unless extended by the approving body.

4:3.4 Application of Yard Requirements for Uses Without Buildings

Where a lot is to be occupied for a permitted use without buildings, the side yard and front yard required for such lot shall be provided and maintained unless otherwise stipulated in this Ordinance, except that side yards shall not be required on lots used for garden purposes without buildings or structures nor on lots used for public recreation area.

4:3.5 Residence District Land Shall Not Provide Access to Nonresidence District Land

No land which is located in a Residence District shall be used for driveways walkway, or access purposes to any land which is located in a nonresidential district, unless such access shall be by a public street.

4:4 MINIMUM LOT SIZE

Every residential building hereafter erected on a lot or parcel of land created subsequent to the effective date of this Ordinance shall provide a lot or parcel of land in accordance with

the lot size requirements of the district within which it is located. In any Residence District, on a lot of record on the effective date of this Ordinance, a single-family dwelling may be established regardless of the size of the lot, provided all other requirements of this Ordinance are complied with. Where two adjoining lots are under the same ownership, and said two lots are individually smaller than the lot size requirements of the district in which they are located, said two lots shall be considered one lot for the purposes of this section.

4:5 **ACCESSORY BUILDINGS AND USES**

4:5.1 **Time of Construction or Establishment**

No accessory building or structure shall be constructed on any lot prior to the time of construction of the principal building to which it is accessory. No accessory use shall be established on a zoning lot prior to the time of establishment of the principal use.

4:5.2 **Separation Between Buildings**

In a residential district, detached accessory structures shall be located no closer to any other accessory or principal building than ten (10) feet. An accessory building may be constructed in a residential district at a distance less than ten (10) feet from the principal building, if the accessory building complies with provisions of Section 7:4.3 and to the Footnotes to Schedule of Lot Size, Yard, and Building Bulk Requirements of Section 7:4.4 of this Ordinance.

4:6 **BULK REGULATIONS**

4:6.1 **Continued Conformity with Bulk Regulations**

The maintenance of yards and other open space and minimum lot area legally required for a building shall be a continuing obligation of the owner of such building or of the property on which it is located, as long as the building is in existence. Furthermore, no legally required yards, other open space, or minimum lot area allocated to any building shall, by virtue of change of ownership or for any other

reason, be used to satisfy yard, other open space, or minimum lot area requirements for any other building.

4:6.2 Division of Zoning Lots

No zoning lot shall hereafter be divided into two or more zoning lots and no portion of any zoning lot shall be sold, unless all zoning lots resulting from each such division or sale shall conform with all the applicable bulk regulations of the zoning district in which the property is located.

4:6.3 Location of Required Open Space

All yards and other open spaces allocated to a building or dwelling group shall be located on the same zoning lot as such building or dwelling group.

4:6.4 Permitted Obstructions in Required Yards

The following shall be considered to be permitted obstructions when located in the required yards specified:

- a. In all yards: Open terraces not over three (3) feet above the average level of the adjoining ground, but not including a permanently roofed-over terrace porch; awnings and canopies; steps four (4) feet or less above grade which are necessary for access to a permitted building or for access to a zoning lot from a street or alley; chimneys projecting 24 inches or less into the yard; approved freestanding signs; arbors and trellises; flagpoles; window unit air-conditioners projecting not more than 18 inches into the required yard; and fences or walls subject to applicable height restrictions .
- b. In front yards: One-story bay windows projecting three (3) feet or less into the yards; and overhanging eaves and gutters projecting three (3) feet or less into the yard.
- c. In rear yards: Open off-street parking spaces; balconies; breezeways and open porches; one-story bay windows projecting three (3) feet or less into the yard; and overhanging eaves and gutters projecting three (3) feet or less into the yard.

- d. In side yards: Overhanging eaves and gutters projecting 18 inches or less into the yard.

4:7 INCOMPLETE DWELLINGS

No cellar, garage, or any incompletely constructed structure in use as a dwelling at the effective date of this Ordinance shall be used as a dwelling for more than one (1) year following said date, unless such structure has been brought to a state of external completion in conformity with the regulations of this Ordinance relative to dwellings in the district in which said structure is located. No such structure constructed after the effective date of this Ordinance shall be used as a dwelling unless such structure has been completed as a dwelling and an occupancy permit issued for such structure.

4:8 EXISTING USES CLASSIFIED AS SPECIAL LAND USES

Existing Special Land Uses Classified as Special Land Uses Under This Ordinance

If a use exists as a special land use or other equivalent designation at the date of adoption of this Ordinance and is classified as a special land use under the terms of this Ordinance, said use shall be considered to be a legal special land use provided all use, building, structure, site plan and locational requirements of this Ordinance are met.

4:9 INTERPRETATION OF USE LISTS

Land uses which are not contained by name in a zoning district list of uses permitted by right, special land uses, or permitted accessory uses may be permitted upon a positive recommendation of the Planning Commission and a finding by the Zoning Board of Appeals that such uses are clearly similar in nature and compatible with the listed uses for that district. In making such a finding, the Zoning Board of Appeals shall consider specific characteristics of the use in question and compare such characteristics with the characteristics of uses expressly permitted in the district. Such characteristics shall include, but not be limited to, daily traffic generation, types of merchandise or service provided, types of goods produced, expected hours of operation, and aesthetic characteristics. The Zoning Board of Appeals shall determine whether such uses shall be permitted by right, special land uses, or permitted as accessory uses. The Planning Commission and the Zoning Board of Appeals

shall have the authority to establish general standards and conditions under which a use may be included in a district under the terms of this section. No use shall be permitted in a district under the terms of the section if said use is specifically listed as a use permitted by right or as a special land use in any other district. A record shall be kept of all uses, conditions and standards which are approved under the terms of this section and once a specific use has been permitted, said type of use may be established within the district subject to any pertinent conditions and standards without further recourse to the procedures of this section.

4:10 **TEMPORARY CONSTRUCTION STRUCTURES**

Temporary construction structures for nonresidential use may be permitted upon approval of the Building Director when such structures are for use by a contractor or builder in conjunction with a construction project. Any such temporary structure shall be removed as soon as said construction project is completed.

4:11 **NUMBER OF PERMITTED USES**

Except as specifically permitted in the Townhouse, Garden Apartment, and Shopping Center Business Districts, no more than one principal use or building shall be placed on a zoning lot, as defined in Article XVII herein. However, the Zoning Board of Appeals may permit more than one principal use or structure provided that the land area and frontage allocated to each principal building or use are equal to or greater than the lot area and frontage requirements in the zoning district, and provided further that the buildings and land comply with all other requirements of the Ordinance in the district in which they are located. In determining area, frontage, and yard setbacks for each such building, a line extending midway between adjacent principal buildings or uses and at right angles to the front lot line shall be considered to be a side lot line.

4:12 **RESIDENTIAL OCCUPANCY**

4:12.1 Intent. This section is intended to reasonably regulate the number of persons who can live in a residential dwelling unit. The City finds that occupancy limits are needed to provide density control; preserve and enhance residential neighborhoods as stable, quiet places for citizens to live and raise children; protect safety and welfare; and maintain property values. Such limits are also needed to ensure that

there are adequate public and private facilities including adequate off-street parking, utilities, and adequate lot size to accommodate the residents of each dwelling unit without impairing the character of the neighborhood. The City also finds there are a number of residential living arrangements other than the traditional biological family arrangement. This Ordinance is intended also to accommodate those alternative living arrangements.

4:12.2 A dwelling unit may not be occupied by more persons than one of the following family living arrangements:

- a. One (1) or more persons related by blood, marriage, adoption or guardianship living as a single housekeeping unit, in all districts.
- b. Four (4) persons plus their offspring living as a single housekeeping unit, in all residential districts.
- c. Six (6) persons living as a single housekeeping unit in any residential district.
- d. A functional family living as a single housekeeping unit which has received a special land use permit.

4:12.3 In this Section offspring means descendants, including natural offspring, adopted children, foster children and legal wards.

4:12.4 In this Section functional family means a group of people having a relationship which is functionally equivalent to a family. The relationship must be of a permanent and distinct character with a demonstrable and recognizable bond characteristic of a cohesive unit. Functional family does not include any society, club, fraternity, sorority, association, lodge, organization or group of students or other individuals where the common living arrangement or basis for the establishment of the housekeeping unit is temporary.

4:12.5 In addition to the standards for granting a special land use approval, a permit for a functional family is subject to the following standards and regulations:

- a. It must meet the definition of this Section.
- b. Two (2) off-street parking spaces must be provided. Additional parking spaces may be recommended by the Planning Commission if any of the following conditions are met:
 - (1) The property is located more than three hundred (300) feet from a bus stop.
 - (2) Street parking available for visitor parking is limited.
 - (3) The petitioner intends to park more than two (2) vehicles regularly on the site and there is limited area available for tandem parking in a driveway.

In order for the Planning Commission to determine if adequate parking will be provided, the petitioner must submit a plan indicating the location of proposed off-street parking and an analysis of public parking and transit facilities provided within a three hundred (300) foot radius of the parcel.

- c. The permit shall apply only to the functional family type which obtained the permit and shall be limited to the number of persons specified in the permit.
- d. There is a contact person who will act as head of household in relating to the City.

4:12.6 The Zoning Board of Appeals may grant a variance from the standards of this Section if it is reasonably necessary to give a handicapped person (as defined in 42 USC §3602) equal opportunity to use and enjoy a dwelling.

4:12.7 The occupancy limits of this Section do not apply to rooming or boarding houses, emergency shelters, or convalescent homes.

4:13 **TEMPORARY USES, SEASONAL OR SPECIAL EVENTS AND TEMPORARY BUILDINGS AND STRUCTURES**

ARTICLE IV - GENERAL PROVISIONS 4.0

Temporary uses, temporary sales and seasonal or special events may be allowed by the City Council in any nonresidential district upon issuance of a permit, when the application information below is provided and the standards of this Section are met.

- a. **Application information:** The applicant shall submit the following to the Building Department.
1. An application form and required fee, established by the City Council.
 2. A written statement describing the requested use or event and the start and end dates.
 3. A written description of the procedures to be used for traffic/parking management, waste disposal, security and similar measures to minimize any negative impacts.
 4. Proof of ownership, or if the applicant is not the owner of the land, written permission of the owner of the property to allow the proposed use or event.
 5. Information establishing that reasonable liability insurance coverage is carried, to the satisfaction of the City Attorney.
 6. A plot or sketch plan (to scale) illustrating property lines, adjacent uses and zoning districts, existing and proposed buildings and structures, boundaries of proposed sales/activity areas, location of any proposed building or structures, any proposed lighting, calculation of required parking based on the standards of Article XVI, proposed traffic circulation, location of fire hydrants, location and size of any proposed signs, and any other information deemed to be necessary by the Building Director.
 7. A performance guarantee or escrow, in an amount and form acceptable to the City Attorney, but which shall be not less than the minimum established by the City Council. The performance guarantee shall be deposited prior to the issuance of a permit. The performance guarantee shall be used by the City to pay the cost of returning the property to its state prior to commencement of the event or refunded to the applicant upon compliance with the requirements of this and any other applicable City ordinances.

- b. **Standards and procedures for review:** Proposed temporary uses, events, buildings and structures shown in Table 4:13d shall be reviewed by the Building Director and other such Departments as deemed necessary by the Building Director, using the following standards, and a recommendation made to City Council:
1. All required information has been submitted.
 2. The proposed temporary use or event will be on a lot with a permitted principal building or, if on a vacant lot, meets the minimum required setback for buildings in the zoning district.
 3. The proposed use, layout, hours of operation and site improvements, such as fencing, are designed to help ensure compatibility with surrounding land uses.
 4. Adequate off-street parking and circulation will be provided. Where Article XVI does not require parking for the proposed use, at least one parking space shall be provided for each eight hundred (800) square feet of gross lot area used for the activity or the amount of parking shall be deemed sufficient by the City Council based on reference sources and past experience of the City or other communities.
 5. Adequate provisions have been made for trash disposal, sewage disposal and security.
 6. All applicable City Building Codes and Ordinances will be met.
- c. **Operational standards:** A temporary or seasonal sale or event shall comply with the following operational standards:
1. The length of a temporary use or sales event shall not exceed seven (7) days during a season, except that sales of Christmas trees are permitted for up to forty-five (45) days. Uses and events which are to occur on a regular schedule (such as every weekend) or over a period of longer than seven (7) days shall be permitted only in commercially zoned districts, based upon a decision by the City Council that the use or event will comply with the intent and standards of this Section. Such a request must be made known at the time of application.

2. All equipment, materials, goods, poles, wires, lighting, signs and other items associated with the temporary uses and seasonal events shall be removed from the premises within five (5) days of the end of the event. Following the five (5) day period, the City shall use the escrow fee to clear such items from the property.
3. The Building Director shall immediately cease operations of any temporary use or seasonal event which does not conform to these standards.

d. Table of Temporary Uses, Events, Buildings and Structures and Related Ordinances.

Type of Temporary Situation	Required Information/Standards
(1)Tent or sidewalk sale accessory to permitted use, excluding fireworks*	<ul style="list-style-type: none"> · maximum ten (10) feet from buildings · shall not cover required parking · goods must be stored inside during nonbusiness hours
(2)Tent or outdoor sale on vacant land, excluding fireworks*	<ul style="list-style-type: none"> · shall not cover required parking
(3)Christmas Tree Sales**	<ul style="list-style-type: none"> · must be in a commercial zoning district
(4)Outdoor cafes and eating areas	<ul style="list-style-type: none"> · must be in a commercial zoning district
(5)Accessory fruit, flower or craft sales	
(6)Circus, carnival, concerts, air or watercraft shows or similar event	
(7)Temporary residence during repairs due to flood, fire or vandalism	<ul style="list-style-type: none"> · All electrical and utility connections shall be approved · Structure shall meet district setback requirements
(8)The Building Director may approve permits for a temporary residence during construction (including mobile homes) on sites for which a building permit has been issued for construction, major repair, or	<ul style="list-style-type: none"> · permits shall be for six (6) months, one additional six (6) month period is permitted if work is proceeding in an expeditious manner · structure shall meet district setback requirements · all electrical and utility connections shall be

Type of Temporary Situation	Required Information/Standards
remodeling of a dwelling unit. **	approved · structure shall be moved into site no more than fourteen (14) days prior to commencement on construction and moved off-site within fourteen (14) days following issuance of a Certificate of Occupancy
<p>NOTE: The Building Director shall review the above uses that require Council approval and make a recommendation to the City Council.</p> <p>*Sale of fireworks must be within a structure as an accessory use to an established retail business and meet City fire and safety standards.</p> <p>**City Council review and approval is required.</p>	

9:1 INTENT

It is the intent of this Article to provide for viable office and commercial development in the City of Westland, while at the same time preserving the quality of adjacent and nearby residential areas. It is the determination of the Westland City Council that this intent can best be achieved by limiting office and commercial development to sites which are sufficiently wide and deep to permit business areas to function and be perceived as separate and apart from nearby residential areas. Where sites which are not sufficiently wide and deep exist, the Council has determined that the residential environment can best be protected by limiting permitted business uses to those which will have the least external impact on adjacent residences. This Article sets forth regulations for five (5) business districts, each of which has a different combination of land uses and/or area, bulk, and other requirements. Each district is designed for mapping in certain locations where its specific combinations of use, area, bulk, and other requirements are more appropriate than the combinations of use, areas, bulk, and other requirements of the other four (4) districts. In determining uses for inclusion in each district, the City Council has considered intensity factors including trip generation characteristics, trade and service area characteristics, typical hours of operation, and other determinants of residential compatibility.

The OB Office Business District provides for the most limited range of business uses. It is designed for mapping on shallow sites which back up to residential areas. The office uses generate the lowest volumes of vehicular traffic and have other use-intensity characteristics which make them compatible with adjacent residential areas. The CB-1 Commercial Business District provides the same office uses permitted in the OB district as well as a selection of commercial and personal service uses which are of relatively low-use intensity in comparison to other commercial uses. The CB-1 Commercial Business District is intended for mapping on shallow sites which back up to residential areas. Flexibility is provided for the CB-1 District by permitting higher-intensity uses as special land uses. The CB-2 Shopping Center Business District provides for a wide range of commercial business uses, including high-intensity commercial uses. The Shopping Center District is intended for mapping on relatively wide and deep sites. The CB-3 General Commercial Business District provides for a wide range of commercial business uses. The CB-4 Vehicle Service District provides for certain automotive sales and service uses and compatible uses. The CB-3 and CB-4 Districts are mapped on sites where the existing pattern of high-intensity

thoroughfare-oriented development is firmly established, and on other sites where there is a particular need to provide for the uses permitted in these Districts.

9:2 **GENERAL REQUIREMENTS: OB, CB-1, CB-2, CB-3 AND CB-4 BUSINESS DISTRICTS**

9:2.1 **Permitted Uses**

Permitted uses of land or buildings, as hereinafter listed, shall be permitted in the districts indicated under the conditions specified. No buildings or zoning lot shall be devoted to any use other than a use permitted hereinunder in the zoning district in which such building or zoning lot shall be located, except in accordance with the provisions of Section 4:9.

9:2.2 **Prohibited Uses**

It is the intent of this Ordinance to specifically prohibit uses which are not listed as permitted uses, or which are not approved for addition to the list of permitted uses in accordance with Section 4:9. Establishments which have more than twenty (20) percent of their floor area devoted to other uses or to accessory uses shall be deemed in violation of this Ordinance.

9:2.3 **Site Plan Requirements: Business Districts**

All uses in the OB, CB-1, CB-2, CB-3 and CB-4 districts shall be subject to the site plan requirements set forth in Article XI and shall meet the following additional site design requirements:

- a. All public utilities shall be placed underground.
- b. All areas where motor vehicles may be driven or parked shall be paved with asphaltic or concrete surfacing of such thickness and design as may be required by engineering standards duly adopted by the City Council.

9:2.4 **Site Plan Review Requirements: Business Districts**

All uses shall be subject to the site plan review requirements of Article XII.

9:2.5 Signs

Signs shall be permitted in accordance with Article XV.

9:2.6 Off-Street Parking and Loading

Off-street parking and loading facilities, accessory to uses permitted, shall be provided in accordance with the regulations established in Article XVI.

9:3 OB OFFICE BUSINESS DISTRICT

9:3.1 Permitted Principal Uses

The following land and/or structure uses are permitted by right in the OB Office Business District:

a. Office uses:

Architectural, engineering, and similar offices.

Real estate, insurance, financial institutions and other business offices.

Medical Offices and Outpatient Clinics.

Legal and accounting offices.

Business service establishments, including:

Management consulting services.

Consumer credit reporting agencies.

Duplicating services.

Mailing and stenographic services.

Other similar business services.

Offices, but not meeting halls, of nonprofit organizations including:

Professional membership organizations.

Labor unions, civic, social and fraternal organizations.
Political organizations.
Stock, bond, and other brokerage establishments.

- b. Laboratories, medical and dental.
- c. Essential services for which special land use approval is not required in accordance with Section 6:3.
- d. On-site signs as regulated in Article XV.

9:3.2 Special Land Uses

- a. Any permitted principal use in the CB-1 or CB-2 Districts shall be permitted as a special land use in the OB Business District subject to the standards and approval requirements as provided in Article XIII and subject further to the requirement that such special land use or combination of special land uses shall not occupy more than twenty-five (25) percent of the structure in which it is located or the complex of structures on the same zoning lot on which it is located.
- b. Establishments other than drive-in or drive-through restaurants that sell prepared food such as ice cream, baked goods, and pizza, for take out.
- c. Institutional and related uses as listed below:
 - Child care centers and nursery schools.
 - Cultural facilities, as follows:
 - Public libraries and public art galleries.
 - Public museums and aquariums.
 - Educational facilities (nonboarding) as follows:
 - Elementary schools.
 - Junior and senior high schools.
 - Colleges and universities.
 - Essential services for which special land use is required in accordance with Section 6:3.

Recreation and social facilities, as follows:

Golf courses, golf driving ranges, pitch and putt, or miniature golf courses
Recreational buildings and community centers, noncommercial.

Swimming pools, noncommercial.

Tennis clubs and courts, noncommercial.

Religious institutions, as follows:

Churches, chapels, temples, and synagogues.

Rectories, parsonages, and parish houses.

Extended health care facilities as follows:

Hospitals

Sanitariums

Nursing and convalescent homes

9:3.3 Accessory Structures and Uses

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side yard area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.
- d. Auditoriums, meeting rooms, offices, and similar facilities shall be permitted as accessory uses to religious institutions, provided such facilities are used for activities normally associated with church business. Activities associated with church business generally do not have daily business hours; use existing church space and facilities on a temporary basis; use mostly volunteers as employees; donate revenues produced directly to the church; and, offer mostly donated goods or services.

9:3.4 Minimum Lot Size Requirements OB District

- a. Minimum lot area: 10,000 square feet.
- b. Minimum lot width: 80 feet.

9:3.5 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:

Front: 25 feet
Side: 10 feet
Rear: 30 feet

- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. A side yard which abuts a street shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any required side yard area, provided that this Section shall not be interpreted to prevent placing of litter containers for the use of pedestrians outdoors. All areas for the temporary storage of garbage and trash, except litter containers for pedestrians, shall be enclosed on all sides.
- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street. Parking shall be permitted in unrequired side and rear yard areas.
- f. Parking structures and shelters shall not be permitted in any required front, side or rear yard. Parking structures and shelters shall be permitted in unrequired

front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

9:3.6 Maximum Building Bulk Requirements: OB District

- a. Maximum building height:
 - Stories: 2
 - Feet: 30
- b. Maximum lot coverage: 30 percent for all principal and accessory buildings.
- c. Maximum building length: 180 feet

9:4 CB-1 LOW INTENSITY COMMERCIAL BUSINESS DISTRICT

9:4.1 Permitted Principal Uses

The following land and /or structure uses shall be permitted by right in the CB-1 Low Intensity Commercial Business District:

- a. Any principal use permitted in the OB Office Business District.
- b. Convenience commercial uses:
 - Convenience food stores.
 - Dry goods and notions stores.
 - Flower shops.
 - Ticket agencies, entertainment.
 - Ticket agencies, transportation.
 - Tobacco shops.
 - Travel agencies.
 - Establishments other than drive-in or drive-through restaurants that sell prepared food, such as ice cream, baked goods and pizza, for take-out.
 - Food stores, including grocery stores, supermarkets and specialized food stores, such as bakeries and delicatessens.
 - Hardware stores.

c. Personal service uses:

Barber and beauty shops.
Dry cleaning and laundry establishments.
Photographic studios.
Tailor and dressmaker shops.
Art merchandising studios.
Art supply stores.
Book and stationery stores.
Business machine sales.
Camera stores.
Carpet and rug stores.
Coin and philatelic stores.
Furniture stores.
Gift shops.
Hearing aid stores.
Interior decorators.
Jewelry stores, costume.
Jewelry stores, fine.
Key shops.
Leather and luggage stores.
Musical instrument sales.
Office supply stores.
Optician retail sales.
Picture framing.
Tanning Salons

d. Comparison commercial uses:

Bicycle sales, rental, and repair shops.
Electrical showrooms and shops.
Garden supply stores.
Hobby shops.
Household, appliance stores.

Household, notions and dry goods.
Music, video and record sales and rental stores.
Novelty shops.
Paint, glass. and wallpaper stores.
Pet stores.
Plumbing showrooms and shops.
Sporting goods.
Toy stores.

- e. General commercial uses and repair services as listed below:
 - Appliance repair establishments for household appliances.
 - Blueprinting and photostating establishments.
 - Catering establishments.
 - Exercise and physical fitness establishments, less than 10,000 square feet in area.
 - Exterminating shops.
 - Locksmith shops.
 - Newspaper distribution agencies.
 - Parking lots and garages.
 - Pawn shops.
 - Printing and publishing shops, less than 10,000 square feet in area.
 - Small engine repair for lawn mowers, snow blowers, and similar devices.
 - Veterinary establishments.
 - Wood sales for fireplaces and stoves, provided that no splitting of wood occurs on the site.
- f. Funeral homes and mortuaries.
- g. Clothing stores

9:4.2 Special Land Uses

- a. Any permitted principal use in the CB-2 District shall be permitted as a special land use in the CB-1 Low Intensity Commercial Business District subject to the standards and approval requirements as provided in Article XIII and subject

further to the requirement that such special land uses or combination of special land uses shall not occupy more than twenty-five (25) percent of the structure in which it is located or the complex of structures in the same zoning lot on which it is located.

- b. Restaurants and establishments serving alcoholic beverages for consumption on the premises shall be permitted as special land uses in the CB-1 District subject to the standards and approval requirements as provided in Article XIII.
- c. Institutional and related uses as listed below shall be permitted as special land uses in the CB-1 Low Intensity Commercial Business District subject to the standards and approval requirements as provided in Article XIII. Such uses shall include:

Child-care centers and nursery schools.

Cultural facilities, as follows:

Public libraries and public art galleries.

Public museums and aquariums.

Educational facilities (nonboarding), as follows:

Elementary schools.

Junior and senior high schools.

Colleges and universities.

Essential services for which Special Land Use approval is required in accordance with Section 6.3.

Extended health care facilities, as follows:

Hospitals.

Sanitariums.

Nursing and convalescent homes.

Public service uses and buildings, as follows:

Public administration buildings, local, county, state, and Federal.

Fire stations.

Police stations.

Recreation and social facilities, as follows:

Golf courses, golf driving ranges, pitch and putt, or miniature golf courses.

Recreational buildings and community centers, noncommercial.

Swimming pools, noncommercial.

Tennis clubs and courts, noncommercial.

Religious institutions, as follows:

Churches, chapels, temples, and synagogues.

Rectories, parsonages and parish houses.

d. Automobile accessory stores, provided no installation of accessories or parts occur on the premises.

e. Drug stores and pharmacies.

9:4.3 Accessory Structures

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.
- d. Auditoriums, meeting rooms, offices, and similar facilities shall be permitted as accessory uses to religious institutions, provided such facilities are used for activities normally associated with church business. Activities associated with church business generally do not have daily business hours; use existing church space and facilities on a temporary basis; use mostly volunteers as employees; donate revenues produced directly to the church; and, offer mostly donated goods or services.

- e. Temporary outdoor sales accessory to special land uses or to uses permitted by right as regulated by Section 4:13.

9:4.4 Minimum Lot Size Requirements

- a. Minimum lot area: 10,000 square feet.
- b. Minimum lot width: 80 feet.

9:4.5 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:

CB-1

Front:	15 feet
Side:	10 feet
Rear:	20 feet

- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, Article XI, and in paragraph "d" below.
- c. Side yard which abut streets shall conform to the same yard setbacks and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any required side yard area, provided that this Section shall not be interpreted to prevent placing of litter containers for the use of pedestrians outdoors.
- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street. Parking shall be permitted in unrequired side and rear yard areas.

- f. Parking structures and shelters shall not be permitted in any required front, side or rear yard. Parking structures and shelters shall be permitted in unrequired front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

9:4.6 Maximum Building Bulk Requirements

- a. Maximum building height:

Stories: 2

Feet: 30

- b. Maximum lot coverage:

40 percent for all principal and accessory buildings.

9:5 CB-2 SHOPPING CENTER COMMERCIAL BUSINESS DISTRICT

9:5.1 Permitted Principal Uses

The following land and/or structure uses are permitted by right in the CB-2 Shopping Center Commercial Business District:

- a. Any principal use permitted in the OB and CB-1 Districts.

9:5.2 Special Land Uses

- a. Any permitted principal use in the CB-3 District shall be permitted as a special land use in the CB-2 Shopping Center Commercial Business District subject to the standards and approval requirements as provided in Article XIII and subject further to the requirement that such special land uses or combination of special land uses shall not occupy more than twenty-five (25) percent of the structure in which it is located or the complex of structures in the same zoning lot on which it is located.
- b. Standard restaurants, fast-food restaurants, and establishments serving alcoholic beverages for consumption on the premises shall be permitted as special land uses in the CB-2 Shopping Center Commercial Business District subject to the standards and approval requirements as provided in Article XIII.

- c. Institutional and related uses as listed below shall be permitted as special land uses in the CB-2 Shopping Center Commercial Business District subject to the standards and approval requirements as provided in Article XIII. Such uses shall include:
 - Child-care centers and nursery schools.
 - Cultural facilities, as follows:
 - Public libraries and public art galleries.
 - Public museums and aquariums.
 - Educational facilities (nonboarding), as follows:
 - Elementary schools.
 - Junior and senior high schools.
 - Colleges and universities.
 - Essential services for which special land use approval is required in accordance with Section 6.3.
 - Extended health care facilities, as follows:
 - Hospitals.
 - Sanitariums.
 - Nursing and convalescent homes.
 - Public service uses and buildings, as follows:
 - Public administration buildings, local, county, state, and Federal.
 - Fire stations.
 - Police stations.
 - Recreation and social facilities, as follows:
 - Golf courses golf driving ranges, pitch and putt, or miniature golf courses.
 - Recreational buildings and community centers, noncommercial.
 - Swimming pools, noncommercial.
 - Tennis club and courts, noncommercial.
- d. Auto accessory stores, provided no installation of accessories or parts occur on the premises.
- e. Drug Stores and pharmacies.

- f. Body Art Studios

9:5.3 Accessory Structures

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use or a principal use permitted as part of a Planned Unit Development shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is necessary.
- d. Temporary outdoor sales accessory to special land uses or uses permitted by right.

9:5.4 Minimum Lot Size Requirement

- a. Minimum lot area: 4 acres
- b. Minimum lot width: Not less than 1/4 depth.

9:5.5 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:
 - Front: 50
 - Side: 25
 - Rear: 25

- b. Required front, side and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any requires side yard area, provided that this section shall not be interpreted to prevent placing of litter containers for the use of pedestrians outdoors. All areas for the temporary storage of garbage and trash, except litter containers for pedestrians, shall be enclosed on all sides subject to the standards in Section 11:6.1.
- e. Unsheltered parking shall not be permitted within 25 feet of a side or rear yard which abuts a street.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in unrequired front, side and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

9:5.6 **Maximum Building Bulk Requirements**

- a. Maximum building height: Equal to the distance to the nearest property line.
- b. Maximum lot coverage: 35 percent for all principal and accessory buildings.

9:6 **CB-3 GENERAL COMMERCIAL BUSINESS DISTRICT**

9:6.1 **Permitted Principal Uses**

The following land and/or structure uses are permitted by right in the CB-3 General Commercial Business District:

- a. Any principal use permitted in the OB, CB-1 and CB-2 Districts.
- b. General commercial uses as listed below:

Amusement establishments, including bowling alleys, pool halls, dance halls, gymnasiums, swimming pools and skating rinks.

Art, sculptor, and composer studios.

Auction rooms.

Blueprinting and photostating establishments.

Catering establishments.

Clubs and lodges, private.

Exterminating shops.

Greenhouses and nurseries.

Kennels

Locksmith shops.

Mail order and catalogue stores.

Meeting halls.

Newspaper distributing agencies.

Parking lots and garages.

Pawn shops.

Physical culture and health services including exercise and physical fitness establishments, gymnasiums, reducing and massage salons, and public baths.

Printing and publishing shops, less than 10,000 square feet in area.

Taxidermists.

Theaters, indoor.

Veterinary establishments.

Motels and hotels.

9:6.2 Special Land Uses

- a. Any special land use permitted in the CB-2 Shopping Center Commercial Business District.

- b. Standard restaurants, drive-in restaurants, fast-foot restaurants, drive-through restaurants, and establishments serving alcoholic beverages for consumption on the premises.
- c. Adult-oriented commercial uses subject to the following restrictions.

Adult-oriented commercial uses have been found to contribute to the serious deterioration of the commercial area in which they are located as well as surrounding residential areas. Such uses are permitted in the City of Westland because of constitutional protections. They are limited in frequency of occurrence and proximity to residential areas in order to protect property values and the quality of life for property owners and residents. Such uses exert their most serious blighting influence when concentrated in close proximity to one another and when located near residential areas. Therefore, not more than two adult-oriented uses shall be permitted within a thousand-foot distance. No adult-oriented use shall be permitted within 750 feet of a residential district or use. No adult-oriented use shall be permitted within 750 feet of any site on which is located a church, school, park or playground, or any area where minors regularly congregate. Advertisements, displays, or other promotional materials shall not be shown or exhibited so as to be visible to the public from pedestrian sidewalks or walkways, or from other public areas. All entries, windows, and other building openings for adult uses shall be located, covered, or screened in such a manner as to prevent a view into the interior from any public area.

Adult-oriented uses shall include:

Bookstores which have more than 15 percent of their stock in trade, books, magazines or other publications, the sale of which is prohibited to minors. Theaters and mini-theaters which have more than 15 percent of their screening time over a six-month period devoted to motion pictures, the attendance at which is prohibited to minors.

Cabarets or bars with live topless-type entertainment, hostesses, waitresses, or other employees.

Nude photographic studios.

- d. Auto accessory stores, provided no installation of accessories and parts occurs on the premises.
- e. Drug stores and pharmacies.
- f. Body art studios
- g. Mini- or Self-Storage Warehouses.

9:6.3 Accessory Structures

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use or a principal use permitted as part of a Planned Unit Development shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side yard area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.
- d. Temporary outdoor sales accessory to special land uses or uses permitted by right.

9:6.4 Minimum Lot Size Requirements

- a. Minimum lot area: 20,000 square feet.
- b. Minimum lot width: 100 feet

9:6.5 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:

Front: 25 feet
Side: 20 feet
Rear: 20 feet

- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any required side yard area, provided that this Section shall not be interpreted to prevent placing of litter containers for the use of pedestrians outdoors. All areas for the temporary storage of garbage and trash, except litter containers for pedestrians, shall be enclosed on all sides subject to the standards in Section 11.6-1.
- e. Unsheltered parking will not be permitted within twenty-five (25) feet of the front property line nor of a side or rear yards abutting a street.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in unrequired front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

9:6.6 Maximum Building Bulk Requirements

- a. Maximum building height: Equal to the distance to the nearest property line.
- b. Maximum lot coverage: 45 percent for all principal and accessory buildings.

9:7 **CB-4 VEHICLE SERVICE DISTRICT**

9:7.1 **Permitted Principal Uses**

The following land and/or structure uses shall be permitted by right in the CB-4 Vehicle Service District:

- a. Automotive accessory stores.
- b. Automobile and light truck sales establishments, including related repair garages, service centers, and other related automotive retail operations.
- c. Service stations for the sale of gasoline or fuel and/or for the minor repair of automobiles, trucks and other vehicles.
- d. Automotive washing establishments.
- e. Food storage lockers.
- f. Nurseries.
- g. Mobile home sales.
- h. Recreational vehicle storage subject to conditions stated in Sections 9:7.7 of this Ordinance.
- i. Mini or self storage warehouses.
- j. Essential services as set forth in Section 6:3.
- k. On-site signs as regulated in Article XV.

9:7.2 **Special Land Uses**

The following land and/or structure uses are permitted as special land uses in the CB-4 Vehicle Service District subject to the standards and approval requirements as set forth in Article XIII:

- a. Standard restaurants, drive-in restaurants, fast-food restaurants, and drive-through restaurants.
- b. Automobile service facilities involving major repairs such as body repair, painting, and engine rebuilding as regulated by Article X, Section 10:3.1d and Article XI.
- c. Gasoline service stations with convenience food store or food shop that sell prepared food such as milk, bread, baked goods, etc. for carry-out.
- d. Any principal use permitted in the OB Office Business District.

9:7.3 Accessory Structures

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use or a principal use permitted as part of a Planned Unit Development shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side yard area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.
- d. Temporary outdoor sales accessory to special land uses or to uses permitted by right.

9:7.4 Minimum Lot Size Requirements

- a. Minimum lot area: 20,000 square feet.
- b. Minimum lot width: 100 feet.

9:7.5 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:
 - Front: 35 feet
 - Side: 30 feet
 - Rear: 30 feet
- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any required side yard area, provided that this Section shall not be interpreted to prevent placing of litter containers for the use of pedestrian outdoors. All areas for the temporary storage of garbage and trash, except litter containers for pedestrians, shall be enclosed on all sides subject to the standards in Section 11:6.1.
- e. Unsheltered parking shall be permitted in required front, side, and rear yards, but not within 25 feet of the front property line.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in unrequired front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

9:7.6 Maximum Building Bulk Requirements

- a. Maximum building height: Equal to the distance to the nearest property line.
- b. Maximum lot coverage: 45 percent for all principal and accessory buildings.

9:7.7 Recreational Vehicle Storage (subject to the following conditions)

- a. Recreational vehicles in storage shall not be connected to electricity, water, gas, or sanitary sewer services.

- b. Recreational vehicles in storage shall not be used for living or housekeeping purposes.
- c. Recreational vehicles shall not be stored in the front yard, as defined by the front setback line.
- d. Recreational vehicles in storage must be kept in good repair and carry an unexpired license and/or registration.
- e. Use of a recreational vehicle in storage for the storage of household equipment, tools, or other items not usually kept in a recreational vehicle is prohibited.
- f. The recreational vehicle storage area shall be hard surfaced, or shall be constructed as recommended by Engineering Division and approved by the City Council.
- g. Recreational vehicles in a storage shall be spaced a minimum of three (3) feet apart to provide ease of access. Additional spacing requirements required by the Westland Fire Department shall be complied with.
- h. Maneuvering lanes between rows of vehicles shall be at least twenty-two (22) feet in width.
- i. Storage of unoccupied mobile homes that are designed and normally used for year-round living in a permanent location is prohibited in a recreational storage area.
- j. All storage or recreational vehicles shall be effectively screened by a solid or opaque fence, either wood or metal fence, as determined by City Council, including solid entrance and exit gates not less than six (6) feet nor more than eight (8) feet in height.

9:8 **FORD ROAD OVERLAY DISTRICT: FROD, Central City Parkway to Wayne**

Road**9:8.1 Overlay District Established**

The FROD District is a mapped overlay zoning district with boundaries as shown on the Zoning Map. Parcels that are located within the FROD District will have two zoning designations - the underlying zoning designation and the FROD zoning designation.

The intent of this overlay district is to create a pedestrian friendly, viable, and attractive mixed-use corridor along Ford Road by utilizing higher design standards and flexibility from underlying zoning regulations.

9:8.2 Applicability

- a. Parcels with Single Family Residential Underlying Zoning Designation. The standards of the FROD overlay zone shall be optional for any parcel that has a single family underlying zoning designation.
- b. Parcels with Other Than Single Family Residential Underlying Zoning Designation. The standards of the FROD zoning district shall be mandatory whenever any activity that requires site plan approval is proposed. Site maintenance and improvement activities and changes in use that do not require site plan approval may be conducted in accordance with the standards of the underlying zoning district.
- c. Standards of Section 9.2. The general requirements applicable to business districts listed in Section 9.2 shall apply to any project developed in the FROD standards, unless specifically noted otherwise in this Section.

9:8.3 Permitted Principal Uses

Buildings in the FROD district may contain more than one use. If a building contains both residential and non-residential uses, the residential uses shall be located on upper stories and non-residential uses shall be located on lower stories. In no case may a non-residential use be located on the same floor as or above a residential use, with the exception of home occupations. Where there is mixed business/office and residential use in a building there shall be provided a separate, private pedestrian entranceway for the residential use.

The following uses are permitted by right in the FROD district:

- a. Convenience commercial uses (see Section 9:4.1 for a listing of uses).
- b. Personal service uses (see Section 9:4.1 for a listing of uses).
- c. Comparison commercial uses (see Section 9:4.1 for a listing of uses).
- d. General commercial uses and repair services (see Section 9:4.1 for a listing of uses).
- e. Clothing stores.
- f. Offices, medical and professional.
- g. Restaurants and/or establishments serving alcoholic beverages for consumption on the premises.
- h. Studios (art, dance, sculptor, composer, etc.)
- i. Theatres, indoor.
- j. Essential services for which special land use approval is not required in accordance with Section 6.3.
- k. Attached residential dwelling units (i.e. row houses or town houses) that have a direct ground-level entrance into each unit from the exterior of the building.
- l. Upper-story residential dwelling units located above a non-residential use.

9:8.4 Special Land Uses

The following uses may be permitted as special land uses in the FROD District:

- a. Drive-through windows.
- b. Drug stores and pharmacies.
- c. Hotel or motel.
- d. Institutional uses (see Section 9:5.2 for a listing of uses, excluding recreation and social facilities)

9:8.5 Lot Size Requirements

- a. Minimum lot area: 10,000 square feet
- b. Minimum lot width: 80 feet

9:8.6 Yard Requirements

- a. Setback requirements for principal structures:

Front: The front façade of all buildings shall be set back a minimum of 0 feet and a maximum of 10 feet from the front property line, except that the maximum front setback may be increased to 40 feet if a front yard parking modification is granted per Section 9:8.10(b).

Side: 0 feet minimum, no maximum

Rear: 20 feet minimum, no maximum

- b. Buildings should be grouped towards the street to form “streetwalls” and located in such a manner to create public spaces that have direct physical and visual connections to the street.

9:8.7 Building Height

- a. The maximum building height shall be 3 stories or 46 feet, whichever is lower.
- b. Height Exceptions: Special architectural features (e.g. corner towers cupolas, entry treatments, chimneys, steeples, belfries, turrets, flagpoles, parapet walls, etc.) will be allowed to exceed the above height requirements if:
 - 1. The feature is located at a corner (the intersection of two public right(s)-of-way); or,
 - 2. The building is located at a designated “gateway”; or,
 - 3. The feature is deemed to be necessary to the type, use, or style of the building in question.
 - 4. Special architectural features shall not exceed the height of the remainder of the building by more than thirty-five percent (35%).
 - 5. The height of any new building shall not exceed the height of any immediately adjacent new or existing two story or three story building by more than fifteen percent (15%) unless the building is on a significant corner property and is approved by the City Council upon

recommendation by the Planning Commission.

9:8.8 Architectural Guidelines

a. Building Entrances:

1. All buildings shall have at least one public, pedestrian entrance that faces Ford Road or the main street on the frontage line and is accessible (see Americans with Disabilities ACT, ADA) from the public sidewalk system.
2. All existing buildings shall retain the original building entrance, if historically accurate.
3. Rear and side entrances are permitted, only if there is a primary entrance from Ford Road frontage or the main street.
4. Entrances with recessed doors are encouraged for protection from the elements and from doors swinging out into the sidewalk area.
5. Front entrance doors shall be constructed out of wood, glass, steel, or fiberglass or as approved by the City Council upon recommendation by the Planning Commission, provided it is compatible with the character of the district.

b. Façade Design: All building facades shall conform to the following design criteria:

1. Street Face: Walls facing a public street shall include windows and architectural features customarily found on the front façade of a building such as awnings, cornice work, edge detail or decorative finish materials. Blank walls shall not face a public street. Significant protrusions (more than 6”) such as awnings, cornice lines, or details at the top of windows and sills are encouraged to create shadow lines or bands on the façade.

Any building located at a corner site shall provide distinct and prominent architectural features of enhanced character and visibility to reflect the importance of the building’s location.

2. Façade Pattern: Large, long facades shall be subdivided into bays,

through the location and arrangement of openings and architectural treatments that are compatible in size and scale to existing buildings. The maximum wall length without modulation shall be thirty feet (30'). The bay width shall be 16'-to 30'.

3. Façade Height to Width Ratio:
 - a. One-story buildings: Single bay facades or individual bays of multiple bay facades, are not to exceed 2 feet of width for each 1 foot of building height unless otherwise approved by the City Council upon recommendation by the Planning Commission.
 - b. Two-story buildings: Single bay facades or individual bays of multiple bay facades, are not to exceed 1 foot of width for each 1 foot of height unless otherwise approved by the City Council upon recommendation by the Planning Commission.
4. Roof Type: Many of the commercial roof configurations in the corridor are "flat" (less than 3: 1 roof slope) with parapets that conceal the roof itself. In order to maintain and create a distinct visual character for the district, roofs shall comply with the following requirements:
 - a. Existing flat roofs and parapets shall be maintained.
 - b. All new retail/office buildings shall have flat roofs and parapets.
 - c. Sloping roofs, gabled (6: 12) or hipped may be allowed as special architectural features, particularly for residential townhouse development subject to review and approval by the City Council upon recommendation by the Planning Commission.
 - d. Parapets may be stepped.
 - e. Mansard roofs, geodesic domes and A-frames are prohibited.
 - f. All rooftop mechanical equipment and HV AC systems shall be screened from ground view.
5. Fenestration or Window and Door Openings: All facades visible from the street must be glazed with transparent glass. Opaque glass applications are prohibited. Glazing on first floor (retail space) to

occur generally 1' -to 2'-6" above the finished floor. Thus, a minimum 1' -to 2'-6" bulkhead is required beneath a storefront display window. Façade glass areas shall meet the following requirements:

- a. First floor window area: minimum 60% and maximum 70% of facade area.
- b. Second floor window area: minimum 25% and maximum 60% of façade area.
- c. Butt-joint glazing, where panes of glass are glazed together using glue or other adhesive material and without a structural element of the window frame, is prohibited.
- d. The use of shutters is discouraged on commercial buildings.
- e. Façade openings such as windows and doors shall be vertical in proportion.
- f. Sliding doors and windows are prohibited along frontage lines. Roll up windows may be allowed subject to approval by the City Council upon recommendation by the Planning Commission.

c. Building Materials:

1. Exterior materials used on buildings in the FROD district shall fall into two categories, primary and accent building materials. The building material requirement is based on the exterior wall surface area, excluding windows and doors. Primary building materials shall cover a minimum of 60% of the exterior wall surface area, while accent materials may be used on up to 40% of the exterior wall surface area.

Primary Building Materials include:

- Durable natural building materials such as brick, stone, and other similar materials.
- Exposed logs, timbers, or wood trim.

- Any material that convincingly matches the appearance of the above natural building materials.

Accent Building Materials include:

- Decorative precast concrete block.
- Metal panels and trim.
- Glass.
- Vinyl siding and non-durable building materials such as EIFS may be used as accent materials, but may cover a maximum of 10% of any exterior building façade's wall area.
- Any other material except those specifically prohibited by the following subsection.

Prohibited Building Materials include:

- Plain concrete block (both painted and unpainted).
- Plywood or T -Ill panels.
- Aluminum siding.

Compliance with Green Building Rating Systems. LEED-NC certification (published and administered by the United States Green Building Council) or an equivalent green building rating qualification such as EnergyStar is encouraged for new buildings. If a building is not certified according to a green building rating system, compliance with the following LEED-NC building material credits is encouraged: MR 4.1 or MR 4.2, MR 5.1 or MR 5.2, MR6, and MR7.

2. Parapet Cap:

- a. Brick: The brick shall be standard modular brick with common tooled mortar joints. Untooled joints or irregular shaped brick are prohibited. Brick color (commonly red or tan) and texture (smooth or glazed to rough) shall be subject to review and approval by the City Council upon

recommendation by the Planning Commission.

- b. Stone: The stone shall be smooth finish stone (limestone or sandstone). The stone shall be light to medium buff color. Pre-cast limestone to simulate traditional limestone or sandstone may be used with the Planning Commission's approval.
- c. Metal: Metal shall be aluminum or painted sheet steel if permitted after review and approval by the City Council upon recommendation by the Planning Commission. The color and finish shall match that of window framing system.

3. Canopies:

- a. Fascia Trim: Fascia trim shall be natural finish aluminum, bronze or painted metal.
- b. Soffit: The soffit shall be metal or cement plaster.
- c. Support Rods: The support rods shall be metal.
- d. Design: Canopies shall be narrow in elevation, six inches (6") to twelve (12") and flat or slightly angled. Typically, the canopies shall be flat or slightly angled so that the overall height dimension does not exceed eighteen inches (18"). Canopies shall be self supporting or supported by tension rods. Canopy projections shall be limited to forty-eight inches (48").

4. Awnings:

- a. Design: Awnings shall be traditional in design and must be made from fabric or similar material, rather than metal, plastic or rigid fiberglass. Awnings shall not be made of high gloss, shiny or translucent materials.
- b. Size: Awnings shall be proportional to the window opening and compatible in height, length, depth and bulk with the building façade. Awnings shall not obscure the architectural features of the building but rather the awnings shall respect

the overall building façade.

- c. Shape: An awning that is triangular in section sloping outward and down from the top of the awning or half round is generally preferred. The City Council may approve other awning shapes, such as round top, box or other unusual shapes, where such shape is appropriate to the integral architectural design of the façade.
- d. Fabric: Fabric shall be standard cloth fabrics in either solid, stripe or patterns that compliment the design and materials on the principal building.
- e. Location: Awnings shall not cover distinctive architectural features of the building façade. All awnings shall be attached directly to the building, rather than supported by columns or poles. First floor awnings shall not be located higher than the midpoint between the highest level of the first floor and the window sill of the second floor. First floor awnings are exempt from the setback requirements, and may extend up to 6 feet from the face of the building. Such awnings may encroach into a right-of-way area.
- f. Ground Clearance: Awnings must provide a minimum of eight (8') feet of vertical clearance from the sidewalk surface grade to the lowest support or awning structure.
- g. Upper Story Awnings: Upper story awnings shall be permitted only on vertically proportioned windows with a height to width ratio of 2:1 or greater, provided the awning does not exceed the width of the window by more than 6 inches and extends no more than three (3') feet from the face of the building. Awnings shall not extend above the roof line.
- h. Lighting: Internally illuminated or back-lit awnings are prohibited.
- i. Awning Signage: Awnings with lettering, symbols and/or other graphics shall be considered to be signs and shall be subject to the sign regulations in Article XV.

5. Windows:
 - a. Glass shall be clear. Reflective, mirrored, heavily tinted or unusually colored glass is prohibited.
 - b. Side and rear facing windows may be faux, to break up long building facades if appropriate, after review and approval by the City Council upon recommendation by the Planning Commission.
 - c. Window muntins (which physically or visually divide the glass in a window sash into separate, smaller units of glass) shall be wood or metal and shall be painted or bronzed. Window muntins are sometimes referred to as “colonial bars.”
 - d. First floor window openings shall not be blocked or covered with a solid material.
6. Waiver. These building material requirements may be waived if the City Council, upon recommendation by the Planning Commission, finds that alternate materials are high quality in nature and will result in an architecturally significant building.

9:8.9 Landscaping Requirements

The following landscaping standards apply to all development in the FROD:

- a. **Single Family Residential Buffer:** Wherever development in the FROD abuts a parcel or parcels that are zoned single family residential and that are located outside of the FROD, a buffer consisting of a six (6) foot decorative masonry screen wall with a 6-8 foot wide planting strip located on the commercial side of the screen wall shall be provided. The planting area shall include one canopy tree for each 35 lineal feet or fraction thereof.
- b. **Interior Parking Lot Landscaping:** One deciduous tree shall be planted within the limits of the parking lot, or in planting area directly adjacent to the parking lot for every 10 parking spaces.
- c. **Parking Lot Buffering:** Parking lots shall be buffered from any street right of way according to the DDA streetscape standards. Those standards require a six (6) foot buffer area, including a 36” tall ornamental fence with masonry

piers, one ornamental deciduous tree for each section of fence, and a continuous hedge of shrubs planted not more than three (3) feet on center.

All plant materials shall comply with the DDA streetscape plant material standards.

- d. Side Street Landscaping: The DDA streetscape treatment shall be provided along the property line of parcels abutting a side street except where the building is set back 10 feet or less from the side street property line.

9:8.10 Off-Street Parking and Loading

- a. Off-Street parking and loading requirements in the FROD: Off-street parking shall comply with the dimension and construction requirements of Article XVI. Instead of the minimum parking requirements listed in Article XVI, the following minimum parking requirements shall apply in the FROD:
 - 1. Minimum parking requirement for all nonresidential uses: 3 spaces per 1,000 sq. ft. of gross leasable area (gla).
 - 2. Minimum parking requirement for all residential uses: 1.25 parking spaces per unit.
- b. Shared Parking: Shared parking is required between adjacent properties. Blanket cross-access easements shall be granted between properties to allow the connection of parking lots between parcels with separate ownership.
- c. Parking Location: New parking lots shall be located at the side or in the rear of the building. Parking in front of a building is not permitted unless the City Council, upon recommendation by the Planning Commission determines that parking in front of the building would be acceptable for any of the following reasons:
 - 1. Marketability of the site would be greatly impaired by parking in the rear of the building.
 - 2. Front yard parking is required to maintain the continuity of front building setbacks in the block while making efficient use of the site, or
 - 3. Front yard parking is required for the purposes of traffic safety and to

minimize driveway curb cuts where the new parking lot is proposed to connect with one or more parking lots on adjoining parcels.

5:1 STATEMENT OF INTENT

This Ordinance established separate districts, each of which is an appropriate area for the location of the lots and uses which are permitted in that district. It is necessary and consistent with the establishment of those districts that nonconforming lots, uses, building and structures which substantially and adversely affect the orderly development and assessed value of other property in the district not be permitted to continue without restriction. The purpose of this Article is to provide for the regulation of these nonconformities and to specify those circumstances and conditions under which nonconformities shall be permitted to continue.

5:2 REGULATIONS PERTAINING TO NONCONFORMING USES, BUILDING AND STRUCTURES

It is the purpose of this Ordinance to eliminate nonconformities as rapidly as is permitted by law. A nonconforming use or structure shall not be repaired, restored, extended, enlarged or substituted for except in accord with the following requirements:

5:2.1 Repairs, Improvements and Modernization of Nonconforming Buildings and Structures

Minor repairs or maintenance of nonconforming buildings and structures are permitted in order to keep them structurally safe and sound. A nonconforming building or structure may be repaired, improved or remodeled provided such repair or improvement does not exceed twenty five (25) percent of the market value of the structure to which they are made. The replacement cost shall be determined prior to any repairs or improvements by the Building Director based upon a report by a qualified appraiser. Improvements to parking and loading areas and to landscaping may be made without any cost limitation provided parking and loading areas which are enlarged meet the requirements of this Ordinance.

5:2.2 Damage by Fire or Other Catastrophe to Nonconforming Buildings or Structures

Any nonconforming buildings or structures damaged by fire, explosion, flood, erosion or other means, shall not be rebuilt, repaired or reconstructed if damaged in excess of

fifty percent (50%) of the structure's precatastrophe market value except when the use or structure would fully comply with the requirements of this Ordinance. For developments containing more than one (1) building, the fifty percent (50 %) standard shall apply to the market value of the total development.

5:2.3 Structural Changes and Enlargement of Nonconforming Uses, Building or Structures

A nonconforming use, building or structure shall not be enlarged, extended or structurally altered, nor shall the nonconformity be changed to a different nonconformity which increases the intensity of use or nonconformity. Any nonconforming use which has been changed and decreased in intensity of use or nonconformity shall not thereafter be permitted to increase the intensity of use or nonconformity.

5:2.4 Mineral Extraction Nonconformity

If a mineral extraction operation is designated a nonconforming use, existing holes or shafts may be worked or enlarged on the land which constituted the lot on which operations were conducted at the time of the operation being so classified, but no new holes or shafts shall be established.

5:2.5 Unlawful Nonconformity

No nonconformity shall be permitted to continue in existence if it was unlawful at the time it was established.

5:2.6 Physically Unsafe Nonconformities

If a nonconforming building or structure or portion of a structure containing a nonconforming use becomes physically unsafe or unlawful due to lack of repairs and maintenance, and is declared by any duly authorized official to be unsafe or unlawful by reason of physical condition, it shall not thereafter be restored, repaired, or rebuilt except in conformity with the regulations of the district in which it is located.

5:3 DETERMINATION OF MARKET VALUE

The market value and cost of repairing, restoring, or improving a nonconforming use, building or structure excluding contents damaged by fire, explosion, flood, erosion, or other means shall be made on the basis of an appraisal by a qualified individual taken from the list of appraisers as maintained by the Building Director.

5:4 NONCONFORMING LOTS OF RECORD

A permitted principal building and uses, and permitted accessory structures and uses, may be erected or placed on a lot of record which existed at the date of adoption of amendment of this Ordinance, provided such lot shall have been in separate ownership and not contiguous with other lots in the same ownership. This provision shall apply even though such lot fails to meet the requirements for area, or width, or both, that are applicable in the district, provided that minimum setback dimensions and other requirements shall conform to the regulations for the district. A reduction of minimum setback requirements shall only be permitted upon granting of a variance by the Zoning Board of Appeals.

5:5 NONCONFORMING BUILDINGS OR STRUCTURES UNDER CONSTRUCTION

To avoid undue hardship, nothing in this Ordinance shall be deemed to require a change in the plans, construction, or designated use of any building on which actual construction was lawfully begun prior to the effective date of adoption or amendment of this Ordinance and upon which actual building construction is hereby defined to include the placing of construction materials in permanent position and fastened in a permanent manner. Where excavation or demolition or removal of an existing building has been substantially begun preparatory to rebuilding, such excavation or demolition or removal shall be deemed to be actual construction, provided that work shall be carried on diligently.

5:6 DISCONTINUANCE OF USE**5:6.1 Discontinuance of a Nonconforming Use**

A nonconforming use, building or structure shall be subject to discontinuance as provided by law, including the provision that a nonconforming use once converted to a conforming use cannot be re-established for any reason.

5:6.2 Abandonment

In the event that a nonconforming use, building or structure is willfully abandoned by the owner or holder, said nonconforming use, building or structure shall not resume or be re-established. Discontinuance of a nonconforming use, building or structure for a period of twelve (12) months or more shall be deemed willful abandonment.

5:6.3 Intention of Owner to Reestablish Use

Neither the intention of the owner nor that of anybody else to use a building or lot or part of either for any nonconforming use, nor the fact that said building or lot or part of either may have been used in violation of this Ordinance shall be taken into consideration in interpreting and construing the words "discontinued" or "abandoned."

5:6.4 Change of Tenancy or Ownership

There may be a change of tenancy, ownership, or management of any existing nonconforming uses of land, structures and land in combination that does not affect any established nonconforming rights.

5:6.5 Purchase or Condemnation

In order to accomplish the elimination of nonconforming uses and structures which constitute a nuisance or are detrimental to the public health, safety and welfare, the City of Westland may acquire by purchase, condemnation or otherwise, private property for the purpose of removal of nonconforming uses or structures.

6:1 DISTRICTS

For the purposes of this Ordinance, the City of Westland is hereby divided into zoning districts. Except as otherwise provided in this Ordinance, no structure or tract of land shall hereafter be used or occupied, and no structure, or part thereof, shall be erected, moved or altered, except in conformity with the regulations herein specified for the zoning district in which the structure or land is located. Uses for enterprises or purposes that are contrary to federal, state or local laws or ordinances are prohibited.

6:1.1 Single- and Two-Family Residence Districts

- R-1 Single-Family Residential District
- R-2 Single-Family Residential District
- R-3 Single-Family Residential District (reserved for future use)
- R-4 Single-Family Residential District (reserved for future use)
- R-5 Single-Family Residential District
- R-6 Two-Family Residential District

6:1.2 Multiple-Family Residence Districts

- THR Townhouse Residential District
- GAR Garden Apartment Residential District
- MRR Mid-Rise Residential District
- MHR Mobile Home Residential District

6:1.3 Business Districts

- OB Office Business District
- CB-1 Low-Intensity Commercial Business District
- CB-2 Shopping Center Commercial Business District
- CB-3 General Commercial Business District
- CB-4 Vehicle Service District

6:1.4 Industrial District

- I-1 Light Industrial District
- I-2 General Industrial District

6:1.5 PUD Planned Unit Development District

6:1.6 FROD Ford Road Overlay District

6:2 OFFICIAL ZONING MAP

6:2.1 Incorporation of Official Zoning Map Herein

The location and boundaries of the districts established by this Ordinance are set forth on the zoning map entitled, "City of Westland Official Zoning District Map" as may be amended from time to time.

6:2.2 Identification of Official Zoning Map

The Official Zoning Map shall be identified by the signature of the Mayor, attested by the City Clerk, and bearing the seal of the City, under the following words: "This is to certify that this is the Official Zoning Map of the City of Westland, Michigan" together with the date of the adoption of this Ordinance.

6:2.3 Changes to the Official Zoning Map

If, in accordance with the provisions of this Ordinance and Act 207 of the Public Acts of 1921, as amended, changes are made in district boundaries or other matter portrayed on the Official Zoning Map, such changes shall be entered on the Official Zoning Map promptly after the amendment has been approved by the City Council.

6:2.4 Final Authority of Official Zoning Map

Regardless of the existence of purported copies of the Official Zoning Map which may from time to time be made or published, the Official Zoning Map which shall be located in the office of the Planning Director shall be the final authority as to the

current zoning status of land and water areas, buildings, and other structures in the City.

6:2.5 Rules for Interpretation of Zoning District Boundaries

The following rules shall apply with respect to the boundaries of the various districts as shown on the Official Zoning Map.

- a. District boundary lines are the center lines of highways, streets, alleys, and easements; right-of-way lines of railroads, toll roads, and expressways; or section, division of section, tract and lot lines; or such lines extended, unless otherwise indicated.
- b. In areas not subdivided into lots and blocks, wherever a district is indicated as a strip adjacent to and paralleling a street or highway, the depth of such strips shall be in accordance with dimensions shown on the map from section quarter section, or division lines, or center lines of streets and highways, or railroad rights-of-way, unless otherwise indicated.
- c. Where a district boundary line divided a lot in single ownership on the effective date of this Ordinance, the Board of Appeals, after due hearing, may extend the regulations for either portion of such lot.

6:3 ESSENTIAL SERVICES EXEMPTED

The erection, construction, alteration, or maintenance by public utilities or municipal departments or commissions, or overhead, surface or underground gas, electrical, steam, or water, distribution or transmission systems, collection communication supply or disposal systems, including mains, drains, sewers, pipes, conduits, tunnels, wires, cables, fire alarm boxes, police call boxes, traffic signals, hydrants, towers, poles, and other similar equipment and accessories in connection therewith, reasonably necessary for the furnishing of adequate service by such public utility or municipal department or commission or for the public health, safety, or general welfare, shall be exempt from the regulations of this Ordinance, provided, however, that the installation shall conform to Federal Communications Commission regulations, and those of other authorities having jurisdiction. However, the following essential services shall be subject to the special land-use provisions of Article XIII if they are to be located in any residential or business district:

- a. Electrical substations
- b. Gas regulator stations
- c. Major transmission lines
- d. Radio, television, microwave transmission and relay towers
- e. Telephone exchange and transmission equipment buildings
- f. Railroad rights-of-way, but excluding railroad yards and shops
- g. Water pumping stations
- h. Water and waste-water works, reservoirs, pumping and filtration plants

6:4 ZONING OF ANNEXED LAND

On land hereafter annexed to, or consolidated with, the City of Westland, no building or structure shall be erected, enlarged or moved and no change in the use of land or existing buildings or structures shall be made until an ordinance designating the zoning district classification of such annexed land is duly adopted by the City Council. Within thirty (30) days of the annexation, the Planning Commission shall file an application for an amendment to establish the zoning district classification of such land. Action shall be taken by the City Council regarding the classification of annexed land within sixty (60) days of its receipt of the amendment application from the Planning Commission.

6:5 RADIO RECEIVING AND/OR TRANSMITTING ANTENNAE TOWERS

Radio receiving and/or transmitting antennae towers up to a maximum height of fifty (50) feet, as measured from the established grade, shall be allowed in all districts provided the antenna tower is for an amateur radio station licensed by the Federal Communications Commission. Antennae towers for licensed amateur radio stations may be erected up to a maximum height of seventy-five (75) feet, as measured from the established grade; provided that if the height of the tower is greater than the distance from the center of the base of the antenna tower to any property line, then written permission must first be obtained from at least two-thirds (2/3) of the adjoining property owners. Antennae towers in residentially-zoned districts shall also meet the following requirements:

- a. All such free-standing towers shall be of a self-supporting design.
- b. The antenna and tower shall be enclosed in a fence or wall to deter any person from climbing the tower, except for service or repair.

- c. Antenna and tower plans shall be submitted to the Building Official with specifications indicating the ability of the antenna and tower to withstand wind-pressure and ice loads, in accordance with the BOCA Building Code adopted by the City of Westland.
- d. Proof of insurance shall be submitted indicating protection of adjacent property owners from any damage caused by the antenna or tower.

6:6 SATELLITE DISH ANTENNAS

Satellite dish antennas for noncommercial use shall be permitted as accessory uses in the rear yards of residentially zoned parcels subject to the following standards except as authorized by Federal Law:

- a. Only one satellite dish antenna shall be permitted on each parcel.
- b. It shall not be located where it will block fire lanes or utility easements or obstruct the view from windows in existing adjoining buildings.
- c. It shall not be closer to any lot line than its height.
- d. Satellite dish antennas anchored to the ground shall not exceed one (1) story or fourteen (14) feet in height.
- e. Satellite dish antennas may be mounted on the roof provided they are not visible from the front of the building and provided further they do not exceed three (3) feet in diameter.
- f. Satellite dish antennas located on corner lots shall be screened from the road right-of-way.
- g. Variances. A variance may be granted by the Zoning Board of Appeals from the provisions of this Section in cases involving practical difficulties, where the evidence supports that the topographic features or special characteristics of the site create

special conditions such that the strict application of this section will prevent the reception of usable satellite signals.

6:7 EXTERIOR MATERIALS

To promote the consistent and orderly development of the community and to enhance the character of the City's visual environment, the materials proposed for the exterior of all principal buildings must be shown on approved site plans and building permits. All exterior wall materials on new principal buildings or additions to existing principal buildings shall be shown on a site plan or building permit plans and be made of face or glazed brick, split rock, or stone veneer, unless, one or more of the following materials, or other similar materials are approved by the City Council:

- a. Concrete fluted or ribbed blocks
- b. Concrete precast or formed in place panels
- c. Granite, marble or lime stone
- d. Tinted or reflected glass or glass blocks
- e. Residential buildings shall hereafter be constructed of face or glazed brick, split rock, or stone veneer, except for "decorative paneling" or siding which shall not exceed ten (10) percent of the face of any wall and also excepting gable ends, dormers and the second story of single-family dwellings, if sixty-five (65) percent of the lots and frontage on both sides of the street in any block where the proposed improvement is contemplated contains structures made of material other than brick, split rock, or stone veneer; in which event, the type and style of the remainder of the residences to be constructed, altered or relocated in such block shall be substantially similar in type and style so that the new or altered building will be in harmony with the character of the existing neighborhood, nothing herein shall prevent any residential improvement from being constructed of brick, split rock, or stone veneer. The Building Director may issue the building permit upon examining the plans and specifications and determining that the materials proposed on the application will not alter the harmony or character of the neighborhood. All sites, except single-family dwelling lots, are

required to have architectural review of building materials as part of the Site Plan review process.

- f. The exterior materials indicated on the site plan shall not be painted or stained unless approved by the City Council.

6:8 WIRELESS TELECOMMUNICATIONS TOWERS AND ANTENNAS

6:8.1 Purpose

The purpose of this section is to establish general guidelines for the siting of wireless communications towers and antennas. The goals of this section are to: (1) protect residential areas and land uses from potential adverse impacts of towers and antennas; (2) encourage the location of towers in non-residential areas; (3) minimize the total number of towers throughout the community; (4) strongly encourage the joint use or collocation of new and existing tower sites as a primary option rather than construction of additional single-use towers; (5) encourage users of towers and antennas to locate them, to the extent possible, in areas where the adverse impact on the community is minimal; (6) encourage users of towers and antennas to configure them in a way that minimizes the adverse visual impact of the towers and antennas through careful design, siting, landscape screening, and innovative camouflaging techniques; (7) enhance the ability of the providers of telecommunications services to provide such services to the community quickly, effectively, and efficiently; (8) consider the public health and safety of communication towers; and (9) avoid potential damage to adjacent properties from tower failure through engineering and careful siting of tower structures. In furtherance of these goals, the City of Westland shall give due consideration to the City of Westland's master plan, zoning map, existing land uses, and environmentally sensitive areas in approving sites for the location of towers and antennas.

6:8.2 Definitions

As used in this ordinance, the following terms shall have the meanings set forth below:

- a. “Alternative tower structure” means man-made trees, clock towers, bell steeples, light poles and similar alternative-design mounting structures that camouflage or conceal the presence of antennas or towers.
- b. “Antenna” means any exterior transmitting or receiving device mounted on a tower, building or structure and used in communications that radiate or capture electromagnetic waves, digital signals, analog signals, radio frequencies (excluding radar signals), wireless telecommunications signals or other communication signals
- c. “Backhaul network” means the lines that connect a provider’s towers/cell sites to one or more cellular telephone switching offices, and/or long distance providers, or the public switched telephone network.
- d. “FAA” means the Federal Aviation Administration.
- e. “FCC” means the Federal Communications Commission.
- f. “Height” means, when referring to a tower or other structure, the distance measured from the finished grade of the parcel to the highest point on the tower or other structure, including the base pad and any antenna.
- g. “Preexisting towers and preexisting antennas” means any tower or antenna for which a building permit or special use permit has been properly issued prior to the effective date of this ordinance, including permitted towers or antennas that have not yet been constructed so long as such approval is current and not expired.
- h. “Tower” means any structure that is designed and constructed primarily for the purpose of supporting one or more antennas for telephone, radio and similar communication purposes, including self-supporting lattice towers, guyed towers, or monopole towers. The term includes radio and television transmission towers, microwave towers, common-carrier towers, cellular telephone towers, alternative tower structures, and the like. The term includes the structure and any support thereto.

6:8.3 Applicability**a. New Towers and Antennas**

All new towers or antennas to be located within the City of Westland shall be subject to these regulations, except as provided in Sections 6:8.3(b) through (d), inclusive.

b. Amateur Radio Station Operators/Receive Only Antennas

This ordinance shall not govern any tower, or the installation of any antenna, that is under seventy (70) feet in height and is owned and operated by a federally-licensed amateur radio station operator or is used exclusively for receive only antennas.

c. Preexisting Towers or Antennas

Preexisting towers and preexisting antennas shall not be required to meet the requirements of this ordinance, other than the requirements of Section 6:8.4(f) and 4(g).

d. AM Array

For purposes of implementing this ordinance, an AM array, consisting of one or more tower units and supporting ground system which functions as one AM broadcasting antenna, shall be considered one tower. Measurements for setbacks and separation distances shall be measured from the outer perimeter of the towers included in the AM array. Additional tower units may be added within the perimeter of the AM array by right.

6:8.4 General Requirements**a. Principal or Accessory Use**

Antennas and towers may be considered either principal or accessory uses. A different existing use of an existing structure on the same lot shall not preclude the installation of an antenna or tower on such lot.

b. Lot Size

For purposes of determining whether the installation of a tower or antenna complies with district development regulations, including but not limited to setback requirements, lot-coverage requirements, and other such requirements, the dimensions of the entire lot shall control, even though the antennas or towers may be located on leased parcels within such lot

c. Inventory of Existing Sites

Each applicant for an antenna and/or tower shall provide to the Planning Director an inventory of its existing towers, antennas, or sites approved for towers or antennas, that are either within the jurisdiction of the City of Westland or within one mile of the border thereof, including specific information about the location, height, and design of each tower. The Planning Director may share such information with other applicants applying for approvals or special land use approval under this ordinance or other organizations seeking to locate antennas within the jurisdiction of the City of Westland, provided, however that the Planning Director is not, by sharing such information, in any way representing or warranting that such sites are available or suitable.

d. Aesthetics

Towers and antennas shall meet the following requirements:

- (1) Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color so as to reduce visual obtrusiveness.
- (2) At a tower site, the design of the buildings and related structures shall, to the extent possible, use materials, colors, textures, screening, and landscaping that will blend them into the natural setting and surrounding buildings.
- (3) If an antenna is installed on a structure other than a tower, the antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.

e. **Lighting**

Towers shall not be artificially lighted, unless required by the FAA or other applicable authority. If lighting is required, the lighting alternatives and design chosen must cause the least disturbance to the surrounding views.

f. **State or Federal Requirements; Monitoring Fee**

All towers must meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the state or federal government with the authority to regulate towers and antennas. If such standards and regulations are changed, then the owners of the towers and antennas governed by this ordinance shall bring such towers and antennas into compliance with such revised standards and regulations within six (6) months of the effective date of such standards and regulations, unless a different compliance schedule is mandated by the controlling state or federal agency. Failure to bring towers and antennas into compliance with such revised standards and regulations shall constitute grounds for the removal of the tower or antenna at the owner's expense. The Planning Director shall establish compliance and

monitoring procedures to ensure compliance with state and federal standards and regulations. Owners of all wireless telecommunication antennas shall pay an annual license fee of \$100.00 per antenna to fund the cost of monitoring compliance.

g. Building Codes; Safety Standards

To ensure the structural integrity of towers, the owner of a tower shall ensure that it is maintained in compliance with standards contained in applicable state or local building codes and the applicable standards for towers that are published by the Electronic Industries Association, as amended from time to time. If, upon inspection, the City of Westland concludes that a tower fails to comply with such codes and standards and constitutes a danger to persons or property, then upon notice being provided to the owner of the tower, the owner shall have thirty (30) days to bring such tower into compliance with such standards. Failure to bring such tower into compliance within said thirty (30) days shall constitute grounds for the removal of the tower or antenna at the owner's expense.

h. Measurement

For purposes of measurement, tower setbacks and separation distances shall be calculated and applied to facilities located in the City of Westland irrespective of municipal and county jurisdictional boundaries.

i. Not Essential Services

Towers and antennas shall be regulated and permitted pursuant to this ordinance and shall not be regulated or permitted as essential services, public utilities, or private utilities.

j. Franchises

Owners and/or operators of towers or antennas shall certify that all franchises required by law for the construction and/or operation of a wireless

communication system in the City of Westland have been obtained and shall file a copy of all required franchises with the Planning Director.

k. Public Notice

For purposes of this ordinance, any special use request, variance request, or appeal of an approved use or special use shall require public notice to all abutting property owners and all property owners of properties that are located within the corresponding separation distance listed in Section 6:8.7(b)(5)(ii), Table 2, in addition to any notice otherwise required by the Zoning Ordinance.

l. Signs

No signs shall be allowed on an antenna or tower.

m. Buildings and Support Equipment

Buildings and support equipment associated with antennas or towers shall comply with the requirements of Section 6:8.8.

n. Multiple Antenna/Tower Plan

The City of Westland encourages the users of towers and antennas to submit a single application for approval of multiple towers and/or antenna sites.

6:8.5 Administratively Approved Uses

a. General

The following provisions shall govern the issuance of administrative approvals for towers and antennas:

- (1) The Planning Director may administratively approve the uses listed in this Section.

- (2) Each applicant for administrative approval shall apply to the Planning Director providing the information set forth in sections 6:8.7(b)(1) and 6:8.7(b)(3) of this ordinance and a nonrefundable fee as established by resolution of the City Council to reimburse the City of Westland for the costs of reviewing the application
- (3) The Planning Director shall review the application for administrative approval and determine if the proposed use complies with Section 6:8.4, 6:8.7(b)(4) and 6:8.7(b)(5) of this ordinance.
- (4) The Planning director shall respond to each such application within sixty (60) days after receiving it by either approving or denying the application. If the Planning Director fails to respond to the applicant within said sixty (60) days, then the application shall be deemed to be approved.
- (5) In connection with any such administrative approval, the Planning Director may, in order to encourage the use of monopoles, administratively allow the reconstruction of an existing tower to monopole construction.
- (6) If an administrative approval is denied, the applicant shall file an application for a special land use approval pursuant to Section 6:8.7 prior to filing any appeal that may be available under the Zoning Ordinance.

b. List of Administratively Approved Uses

The following uses may be approved by the Planning Director after conducting an administrative review:

- (1) Locating a tower or antenna, including the placement of additional buildings or other supporting equipment used in connection with said tower or antenna, in any I-1 or I-2 zoning district, upon compliance

with the setback and separation requirements contained in Sections 6:8.7(b)(4) and (b)(5).

- (2) Locating antennas on existing structures or towers consistent with the terms of subsections (a) and (b) below.

(a) **Antennas on Existing Structures**

Any antenna which is not attached to a tower may be approved by the Planning Director as an accessory use to any commercial, industrial, professional, institutional, or multi-family structure of eight or more dwelling units, provided:

- (i) The antenna does not extend more than thirty (30) feet above the highest point of the structure;
- (ii) The antenna complies with all applicable FCC and FAA regulations; and
- (iii) The antenna complies with all applicable building codes.

(b) **Antennas on Existing Towers**

A proposed antenna which is to be attached to an existing tower may be approved by the Planning Director and, to minimize adverse visual impacts associated with the proliferation and clustering of towers, collocation of antennas by more than one carrier on existing towers shall take precedence over the construction of new towers, provided such collocation is accomplished in a manner consistent with the following:

- (i) A tower which is modified or reconstructed to accommodate the collocation of an additional antenna shall be of the same tower type as the existing tower, unless the Planning Director allows reconstruction as a monopole.

(ii) Height

- (a) An existing tower may be modified or rebuilt to a taller height, not to exceed thirty (30) feet over the tower's existing height, to accommodate the collocation of an additional antenna.
- (b) The height change referred to in subsection (ii)(a) may only occur one time per communication tower.
- (c) The additional height referred to in subsection (ii)(a) shall not require an additional distance separation as set forth in Section 6:8.7. The tower's premodification height shall be used to calculate such distance separations.

(iii) Onsite Location

- (a) A tower which is being rebuilt to accommodate the collocation of an additional antenna may be moved onsite within fifty (50) feet of its existing location provided applicable setback requirements are met.
- (b) After the tower is rebuilt to accommodate collocation, only one tower may remain on the site.
- (c) A relocated onsite tower shall continue to be measured from the original tower location for purposed of calculating separation distances between towers pursuant to Section 6:8.7(b)(5). The relocation of a tower hereunder shall in no way be deemed to cause a violation of Section 6:8.7(b)(5).
- (d) The onsite relocation of a tower which comes within the separation distances to residential units or

residentially zoned lands as established in Section 6:8.7(b)(5) shall only be permitted when approved by the Planning Director.

- (3) Installing a cable microcell network through the use of multiple low-powered transmitters/receivers attached to existing wireline systems, such as conventional cable or telephone wires, or similar technology that does not require the use of towers.

6:8.6 Permitted Uses

a. General

The uses listed in this Section are deemed to be permitted uses and shall not require administrative approval or a special use permit.

b. Permitted Uses

The following uses are specifically permitted:

- (1) Antennas or towers located on property owned, leased, or otherwise controlled by Westland provided a license or lease authorizing such antenna or tower has been approved by the City of Westland.

6:8.7 Special Land Use Approval Required

a. General

The following provisions shall govern the issuance of special use permits for towers or antennas by the City Council:

- (1) If the tower or antenna is not a permitted use under Section 6:8.6 of this ordinance or permitted to be approved administratively pursuant to Section 6:8.5 of this ordinance, then a special land use approval

shall be required for the construction of a tower or the placement of an antenna in all zoning districts.

- (2) Applications for special land use under this Section shall be subject to the procedures and requirements of Article XIII of the Zoning Ordinance, except as modified in this Section.
- (3) In granting a special land use approval, the City Council may impose conditions to the extent the City Council concludes such conditions are necessary to minimize any adverse effect of the proposed tower on adjoining properties.
- (4) Any information of an engineering nature that the applicant submits, whether civil, mechanical, or electrical, shall be certified by a licensed professional engineer.
- (5) An applicant for a special land use approval shall submit the information described in this Section and a non-refundable fee as established by resolution of the City Council to reimburse the City of Westland for the costs of reviewing the application.

b. Towers

(1) Information Required

In addition to any information required for applications for special use permits pursuant to Article XIII of the Zoning Ordinance, applicants for a special land use approval for a tower shall submit the following information:

- (i) A scaled site plan clearly indicating the location, type and height of the proposed tower, on-site land uses and zoning, adjacent land uses and zoning (including when adjacent to other municipalities), Master Plan classification of the site and all properties within the applicable separation distances

set forth in Section 6:8.7(b)(5), adjacent roadways, proposed means of access, setbacks from property lines, elevation drawings of the proposed tower and any other structures, topography, parking, and other information deemed by the Planning Director to be necessary to assess compliance with this Ordinance. Refer to Article XII of the Zoning Ordinance.

- (ii) Legal description of the parent tract and leased parcel (if applicable), and the names and addresses of all owners and lessees.
- (iii) The setback distance between the proposed tower and the nearest residential unit, platted residentially zoned properties, and unplatted residentially zoned properties.
- (iv) The separation distance from other towers described in the inventory of existing sites submitted pursuant to Section 6:8.4(c) shall be shown on an updated site plan or map. The applicant shall also identify the type of construction of existing towers(s) and the owner/operator of the existing tower(s).
- (v) A landscape plan showing specific landscape materials in accordance with Article XI of the Zoning Ordinance.
- (vi) Method of fencing, and finished color and, if applicable, the method of camouflage and illumination.
- (vii) A description of compliance with Sections 6:8.4, (d), (e), (f), (g), (j), (l), and (m), 6:8.7(b)(4), 6:8.7(b)(5) and all applicable federal, state or local laws.
- (viii) A notarized statement by the applicant as to whether construction of the tower will accommodate collocation of additional antennas for future users.

- (ix) Identification of the entities providing the backhaul network for the tower(s) described in the application and other cellular sites owned or operated by the applicant in the municipality.
- (x) A written description of the suitability of the use of existing towers, other structures or alternative technology not requiring the use of towers or structures to provide the services to be provided through the use of the proposed new tower.
- (xi) A written description of the feasible location(s) of future towers or antennas within the City of Westland based upon existing physical, engineering, technological or geographical limitations in the event the proposed tower is erected.

(2) **Factors Considered in Granting Special Land Use Approval for Towers**

In addition to any standards for consideration of special land use approval applications pursuant to Article XIII of the Zoning Ordinance, the City Council shall consider the following factors in determining whether to issue a special land use approval, although the City Council may waive or reduce the burden on the applicant of one or more of these criteria if the City Council concludes that the goals of this ordinance are better served thereby:

- (i) Height of the proposed tower;
- (ii) Proximity of the tower to residential structures and residential district boundaries;
- (iii) Nature of uses on adjacent and nearby properties;
- (iv) Surrounding topography;

- (v) Surrounding tree coverage and foliage;
- (vi) Design of the tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness;
- (vii) Proposed ingress and egress; and
- (viii) Availability of suitable existing towers, other structures, or alternative technologies not requiring the use of towers or structures, as discussed in Section 6:8.7(b)(3) of this ordinance.

(3) **Availability of Suitable Existing Towers, Other Structures, or Alternative Technology**

No new tower shall be permitted unless the applicant demonstrates to the reasonable satisfaction of the City Council that no existing tower, structure or alternative technology that does not require the use of towers or structures can accommodate the applicant's proposed antenna. An applicant shall submit information requested by the City Council related to the availability of suitable existing towers, other structures or alternative technology. Evidence submitted to demonstrate that no existing tower, structure or alternative technology can accommodate the applicant's proposed antenna may consist of any of the following:

- (i) No existing towers or structures are located within the geographic area which meet applicant's engineering requirements.
- (ii) Existing towers or structures are not of sufficient height to meet applicant's engineering requirements.

- (iii) Existing towers or structures do not have sufficient structural strength to support applicant's proposed antenna and related equipment.
- (iv) The applicant's proposed antenna would cause electromagnetic interference with the antenna on the existing towers or structures, or the antenna on the existing towers or structures would cause interference with the applicant's proposed antenna.
- (v) The fees, costs, or contractual provisions required by the owner in order to share an existing tower or structure or to adapt an existing tower or structure for sharing are unreasonable. Costs exceeding new tower development are presumed to be unreasonable.
- (vi) The applicant demonstrates that there are other limiting factors that render existing towers and structures unsuitable.
- (vii) The applicant demonstrates that an alternative technology that does not require the use of towers or structures is unsuitable. Costs of alternative technology that exceed new tower or antenna development shall not be presumed to render the technology unsuitable.

(4) **Setbacks**

The following setback requirements shall apply to all towers for which a special land use approval is required; provided, however, that the City Council may reduce the standards setback requirements if the goals of this ordinance would be better served thereby:

- (i) Towers must be set back a distance equal to at least seventy-five percent (75%) of the height of the tower from any adjoining lot line.

- (ii) Guys and accessory buildings must satisfy the minimum zoning district setback requirements.

(5) **Separation**

The following separation requirements shall apply to all towers and antennas for which a special land use permit is required; provided, however, that the City Council may reduce the standard separation requirements if the goals of this ordinance would be better served thereby.

- (i) Separation from off-site uses
 - (a) Tower separation shall be measured from the base of the tower to the lot line of the off-site uses as specified in Table 1, except as otherwise provided in Table 1.
 - (b) Separation requirements for towers shall comply with the minimum standards established in Table 1.

Table 1

Off-Site Uses	Separation Distance
Single-Family or duplex residential units ¹	200 feet or 300% height of tower whichever is greater
Vacant single-family or duplex residentially Zoned land which is either platted or has preliminary subdivision plan approval which is not expired	200 feet or 300% height of tower ² whichever is greater
Vacant unplatted residentially zoned lands ³	200 feet or 300% height of tower whichever is greater
Existing multi-family residential units greater than duplex units	200 feet or 300% height of tower whichever is greater

Non-residentially zoned lands or non-residential uses	None; only setbacks apply as required by the Zoning Ordinance
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¹Includes modular homes and mobile homes used for living purposes.

²Separation measured from base of tower to closest building setback line.

³Includes any unplatted residential use properties without a valid preliminary subdivision plan or valid development plan approval and any multi-family residentially zoned land greater than duplex.

(ii) **Separation distances between towers.**

- (a) Separation distances between towers shall be applicable for and measured between the proposed tower and preexisting towers. The separation distances shall be measured by drawing or following a straight line between the base of the existing tower and the proposed base, pursuant to a site plan, of the proposed tower. The separation distances (listed in linear feet) shall be as shown in Table 2.

Table 2

	Lattice	Guyed	Monopole 75 ft In Height or Greater	Monopole Less Than 75 Ft in Height
Lattice	5,000 ft.	5,000 ft.	1,500 ft.	750 ft.
Guyed	5,000 ft.	5,000 ft.	1,500 ft.	750 ft.
Monopole 75 Ft. in Height or Greater	1,500 ft	1,500 ft.	1,500 ft.	750 ft.
Monopole Less Than 75 Ft. in Height	750 ft.	750 ft.	750 ft.	750 ft.

(6) **Security fencing**

Towers shall be enclosed by security fencing not less than six feet in height.

(7) **Landscaping**

Article XI of the Zoning Ordinance shall govern the landscaping surrounding towers for which a special land use approval is required.

6:8.8 Buildings or Other Equipment Storage**a. Antennas Mounted on Structures or Rooftops**

The equipment cabinet or structure used in association with antennas shall comply with the following:

- (1) The cabinet or structure shall not contain more than 240 square feet of gross floor area or be more than 10 feet in height. In addition, for buildings and structures which are less than sixty-five (65) feet in height, the related unmanned equipment structure, if over 240 square feet of gross floor area or 10 feet in height, shall be located on the ground and shall not be located on the roof of the structure.
- (2) If the equipment structure is located on the roof of a building, the area of the equipment structure and other equipment and structures shall not occupy more than 10 percent of the roof area.

b. Antennas Mounted on Utility Poles or Light Poles

The equipment cabinet or structure used in association with antennas shall be located in accordance with the following:

- (1) In residential districts, the equipment cabinet or structure shall be located in conformance with applicable setback requirements.
- (2) In commercial or industrial districts the equipment cabinet or structure shall be located in conformance with applicable setback requirements.

c. Antennas Located on Towers

The related unmanned equipment structure shall not contain more than 240 square feet of gross floor area or be more than 10 feet in height, and shall be

located in accordance with the minimum yard requirements of the zoning district in which located.

6:8.9 Removal of Abandoned Antennas and Towers

Any antenna or tower that is not operated for a continuous period of twelve (12) months shall be considered abandoned, and the owner of such antenna or tower, and owner of the property shall remove the same within ninety (90) days of receipt of notice from the City notifying the owner of such abandonment. Failure to remove an abandoned antenna or tower within said ninety (90) days shall be grounds to remove the tower or antenna at the owner of the tower and the property owner's expense. If there are two or more users of a single tower, then this provision shall not become effective until all users cease using the tower.

For each location identified on the applicant/provider's survey maps and drawings, the applicant shall include a description of the security to be posted at the time of receiving a building permit for the wireless communication support structure to ensure removal of the structure when it has been abandoned or is no longer needed, as provided in subsection 6:8.9 above. The security shall, at the election of the applicant, be in the form of cash, surety bond, letter of credit, or an agreement in a form approved by the City Attorney and recordable at the office of the Wayne County Register of Deeds, a promise of the applicant and owner of the property to remove the facility in a timely manner as required under this Section, with the further provision that the applicant and owner shall be responsible for the payment of any costs and attorney's fees incurred by the City of Westland in securing removal.

6:9 Solar Energy Systems

A solar energy system is defined as an energy system which converts solar energy to usable thermal, mechanical, chemical, electrical, or any other form of energy, to meet all or a significant part of a structure's energy requirements, and are a permitted use in all zoning districts, subject to the following restrictions.

a. Roof mounted systems on the principal building shall not be more than three (3) feet higher than the finished roof to which it is mounted. In no instance shall any part of the system extend beyond the edge of the roof.

b. Ground mounted systems and systems attached to accessory buildings shall be not less than ten (10) feet from any side or rear property line. Solar energy systems are prohibited in front yards, and shall not be located past the front wall of the principal building.

c. There is no limit to the number of modules and arrays installed on each property that comprise a solar energy system. The number of solar panels and supporting equipment shall be considered as one system.

d. Solar energy commercial operations are prohibited as a principal use. These are systems whose main purpose is to generate energy for sale back into the energy grid system rather than being consumed on site.

e. Ground mounted solar energy systems shall be categorized as accessory buildings.

f. If solar energy systems are attached to accessory buildings, the number of accessory buildings allowed shall be regulated in accordance with the provisions set forth in Zoning Ordinance No. 248.

g. The height of ground mounted solar energy systems and systems included on accessory buildings shall not exceed 12 feet in height.

h. Construction permits are required.

6:10 Wind Turbines

6:10.1 Purpose and intent.

The purpose of this section is to establish guidelines for siting wind turbines and wind energy facilities. This section's goals are as follows:

- (1) To promote the safe, effective, and efficient use of wind turbines installed to reduce the on-site consumption of electricity supplied by utility companies while protecting the health, safety, and welfare of the residents of the City of Westland.
- (2) To minimize the potential adverse effects that wind turbines and wind energy

facilities may have on residential areas and land uses by promoting and requiring careful design, siting, noise limitations, and innovative camouflaging techniques.

(3) To avoid potential damage to people and adjacent properties from turbine failure through engineering and proper siting of turbine structures.

6:10.2 Definitions.

The following words, terms, and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant means the person or entity filing an application under this article.

Hub height means the distance measured from the surface of the tower foundation to the height of the wind turbine hub, to which the blade is attached.

Nonparticipating landowner means any landowner except those on whose property a wind turbine is located.

Occupied building means a residence, school, hospital, church, public library or other building used for public gathering that is occupied or in use on the date the permit application is submitted.

Operator means each person or entity responsible for the day-to-day operation and maintenance of a wind turbine.

Roof-mounted wind turbine means a single wind energy conversion system that is mounted to the roof of any structure with a maximum rotor diameter of seven feet.

Turbine height means the distance measured from the surface of the tower foundation to the highest point of the turbine rotor plane.

Wind turbine means a freestanding or roof-mounted, single wind energy conversion system that converts wind energy into electricity through the use of a wind turbine generator, and includes the nacelle, rotor, tower, and pad transformer, if any. This may also include an anemometer.

6:10.3 Permitted Uses.

(a) The uses listed in this Section are deemed to be permitted uses and shall not require administrative approval or a special use permit.

(b) Permitted Uses. The following uses are specifically permitted:

(1) A single roof-mounted wind turbine not to exceed the height limit in that zoning district and shall be considered a permitted accessory use on a single parcel in any R-1, R-2, R-3, R-4, or R-5 zoned district, if it meets all of the other applicable standards and requirements of Article VI.

6:10.4 Permit Required.

(a) A free standing wind turbine or a second roof-mounted wind turbine in any R-1, R-2, R-3, R-4, or R-5 zoned district zoned parcel requires special land use approval.

(b) Except as forth in Article VI, Section 6:10.3(b)(1), no wind turbine shall be constructed or located within the City of Westland unless a permit has been issued to the owner or operator approving construction of it under this article.

(c) Any physical modification to an existing and permitted wind turbine or turbines that materially alters the size, type and number of wind turbines or other equipment shall require a permit amendment under this article. Like-kind replacements shall not require a permit modification.

(d) Wind turbines in all zoning districts shall be subject to any approval required by the Federal Aviation Administration (FAA).

6:10.5 Wind turbines in nonresidential districts.

(1) General

The following provisions shall govern the issuance of special use permits for wind turbines by the City Council:

(1) If the wind turbine is not a permitted use under Section 6:9.3(b)(1) of this ordinance, a special land use approval shall be required for the construction of a wind turbine.

(2) Applications for special land use under this Section shall be subject to the procedures and requirements of Article XIII of the Zoning Ordinance, except as modified in this Section.

(3) In granting a special land use approval, the City Council may impose conditions to the extent the City Council concludes such conditions are necessary to minimize any adverse effect of the proposed wind turbine on adjoining properties.

(4) Any information of an engineering nature that the applicant submits, whether civil, mechanical, or electrical, shall be certified by a licensed professional engineer.

(5) An applicant for a special land use approval shall submit the information described in this Section and a non-refundable fee as established by resolution of the City Council to reimburse the City of Westland for the costs of reviewing the application.

(b) The application shall contain the following:

(1) A narrative describing the project location, the approximate generating capacity of the wind turbine, the height of the turbine to be constructed, and a description of ancillary facilities.

(2) An affidavit or similar evidence of agreement between all property owners demonstrating that the applicant has the permission of all property owners to apply for necessary permits for construction and operation of the wind turbine.

(3) A scaled site plan clearly indicating the location, type and height of the proposed wind turbine and ancillary equipment, property lines, setback lines, on-site land uses and zoning, adjacent land uses and zoning (including when adjacent to other municipalities), Master Plan classification of the site and all properties within the applicable separation distances, adjacent roadways, proposed means of access, setbacks from property lines, elevation drawings of the proposed wind turbine and any other structures, topography, parking, and other information deemed by the Planning Director to be necessary to assess compliance with this Ordinance.

(4) A landscape plan showing specific landscape materials in accordance with Article XI of this ordinance.

(5) Documents related to decommissioning.

(6) Method of fencing and finished color and, if applicable, the method of camouflage and illumination.

(5) Other relevant studies, reports, certifications and approvals as may be reasonably requested by the City of Westland to ensure compliance with this article.

(6) The proposed site shall have documented annual wind resources sufficient for the operation of the proposed wind turbines generator; provided, however, this standard shall not apply to an anemometer tower. The Planning Director or the City Council may require the submission of a wind resource study ("Study") documenting wind resources on the site over a minimum of one year. The Study shall indicate the long-term commercial economic viability of the project. Anemometers to be placed shall be calibrated regularly to ensure a measurement of error of one percent or less. All anemometers shall be placed at the expected hub height of the wind turbine to be used. Sufficient wind resources, as described by the U.S. Department of Energy, include areas with a wind power class 4 or higher. The city may retain the services of an independent, recognized expert to review the results of the Study prior to acting on the application for special land use permit. This review shall be at the expense of the applicant.

(7) Each proposed wind turbine or anemometer tower shall be set back from any adjoining lot line a distance equal to the overall height of the tower.

(c) Within 45 days after receipt of a permit application, the Planning Director will determine whether the application is complete and advise the applicant accordingly.

(d) After the completeness determination, the Westland Planning Commission will schedule a public hearing. The applicant shall participate in the hearing and be afforded an opportunity to present the project to the public and municipal officials, and answer questions about the project. The public shall be afforded an opportunity to ask questions and provide comment on the proposed project.

(e) After the Public Hearing by the Planning Commission, the City Council will make a decision whether to issue or deny the special land use.

(f) The City Council shall make the final determination on the application for special land use approval. Such determination shall be based solely on the requirements and standards of this Ordinance. Approval, approval with conditions, or disapproval shall be made by resolution setting forth the City Council's findings regarding the pertinent requirements and

standards. If the special land use is approved by the City Council, the applicant may then submit the written approval to the Zoning Enforcement Officer who will then sign the zoning certificate if all other zoning certificate requirements have been met, and all required signatures have been obtained. If the special land use approval is denied, the City Council may by resolution require that a revised special land use application be resubmitted for review and approval in accordance with the process outlined above. If in the judgment of the City Council, the special land use application can be approved if minor modifications are made, the City Council may by resolution issue a conditional approval in writing and provide for resubmission of a revised special land use application to the Enforcement Officer who shall sign the zoning certificate upon determination that all appropriate modifications have been made in accordance with City Council stipulations, and that all other zoning certificate requirements have been met.

(g) Each action taken with reference to special land use review and approval shall be duly recorded in the minutes of the Planning Commission and City Council and the grounds for the action taken upon each special land use submitted for review and approval shall also be recorded in the minutes and transmitted in writing to the applicant.

(h) It shall be the responsibility of the owner of a property for which special land use approval is required to maintain his property in accordance with the approved site plan on a continuing basis until the property is razed or new zoning regulations supersede the regulations based upon which the special land use approval was granted, or until a new special land use approval has been obtained as a basis for modifying the use or site plan. Any property owner who fails to so maintain a special land use as approved shall be deemed in violation of the use provisions of this Ordinance and shall be subject to the same penalties appropriate to such a use violation. All plans, specifications, and statements submitted with the application for a special land use approval shall become, with any changes ordered by the City Council, a part of the conditions of any approval issued by the City Council pursuant thereto.

(2) Factors Considered in Granting Special Land Use Approval for Wind Turbines

In addition to any standards for consideration of special land use approval applications pursuant to Article XIII of the Zoning Ordinance, the City Council shall consider the following factors in determining whether to approve a special land use, although the

City Council may waive or reduce the burden on the applicant of one or more of these criteria if the City Council concludes that the goals of this ordinance are better served thereby:

- (i) Height of the proposed wind turbine;
- (ii) Proximity of the wind turbine to residential structures and residential district boundaries;

- (iii) Nature of uses on adjacent and nearby properties;
- (iv) Surrounding topography;
- (v) Surrounding tree coverage and foliage;
- (vi) The size of the property upon which the proposed wind turbine is to be located, set back requirements, and lot-coverage requirements;
- (vii) Design of the tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness;
- (viii) The results of any Study;
- (ix) Proposed ingress and egress;
- (x) The impact on the natural environment;
- (xi) The exterior lighting and drainage shall not negatively affect any adjacent property or the surrounding area;
- (xii) The proposed special land use will be consistent with the general objectives of the City Master Plan;
- (xiii) The potential affect of noise and light flicker upon any individual in surrounding occupied buildings or on a nonparticipating landowner's property;
- (xiv) The proposed special land use will be compatible with adjacent uses of land in terms of location, size and character, and will have no negative impact on adjacent property or the surrounding neighborhood; and,
- (xv) Reasonable conditions may be imposed by the City Council upon approval of a special land use to reduce to a minimum any detrimental effect. Conditions imposed shall become part of the site plan and shall remain unchanged unless a change in conditions is approved by the City Council.

(3) **Setbacks**

The following setback requirements shall apply to all wind turbines for which a special land use approval is required; provided, however, that the City Council may reduce

the standards setback requirements if the goals of this ordinance would be better served thereby:

(i) Wind turbines must be set back a distance equal to at least a distance equal to the overall height of the wind turbine from any adjoining lot line.

(ii) Any guys and accessory buildings must satisfy the minimum zoning district setback requirements.

(iii) Wind turbines shall be set back from the nearest occupied building a distance of not less than ten (10) feet.

(iv) All wind turbines shall be set back from the nearest public road a distance equal to the turbine height, as measured from the right-of-way line of the nearest public road to the center of the wind turbine base. Those turbines rigidly attached to a building and whose base is on the ground may reduce this required setback by the amount equal to the distance from the point of attachment to the ground.

(4) **Security fencing**

The City Council may require wind turbines to be enclosed by security fencing not less than six feet in height.

(5) **Landscaping**

Article XI of the Zoning Ordinance shall govern the landscaping surrounding wind turbines for which a special land use approval is required.

6:10.6 Wind turbine design and installation.

(a) *Compliance with building code.* All wind turbines shall comply with the building code currently adopted by the City. Building permits for all wind turbines must be issued to a licensed contractor and applications shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footing. An engineering analysis of the tower showing compliance with the currently adopted building code and certified by a licensed professional engineer shall also be submitted.

(b) *Braking system.* All wind turbines shall be equipped with a redundant braking system. This includes both aerodynamic overspeed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-

safe mode. Stall regulation shall not be considered a sufficient braking system for overspeed protection.

(c) *Compliance with applicable electrical codes and standards.* All electrical components of the wind turbine shall conform to relevant and applicable local, state and national codes, as well as applicable international standards.

(d) *Visual appearance; power lines.*

(1) Wind turbines shall be either monopole, monolithic tube or lattice style construction, and a non-obtrusive color such as white, off-white or gray.

(2) Roof-mounted wind turbines are not subject to color restrictions except that they must be maintained in their original manufactured color.

(3) Wind turbines shall not be artificially lighted, except to the extent required by the Federal Aviation Administration or other applicable authority that regulates air safety.

(4) Wind turbines shall not display advertising, except for one sign no greater than two square feet identifying the turbine manufacturer, and one sign no greater than two square feet providing the owner's name, address and telephone number for emergency calls. Both signs must be located on the lowest ten feet of the structure.

(5) On-site transmission and power lines between wind turbines shall, to the maximum extent practicable, be placed underground.

(e) *Warnings.*

(1) A clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.

(2) Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

(f) *Climb prevention/locks.*

(1) Wind turbines shall not be climbable up to 15 feet above ground surface.

(2) All access doors to wind turbines and electrical equipment shall be locked to prevent entry by unauthorized persons.

6:10.7 Wind turbine height.

(a) Maximum height for a single wind turbine in R-6, THR, GAR, MRR, MHR, CB-1, CB-2, CB-3, CB-4, OB, I-1, and I-2 districts shall be limited to 70 feet.

(b) Maximum height for a single wind turbine serving a R-1, R-2, R-3, R-4, and R-5 zoned district shall be limited to 30 feet from ground level.

6:10.8 Noise and shadow flicker.

(a) Audible sound from any and all wind turbines shall not exceed 45 dba, as measured at the exterior of an occupied building on a nonparticipating landowner's property.

(b) The City Council may impose restrictions upon the owner or operator of a wind turbine to minimize shadow flicker to any occupied building or nonparticipating landowner's property.

6:10.9 Utility notification

No wind turbine shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

6:10.10 Signal interference

The applicant shall not disrupt or interfere with radio, telephone, television or similar signals and shall mitigate any harm caused by the wind turbine.

6:10.11 Decommissioning

(a) The property owner or facility owner and operator shall, at its expense, complete decommissioning of a wind turbine or wind energy facility within 12 months after

the end of the useful life of the facility or individual wind turbine. The wind turbine will presume to be at the end of its useful life if no electricity is generated for a continuous period of six (6) months.

(b) Decommissioning shall include removal of wind turbines, building, cabling, electrical components, roads, foundations to a depth of 36 inches, and any other associated facilities.

(c) Disturbed earth shall be graded and reseeded.

ARTICLE VII - SINGLE-FAMILY AND TWO-FAMILY RESIDENTIAL DISTRICTS

7.0

7:1 INTENT

It is the intent of this Article to provide for single- and two-family residential development at a variety of densities, which are consistent with the existing and desirable future pattern of development in the City. Provision is made for a variety of residential densities in order to accommodate different residential preferences within areas which meet the minimum lot size standards consistent with each different preference. The regulations provide for a limited number of nonresidential special land uses which may be established for the convenience of residents while still preserving the overall residential character of the districts. Provision is also made for accommodating mobile homes used as single-family dwellings on lots outside of mobile home parks. The intent of these regulations is to permit the use of mobile homes in all districts in which similar dwellings constructed on the site are permitted, subject to the requirements set forth herein to assure acceptable similarity in exterior appearance between such mobile homes and dwellings that have been or might be constructed under these and other lawful regulations in the same district.

7:2 PERMITTED LAND USES: R-1 THROUGH R-5 SINGLE-FAMILY RESIDENTIAL DISTRICTS

7:2.1 Permitted Principal Uses

The following land uses shall be permitted by right in R-1, R-2 and R-5 Single-Family District:

- a. Single-family detached dwellings.
- b. Parks and playgrounds.
- c. Essential services for which special land use approval is not required in accordance with Section 6:3.
- d. On-site signs as regulated in Article XV.

- e. Mobile homes used as single-family dwellings, subject to the requirements set forth in Section 7:9.6.
- f. State licensed residential facilities, as defined in Public Act 110, Section 102(s) and Section 206.

7:2.2 Special Land Uses

The following land uses shall be permitted as special land uses in the R-1, R-2 and R-5 Single-Family Districts subject to the lot area, yard, and setback requirements set forth in this Article and subject to the standards and approval requirements as provided for in Article XIII:

- a. Cemeteries.
- b. Cultural facilities, as follows:
Public libraries and public art galleries.
Public Museums and Aquariums.
- c. Education facilities (nonboarding), as follows:
Elementary schools.
Junior and senior high schools.
Colleges and universities.
- d. Essential services for which Special Land Use approval is required in accordance with Section 6:3.
- e. Extended health-care facilities, as follows:
Hospitals.
Sanitariums.
Nursing and convalescent homes.
- f. Greenhouses, nurseries and related horticultural operations, provided any accessory retail operations are limited to the sale of plant material or food

ARTICLE VII - SINGLE-FAMILY AND TWO-FAMILY RESIDENTIAL DISTRICTS

7.0

products grown on the site, gardening supplies and equipment, and other products directly related to gardening or horticulture.

- g. Group day care home.
- h. Kennels for more than three (3) dogs when located on a lot which also contains the principal residence of the proprietor.
- i. Off-street parking for immediately adjacent non-residential uses.
- j. Philanthropic and eleemosynary uses.
- k. Public service uses and buildings, as follows:
 - Public administration buildings, local, county, state, and Federal.
 - Fire stations.
 - Police stations.
- l. Recreation and social facilities, as follows:
 - Golf courses, driving ranges, pitch and putt, or miniature golf courses.
 - Recreation buildings and community centers, noncommercial.
 - Swimming pools, noncommercial.
 - Tennis clubs and courts, noncommercial.
- m. Religious institutions, as follows:
 - Churches, chapels, temples, and synagogues.
 - Convents, seminaries, monasteries, and nunneries.
 - Rectories, parsonages, and parish houses.

7:2.3 Accessory Structures and Uses

The following structures and uses shall be permitted in the R-1, R-2 and R-5 Districts as accessory to a permitted use or an approved special land use subject to the lot size, yard, and setback requirements set forth in this Article:

- a. Adult foster care family home.

- b. Auditoriums, meeting rooms, offices, and similar facilities accessory to religious institutions, provided such facilities are used for activities normally associated with church business. Activities associated with church business generally do not have daily business hours; use existing church space and facilities on a temporary basis; use mostly volunteers as employees; donate revenues produced directly to the church; and, offer mostly donated goods or services.
- c. Athletic fields and playgrounds accessory to educational facilities when the athletic fields or playgrounds are specifically approved as special land uses and when 1.2 square feet of site area over and above the minimum otherwise required is provided for every 1.0 square feet of site area occupied by the accessory athletic school or play ground.
- d. Clubhouses and other structures on the grounds of private clubs, golf courses, and tennis clubs, accessory to recreational and social facilities when the clubhouse or other structures are specifically approved as special land uses.
- e. Child-care centers and nursery schools accessory to religious institutions when the child-care centers or nursery schools are specifically approved as special land uses.
- f. Family day care home.
- g. Garages and carports.
- h. Greenhouses and conservatories, private (non-commercial).
- i. Home occupations, subject to the following performance standards:
 - 1. Total floor area devoted to the home occupation in the principal building shall not exceed twenty-five (25) percent of the gross floor area of the dwelling. No accessory building shall be used in the activities of the home occupation.

2. Outside appearance of premises shall have no visible evidence of the conduct of a home occupation.
3. No outdoor display of goods or outside storage of equipment or materials used in the home occupation shall be permitted.
4. No article or service shall be sold or offered for sale on the premises except those which are produced by such home occupation on the premises.
5. The nature of the home occupation shall not generate more than ten (10) business-related vehicle trips in any one (1) day in the vicinity of the home occupation, not more than two (2) persons visiting the site at one time and any need for parking generated by the conduct of such home occupation shall be provided off-street in accordance with the off-street parking requirements.
6. No equipment or process shall be used in such home occupation which creates noise, dust, vibration, glare, fumes, odors or electrical interference detectable to the normal senses beyond the property boundary.
7. A garage, yard, house or basement sale is permitted if conducted in accordance with the requirements of other City ordinances.
8. The following are typical examples of uses which often can be conducted within the limits of these restrictions and thereby qualify as home occupations. Uses which may qualify as “home occupations” are not limited to those named in this paragraph (nor does the listing of a use in this paragraph automatically qualify it for a home occupation); accountant, architect, author, conducting craft or fine art activities, consultant, dressmaking, musical instrument instruction, dance classes, photography, individual tutoring, millinery, preserving and home cooking.

9. The following uses are not permitted as home occupations if conducted as a person's principal occupation and the person's dwelling is used as the principal place of business: vehicle repair or painting, dental office and medical office.
10. Child Day Care facilities not exceeding six (6) children.
- j. Living quarters, detached for persons employed on the premises if occupied by such persons and their immediate family, when 4,400 square feet of site area above the minimum otherwise required is provided for each accessory dwelling unit.
- k. Mausoleums and grounds maintenance buildings accessory to cemeteries.
- l. Pavilions, restrooms, snack bars, and similar buildings accessory to parks and playgrounds.
- m. Radio receiving and/or transmitting antennae towers subject to the standards in Section 6:5.
- n. Satellite dish antennae subject to the standards in Section 6:6.
- o. Secondary religious facilities servicing a principal religious institution with special land use approval.
- p. Sewage disposal units, individual.
- q. Stadiums and grandstands in athletic fields accessory to educational facilities when the stadiums or grandstands are specifically approved as special land uses and when 1.2 square feet of site area over and above the minimum otherwise required is provided for every 1.0 square feet of site area occupied by the accessory stadium or grandstand.

- r. Storage of building materials and equipment, and temporary buildings for construction purposes for a period not to exceed the duration of such construction.
- s. Swimming pools and tennis courts, private.
- t. Temporary real estate tract offices for the purpose of conducting the sale of lots of the tract upon which such tract office is located, for a period not to exceed two (2) years.
- u. Toolhouses, sheds, and other similar buildings for the storage of domestic supplies.

7:3 PERMITTED LAND USES R-6 TWO-FAMILY RESIDENTIAL DISTRICT

7:3.1 Permitted Principal Uses

The following land uses shall be permitted by right in the R-6 Two-Family Residential District:

- a. Two-family dwellings.
- b. Single-family dwellings subject to the lot size, yard, and building bulk requirements in the R-5 district.
- c. Essential services for which special land use approval is not required in accordance with Section 6:3.
- d. On-site signs as regulated in Article XV.
- e. State licensed residential facilities, as defined in Public Act 110, Section 102(s) and Section 206.

7:3.2 Accessory Structures and Uses

The following structures and uses shall be permitted as accessory to a permitted use in the R-6 Residential District:

- a. Garages and carports.
- b. Home occupations, subject to the standards in Section 7:2.3(i).
- c. Radio receiving and/or transmitting antennae towers subject to standards in Section 6:5.
- d. Satellite dish antennae subject to the standards in Section 6:6.
- e. Sewage disposal units, individual.
- f. Storage of building materials and equipment, and temporary buildings for construction purposes for a period not to exceed the duration of such construction.
- g. Swimming pools and tennis courts, private.
- h. Temporary real estate tract offices for the purpose of conducting the sale of lots of the tract upon which such tract office is located, for a period not to exceed two (2) years.
- i. Toolhouses, sheds, and other similar buildings for the storage of domestic supplies.

7:4 LOT SIZE, YARD AND BUILDING BULK REQUIREMENTS

7:4.1 Lot Size Requirements

Lot size requirements for R-1, R-2, R-5 and R-6 Districts shall be as specified in the "Schedule of Lot Size, Yard, and Building Bulk Requirements." In addition, the following lot size requirements shall be met:

- a. No lot shall be less in width than one-fourth (1/4) its depth.
- b. The lot size requirements for special land uses shall be minimum requirements which may be increased if determined necessary in order to meet special land use standards as a condition for granting special land use approval.
- c. No additional lot area shall be required for accessory uses except as specifically set forth for each accessory use.

7:4.2 Yard Setback Requirements

Yard setback requirements for R-1, R-2, R-5 and R-6 Districts shall be as specified in the "Schedule of Lot Size, Yard, and Building Bulk Requirements."

- a. Where two-thirds (2/3) or more of the lots on a block face are built upon, no new front yard shall be less than the average front yard for the built-upon lots.
- b. The side yard abutting upon a street shall not be less than twenty (20) feet, when there is a common rear yard. In the case of a rear yard abutting a side yard of an adjacent lot, the side yard abutting a street shall not be less than the adjoining front yard. Side yards between dwellings shall be alternated so as to provide a minimum of fifteen (15) feet between dwellings.
- c. The yard size requirements for special land uses shall be minimum requirements which may be increased if determined necessary to meet special land use standards and as a condition for granting special land use approval.
- d. Required front, side and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as allowed in Sections 4:6.5 and 7:4.3 and in Article XI.

- e. For lots less than sixty (60) feet in width, which were of record on the effective date of this Ordinance a minimum side yard of three (3) feet and a minimum combined width of both side yards of eleven (11) feet shall be permitted, provided that the principal buildings on adjoining lots shall be located not less than ten (10) feet apart, and provided the width of the overhang shall not exceed twelve (12) inches, not including gutter.
- f. For lots less than thirty-five (35) feet in width which were on record on the effective date of this Ordinance, the required combined width of side yards may be reduced by six (6) inches for each lot or major fraction thereof by which the width of such lot is less than thirty-five (35) feet provided that the minimum side yard shall be not less than three (3) feet and the combined width of both side yards shall be not less than six (6) feet. Provided, however, that this requirement shall not apply to any lot which at the time this Ordinance becomes effective is narrower at the front building line, or less in area than the specifications herein provided, if such lot was of record at the time of the effective date of this Ordinance.

7:4.3 Residential Accessory Buildings

Buildings accessory to residential buildings shall be governed by the following regulations:

- a. Where a residential accessory building is structurally attached to a main building or is less than ten (10) feet distant from a main building, it shall be subject to, and must conform to, all yard and bulk regulations of this Ordinance, applicable to the main building.
- b. A residential accessory building may occupy not more than forty (40) percent of a required rear yard, and/or twenty-five (25) percent of any non-required rear yard; provided that in no instance shall the total square footage of all accessory buildings exceed the ground floor area of the main buildings.

- c. A detached accessory building shall be located so that its front building line is at least ten (10) feet to the rear of the building line of any main building, provided that a detached private garage shall be so located that its front building line is not closer to the front lot line than the rear building line of any main building.
- d. When an accessory building is located on a corner lot, the side lot line of which is substantially a continuation of the front lot line of the lot to its rear, said building shall not project beyond the front yard line required on the lot to the rear of such corner lot.
- e. Structures such as steps, paved terraces, garden walls, or retaining walls, not over three (3) feet above the finished grade, may be erected in the required front, side or rear open spaces.
- f. Accessory buildings for residential land uses shall not be erected in any required yard except a rear yard, provided further, that in no instance shall such a building be nearer than two (2) feet to any adjoining lot line.
- g. Nonresidential accessory buildings or structures shall not be constructed on any lot prior to the time of construction of the principal building.
- h. Detached accessory structures shall not exceed a height of fourteen (14) feet. However, the height of an accessory structure may exceed fourteen (14) feet provided that:
 - 1) the size of the lot exceeds one third (1/3) of an acre (14,520 square feet),
 - 2) the accessory structure does not exceed the maximum height requirement for the principal structure, and
 - 3) approval of the Zoning Board of Appeals is first obtained for any such height variance.

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7:4.4 Maximum Building Bulk Requirements

Maximum building bulk requirements for R-1, R-2, R-5 and R-6 Districts shall be as specified in the "Schedule of Lot Size, Yard, and Building Bulk Requirements."

7:5 MINIMUM SINGLE-FAMILY AND TWO-FAMILY RESIDENTIAL FLOOR AREA AND WIDTH

The minimum single-family and two-family dwelling use floor area and width for the R-1, R-2, R-5 and R-6 Residential Districts shall be as specified below:

		Minimum Floor Area per Dwelling Unit	Minimum Width per Dwelling Unit
R-1	Single-family dwellings With basement Without basement	1,600 sq. ft. 1,900 sq. ft.	24 ft.
R-2	Single-family dwellings With basement Without basement	1,500 sq. ft. 1,700 sq. ft.	24 ft. 24 ft.
R-5	Single-family dwellings With basement Without basement	1,000 sq. ft. 1,200 sq. ft.	24 ft. 24 ft.
R-6	Two-family dwellings With basement Without basement	900 sq. ft. 1,200 sq. ft.	24 ft. 24 ft.

7:6 SIGNS

Signs shall be allowed in Residential Districts in accordance with the regulations established in Article XV.

7:7 OFF-STREET PARKING AND LOADING

Off-street parking and loading facilities, accessory to uses allowed in Residential Districts, shall be provided in accordance with the regulations established in Article XVI.

7:8 FRONTAGE OF DWELLING

Each dwelling shall be situated upon a lot having direct frontage for at least twenty (20) feet upon a public street at least fifty (50) feet wide except that in single-family districts, a single family detached dwelling may be erected upon a lot having direct frontage for at least twenty (20) feet upon:

- a. Any public street which is not an alley or secondary means of access to the block.
- b. An unobstructed easement of access to a public street, providing said easement is at least thirty (30) feet wide at all points and is for the exclusive use of the lot upon which said dwelling is to be situated.
- c. An unobstructed private road existing on the City of Westland Street System Map on November 1, 1999, when such private road provides access to a public street.

7:9 STANDARDS FOR MOBILE HOMES IN SINGLE-FAMILY DISTRICTS

A mobile home may be used as a single-family dwelling on a lot outside a mobile home park, if the following standards and requirements are met. These standards and requirements shall not apply to a mobile home located in a licensed mobile home park.

7:9.1 Lot Requirements

- a. A mobile home may be placed only on a lot that is located in a zoning district which permits single-family dwellings.
- b. Not more than one mobile home (single- or double-wide) shall be used as a single-family dwelling on a lot, nor shall a mobile home be placed on any lot on which another single-family dwelling is located.

- c. A mobile home shall not be used as an accessory building on any residential lot.
- d. Unless otherwise specified herein, mobile homes used outside of mobile home parks shall conform to all of the requirements and standards in the zoning district in which the mobile home is located.

7:9.2 Minimum Floor Area, Floor Width, and Building Bulk Requirements

- a. The minimum exterior width along any exterior side elevation of the mobile home shall be not less than 24 feet at any point.
- b. The mobile home shall comply with the minimum square footage (floor area) requirements for the zoning district in which it is located.
- c. The minimum interior floor-to-ceiling height shall not be less than seven (7) feet, six (6) inches.

7:9.3 Foundation Requirements

- a. A mobile home shall be attached to a permanent foundation constructed on the site in accordance with the Building Code of the City of Westland.
- b. The mobile home shall be installed according to manufacturer's setup requirements, and secured using an anchoring system that meets the Michigan Mobile Home Commission requirements.
- c. The distance between the ground elevation of the mobile home and the top of the basement or crawlspace shall not exceed two (2) feet.
- d. The wheels, tongue and hitch assembly, or other towing appurtenances shall be removed before attaching the mobile home to its foundation.

7:9.4 Utilities

Mobile homes in single-family districts shall be connected to public water and sewer facilities.

7:9.5 Exterior Design and Appearance

The exterior design and appearance of a mobile home in a single-family district shall be similar or closely compatible to that found on conventional single-family stick-built homes in the surrounding area. Accordingly, mobile homes in single-family districts shall meet the following standards:

- a. Exterior walls, including the roof line, shall be finished with natural or simulated natural materials, common to conventional single-family dwellings, such as, but not limited to, beveled siding, vertical siding, board and batten siding, brick, shakes or shingles.
- b. The pitch of the roof shall not be less than one foot of rise for each four feet of horizontal run.
- c. The roofing material shall be shake, tile, composition shingle or other material commonly found on conventional single-family stick-built homes in the surrounding areas.
- d. A roof drainage system shall be designed to collect and concentrate the discharge of rain and snow-melt waters and prevent roof drainage along the sides of the dwelling.
- e. The roof shall have sloping lines with eaves, such as gable, mansard or shed style roofs, or shall be compatible with conventional single-family stick-built homes in the surrounding areas.
- f. A mobile home shall have no fewer than two (2) permanent exterior doors for entrance and /or exit, either at the front and rear or front and side of the mobile

ARTICLE VII - SINGLE-FAMILY AND TWO-FAMILY RESIDENTIAL DISTRICTS

7.0

home. Each door shall have either steps or a porch connected to the exterior door area where a difference in elevation requires the same.

7:9.6 **Construction Standards**

Mobile homes located in single-family districts shall comply with the Building Code of the City of Westland and with the National Mobile Home Construction and Safety Standards Act of 1974 (Title VI of Pub. L. 93- 383, 88 Stat. 700, 42 U. S. C. Section 5401, et. seq.). If the mobile home was built prior to 1974, it must be certified by the City of Westland as complying with the standards of the above Act.

7:10 SCHEDULE OF LOT SIZE, YARD AND BUILDING BULK REQUIREMENTS										
	Minimum Lot Size			Minimum Yard Setback Requirements				Maximum Bulk Requirements		
	Minimum Lot Area	Minimum Lot Width	Minimum Lot Depth	Front Minimum	Least Side	Sum of Two Sides	Rear Minimum	Maximum Building Height	Maximum Lot Coverage	
	(Sq. Ft.)	(Lin. Ft.)	(Lin. Ft.)	(Lin. Ft.)	(Lin. Ft.)	(Lin. Ft.)	(Lin. Ft.)	Stories	Feet	(Percent)
USES PERMITTED BY RIGHT										
R-1 Single-Family Detached Dwelling	9,600	80	100	30	5	20	35	2	30	30
R-2 Single-Family Detached Dwelling	8,400	70	100	30	5	15	35	2	30	30
R-5 Single- Family Dwelling	7,200	60	100	25	5	15	35	2	30	30
R-6 Two-Family Dwelling ²	8,400	80	100	25	10	20	35	2	30	30
SPECIAL LAND USES IN SINGLE-FAMILY DISTRICTS										
Cemeteries	435,600	660	330	30	30	60	30	2	30	30
Child Care Centers and Nursery Schools	20,000	100	100	30	30	60	30	2	30	30
Cultural Facilities	20,000	100	100	Each yard setback shall be 30 feet plus 1 foot for each foot in height of structure over 30 feet				2	30	30
Educational Facilities	80,000	200	200	Same as above				2	30	30
Health Care Facilities	40,000	150	150	Same as above						30
Kennels for up to 6 dogs for each additional dog	130,680 5,000	200	200	75	75	150	75	20	30	30
Off-Street Parking for Adjacent Nonresidential Uses	7,200	60	100	15	15	15	15	0	0	0
Philanthropic and Eleemosynary Uses	40,000	150	150	30	30	60	30	2	30	30
Public Service Uses	20,000	100	100	30	30	60	30	2	30	30
Public Utility Uses	20,000	100	100	30	30	60	30	2	30	30
Recreational and Social Facilities	80,000	200	200	30	30	60	30	2	30	30
Religious Institutions	40,000	150	150	30	30	60	30	2	30	30
<p>FOOTNOTE:</p> <ol style="list-style-type: none"> Where the garage is continuous with and attached to the house, the sum of two sides shall be at least ten (10) feet, provided a minimum clearance of fifteen (15) feet exists between existing adjoining houses on either side (R-1, R-2, R-5, R-6 districts). Single family dwellings in the R-6 District will be subject to the lot size, yard, and building bulk requirements in the R-5 District. The Building Director, upon good cause shown, may in his discretion, and only with respect to the construction of a new single family residence, waive a requirement of this schedule up to a distance not exceeding six (6) inches, and further provided such waiver will not act to increase the size or square footage of the structure beyond those dimensions as set forth in the building plans previously approved by the Building Director. 										

ARTICLE VIII - TOWNHOUSE (THR), GARDEN APARTMENT (GAR)_____ 8.0
MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

8:1 **INTENT**

It is the intent of this Article to provide for multiple-family housing of a variety of types and densities consistent with the existing and desirable future pattern of development in the City. Provision is made for townhouse, garden apartment and mid-rise multiple-family districts. Provision is also made for mobile home parks at multiple-family densities. These residential types will provide a range of housing options for current and future residents. The Townhouse, Garden Apartment, Mid-Rise, and Mobile Home Districts should be located in areas which are large enough to create a substantial multiple-family environment. In general, the Townhouse and Garden Apartment Districts should be mapped on parcels which alone or together with other contiguous Townhouse or Garden Apartment parcels contain at least 80,000 square feet and constitute an entire block face or more. The Mid-Rise Districts should, in general, be mapped on individual parcels which are at least 200,000 square feet. The Mobile Home District should be mapped on parcels which are located in close proximity to amenities such as public parks and open space areas, and established shopping facilities. The regulations in this Article protect Townhouse, Garden Apartment, and Mid-Rise Residential Districts from the encroachment of incompatible land uses. Regulations for these districts do not permit the wide range of nonresidential special land uses permitted in single-family residential districts because these districts are intended for selective mapping at limited locations which should be preserved for multiple-family use. Office and low-intensity commercial uses are permitted as special accessory land uses in the Mid-Rise Residential District.

8:2 **PERMITTED LAND USES (THR TOWNHOUSE, GAR GARDEN APARTMENT AND MRR MID-RISE RESIDENTIAL DISTRICTS)**

8:2.1 **Permitted Uses**

Permitted uses of land or buildings shall be permitted in the districts indicated under the conditions specified. No buildings or zoning lot shall be devoted to any use other than a use permitted in the zoning district in which such building or zoning lot shall be located, except in accordance with the provisions of Section 4:9.

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8:2.2 Prohibited Uses

It is the intent of this Ordinance to specifically prohibit uses which are not listed as permitted uses, or which are not approved for addition to the list of permitted uses in accordance with Section 4.9. Establishments which have more than twenty (20) percent of their floor area devoted to other uses or to accessory uses shall be deemed in violation of this Ordinance.

8:2.3 Site Plan Requirements

All uses in the THR, GAR and MRR districts shall be subject to the site plan requirements set forth in Article XI and shall meet the following additional site plan requirements:

- a. All public utilities shall be placed underground.
- b. All areas where motor vehicles may be driven or parked shall be paved with asphaltic or concrete surfacing of such thickness and design as may be required by engineering standards duly adopted by the City Council.

8:2.4 Site Plan Review Requirements

All uses shall be subject to the site plan review requirements of Article XI.

8:2.5 Signs

Signs shall be permitted in accordance with the regulations established in Article XV.

8:2.6 Off-street Parking and Loading

Off-street parking and loading facilities, accessory to uses permitted shall be provided in accordance with the regulations established in Article XVI.

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8:3 **THR TOWNHOUSE RESIDENTIAL DISTRICT**

8:3.1 **Permitted Principal Uses**

The following land and/or structure uses are permitted by right in the THR Townhouse Residential District:

- a. Townhouse Dwelling Units
- b. Single-family dwellings subject to lot, size, yard and building requirements of the R-5 District.
- c. Parks and playgrounds.
- d. Essential services for which special land use approval is not required in accordance with Section 6:3.
- e. On-site signs as regulated in Article XV.
- f. State licensed residential facilities, as defined in Public Act 110, Section 102(s) and Section 206.

8:3.2 **Accessory Structures and Uses**

The following structures and uses shall be permitted as accessory to a permitted use in the THR Townhouse Residential District:

- a. Community buildings containing recreation facilities, offices, meeting rooms, and other services for the exclusive use of the residents of the property on which they are located and their nonpaying guests, provided that a minimum separation of fifty (50) feet is provided between community buildings and any residential structures, and provided further that applicable building bulk requirements set forth herein are complied with.

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MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

- b. Garages and carports.
- c. Home occupations subject to the standards in Section 7:2.3(i).
- d. Radio receiving and /or transmitting antennae towers subject to the standards in Section 6:5.
- e. Satellite dish antennae subject to the standards in Section 6:6.
- f. Storage of building materials and equipment, and temporary buildings for construction purposes for a period not to exceed the duration of such construction.
- g. Swimming pools and tennis courts for the exclusive use of the residents of the property on which they are located and their gratuitous guests.
- h. Toolhouses, sheds, and other similar buildings for the storage of domestic supplies.

8:3.3 Minimum Lot Size Requirements

- a. Minimum lot area: 80,000 square feet for lots with up to 16 residential units, plus 4,300 square feet for each additional residential unit. The minimum lot area for developments designed specifically to house elderly residents shall be reduced to 55 percent of the square footage cited above.
- b. Minimum lot width: 200 feet.
- c. Minimum lot depth: 200 feet.

8:3.4 Minimum Yard Requirements

- a. Minimum setback requirements:

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MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

Front: 35 feet
Side: Single story building 20 feet
Two story building 30 feet
Rear: 35 feet

- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4: 6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash which is generated from indoor domestic activities shall not be located in any required or unrequired front yard area or in any required side yard area subject to the standards of Section 11:6.1.
- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street or a Single- or Two-Family Residential District. Parking shall be permitted in unrequired side and rear yard areas. Parking shall be prohibited in required front yards.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in required front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

8:3.5 Maximum Building Bulk Requirements

- a. Maximum building height:
 - Stories: 2
 - Feet: 30

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- b. Maximum lot coverage: 30 percent for all principal and accessory buildings.
- c. Maximum building length: 180 feet.
- d. Maximum number of residential units per structure: 10
- e. Separation between buildings: 20 feet or greater as determined by the formula below (see Appendix for Diagram):

$$S = \frac{La + Lb + 2 (Ha + Hb)}{6}$$

S = Required minimum horizontal distance between any wall of Building "A " and any wall of Building "B" or the vertical prolongation of either.

La = Length of Building "A"

The length of Building "A" is the length of that portion or portions of a wall or walls of Building "A" from which, when viewed directly from above, lines drawn perpendicular to Building "A" will intersect any wall of Building "B".

Lb = Length of Building "B"

The length of Building "B" is the length of that portion or portions of a wall or walls of Building "B" from which, when viewed directly from above, lines drawn perpendicular to Building "B" will intersect any wall of Building "A".

Ha = Height of Building "A"

The height of Building "A" at any given level is the height above natural grade level of any portion or portions of a wall or walls, along the length of Building "A". Natural grade level shall be the mean level of the ground immediately adjoining the portion or portions of the wall or walls along the total length of the building.

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Hb = Height of Building "B"

The height of Building "B" at any given level is the height above natural grade level of any portion or portions of a wall or walls along the length of Building "B". Natural grade level shall be the mean level of the ground immediately adjoining the portion or portions of the wall or walls along the total length of the building.

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8:3.6 Minimum Development Standards

a. Minimum Residential Unit Floor Area:

(i) Studio and one-bedroom townhouse units

With basement 750 sq. ft.

Without basement 950 sq. ft.

NOTE: Except for structures restricted to senior citizen occupancy, not more than 15 percent of all units on a zoning lot shall be studio or efficiency units

(ii) Two (2) or more bedroom townhouse units

With basement 950 sq. ft.

Without basement 1,150 sq. ft.

Any housing development designed specifically for elderly residents shall provide a minimum floor area of 320 square feet for efficiency apartments and 450 square feet for one bedroom units. In addition, any such elderly housing development shall allocate a minimum of 1,000 square feet of floor area to common space (such as dining areas, recreation areas, sitting rooms, etc.). The common space shall be increased by at least 35 square feet per dwelling unit for each unit in excess of 30 units contained in the development.

b. Mandatory Garage

A one-car or larger garage shall be provided for each townhouse unit. Said garage shall be attached to the unit it serves or lie adjacent to private outdoor space attendant to the unit it serves.

c. Mandatory Private Outdoor Space

A minimum of 150 square feet of private outdoor space shall be provided for each townhouse unit. Said outdoor space shall be enclosed with a fence or wall

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at least five (5) feet in height and constructed of materials equal in quality and durability to that used to cover the townhouse unit itself. Said wall or fence may have openings for ventilation.

- d. **Mandatory Landscaped Open-Space Area:** A landscape open space area or areas landscaped in accordance with the provisions of Section 11:3.5 and equal in size to 1,000 square feet times the number of residential units on the site shall be provided. Open space areas counted toward meeting this requirement shall have a length not greater than four (4) times their width and shall be located where they are easily accessible to the residential units they serve. Required open space area may be reduced in size by one square foot for each square foot of private outdoor space that is provided in excess of the 150 square foot per residential unit minimum requirement set forth in "c" above.

8:4 **GAR GARDEN APARTMENT RESIDENTIAL DISTRICT**

8:4.1 **Permitted Principal Uses**

The following land uses are permitted by right in the GAR District:

- a. Townhouse dwelling units.
- b. Single-family dwellings subject to lot, size, yard and building requirements in the R-5 District.
- c. Garden apartments.
- d. Parks and playgrounds.
- e. Essential services for which special land use approval is not required in accordance with Section 6:3.
- f. On-site signs as regulated in Article XV.

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- g. State licensed residential facilities, as defined in Public Act 110, Section 102(s) and Section 206.

8:4.2 Accessory Structures and Uses

Any accessory structure or uses permitted in the THR Townhouse District (see Section 8:3.2).

8:4.3 Minimum Lot Size Requirements

- a. Minimum lot area: 80,000 square feet for lots with up to 20 dwelling units, plus 3,600 square feet for each additional dwelling unit. The minimum lot area for developments designed specifically to house elderly residents shall be reduced to 55 percent of the square footage cited above.
- b. Minimum lot width: 200 feet.
- c. Minimum lot depth: 200 feet.

8:4.4 Minimum Yard Requirements

- a. Minimum setback requirements:
 - Front 35 feet
 - Side: Single story building 20 feet
Two story building 30 feet
 - Rear: 35 feet
- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.

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- d. Areas for the temporary storage of garbage and trash which is generated from domestic activities shall not be located in any required or unrequired front yard area or in any required side yard subject to standards in Section 11.6-1.
- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street or a single- or two-family residential district. Parking shall be permitted in unrequired side and rear yard areas. Parking shall be prohibited in required front yards.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in unrequired front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

8:4.5 Maximum Building Bulk Requirements

- a. Maximum building height:
Stories: 3
Feet: 40
- b. Maximum lot coverage: 30 percent for all principal and accessory buildings.
- c. Maximum building length: 180 feet.
- d. Separation between buildings: 20 feet or greater as determined by the formula in Section 8:3.5.

8:4.6 Minimum Development Standards

- a. Minimum Residential Unit Floor Area:

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- (i) Studio and one-bedroom garden apartment units: 750 square feet OR 550 square feet plus a 200 square-foot separate storage area for each unit.

NOTE: Except for structures restricted to senior citizen occupancy, not more than 15 percent of all units on a zoning lot shall be studio or efficiency units.

- (ii) Two (2) or more bedroom garden apartment units: 950 square feet OR 750 square feet plus a 200 square-foot separate storage area for each unit.

Any housing development designed specifically for elderly residents shall provide a minimum floor area of 320 square feet for efficiency apartments and 450 square feet for one bedroom units. In addition, any such elderly housing development shall allocate a minimum of 1,000 square feet of floor area to common space (such as dining areas, recreation areas, sitting rooms, etc.). The common space shall be increased by at least 35 square feet per dwelling unit for each unit in excess of 30 units contained in the development.

- b. Mandatory Private Outdoor Space:

A minimum of 60 square feet outdoor space or balcony shall be provided for each garden apartment unit.

- c. Mandatory Landscape Open-Space Area: GAR District:

A landscape open-space area or areas landscaped in accordance with the provisions of Section 11:3.5 and equal in size to 1,000 square feet times time number of residential units on the site shall be provided. Outdoor open space areas counted towards meeting this requirement shall have a length not greater than four (4) times their width and shall be located where they are easily accessible to the garden apartment units they serve.

8:5 **MRR MID-RISE RESIDENTIAL DISTRICT**

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MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

8:5.1 Permitted Principal Uses

The following land uses are permitted by right in the MRR Mid-Rise Residential District:

- a. Townhouse dwelling units.
- b. Garden apartments.
- c. Mid-rise residential structures.
- d. Parks and playgrounds.
- e. Essential services for which special land use approval is not required in accordance with Section 6:3.
- f. On-site signs as regulated in Article XV.
- g. State licensed residential facilities, as defined in Public Act 110, Section 102(s) and Section 206.

8:5.2 Special Land Uses

Any use permitted by right in the OB, or CB-1 Districts shall be permitted as a special land use in the MRR District subject to the standards and approval requirements as provided for in Article XIII and further subject to the following conditions:

- a. The special land use shall not occupy a building area equal to more than ten percent of the total building area occupied by residential permitted principal uses. Parking facilities for either the special land use or the permitted residential use shall not be counted in building area calculations for the purposes of this section.

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- b. Signs for the special land use shall not exceed in number or area one-half (1/2) the total which would be permitted if the special land use were located in the OB District.
- c. The site shall be arranged so that vehicular access and parking facilities for the special land use do not conflict with vehicular access and parking facilities for the permitted principal use.

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MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

8:5.3 Accessory Structures and Uses

Any accessory structures or uses permitted in the THR Townhouse District (see Section 8:3.2)

8:5.4 Minimum Lot Size Requirements

- a. Minimum lot area: 80,000 square feet for lots with up to 20 dwelling units, plus 1,250 square feet for each additional residential unit. The minimum lot area for developments designed specifically to house elderly residents shall be reduced to 55 percent of the square footage cited above.
- b. Minimum lot width: 200 feet.
- c. Minimum lot depth: 200 feet.

8:5.5 Minimum Yard Requirements

- a. Minimum setback requirements:

Front: 50 feet, or 1 foot for every foot of building height, whichever is greater.
Side: 30 feet, or 1 foot for every foot of building height, whichever is greater:
Rear: 50 feet, or 1 foot for every foot of building height, whichever is greater.
- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash which is generated from domestic activities shall not be located in any required or unrequired front yard area or in any required side yard area subject to the standards of Section 11:6.1.

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- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street. Parking shall be permitted in unrequired side and rear yard areas.
- f. Parking structures and shelters shall not be permitted in any required front, side or rear yard. Parking structures and shelters shall be permitted in unrequired front, side, and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

8:5.6 Maximum Building Bulk Requirements

- a. Maximum building height:
 - Stories: 12
 - Feet: 120
- b. Maximum lot coverage: 35 percent for all principal buildings, and 65 percent for the total of all principal and accessory buildings and paved vehicular drive and parking areas.
- c. Maximum building length: 180 feet.
- d. Separation between buildings: The minimum distance between any two buildings shall be regulated according to the length and height of such buildings.

The formula regulating the required minimum distance between two buildings (referred to as Building "A" and Building "B") is determined by the formula in Section 8:3.5.

8:5.7 Minimum Residential Unit Floor Area

- a. Studio and one-bedroom dwelling units: 750 square feet.

ARTICLE VIII - TOWNHOUSE (THR), GARDEN APARTMENT (GAR)_____8.0
MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

NOTE: Except for structures restricted to senior citizen occupancy, not more than 15 percent of all dwelling units shall be of the studio or one-bedroom type.

- b. Two bedrooms or more dwelling units: 950 square feet.

8:5.8 Minimum Landscape Open-Space Area

A landscape open-space area or areas equal in size to 350 square feet times the number of residential units on the site shall be provided. Such landscape open-space areas shall be landscaped as provided in Section 11:3.5.

8:6 MHR MOBILE HOME RESIDENTIAL DISTRICT

Regulations for the MHR Mobile Home Residential District shall be the same as in the Michigan Mobile Home Commission Rules as adopted and amended by the Michigan Mobile Home Commission for the City of Westland and set forth herein shall govern where applicable.

8:6.1 Rule 920

Rule 920 (i) of the Michigan Mobile Home Commission Rules shall read as follows for the City of Westland:

- a. A road shall have a driving surface not less than the following:
 - (1) One way. 20 feet
 - (2) Two way, with no parking 22 feet
 - (3) At access points where general traffic enters or leaves the park, the widths shall be sufficient to permit free movement from or to the stream of traffic on the public roads.

8:6.2 Rule 923

ARTICLE VIII - TOWNHOUSE (THR), GARDEN APARTMENT (GAR)_____ 8.0
MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

Rule 923 of the Michigan Mobile Home Commission Rules shall read as follows for the City of Westland:

Rule 923. Curbing, integral valley, inverted crown or other drainage system acceptable to the City Engineer shall be installed on all internal roads. If curbing is used, it shall be constructed as follows:

- (a) Curbing shall be concrete with the exception of the integral valley curb and gutter (gravity drains), which may be either concrete or asphalt.
- (b) If integral valley curbing and gutter or mountable curb and gutter are used, the height of the curb measured from the gutter line shall be between 3 and 5 inches.
- (c) Crosswalks shall conform to Act No. 8 of the Public Acts of 1973, being §§125.1361 et seq. of the Michigan Compiled Laws. [Effective 3/1/79].

8:6.3 Rule 941

Rule 941 of the *Michigan Mobile Home Commission Rules* shall be amended by adding the following language for the City of Westland:

- (5) The minimum site size for any mobile home lot shall be 5,500 square feet, except that this minimum may be reduced to 4,400 square feet provided that additional mobile home park open-space is set aside in an amount equal to one (1) square foot for each square foot by which each site is reduced. Said additional open-space shall not be counted toward meeting the open-space requirements established elsewhere in these rules.

8:6.4 Rule 944

Rule 944 (1) of the *Michigan Mobile Home Commission Rules* shall be amended to read as follows for the City of Westland:

ARTICLE VIII - TOWNHOUSE (THR), GARDEN APARTMENT (GAR)_____ 8.0
MID-RISE (MRR) AND MOBILE HOME (MHR) RESIDENTIAL DISTRICTS

- (1) Mobile homes, permanent park buildings and facilities, and other structures shall not be located closer than 20 feet from the property boundary line of the park.

10:1 **INTENT**

This article provides for development of a full range of industrial use in two districts, the I-1 Light Industrial District and the I-2 General Industrial District. In addition to industrial uses, these two districts also provide for fringe commercial uses which are compatible with industrial uses, and are often incompatible with other commercial uses. The I-1 and I-2 Districts are restricted to industrial and fringe commercial uses in order to ensure adequate area to meet the long-range demand for such uses. The I-1 Light Industrial District is intended to provide for light industrial activities which do not create an appreciable nuisance or hazard, and uses that require a pleasant, hazard- and nuisance-free environment. The I-2 General Industrial District permits heavy industrial uses in addition to a full range of light industrial and fringe commercial uses.

10:2 **GENERAL REQUIREMENTS: INDUSTRIAL DISTRICTS**

10:2.1 **Permitted Uses**

Permitted uses of land or buildings, as hereinafter listed, shall be permitted in the districts indicated under the conditions specified. No buildings or zoning lot shall be devoted to any use other than a use permitted hereinunder in the zoning district in which such building or zoning lot shall be located, except in accordance with the provisions of Section 4:9.

10:2.2 **Prohibited Uses**

It is the intent of this Ordinance to specifically prohibit uses which are not listed as permitted uses, or which are not approved for addition to the list of permitted uses in accordance with Section 4:9. Establishments which have more than twenty (20) percent of their floor area devoted to other uses or to accessory uses shall be deemed in violation of this Ordinance.

10:2.3 **Site Plan Requirements**

All uses in the I-1 and I-2 Districts shall be subject to the site plan requirements set forth in Article XI and shall meet the following additional site design requirements:

- a. All public utilities shall be placed underground.
- b. All areas where motor vehicles may be driven or parked shall be paved with asphaltic or concrete surfacing of such thickness and design as may be required by engineering standards duly adopted by the City Council.

10:2.4 Site Plan Review Requirements: Industrial Districts

All uses shall be subject to the site design review requirements of Article XII.

10:2.5 Signs

Signs shall be permitted in accordance with the regulations established in Article XV.

10:2.6 Off-Street Parking and Loading

Off-street parking and loading facilities, accessory to uses permitted shall be provided in accordance with the regulations established in Article XVI.

10:2.7 Performance Standards

- a. Any activity involving the use or storage of flammable or explosive materials shall be protected by adequate fire-fighting and fire suppression equipment and such safety devices as are normally used in the handling of any such material. Such hazards shall be kept removed from adjacent activities to a distance which is compatible with the potential danger involved.
- b. No activity shall emit dangerous radioactivity at any point, or unreasonable electrical disturbance adversely affecting the operation at any point of any equipment other than that of the creator of such disturbance.

- c. No vibration shall be permitted which is discernible without instruments on any adjoining lot or property.
- d. Smoke shall not be emitted with a density greater than No. 1 on the Ringelmann Chart as issued by the U. S. Bureau of Mines except for once hourly blow-off periods of ten minutes duration when a density of not more than No. 2 is permitted.
- e. No malodorous gas or matter shall be permitted which is offensive or which produces a public nuisance or hazard on any adjoining lot or property.
- f. No pollution of air by fly-ash, dust, vapors, or other substances shall be permitted which is harmful to health, animals, vegetation or other property, or which can cause excessive soiling. Dust, dirt, smoke, or fly-ash shall not be in excess of 0.3 grains per cubic foot of flue gas at stack temperature of 500 degrees Fahrenheit and not to exceed fifty (50) percent excess air.
- g. No direct or reflected glare shall be permitted which is visible from any property or from any public street, road, or highway. In particular, any operation or activity producing glare shall be so conducted that direct and indirect illumination from the source of light shall not cause illumination in excess of one-half (0.5) of one (1) footcandle when measured at any residence or business district boundary line. Flickering or intense source of light shall be so controlled as not to cause a nuisance across any lot lines.
- h. Pollution of water shall be subject to such requirements and regulations as are established by the Michigan State Department of Health, the Michigan Department of Natural Resources, the Wayne County Health Department, and the U. S. Environmental Protection Agency. Such requirements and regulations shall apply in all cases except when they are less stringent than the following standards in which case the following standards shall apply:
 - (1) No wastes shall be discharged in the public sewer system which is dangerous to the public health and safety.

- (2) Acidity or alkalinity shall be neutralized to a Ph of 7.0 as a daily average on a volumetric basis, with a maximum temporary variation of Ph 5.0 to 10.0.
- (3) Wastes shall contain no cyanides and no halogens and shall contain not more than 10 p.p.m. of the following gases: hydrogen sulphite, sulphur dioxide and nitrous oxide.
- (4) Wastes shall not contain any insoluble substance in excess of 10,000 p.p.m. or exceeding a daily average of 500 p.p.m. or fail to pass a No. 8 Standard Sieve, or have a dimension greater than one-half (1/ 2) inch.
- (5) Wastes shall not have chlorine demand greater than 15 p.p.m.
- (6) Wastes shall not contain phenols in excess of .005 p.p.m.
- (7) Wastes shall not contain any grease or oil or any oil substance in excess of 100 p.p.m. or exceed a daily average of 25 p.p.m.

i. **Interior uses**

The measurable noise emanating from the interior premises and as measured at the street or property line, may not exceed sixty-five (65) decibels as measured on the “C” scale of a sound level meter constructed and calibrated in conformance to the requirements of the American National Standards Institute, unless otherwise stated in the specifications for the sound level meter. Objectionable noises, due to intermittence, beat frequency or shrillness, shall be muffled so as not to become a nuisance to adjacent uses. Sirens and related apparatus used solely for safety and other public purposes are exempt from this standard.

j. **Exterior uses**

The measurable noise emanating from exterior uses and as measured at the street or property line, may not exceed one hundred five (105) decibels as measured on the "C" scale of a sound level meter constructed and calibrated in conformance to the requirements of the American National Standards Institute, unless otherwise stated in the specifications for the sound level meter. Objectionable noises, due to intermittence, beat frequency or shrillness, shall be muffled so as not to become a nuisance to adjacent uses. Sirens and related apparatus used solely for safety and other public purposes are exempt from this standard.

10:3 I-1 LIGHT INDUSTRIAL DISTRICT

10:3.1 Conditions

Uses allowed in the I-1 Light Industrial District are subject to the following conditions:

- a. Dwelling units and lodging rooms, other than watchmen's quarters, are not permitted.
- b. No building shall be erected or altered, and no land shall be used for any of the following:

Basic or semi-finished chemicals manufacturing including but not limited to cellulose products; resins; dye stuffs; glue; vegetables, animal and mineral fats or oils, explosives, combustible gasses, soap, detergents, fertilizer derived from animal origins, asphaltic and tar products, including asphaltic paving materials.

Cement manufacturing.

Drop forging.

Heavy chemicals manufacturing including but not limited to mineral acids or other corrosives, ammonia, caustic soap and sulfuric acid.

Leather curing and tanning.

Metal or alloy ingot manufacturing.

Oil refineries.

Open hearths and blast furnaces.

Petroleum bulk storage.

Processing, sale, storage or reclamation of junk of all kinds including automobile wrecking and storage.

Slaughtering or processing of animals.

Stock yards.

- c. All business, servicing, or processing--except for off-street loading--shall be conducted within enclosed buildings, unless otherwise indicated hereinafter.
- d. All storage--except for licensed motor vehicles in operable condition--shall be within completely enclosed buildings or effectively screened by a solid wall or wooden fence, as determined by City Council (including solid entrance and exit gates), not less than six (6) feet nor more than eight (8) feet in height.
- e. The following machines and equipment shall not be used: punch presses, steam hammers, drop hammers, stamping machines, forging equipment, and automobile screw machines.
- f. Glare and heat from arc welding or similar processes shall be performed so as not to be seen from any point beyond the outside of the property.

- g. The measurable noise emanating from the premises used for the activities permitted under this Article shall not exceed seventy (70) decibels, as measured from the outside of the walls or roof of the building occupies for such uses.
- h. No storage or construction equipment materials nor construction materials shall exceed the eight (8) feet in height, except for construction vehicles. Any toxic or liquid materials shall be stored in closed containers. All buffering of the site shall be determined by the Building Director and approved by City Council.

10:3.2 Permitted Principal Uses

The following land and /or structure uses are permitted by right in the 1-1 Light Industrial District:

- a. Light industrial uses. Such uses shall be limited to:
 - Cabinet and furniture manufacturing.
 - Carpet manufacturing.
 - Cloth products manufacturing from finished cloth.
 - Communications equipment manufacturing.
 - Contractors shops, and yards.
 - Dry cleaning establishments, including those serving pick-up stations located off the premises.
 - Electronic and scientific precision instruments manufacturing
 - Electroplating. Glass products production and sales.
 - Greenhouses - wholesale.
 - Insulating materials manufacturing.
 - Jewelry manufacturing engraving.
 - Laboratories - research and testing.
 - Laundries.
 - Leather products manufacturing from finished leather.
 - Light machinery production - household appliances, business machines, hand tools, electrical components and subassemblies, electric motors.

Mattress manufacturing.
Musical instruments manufacture.
Optical goods manufacturing.
Orthopedic and medical appliance manufacturing
Paper products manufacturing from finished paper.
Pottery and ceramics manufacturing.
Recreation vehicles assembly.
Rope, cord, and twine manufacturing.
Secondary food processing and packaging of food products initially processed
off the premises.
Sporting goods manufacturing.
Sign manufacturing.
Trade schools.
Upholstering shops.
Warehousing and storage facilities.

- b. Essential services as set forth in Section 6:3.
- c. On-site signs as regulated in Article XV.

10:3.3 **Special Land Uses**

The following land and/or structure uses are permitted as special land uses in the I-1 Light Industrial District subject to the standards and approval requirements set forth in Article XIII and provided such uses are not in conflict with the provisions of Section 10:3.1:

- a. Fringe commercial uses. Such commercial uses shall be limited to:
 - Amusement establishments, including bowling alleys, dance hall, gymnasiums, pool halls, skating rinks and swimming pools
 - Art, sculptor, and composer studios
 - Auction rooms
 - Auto, truck and recreation vehicle repair
 - Automobile accessory stores

Automobile and light truck sales establishments
Automobile service stations
Automobile washing establishments
Bicycle sale, rental, and repair shops
Blueprinting and photostating establishments
Boat showrooms, sales and repair establishments
Building materials and products sales and storage establishments
Catering establishments
Clubs and lodges, private
Drive-in facilities for uses permitted
Dry cleaning and laundry establishments
Educational services, commercial, including trade and vocational schools
Electrical showrooms and shops
Exterminating shops
Farm implement stores
Food storage lockers
Fuel and ice sales establishments
Garden supply, tool, seed and feed stores
Garages for storage, repair and servicing of motor vehicles, including body repair, painting and engine rebuilding as regulated by Article X, Section 10:3.1(d) and Article XI
Greenhouses and nurseries
Ice sales
Kennels Machinery sales
Locksmith shops
Mail order and catalog stores
Meeting halls
Milk distributing stations excluding bottling
Mobile home sales and rentals
Model Homes and garage displays
Motor vehicle sales, new and used
Mortuaries and funeral homes
Newspaper distributing agencies
Parking lots and garages
Parks and playgrounds

Physical culture and health services including gymnasiums, reducing and
 massage salons, and public baths
 Plumbing showrooms and shops
 Printing and publishing shops
 Recreational vehicle storage as regulated by Article IX, Section 9:7.7.
 Rental of automobiles, trucks, trailers or recreation vehicles
 Restaurants serving food and alcoholic beverages for consumption within the
 building, but not having the character of a carry-out, drive-in, or
 drive-through facility
 Secondhand stores and rummage shops
 Taxidermists
 Theaters, indoor and outdoor
 Trailer and camper sales and rental -- for uses with private passenger motor
 vehicles
 Veterinary establishments
 Warehouses for families and small businesses.

- b. Chemical processing and production.
- c. Cosmetics production.
- d. Food manufacture, packaging, and processing.
- e. Freight terminals.
- f. Sewage treatment plants, municipal.
- g. Shooting ranges, including but not limited to the firing of guns and/or bows
 and arrows, provided that such a facility is completely enclosed and sound
 proofed.

10:3.4 Accessory Structures

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be located in any front or side yard area.
- c. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.

10:3.5 Minimum Lot Size Requirements

- a. Minimum lot area: 10,000 square feet.
- b. Minimum lot width: 100 feet.

10:3.6 Minimum Yard Requirements

- a. Minimum setback requirements for principal and accessory structures:
 - Front: 35 feet, plus an additional 15 feet where adjacent to a residential district
 - Side: 18 feet, plus an additional 15 feet where adjacent to a residential district.
 - Rear: 20 feet, plus an additional 15 feet where adjacent to a residential district
- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article XI, and in paragraph "d" below.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.
- d. Areas for the temporary storage of garbage and trash shall not be located in any required or unrequired front yard area or in any required side yard area, provided that this Section shall not be interpreted to prevent placing of litter containers for the use of pedestrians outdoors. All areas for the temporary storage of garbage and trash, except litter containers for pedestrians, shall be enclosed on all sides subject to the standards in Section 11:6.1.
- e. Unsheltered parking shall be permitted in required side and rear yards, except that parking shall not be permitted in a required side or rear yard which abuts a street. Parking shall be permitted in unrequired side and rear yard areas.
- f. Parking structures and shelters shall not be permitted in any required front, side, or rear yard. Parking structures and shelters shall be permitted in unrequired front, side and rear yards, provided that parking shelters which are in front yards shall be completely enclosed on all sides visible from streets.

10:3.7 **Maximum Building Bulk Requirements**

- a. Maximum building height: 35 feet.

10:4 **I-2 GENERAL INDUSTRIAL DISTRICT**

10:4.1 **Permitted Principal Uses**

The following land and/or structure uses are permitted by right in the I-2 General Industrial District:

- a. Any principal use permitted in the I-1 Light Industrial District.

- b. Heavy industrial uses. Such uses shall be limited to:

- Manufacture of nonalcoholic beverages, bottling of alcoholic and/or nonalcoholic beverages

- Manufacture of light component parts of products

- Milk processing; bottling, and manufacturing of milk products

- Airports and heliports

- Manufacture and assembly of major electrical equipment

- Manufacture of colors, dye, paint, and other coatings excluding tar products

- Manufacturing of machinery and machinery components

- Stamping and fabricating metal shops using press, brakes, and rolls

- Manufacture of malt products, brewings, and distillation of liquors and spirits

- Machine, welding, tool and die shops

- Thermal, electric, steam, solar, and/or atomic power plants

- Manufacture of glass and glass products

- Motor truck terminals

- Paper manufacturing

- Can and container manufacturing

- c. Cosmetic production.

- d. Food manufacture, packaging and processing.

10:4.2 **Special Land Uses**

The following land and/or structure uses are permitted as special land uses in the I-2 General Industrial District subject to the standards and approval requirements set forth in Article XIII, and provided they are completely surrounded by other industrial uses:

- a. Basic or semi-finished chemicals manufacturing including, but not limited to cellulose products; resins; glue; vegetables, animal and mineral fats or oils, explosives, combustible gasses, soap, detergents, fertilizer derived from animal origins, asphaltic and tar products, including asphaltic paving materials.
- b. Cement manufacturing.
- c. Drop forging.
- d. Heavy chemicals manufacturing including, but not limited to, mineral acids or other corrosives, ammonia, caustic soap and sulfuric acid.
- e. Leather curing and tanning.
- f. Metal or alloy ingot manufacturing.
- g. Oil refineries.
- h. Open hearths and blast furnaces.
- i. Petroleum bulk storage.
- j. Processing, sale, storage or reclamation of junk of all kinds including automobile wrecking and storage.

- k. Slaughtering or processing of animals.
- l. Stock yards.
- m. Sewage Treatment Plant - Municipal.
- n. Motor vehicle and trailer storage as regulated by Article 10.3-l(d).

In addition, the special land uses permitted in the I-1 Light Industrial District are permitted as special land uses in the I-2 General Industrial District subject to the standards and approval requirements set forth in Article XIII.

10:4.3 **Accessory Structures**

Accessory structures and uses typically incidental to a principal use permitted by right or a principal special land use or a principal use permitted as part of a Planned Unit Development shall be permitted as accessory uses subject to the following requirements:

- a. No accessory structure or use shall occupy more than twenty (20) percent of the floor area of the principal uses.
- b. No accessory structure shall be constructed on any lot prior to the time of construction of the principal structure to which it is accessory.

10:4.4 **Minimum Lot Size requirements**

- a. Minimum lot area: 43,560 square feet.
- b. Minimum lot width: 122 feet.

10:4.5 **Minimum Yard Requirements**

- a. Minimum setback requirements for principal and accessory structures:

Front: 75 feet, plus an additional 25 feet where adjacent to a residential district
Side: 25 feet, plus an additional 25 feet where adjacent to a residential district
Rear: 25 feet, plus an additional 25 feet where adjacent to: a residential district

- b. Required front, side, and rear yards shall be unobstructed from the ground level to the sky, except by natural vegetation and as specifically permitted in Section 4:6.5, in Article IV.
- c. Side and rear yards which abut streets shall conform to the same yard setback and other requirements as front yards.

10:4.6 Maximum Building Bulk Requirements

- a. Maximum building height: 35 feet.

11:1 **PURPOSE**

It is the purpose of this Article to set minimum standards for the protection and enhancement of the environment by requiring site plan review and the use of landscape materials.

11.2 **APPLICATION**

The requirements set forth in this Article shall apply to all uses, lots, sites, and parcels which are developed or expanded. No site plan shall be approved unless said site plan shall show landscaping consistent with the provisions of this Article. In cases where the use of an existing building changes or an existing building is expanded or otherwise altered, all of the site plan standards set forth herein shall be met. In cases where the existing structure or its site present practical difficulties to meeting all of the site plan standards, the Zoning Board of Appeals may approve variances from the site plan standards based on the standards for variances set forth in Article III.

11:3 **LANDSCAPE BUFFER AND OPEN-SPACE STANDARDS**

11:3.1 **Buffering of Nonresidential Uses Adjacent to Residential Property**

The owner of property which is used for nonresidential purposes shall install and maintain in good condition along the entire edge of said property adjacent to property which is used or zoned for residential purposes either a protective screen wall or, in the discretion of City Council and in compliance with the requirements set forth below, a landscape buffer strip or a wood privacy fence. Protective screen walls, buffer strips and wood privacy fences shall be installed prior to construction of the principal use and shall have the following specifications and requirements:

a. Protective screen wall:

- (1) The wall shall be of brick, decorative poured concrete, removable concrete panel or other decorative masonry construction at least six (6) feet high and eight (8) inches thick, and it shall be reinforced with steel pilasters, or the equivalent. A six (6) foot high wooden frame fence,

removable panel concrete fence or a vinyl fence may be substituted for the wall over utility lines or easements, provided posts are sunk in the soil to a depth of at least (3) feet.

- (2) It shall contain no openings whatsoever except for such gates as may be approved by the City Council in the course of site plan review.
- (3) It shall extend the full length of the nonresidential property where such property is also adjacent to a residential district or property used for residential purposes, except as provided for in Section 11:3.7.

b. Landscape buffer strip:

- (1) The buffer strip shall be a minimum of twenty (20) feet in depth.
- (2) The buffer strip shall be graded with a continuous berm at least three (3) feet above the grade elevation at the grade of the highest level of either property at the common property line, or at the curb level of the abutting street, or at the height of the abutting public sidewalk located in a dedicated public street, whichever is the highest with side slopes having a minimum ratio of three feet of run for every one foot of rise. A three (3) foot-high brick or other decorative masonry screen wall be substituted for the berm, or used as retaining wall in conjunction with a half-berm.
- (3) All portions of the buffer strip shall be planted with grass, ground cover, shrubbery, or other suitable live plant material.
- (4) A minimum of one (1) deciduous tree shall be planted for each thirty (30) lineal feet or portion thereof of required buffer strip length. Required deciduous trees may be planted at approximately thirty (30) foot intervals, or may be clustered if the City Council determines that a particular clustering configuration would improve the effectiveness of the buffer strip in screening the property in question from adjacent property.

- (5) A minimum of one (1) evergreen tree shall be planted for each eight (8) lineal feet or portion thereof of required buffer strip length. Required evergreen trees may be planted at eight (8) foot intervals or can be planted in staggered rows at five foot centers, or may be clustered if the City Council determines that a particular clustering configuration would improve the effectiveness of the buffer strip in screening the property in question from adjacent property.
- (6) A minimum of one (1) intermediate shrub shall be planted for each eight (8) lineal feet or portion thereof of required buffer strip length. Required intermediate shrubs may be planted at eight (8) foot intervals or may be clustered if the City Council determines that a particular clustering configuration would improve the effectiveness of the buffer strip in screening the property in question from adjacent property.
- (7) For the purpose of determining required plant material, required buffer strip length shall be measured along the exterior periphery of the buffer strip.

c. Wood Privacy Fence:

- (1) A wood privacy fence shall only be allowed in the discretion of City Council, and only where the adjacent property is used for residential purposes and is zoned for non-residential use.
- (2) Such fence shall be six (6) feet above the highest grade on either side of the fence, and shall be constructed with posts sunk in the soil at least three (3) feet.

11:3.2 Buffering of Nonresidential Uses Adjacent to a Public Thoroughfare

The owner of property used for business, semipublic, public, or other nonresidential uses shall install and maintain in good condition a landscape buffer

strip along the entire edge of said property adjacent to a public thoroughfare right-of-way. The buffer strip shall be designed and landscaped as follows:

- a. The buffer strip shall be a minimum of twenty feet in depth or the applicable setback for the zoning district. It shall be graded with a continuous berm at least three (3) feet above the grade elevation at the grade of the highest level of either property at the common property line, or at the curb level of the abutting street, or at the height of the abutting public sidewalk located in a dedicated public street, whichever is the highest with side slopes having a minimum ratio of three feet of run for every one foot of rise. A three (3) foot-high brick or other decorative masonry screen wall may be substituted for the berm, or used as a retaining wall in conjunction with a half-berm.
- b. Grass, ground cover, or other suitable live plant material shall be planted over the entire buffer strip area except that paving may be used in areas of intensive pedestrian circulation.
- c. A minimum of one (1) deciduous tree shall be planted for each thirty (30) lineal feet or portion thereof of required buffer strip length. Paved areas used for pedestrian circulation and vehicular access shall be counted in measuring the length of the buffer strip for the purpose of determining the required number of trees. Trees need not be planted at thirty- (30) foot intervals, but may be located along the buffer strip as desired by the complying property owner.
- d. A minimum of one (1) evergreen tree and one intermediate shrub shall be planted for each thirty (30) lineal feet or portion thereof of required buffer strip length. Trees and shrubs need not be planted at thirty (30) foot intervals, but may be located along the buffer strip as desired by the complying property owner and approved by the City Council.
- e. For the purpose of determining required plant material, required buffer strip length shall be measured along the exterior periphery of the buffer strip.

11:3.3 Screening and Landscaping of Parking Areas Adjacent to or Visible from Public Thoroughfares or Residential Districts

The owner of an off-street parking area adjacent to or visible from a public right-of-way or residential area shall install and maintain in good condition the following landscaping:

- a. Off-street parking areas shall be screened from public thoroughfares and residential districts by a thirty-six (36) inch high brick or other decorative masonry wall around the periphery of the parking area. The wall may be interrupted at not more than twenty (20) percent of its required length if necessary to provide for vehicular access, except that the wall may be interrupted at more than (20) percent of its required length if necessary to provide for one (1) vehicular access and one (1) egress lane. A thirty-six (36) inch berm planted with grass, ground cover, or other suitable material may be substituted for the wall. It shall be graded with a continuous berm at least three (3) feet above the grade elevation at the grade of the highest level of either property at the common property line, or at the curb level of the abutting street, or at the height of the abutting public sidewalk located in a dedicated public street, whichever is the highest with side slopes having a minimum ratio of three feet of run for every one foot of rise and planted in accordance with Section 11:3.1(b). The plant materials may be clustered if the City Council determines that a particular clustering configuration would improve the effectiveness of the buffer strip in screening the property in question from adjacent property. The wall (or berm) shall not be required along the portion of parking and vehicular-use area periphery which lies adjacent to a protective screen wall of the type required in Section 11:3.1(a) of this Article, or along the portion of the parking and vehicular-use area periphery which lies adjacent to a building on the same lot as the parking area. In multiple-family districts the wall (or berm) shall not be required along the portion of an off-street parking area which lies adjacent to an off-street parking area in an adjoining multiple-family development. In industrial districts, said wall shall not be required for parking areas which are adjacent to or visible from a public thoroughfare which functions primarily to carry local industrial traffic provided said parking areas are at least twenty-five (25)

feet from the thoroughfare and not adjacent to or visible from a residential area.

- b. Off-street parking areas shall have a minimum of one (1) deciduous tree for every ten (10) parking spaces. Trees may be located in landscape areas within parking areas or on the periphery of parking areas, but trees counted for meeting this requirement shall not be counted toward meeting other buffer strip or landscape area requirements.

11:3.4 **Buffering of Multiple Dwellings from Streets**

The owner of property used for multiple-dwellings shall install and maintain in good condition a landscape buffer at least twenty (20) feet in depth along the entire edge of said property adjacent to a public right-of-way line. The buffer strip shall be designed and landscaped as follows:

- a. The buffer strip may be interrupted at not more than twenty (20) percent of its required length to provide for vehicular access, except that it may be interrupted at more than twenty (20) percent of its required length if necessary to provide for one (1) vehicular access and one (1) egress lane.
- b. All portions of the buffer strip shall be planted with grass, ground cover, shrubbery, or other suitable plant material.
- c. A minimum of one (1) deciduous tree shall be planted for each thirty (30) lineal feet or portion thereof of required buffer strip length, and a minimum of one (1) evergreen tree shall be planted for every fifteen (15) lineal feet of required buffer strip length. Required trees need not be planted at thirty (30) foot intervals, but may be located along the buffer strip as desired by the complying property owner.
- d. Paved areas used for pedestrian circulation and vehicular access shall be counted in measuring the length of the buffer strip for the purpose of determining the required number of trees and shrubs. Areas devoted to other

buffer strip encroachments, whether specifically permitted by an approved variance, shall be counted in measuring buffer strip length.

11:3.5 **Landscape Open-Space Area**

Whenever in this Ordinance a landscaped open-space area is required, it shall be landscaped according with the following standards:

- a. All portions of the landscaped open-space area shall be planted with grass, ground cover, shrubbery, or other suitable plant material, except that paved active recreation areas, patios, terraces, pedestrian circulation areas, swimming pools, and other similar site components may be incorporated with the approval of the City Council.

Drain courses, lakes, and water retention areas may be counted as a portion of the required landscaped open-space area upon approval of the City Council, provided that: 1) such drainage courses, lakes, and water retention areas shall not occupy more than 25 percent of the total required open space area, and 2) drainage courses, lakes, and water retention areas counted as part of the required open space area shall not be fenced.

- b. A minimum of one (1) deciduous tree shall be planted for each 3,000 square feet or portion thereof of required landscaped open-space area. Required trees may be planted at uniform intervals, at random, or in groupings.
- c. A minimum of one (1) evergreen tree and one intermediate shrub shall be planted for each 1000 square feet or portion thereof of required landscape open-space area. Required evergreen trees and intermediate shrubs may be planted at uniform intervals, at random, or in groupings.
- d. The total landscaped open-space area requires shall be the basis for determining the number of trees, evergreens, and shrubs, irrespective of the portion of the required landscaped open-area which is devoted to active recreational purposes or pedestrian circulation, but not including hard

surfaces or water area. Allowances for existing healthy plant material may be given by the City Council.

11:3.6 Landscaping of Rights-of-Way and Other Adjacent Public Open-Space Areas

Public rights-of-way and other public open-space areas adjacent to required buffer strips and landscaped open-space areas shall be planted with grass or other suitable ground cover and maintained by the owner of the adjacent property as if they were part of required buffer strips and landscaped open-space areas.

11:3.7 Regulations Pertaining to Landscaping Areas Used for Sight Distance

When a driveway intersects a public right-of-way or when the subject property abuts the intersection of public rights-of-way, all landscaping within the corner triangular areas described below shall permit unobstructed cross-visibility. Shrubs located in the triangular areas shall not be permitted to grow to a height of more than thirty (30) inches above the pavement grade at the edge of the pavement. Required protective screen walls must be installed outside sight distance triangular areas. Portions of required berms located within sight distance triangular areas shall not exceed a height of thirty (30) inches above the pavement grade at the edge of the pavement. Trees may be planted and maintained in this area, provided that all branches are trimmed to maintain a clear vision for a vertical height of eight (8) feet above the roadway surface. Landscaping except grass or ground cover shall not be located closer than three (3) feet from the edge of an access-way pavement.

The triangular areas referred to above are:

- a. The area formed at a corner intersection of a public right-of-way and a driveway, two sides of the triangle area being ten (10) feet in length measured along the right-of-way line and driveway line and the third side being a line connecting these two sides.
- b. The area formed at a corner intersection of two (2) public rights-of-way lines, the two (2) sides of the triangular area being thirty (30) feet in length

measured along the abutting public right-of-way line and the third side being a line connecting these two sides.

11:4 **MATERIAL STANDARDS AND SPECIFICATIONS**

All plant and nonplant material shall be installed in accordance with the following standards:

11:4.1 Maintenance-Free/Nonplant Material

All nonplant material shall be durable and as maintenance-free as reasonably practical.

11:4.2 Plant Quality

Plant and grass materials used in compliance with provisions of this Ordinance shall conform to standards of the Michigan Association of Nurserymen and shall have passed any inspections or retain certifications required under state regulations. Grass shall be clean and free of noxious weeds, pests and diseases.

11:4.3 Plastic Plant Material Prohibited

Plastic and other nonorganic plant materials shall not be used to meet the requirements of this Ordinance.

11:4.4 Required Plant Material Specifications

The following specifications shall apply to all plant material required by this Article:

a. Deciduous shade trees (for parking lots and buffer strips)

Ash (Marshall Seedless)	All tree plantings shall be a minimum of 2" to 2-1/2" in caliper at a point on the trunk 6" above the ground
Linden (Varieties)	
Locust (Thornless, Seedless, varieties only)	
Maple (Varieties including Red Sugar, and Norway)	
Oak (Varieties)	
Sweet Gum	
Pear (Bradford, Redspire, Aristocrat and Chanticleer)	

b. Deciduous ornamental trees (for buffer strips)

Flowering Crabapple (Varieties)	All single stem plantings shall be a minimum of 1-1/2" to 2" caliper when installed.
Hawthorn (Varieties)	
Flowering Dogwood (Varieties)	
Eastern Redbud	
Serviceberry (Varieties)	

c. Evergreen trees

Upright Juniper (Varieties)	All plantings shall be a minimum of 5' to 6' in height with an average spread of 21" to 30" with the exception of Pine and Spruce trees which shall be a minimum of 8' in height.
Arborvitae (Varieties)	
Pine (Varieties)	
Spruce (Varieties)	
Note: Pine or Spruce trees shall be planted at fifteen (15) foot intervals at a minimum.	

d. Intermediate shrubs

Dwarf Forsythia	All plantings shall be a minimum height of 2-1/2' to 3' in height when installed
Honeysuckle (Varieties)	
Mockorange (varieties)	
Ninebark.	
Spirea (Varieties)	
Juniper (Varieties)	
Tall Hedge Buckthorn	
Viburnum (Varieties)	
Winged Euonymus	
Yew (Varieties)	

11:4.5 **Ground Covers**

Ground covers used in planting beds in lieu of grass in whole or in part shall be planted in such a manner as to present a finished appearance and reasonably complete coverage after one complete growing season.

11:5 **INSTALLATION AND MAINTENANCE OF LANDSCAPE MATERIALS**

In the cases where an owner of property is required to install and maintain landscape materials, said owner shall observe the following standards:

11:5.1 **Installation**

Landscaping shall be installed in a sound workmanlike manner and according to accepted planning procedures with the quality of plant materials as hereinafter described. Landscaped areas must be protected from vehicular encroachment, by such means as, but not limited to, wheel stops. Landscape areas shall be elevated above the pavement to a height adequate to protect plant materials from snow removal operations, salt and other hazards. If building or paving construction is completed in an off-planting season, the temporary certificates of occupancy will be issued only after the owner provides cash, irrevocable letter of credit or other acceptable financial guarantees to ensure installation of required landscaping in the next planting season. A specific listing of plant materials shall be provided by the owner of the development which shall include a cost estimate for the landscaping to be installed. The minimum estimate shall be in accordance with the provisions of the Planning Commission Fee Schedule as adopted by the City Council.

11:5.2 **Maintenance**

The owner of landscaping required by this Ordinance shall maintain such landscaping in good condition so as to present a healthy, neat and orderly appearance, free from refuse and debris. All unhealthy and dead material shall be replaced within one (1) year or the next appropriate planting period, which ever

comes first. All required landscape areas shall be provided with a sprinkling system. Maintenance of landscaped areas in public rights-of-way adjacent to required landscape areas shall be the responsibility of the owner of the adjacent private property.

11:6 OUTDOOR STORAGE IN NONRESIDENTIAL AREAS AND IN MULTIPLE-FAMILY RESIDENTIAL AREAS

11:6.1 Screening of Certain Equipment

No incinerator, garbage, or trash receptacle, oil or propane tank, or storage rack, shall be exposed on the grounds outside the building, except when enclosed on the three sides by a solid concrete or masonry wall and a solid gate on the access opening. Adequate height of the screening shall be provided to completely obscure all stored material. The screening structure must be located at least fifteen (15) feet from any building.

11:6.2 Screening of Goods, Merchandise and Other Materials

No storage of goods, merchandise, or materials outside the building shall be permitted, except when enclosed on all sides by a solid masonry wall or wooden fence of adequate height to completely obscure all stored material. The solid concrete or masonry wall must be located greater than twenty (20) feet from any building. Openings in such wall or fence shall be approved by the City Council through the site plan review process. The City Council may waive or modify the wall or fence requirements upon recommendation of the Planning Commission that the screening would not serve a useful purpose or would not be practical to install. The solid concrete or masonry wall must be located greater than twenty (20) feet from any building.

11:7 REGULATIONS PERTAINING TO EXISTING PLANT MATERIAL

11:7.1 Consideration of Existing Plant Material

In instances where healthy plant material exists on a site prior to its development, the City Council, pursuant to site plan approval, may adjust the application of the above standards to allow credit for such plant material if such an adjustment is in keeping with and will preserve the intent of this Ordinance.

11:7.2 Preservation of Existing Plant Material

Site plans shall show all existing trees six (6) inches in diameter, or greater located within the proposed developments contract limits. Any tree to be removed shall be labeled as such on the site plan. All trees to be removed must be approved by the City Council. The City Council shall not approve the removal of any tree larger than six (6) inches in diameter unless said removal is required to provide for structures and necessary parking.

11:8 FENCES AND WALLS

11:8.1 Residential Fence Standards

All fences must comply with the Fence provisions of the Westland City Code.

11:8.2 Nonresidential Fence Height Limit

No fence or wall shall be erected, placed, or maintained along a lot line on any nonresidentially-zoned property, to a height exceeding eight (8) feet.

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12:1 INTENT AND APPLICABILITY

These site plan review procedures are instituted to provide for Planning Commission review and recommendation and City Council review and approval of site plans to ensure full compliance with all applicable requirements of this Ordinance. It is hereby recognized that peculiarities of lot contour, existing and potential adjacent development, existing and potential vehicular and pedestrian circulation and other determinants may require special regulation of the location and external design of buildings, open spaces, parking areas and driveways that cannot be achieved by detailed specifications. Therefore, City Council approval is required for every nonresidential site plan, including industrial developments which are contiguous or adjacent to existing or zoned residential property, and excluding industrial developments which are located in platted industrial subdivisions and are not contiguous or adjacent to any existing or zoned residential property. Planning Commission and City Council review and City Council approval is also required for every single-family and every multi-family residential site design site plan containing five (5) or more dwelling units. The site plan review process should provide an opportunity for consultation and cooperation between the applicant, the Planning Commission and City Council so that maximum utilization of land consistent with minimum adverse effects on adjoining areas can be achieved. Site plan review and approval is an integral part of the special land use approval process.

12:2 PROCEDURES

12:2.1 Applicant

The owner of an interest in land for which site plan approval is sought, or the designated agent of the owner, shall file the application for site plan approval with the Planning Director.

12:2.2 Issuance of Zoning Certificate

The City Council shall approve site plans in accordance with the procedures and standards set forth herein before a zoning certificate is issued.

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12:2.3 **Occupancy Certificate**

No occupancy certificate shall be issued until the site plan as approved by the City Council has been completed including the installation of all landscaping materials. A temporary occupancy certificate may be issued as provided in Section 3:9.3 before the site plan has been completed.

12:2.4 **Application Forms and Documentation**

The application for site plan approval shall be made on such forms as shall be prescribed by the City Council and provided by the Planning Director and shall be accompanied by the necessary fees and documents as provided herein.

12:2.5 **Submission to Planning Director and Report**

The application for site plan approval shall be submitted to the Planning Director who shall prepare a report on whether the site plan meets all applicable requirements of this Ordinance and any additional requirements recommended by the Planning Director based on the standards set forth in this Ordinance. The Planning Director shall forward the report to the Planning Commission together with the application within forty-five (45) days of receiving the completed application.

12:2.6 **Date and Notification of Planning Commission Consideration**

The Planning Director shall set a date for Planning Commission consideration of the site plan within forty-five (45) days of receiving the completed application and shall provide notice of such date as provided below:

- a. Notice of the hearing shall be published in the official city newspaper, or a newspaper of general circulation within the City of Westland. Notice shall also be sent by mail or personal delivery to the owners of property for which approval is being considered. Notice shall also be sent to all persons to whom real property is assessed within 300 feet of the property and to the occupants of all structures within 300 feet of the property regardless of whether the property or occupant is located in the City of Westland. . Notification need not be given to more than one occupant of a structure,

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except that if a structure contains more than one dwelling unit or spatial area owned or leased by different persons, one occupant of each unit or spatial area shall be given notice. If a single structure contains more than 4 dwelling units or other distinct spatial areas owned or leased by different persons, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure.

- b. the notice shall be given not less than 15 days before the date the application will be considered by approval. If the name of the occupant is not known, the term “occupant” may be used in making notification under this subsection. The notice shall do all of the following:
 - (i) Describe the nature of the request;
 - (ii) Indicate the property that is the subject of the request. The notice shall include a listing of all existing street addresses within the property. Street addresses do not need to be created and listed if no such addresses currently exist within the property. If there are not street addresses, other means of identification may be used.
 - (iii) State when and where the request will be considered.
 - (iv) Indicate when and where written comments will be received concerning the request.

12:2.7 **Planning Commission Recommendation**

The Planning Commission shall, within a reasonable time after its next regularly scheduled meeting following the date at which the application for site plan approval was considered, pass a resolution setting forth its findings regarding the general and specific standards set forth herein, and shall recommend to the City Council, approval, approval with conditions, or disapproval, with its reasons.

12:2.8 **City Council Review and Determination**

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The City Council shall review the application for site plan approval, together with the Planning Director's report and the Planning Commission's recommendations thereon and shall make the final determination on the application for site plan approval. Such determination shall be based solely on the requirements and standards of this Ordinance and State and Federal regulations. Approval, approval with conditions, or disapproval, shall be made by resolution setting forth the City Council's findings regarding the pertinent requirements and standards.

If the site plan is approved by the City Council, the applicant may then submit the written approval to the Zoning Enforcement Officer who will then sign the zoning certificate if all other zoning certificate requirements have been met, and all required signatures have been obtained. If site plan approval is denied, the City Council may by resolution require that a revised site plan be resubmitted for review and approval in accordance with the process outlined above. If in the judgment of the City Council, the site plan can be approved if minor modifications are made, the City Council may by resolution issue a conditional site plan approval in writing and provide for resubmission of a revised site plan to the Enforcement Officer who shall sign the zoning certificate upon determination that all appropriate site plan modifications have been made in accordance with City Council stipulations, and that all other zoning certificate requirements have been met.

12:2.9 **Recording of Planning Commission and City Council Action**

Each action taken with reference to site plan review and approval shall be duly recorded in the minutes of the Planning Commission and City Council and the grounds for the action taken upon each site plan submitted for review and approval shall also be recorded in the minutes and transmitted in writing to the applicant.

12:2.10 **Period of Validity**

An approved site plan shall be valid for a period of one year. If, after one year, a building permit has not been issued, the City Council may extend the approval for a maximum of one additional year upon request of the applicant. Any such extension shall be granted only if existing site conditions have not been substantially changed, and provided further that there are no revisions to the site plan. If, after the one year extension, a building permit still has not been issued, the applicant must submit to site plan for normal review as outlined in Section 12:2 herein.

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12:2.11 Maintenance of Site Plan

It shall be the responsibility of the owner of property for which site plan approval is required to maintain his property in accordance with the approved site plan on a continuing basis until the property is razed or new zoning regulations supersede the regulations based upon which the site plan approval was granted, or until a new site plan approval has been obtained as a basis for modifying the site plan. Any property owner who fails to so maintain an approved site plan shall be deemed in violation of the use provisions of this Ordinance and shall be subject to the same penalties appropriate to such a use violation.

12:2.12 Minor Amendments to Approved Site Plans

A minor change to a site plan may be approved by City Council after the plan has been reviewed by the Planning Director, Fire Chief, Building Director and City Engineer, and they certify in writing to the City Council that the change meets all requirements of this Ordinance and will not significantly alter or will not conflict with the condition of site plan approval and is one of the following:

- a. New fire escape.
- b. Change in building height that does not create new floor area.
- c. Relocation of sidewalks.
- d. Rearrangement of parking lot and drives.
- e. Decrease in building size.
- f. Moving a building no more than twenty (20) feet or twenty (20) percent of the distance to the closest property line, whichever is smaller.
- g. Other proposed amendments to approved site plans must be submitted to City Council for approval.

12:3 APPLICATION DATA REQUIREMENTS

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The following data shall be included with and as a part of the site plan submitted for final review and approval by the Planning Commission and City Council:

12:3.1 **Site Plan**

The application shall include a site plan drawn to a scale of one (1) inch equals twenty (20) feet, or to another scale as determined by the Planning Director and adequate to determine compliance with the requirements of this Ordinance and provide the Planning Commission and City Council with any other information needed to evaluate the overall site plan on the basis of the criteria set forth herein.

12:3.2 **Building Elevations**

The application shall include elevation drawings, exterior wall materials to be used and floor plans of all existing and proposed buildings on the site, drawn to a scale not less than one-eighth (1/8) inch equals one (1) foot, or to another scale determined by the Planning Director and adequate to determine compliance with the requirements of this Ordinance and provide the Planning Commission and City Council with any other information needed to evaluate the overall site plan on the basis of the criteria set forth herein.

12:3.3 **Detailed Information**

The following detailed information shall be submitted to the Planning Director with the necessary number of copies of the site plan building elevations, and building floor plans:

- a. The existing and proposed zoning.
- b. The location and size of all structures including location of entrances and loading points.
- c. All outside dimensions of each structure, its distance from the property lines, its area and its height.

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- d. Floor plans with dimensions of each delineated space by type of intended use by square footage in include tenant space and owner occupied space. In the case of residential units, the number and location of each type of residential unit (one-bedroom units, two-bedroom units, etc.) with typical floor plans for each type of unit and the square footage of floor area by unit type.
- e. The description of the whole property, or that portion to be developed and the area of the site in square feet, excluding all existing rights-of-way.
- f. A certified survey completed by a State of Michigan Licensed Land Surveyor, which indicates the recorded and measured dimensions of the property lines and other pertinent data as prescribed in Act No. 132 of Public Acts of 1970, as amended, prior to final approval of the Engineering Site Plan. The survey plot plan shall not exceed eight and one-half (8-1/2) inches by fourteen (14) inches in size.
- g. Structures, uses, zoning and other significant features of immediately adjacent property.
- h. The location of all existing and proposed drives, parking area and pedestrian circulation ways, including types of surfacing, parking layout dimensions, required and proposed number of parking spaces as outlined in Article XVI of this Ordinance.
- i. The dimensions of public and private road widths and public rights-of-way.
- j. All existing easements and vacated easements and rights-of-way.
- k. All required minimum setbacks from the existing or proposed rights-or-way, and property lines.
- l. The locations of existing and proposed lawns, landscaped areas and outdoor recreation areas, and how the landscaping is to be accomplished.
- m. The locations, sizes and types of all existing natural features and trees over six (6) inches in diameter. All natural areas that are to be preserved during

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construction, and the proposed protection measures shall be shown on the site plan.

- n. The design and materials of construction of all free-standing architectural walls, including typical cross-sections and the heights above ground on both sides of free-standing walls.
- o. The location, intensity and orientation of all exterior lighting.
- p. The location, dimensions and lighting of all signs.
- q. The location and capacity of existing or proposed water, sewers, and other utilities serving the site with approximate rim elevations, inverts, size and lengths.
- r. The location of refuse collection and storage stations, number of receptacles, and screening. Adequate pedestrian litter containers shall be shown on the site plan.
- s. Existing and proposed grades referenced to a U.S.G.S. benchmark.
- t. All plans must be sealed by appropriate registrant as prescribed in Act 299, P.A. of 1980, State of Michigan.
- u. The location, size and capacity of a storm water management plan and attendant facilities shall be provided in accordance with the City of Westland Best Management Practices standards for the management of storm water runoff.
- v. All finalized site plan, surveys, drawings and correspondence shall be submitted in digital format.
- w. Detailed information showing nearby intersections; existing driveways on adjacent sites; proposed driveways; changes to existing access; and any information requested by the City necessary to review site access.

12:4 STANDARDS FOR SITE PLAN APPROVAL

The City Council shall grant site plan approval only if the site plan fully meets all applicable standards set forth in this Ordinance, and only upon a finding that the site plan will not, on the basis of the facts known at the time of submission of the site plan, have an unduly harmful external impact on surrounding property owners or the residents of the city as a whole. The City Council may, as a basis for making such a finding, require whatever site plan modifications it deems necessary including the provision of additional site plan amenities not specifically required by this Ordinance.

- 12:4.1 All elements of the site plan shall be harmoniously and efficiently organized in relation to topography, the size and type of lot, the character of adjoining property and the type and size of buildings. The site will be so developed as not to impede the normal and orderly development or improvement of surrounding property for uses permitted in this Ordinance.
- 12:4.2 The existing trees and landscape elements shall be preserved in their natural state, insofar as practicable, by minimizing tree and soil removal. All natural features that are to be preserved shall be shown on the approved site plan. Protective barriers, composed of wood or other suitable materials, shall be constructed around the areas to be protected and shall be shown on the approved site plan.
- 12:4.3 The site plan shall provide reasonable, visual and sound privacy for all dwelling units located therein and adjacent thereto. Fences, walks, barriers and landscaping shall be used, as appropriate, for the protection and enhancement of property and the privacy of its occupants.
- 12:4.4 All buildings or groups of buildings shall be so arranged as to permit emergency vehicle access by some practical means to all sides.
- 12:4.5 All structures, dwelling units and dwellings, as defined by this Ordinance, in residential design site plans shall front a street that is constructed in accordance with City engineering standards for public streets and may be dedicated to the City.

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- 12:4.6 There shall be provided a pedestrian circulation system which is insulated as completely as reasonably possible from the vehicular circulation system. In order to ensure public safety, pedestrian underpasses or overpasses may be required in the vicinity of schools, playgrounds, local shopping areas and other uses which generate a considerable amount of pedestrian traffic. All components of the pedestrian circulation system shall be free from any mechanical equipment such as vending machines, storage coolers and similar devices.
- 12:4.7 Public street access points shall be located and designed to minimize disruption of through traffic flow. The arrangement of public or common ways for vehicular and pedestrian circulation shall respect the pattern of existing or planned streets and pedestrian or bicycle pathways in the area.
- 12:4.8 Appropriate measures shall be taken to ensure that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Provisions shall be made for the construction of sewer facilities including grading, gutters, piping, and the treatment of turf to handle storm water, prevent erosion and the formation of dust. Surface water on all paved areas shall be collected at intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in paved areas.
- 12:4.9 Exterior lighting shall be of a type and design and so arranged that light is deflected away from adjacent properties and shall not exceed one footcandle of intensity as measured at the property line and a maximum illumination of ten footcandles within the site, except that gas stations are allowed a maximum of twenty footcandles under a canopy, and automobile dealerships are allowed up to fifteen footcandles within the site. The light shall not impede the vision of traffic along adjacent streets. Flashing or intermittent lights shall not be permitted. All parking lot lighting shall be turned on at sunset and remain illuminated during the hours of operation of the principal use of the premise and remain illuminated for one hour after the business closes for the day.
- 12:4.10 Adequate services and utilities and improvements shall be provided, located and constructed with sufficient capacity to adequately serve the development.

12:5 SITE CONDOMINIUM SUBDIVISION REVIEW PROCEDURES

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- 12:5.1 The intent of this Section is to allow comparable review of site condominium subdivisions with development under conventional platting, with regard to meeting Ordinance regulations. This procedure is required because of the different design terms which are used for site condominium subdivisions.
- 12:5.2 Site condominium subdivision projects and construction plans shall include the required information for site plan review as identified in this Ordinance. In addition, a copy of the proposed Master Deed and any other restrictive covenants shall be submitted. The Site Condominium Subdivision Site Plan shall show all proposed site condominium building sites and building envelopes together with all proposed public and private utility improvements. The site plan review procedures of this Article shall be followed for the approval of a site condominium subdivision.
- 12:5.3 The following terms shall be used in applying Ordinance standards to a site condominium subdivision:
- a. All regulations pertaining to a lot shall apply to the site condominium building site.
 - b. All regulations pertaining to dwelling or building height, width, or size shall apply to a condominium structure.
 - c. Required setbacks shall apply to all site condominium subdivisions and shall be measured as follows:
 1. The front yard setback shall be measured from nearest road right-of-way line to the site condominium building envelope.
 2. The side yard setback shall be measured from the side of the site condominium building envelope to the side building site line.
 3. The rear yard shall be measured from the rear line of the site condominium building envelope to the rear line of the building site.

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4. Regulations for building-to-building spacing shall be measured from building envelope to building envelope.
- d. Issuance of temporary certificates of occupancy is permitted for not more than seventy-five (75) percent of the dwelling units within the limits of the approved site plan. Once this point of occupancy is reached, all site improvements as depicted upon the approved site plan must be completely installed.

ARTICLE XIII - SPECIAL LAND USE PROCEDURES AND STANDARDS

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13:1 **PURPOSE**

This section sets forth review procedures and standards for Planning Commission review and recommendation and City Council review and approval of special land uses. These procedures are instituted to provide an opportunity to use a lot for an activity which, under usual circumstances could be detrimental to other permitted land uses and cannot be permitted within the same district, but which can be permitted under circumstances particular to the proposed location and subject to conditions which provide protection to adjacent land uses. These procedures are adopted to provide guidelines for the City Council to follow in arriving at any special land use decision over which it has jurisdiction, and to provide for the public health, safety and general welfare.

13:2 **PROCEDURES**

13:2.1 **Applicant**

The owner of an interest in land for which special land use approval is sought, or the designated agent of the owner, shall file the application for special land use with the Planning Director.

13:2.2 **Issuance of Zoning Certificate**

The City Council shall approve all special land use applications in accordance with the procedures and standards set forth herein before a zoning certificate is issued.

13:2.3 **Occupancy Certificate**

No occupancy certificate shall be issued until the special land use site plan as approved by the City Council has been completed including the installation of landscaping materials. A temporary occupancy certificate may be issued as provided in Section 3:9.3 before the site plan improvements have been completed.

13:2.4 **Application Forms and Documentation**

The application for special land use approval shall be made on such forms as shall be prescribed by the City Council and provided by the Planning Director and shall be accompanied by the necessary fees and documents as provided herein.

13:2.5 **Submission to Planning Director and Planning Director Report**

The application for special land use approval shall be submitted to the Planning Director who shall prepare a report on whether the proposal meets all applicable requirements of this Ordinance and any additional requirements recommended by the Planning Director based on the standards set forth in this Ordinance. The Planning Director shall forward the report to the Planning Commission together with the application and site plan within forty-five (45) days of receiving the completed site plan.

13:2.6 **Data and Notification of Planning Commission Public Meeting**

- (a) Notice of the hearing shall be published in the official city newspaper, or a newspaper of general circulation within the City of Westland. Notice shall also be sent by mail or personal delivery to the owners of property for which approval is being considered. Notice shall also be sent to all persons to whom real property is assessed within 300 feet of the property and to the occupants of all structures within 300 feet of the property regardless of whether the property or occupant is located in the City of Westland. . Notification need not be given to more than one occupant of a structure, except that if a structure contains more than one dwelling unit or spatial area owned or leased by different persons, one occupant of each unit or spatial area shall be given notice. If a single structure contains more than 4 dwelling units or other distinct spatial areas owned or leased by different persons, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure.

- (b) The notice shall be given not less than 15 days before the date the application will be considered for approval. If the name of the occupant is not known, the term “occupant” may be used in making notification under this subsection. The notice shall do all of the following:
 - (i) Describe the nature of the request;
 - (ii) Indicate the property that is the subject of the request. The notice shall include a listing of all existing street addresses within the property. Street addresses do not need to be created and listed if no such addresses currently exist within the property. If there are not street addresses, other means of identification may be used.
 - (iii) State when and where the request will be considered.
 - (iv) Indicate when and where written comments will be received concerning the request.

13:2.7 **Planning Commission Recommendation**

The Planning Commission shall, within a reasonable time following the date at which the application for special land use approval was considered, pass a resolution setting forth its findings regarding the general and specific standards set forth herein, and shall recommend to the City Council, approval, approval with conditions, or disapproval, with its reasons.

13:2.8 **Review of Recommendations and Public Hearing**

The City Council shall review the application for special land use approval, together with the Planning Director’s report and Planning Commission’s recommendations thereon. At the initiative of the body or official responsible for approving the special land use or upon the request of the applicant, a real property owner whose

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real property is assessed within 300 feet of the property, or the occupant of a structure located within 300 feet of the property, a public hearing shall be held before a discretionary decision is made on the special land use request. The body or official designated to review and approve special land uses may deny, approve, or approve with conditions a request for special land use approval. The decision on a special land use shall be incorporated in a statement of findings and conclusions relative to the special land use which specifies the basis for the decision and any conditions imposed.

- a. Notice of the hearing shall be published in the official city newspaper, or a newspaper of general circulation within the City of Westland. Notice shall also be sent by mail or personal delivery to the owners of property for which approval is being considered. Notice shall also be sent to all persons to whom real property is assessed within 300 feet of the property and to the occupants of all structures within 300 feet of the property regardless of whether the property or occupant is located in the City of Westland. . Notification need not be given to more than one occupant of a structure, except that if a structure contains more than one dwelling unit or spatial area owned or leased by different persons, one occupant of each unit or spatial area shall be given notice. If a single structure contains more than 4 dwelling units or other distinct spatial areas owned or leased by different persons, notice may be given to the manager or owner of the structure, who shall be requested to post the notice at the primary entrance to the structure.
- b. The notice shall be given not less than 15 days before the date the application will be considered for approval. If the name of the occupant is not known, the term “occupant” may be used in making notification under this subsection. The notice shall do all of the following:
 - (i) Describe the nature of the request;

- (ii) Indicate the property that is the subject of the request. The notice shall include a listing of all existing street addresses within the property. Street addresses do not need to be created and listed if no such addresses currently exist within the property. If there are not street addresses, other means of identification may be used.
- (iii) State when and where the request will be considered.
- (iv) Indicate when and where written comments will be received concerning the request.

13:2.9 City Council Determination

The City Council shall make the final determination on the application for special land use approval. Such determination shall be based solely on the requirements and standards of this Ordinance. Approval, approval with conditions, or disapproval shall be made by resolution setting forth the City Council's findings regarding the pertinent requirements and standards. If the special land use is approved by the City Council, the applicant may then submit the written approval to the Zoning Enforcement Officer who will then sign the zoning certificate if all other zoning certificate requirements have been met, and all required signatures have been obtained.

If site special land use approval is denied, the City Council may by resolution require that a revised special land use application be resubmitted for review and approval in accordance with the process outlined above. If in the judgment of the City Council, the special land use application can be approved if minor modifications are made, the City Council may by resolution issue a conditional approval in writing and provide for resubmission of a revised special land use application to the Enforcement Officer who shall sign the zoning certificate upon determination that all appropriate modifications have been made in accordance with City Council stipulations, and that all other zoning certificate requirements have been met.

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13:2.10 **Recording of Planning Commission and City Council Action**

Each action taken with reference to special land use review and approval shall be duly recorded in the minutes of the Planning Commission and City Council and the grounds for the action taken upon each special land use submitted for review and approval shall also be recorded in the minutes and transmitted in writing to the applicant.

13:2.11 **Maintenance of Site Plan**

It shall be the responsibility of the owner of a property for which special land use approval is required to maintain his property in accordance with the approved site plan on a continuing basis until the property is razed or new zoning regulations supersede the regulations based upon which the special land use approval was granted, or until a new special land use approval has been obtained as a basis for modifying the use or site plan. Any property owner who fails to so maintain a special land use as approved shall be deemed in violation of the use provisions of this Ordinance and shall be subject to the same penalties appropriate to such a use violation. All plans, specifications, and statements submitted with the application for a special land use approval shall become, with any changes ordered by the City Council, a part of the conditions of any approval issued by the City Council pursuant thereto.

13:3 **APPLICATION DATA REQUIREMENTS**

The application and data requirements for special land use approval shall be the same as set forth in Section 12:3 for site plan review, plus such other data as may be required by the Planning Director, the Planning Commission, and the City Council to make the determination required herein.

13:4 **GENERAL STANDARDS FOR GRANTING SPECIAL LAND USE APPROVAL**

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The City Council shall approve special land uses upon determination that the proposed use will comply with all requirements of this Ordinance including site plan regulations in Article XI and the site plan standards, in Article XII applicable standards for specific uses, and the following general standards:

- 13:4.1 The location of the proposed special land use within the zoning district will minimize the impact of the traffic generated by the proposed use on surrounding uses. It shall be presumed that this standard has not been met if the proposed use is not located immediately adjacent to or within two hundred (200) feet from an arterial street. This presumption may be set aside by the presentation of substantial evidence indicating that the traffic generated by the proposed use will have a minimal impact despite the failure to meet this locational standard.
- 13:4.2 The site plan of the proposed special land use will minimize the impact of site activity on surrounding properties. In determining whether this requirement has been met, consideration shall be given to:
- a. The location and screening of outdoor storage or activity areas and mechanical equipment in relationship to surrounding development.
 - b. The location and screening of vehicular circulation and parking areas in relationship to surrounding development.
 - c. The hours of operation of the proposed use. In granting the approval for a special land use, restrictions may be set upon the hours of operation as appropriate to ensure minimal impact on surrounding uses.
 - d. The bulk, placement, and materials of construction of the proposed use in relationship to surrounding uses.
 - e. The impact on the existing natural environment.

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- f. The exterior lighting and drainage shall not negatively impact on adjacent property or the surrounding neighborhood (See Section 12:4.9).

13:4.3 The site plan of the proposed special land use will be such as to provide the maximum feasible enhancement of the neighborhood environment of the surrounding area. In determining whether this requirement has been met, consideration shall be given to:

- a. The provision of landscaping or other site amenities over and above those required by specific stipulations of this Ordinance. Provision of additional landscaping amenities over and above the requirements of Article XI of this Ordinance may be required.
- b. The bulk, placement, and materials of construction of proposed structures in relation to surrounding uses.
- c. The location of the proposed special land use will not be detrimental to the orderly development of surrounding areas and will not have a detrimental effect on the natural environment.
- d. The traffic and parking impact on existing streets and intersections.

13:4.4 The location of the proposed special land use will not result in a small residential area being substantially surrounded by nonresidential development, and further, the location of the proposed special land use will not result in a small nonresidential area being substantially surrounded by incompatible uses.

13:4.5 The proposed special land use will be consistent with the general objectives of the City Master Plan.

13:4.6 The proposed special land use will be compatible with adjacent uses of land in terms of location, size and character, and will have no negative impact on adjacent property or the surrounding neighborhood.

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- 13.4.7 Reasonable conditions may be imposed by the City Council upon approval of a special land use to reduce to a minimum any detrimental effect. Conditions imposed shall become part of the site plan and shall remain unchanged unless a change in conditions is approved by the City Council.

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14:1 INTENT

The intent of the Planned Unit Development District (PUD), is to permit flexibility in the regulation of land development which either includes a mix of land uses or is proposed for a site containing unique natural features which the developer and City desire to preserve. The standards of this Article are intended to encourage innovative design and create opportunities which may not be obtainable through the more rigid standards of the other zoning districts. The district is intended to accommodate developments with mixed or varied uses, sites with unusual topography or unique settings within the community or on land which exhibits difficult or costly development problems and shall not be allowed where this zoning classification is sought primarily to avoid the imposition of standards and requirements of other zoning classifications rather than to achieve the stated purpose above.

14:2 PERMITTED USES

14:2.1 Permitted Principal Uses

Any combination of uses permitted in any residential, office, business or industrial classifications pursuant to this Ordinance.

14:2.2 Permitted Accessory Uses

Any use which is accessory to the uses allowed as permitted principal uses.

14:3 ELIGIBILITY

Planned unit developments may be allowed by the City Council, following a recommendation by the Planning Commission that the following criteria are applicable:

- a. The subject site shall be a minimum size of one (1) acre of contiguous land under the control of one owner, or a group of owners, or the application must be made with the written authorization of all property owners.
- b. The site contains significant natural or historic features which will be preserved through development under the PUD standards, as determined by the Planning Commission, or

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the PUD will provide a complementary mixture of uses or housing types within a unique, high quality design.

- c. The planned unit development will result in a recognizable and substantial benefit to the ultimate users of the project and to the City, where such benefit would otherwise be unfeasible or unlikely to be achieved. These benefits shall be demonstrated in terms of preservation of natural features, unique architecture, extensive landscaping, integration of various site features into a unified development, provision of useful open space, expand the supply of affordable housing for lower income households, or provision of employment and shopping opportunities.
- d. A finding that the proposed type and density of use shall not result in an unreasonable increase in traffic or the use of public services, facilities and utilities; that the natural features of the subject site have the capacity to accommodate the intended development; and the development shall not place an unreasonable burden upon surrounding land or land owners.
- e. The proposed development shall be consistent with the City Master Plan.
- f. Usable open space and off-street parking shall be provided, at least equal to the total of the minimum required for each of the component uses of the development. The City Council may, if deemed appropriate, require for planned unit developments more or less usable open space or parking than that required by this Ordinance, or may require no usable open space or parking.
- g. Landscaping shall be provided so as to ensure that proposed uses will be adequately buffered from one another and from surrounding public and private property to meet the minimum requirements of this Ordinance. The City Council may, if deemed appropriate, require for planned unit developments more or less landscaping than that required by this Ordinance.
- h. Vehicular and pedestrian circulation, allowing safe, convenient, uncongested and well-defined circulation within and to the district, shall be provided.

14.4 APPROVAL PROCEDURE

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- a. The PUD zoning approval shall involve two phases. The preliminary phase shall involve a review of the conceptual PUD development plan to determine its suitability for inclusion in the land use and zoning plans of the City and adoption by the City Council as part of the Zoning Ordinance. The final phase shall require detailed site plans for any part of the conceptual PUD development plan prior to the issuance of building permits. The two phases may be combined and considered for approval as a preliminary and final phase PUD development plan.
- b. The Planning Commission may hold an informational meeting where the petitioner presents the proposed PUD development plan and the Planning Commission provides the petitioner with its comments within 30 days after holding such a meeting. Notice of the meeting shall be given to the Mayor and City Council. No fees shall be charged for said informational meeting.
- c. The petitioner shall next submit to the Planning Director sufficient copies of the PUD development plans together with appropriate review fees. Copies of the plan as submitted shall be distributed to the appropriate City agencies for review to determine if the development concept can be accommodated by the existing public utility, street and general City service facilities, or if any addition to, or extensions of facilities are necessary for the project.
- d. The Planning Director shall notify the petitioner of any questions raised by the City agencies during said review and shall submit like information to the Planning Commission for its consideration, along with a report which evaluates the planning aspects of the project and its impact on the present and future development of the City.
- e. The Planning Commission shall, after holding public hearings on said PUD development plans and reviewing said reports, make its recommendation to the City Council on said plan within sixty (60) days of its date of filing unless said time is agreed to be extended by the petitioner in writing; provided that the Planning Commission may extend this time for periods not to exceed thirty (30) days each if such extensions are necessary for adequate review. The public hearing notice shall be in accordance with the provisions of Section 3:12.5 of this Ordinance.

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- f. If the preliminary phase or final phase PUD development plan is rejected by the Planning Commission, its reasons therefor shall be specified in writing and those reasons approved by the Planning Commission.
- g. The Planning Commission's recommendations and all related reports shall be submitted to the City Council for its consideration. The Council shall, after holding a public hearing on the preliminary phase and final phase PUD development plan, take final action on said plan and petition within 90 days of the date it receives a report from the Planning Commission or such reasonable extension of time as may be necessary for adequate review.
- h. Any conditions of approval required by the City Council shall be satisfied by the petitioner or owner prior to subsequent final phase site plan approval and prior to the issuance of any building permits. The City Clerk shall keep a special record of all approved PUD development plans and approval conditions.
- i. Approval of the preliminary phase PUD development plan by the City Council shall rezone the property to a "PUD" zoning classification for uses as shown on the PUD development plan and shall confer upon the owner the right to proceed through the subsequent planning phase in accordance with regulations and ordinances in effect at the time of the Council's approval for a period not-to-exceed one (1) year from date of approval, unless subsequent regulations or ordinances are specifically made applicable to developments which have been so approved. If final phase PUD development plans have not been submitted for approval before the termination of said one (1) year period, said subsequent site planning must conform to the regulations, ordinances and laws in effect at the time said site plan is submitted. The City Council may extend the approval for a maximum of one additional year upon request of applicant. Any such extension shall be granted only if existing site conditions have not been substantially changed, and provided further that there are no revisions to the plan. If, after the one year extension a building permit still has not been issued, the applicant must submit the plan for normal review as outlined in Section 14:4 herein.
- j. An approved PUD development plan runs with the land, not with the owner. If the land is sold or otherwise exchanged, the approved PUD development plan shall remain in effect unless an applicant submits a request to amend or terminate the PUD development plan.

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14:5 **PRELIMINARY PHASE PUD DEVELOPMENT PLAN**

The applicant shall prepare and submit the following to the Planning Director:

- a. All information, in a preliminary form, that is required for a site plan in Article XI of this Ordinance.
- b. A list of anticipated deviations from the standard zoning ordinance regulations which would otherwise be applicable.
- c. The applicant shall present material as to the development's objectives and purposes to be served; economic feasibility; conformity to plans and policies of the City; market needs; impact on public schools, utilities and circulation facilities; impact on natural resources; impact on the general area and adjacent property; estimated cost; and a staging plan showing the general time schedule of and expected completion dates of the various elements of the plan.
- d. Any other information which the Planning Commission or City Council require to determine if the proposed preliminary phase PUD development plan meets the eligibility criteria. This may include but is not limited to: preliminary building elevations, floor plans and sign plans. For large projects an impact assessment may be required.

14:6 **FINAL PHASE PUD DEVELOPMENT PLAN**

For each final phase PUD development plan area, the application shall prepare and submit the following to the Planning Director:

- a. All information that is required for a site plan in Article XI of this Ordinance.
- b. A detailed list of existing and/or proposed exterior materials shall be provided and will become part of the PUD development plan.
- c. A detailed scale model indicating the three (3) dimensional character of the proposal shall be required if there is a proposed addition to the floor area of an existing building which results in an increase in land coverage or building height, or if any new buildings

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are proposed to be constructed. All applications shall include photographs of all sides of all existing buildings. Any additional graphics or written materials requested by the Planning Commission or the City Council to assist the City in visualizing and understanding the proposal shall be submitted.

- d. Approval of the final phase PUD development plan shall be conditioned upon execution of a development agreement which secures completion of all public and private improvements shown on the PUD development plan and describes how conditions required as part of the PUD approval are to be met.
- e. Approval of the final phase PUD development plan shall entitle the owner to apply for building permits.
- f. The proposed Planned Unit Development District and all proposed buildings, parking spaces, landscaping, open space and amenities must be started within three (3) years of the establishment of the district and work must be continued in a reasonably diligent manner and completed within five (5) years of the establishment of the district. Said five (5) year period may be extended if applied for by the petitioner and granted by the City Council in writing following public notices and a public hearing. Failure on the part of the owner to secure the written extension shall result in stoppage of all construction.
- g. PUD development plan.

14:7 MINOR AMENDMENTS TO APPROVED FINAL PUD DEVELOPMENT PLAN

Minor changes to a previously approved final phase PUD development plan may be approved by City Council after the plan has been reviewed by the Planning Director, Fire Chief, Building Director and City Engineer and they certify in writing that the proposed revision meets all requirements of this Ordinance and constitutes a minor alteration and does not alter the basic design nor any specific conditions of the plan as agreed upon by the Planning Commission and the City Council. The Planning Director shall record all such changes on the original final phase PUD development plan and shall advise the Planning Commission of all said minor revisions. Minor alterations or revisions under this Section shall include but not be limited to:

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- a. New fire escape.
- b. Change in building height that does not create new floor area.
- c. Relocation of sidewalks.
- d. Rearrangement of parking lot and drives.
- e. Decrease in building size.
- f. Moving a building no more than twenty (20) feet or twenty (20) percent of the distance to the closest property line, whichever is smaller.
- g. Other proposed amendments must follow the approval procedures for a new Planned Unit Development.

19:1 **PROVISIONS REPEALED**

The Zoning Ordinance of the City of Westland, being Ordinance No. 235, and all amendments thereto, are hereby repealed as of the effective date of this Ordinance provided that such repeal shall not affect or impair any prosecution arising from a violation of such Ordinance No. 235, which violation occurred prior to the effective date of this Ordinance.

15:1 PURPOSE

The regulations contained herein are instituted to provide for the establishment of signs that will promote viable commercial and industrial activity, but will not, by reason of their size, location, construction, or manner of display, endanger life or limb, confuse or mislead traffic, obstruct vision necessary for traffic safety, or otherwise endanger the public morals, health or safety. Furthermore, it is the intent of these regulations to preserve and improve the appearance of the City by preventing placement of 1) oversized signs that are out-of-scale with surrounding buildings and structures, and 2) an excessive accumulation of signs that would cause visual clutter. These regulations are further intended to regulate permitted signs in such a way as to create land use patterns that are compatible with other major land use objectives and to prevent such signs from causing annoyance or disturbance to the citizens and residents of the City.

15:2 SCOPE OF REQUIREMENTS

The regulations herein set forth shall apply to and govern signs in all districts. No sign shall be erected or maintained unless it is in compliance with the regulations governing location and bulk of structures for the district in which it is located, except when specifically provided for by a variance. Any sign already established on the effective date of this Ordinance, and which sign is rendered nonconforming by the provisions herein, and any sign which as a result of subsequent amendments hereto shall be rendered nonconforming, shall be subject to the regulations concerning nonconformities set forth in Section 15:3.6 of this Ordinance.

15:3 GENERAL LIMITATIONS**15:3.1 Exceptions**

The provisions of this Ordinance shall not apply to the following:

- a. Signs not visible beyond the boundaries of the lot or parcel upon which they are situated, or from any public thoroughfare or right-of-way.

- b. Miscellaneous traffic and other official signs of any public or governmental agency such as railroad crossing signs, trespassing signs, signs indicating danger, or signs used as aids to service or safety.
- c. Any identification of any official court or public office, notices thereof, parks, playgrounds, and community recreation facilities, or any flag, emblem or insignia of the nation, a political unit, or school.
- d. Any sign which is located completely within an enclosed building, and which sign is not visible from outside the building.
- e. Tablets, grave markers, headstones, statuary, or remembrances of persons or events that are noncommercial in nature.
- f. Works of fine art when not displayed in conjunction with a commercial enterprise which may receive direct commercial gain from such displays.
- g. Temporary decorations or displays celebrating the occasion of traditionally accepted patriotic or religious holidays, and special municipal and public school activities.
- h. Signs on a truck, bus, trailer, or other vehicle while operated in the normal course of a business which is not primarily the display of such sign.

15:3.2 Prohibited Signs

The following signs shall not be permitted, erected, or maintained in any district:

- a. Signs which incorporate any flashing or moving lights, or exposed incandescent light bulbs, except as specifically permitted. This prohibition shall not apply to LED or electronic display signs with static messages or images, as specifically authorized in this ordinance, provided that they meet the rate of change and maximum luminescence requirements of this ordinance.

- b. Banners, pennants, spinners, streamers, inflatable balloons, and benches with advertisements (except as authorized by Section 15:6.10 of this Article).
- c. String lights used in connection with commercial premises for commercial purposes, other than holiday decorations.
- d. Any sign which has any visible moving part, visible revolving parts or visible mechanical movement of any description or other apparent visible movement achieved by electrical, electronic, or mechanical means, including intermittent electrical pulsations, or by action of normal wind current. This prohibition shall not apply to LED or electronic display signs with static messages or images, as specifically authorized in this ordinance, provided that they meet the rate of change and maximum luminescence requirements of this ordinance.
- e. Any sign or sign structure which is structurally unsafe, or constitutes a hazard to safety or health by reason of inadequate maintenance, dilapidation or abandonment, or is not kept in good repair, or is capable of causing electrical shocks to persons likely to come in contact with it.
- f. Any sign which obstructs free ingress to or egress from a required door, window, fire escape, or other required exit way.
- g. Any sign which makes use of words such as "Stop", "Look", "Danger", or any other words, phrases, symbols, or characters, in such a manner as to interfere with, mislead, or confuse traffic.
- h. Any sign or other advertising structure containing any obscene, indecent or immoral matter.
- i. Any sign unlawfully installed, erected or maintained.
- j. Any sign now or hereafter existing which no longer advertises a bona fide business conducted, or a product sold.

- k. Portable or temporary signs, except as authorized herein or as approved pursuant to a variance from the Zoning Board of Appeals.
- l. Any sign attached to a standpipe, cutter drain, or fire escape, or any sign erected so as to impair access to a roof.
- m. Any outdoor advertising sign or billboard; however, this section shall not apply to billboards or outdoor advertising signs lawfully in existence at the time this ordinance becomes effective, as such signs may be maintained and repaired to continue their useful life, nor to those specific signs which are expressly allowed by the district regulations contained in this Ordinance. The maintenance and repair of an existing billboard may include upgrade to an LED or electronic display sign provided that: (1) the sign shall contain only static messages or images; (2) the rate of change between 2 static messages or images shall not exceed more than 1 change per 6 seconds; (3) each change shall be complete in 1 second or less; (4) the sign shall possess and utilize automatic dimming capabilities so that the maximum luminescence level is not more than 0.3 foot candles over ambient light levels measured at a distance of 150 feet for those sign faces less than or equal to 300 square feet, measured at a distance of 200 feet for those sign faces greater than 300 square feet but less than or equal to 378 square feet, measured at a distance of 250 feet for those sign faces greater than 378 square feet and less than 672 square feet, and measured at a distance of 350 feet for those sign faces equal to or greater than 672 square feet.; and (5) the sign shall be configured to default to a static display in the event of mechanical failure.
- n. Any sign which would project above the parapet line of any roof.
- o. Any sign which would project into any public right-of-way or other access way.
- p. Any sign which is attached to a tree, fence, or utility pole.
- q. Any for sale sign displayed on any vehicle parked on a commercial or business parking lot.

- r. Any other sign not specifically authorized by this Ordinance.
- s. High intensity search lights used for the attraction of business patrons and customers but not including any emergency lighting as may be required by police, fire or other emergency personnel.

15:3.3 Marquee Signs, Awnings and Canopies

- a. Where limitations are imposed by this Ordinance on the projection of signs from the face of the wall of any building or structure such limitations shall not apply to on-premise canopy or marquee signs, provided that any such on-premise sign located on a marquee or canopy shall be affixed flat to the vertical face thereof, and provided further that all marquee signs and canopies shall maintain the following clearances.

(1) Height

All marquee signs shall maintain a vertical clearance of not less than 10 feet above grade.

All identification canopies shall maintain a vertical clearance of not less than seven feet and six inches (7' 6") above grade.

(2) Projection

No marquee or canopy sign shall project into a public right-of-way.

- b. On-premise signs on awnings shall be exempt from the limitations imposed by this Ordinance on the projection of signs from the face of the wall of any building or structure, provided that any such sign located on the awning shall be affixed flat to the surface thereof, and shall be non-illuminated; provided, no such sign shall extend vertically or horizontally beyond the limits of said awning, and provided further that all awnings shall maintain the following clearances:

(1) Height

All awnings shall maintain a vertical clearance of not less than seven feet and six inches (7' 6") above grade.

(2) Projection

No awning shall project into a public right-of-way.

15:3.4 **"For Sale" and "For Rent" Sign**

Temporary, freestanding and wall-mounted signs offering the premises on which they are located "for sale," "for lease," or "for rent" shall be permitted in any district subject to the following controls:

- a. Area and Number: There shall be not more than one (1) such sign per zoning lot, except that on a corner zoning lot two (2) signs, one (1) facing each street, shall be permitted. One (1) sign shall be permitted for every 300 feet of frontage on an individual vacant unplatted lot or on contiguous vacant unplatted lots which are being offered as a single parcel, provided that the total frontage on the lot or lots exceeds 300 feet. No sign shall exceed six (6) square feet that is placed on a zoned lot or acreage with a frontage of less than three hundred (300) feet and shall not exceed sixteen (16) square feet on a zoned lot or acreage with a frontage greater than three hundred (300) feet.
- b. Height: No freestanding sign shall project higher than five (5) feet above the curb level.

- c. Duration: Temporary directional signs that indicate the location of a building or structure that is for sale, lease, or rent and open for public viewing shall be erected and removed in the same day that the building or structure is open for public viewing. All signs "For Sale," "For Lease," or "For Rent," shall be removed within ten (10) days of the sale, lease or rent of such land or building.

15:3.5 Political Signs

Temporary political signs with a total area not to exceed eight (8) square feet shall be permitted on private property. Such signs shall have a maximum height of eight (8) feet. No political sign shall be located in a public right-of-way or where it can block clear vision areas as set forth in Section 11:3.7.

15:3.6 Obsolete and Nonconforming Signs

- a. Obsolete signs which do not comply with the requirements of this ordinance, shall be removed by the owner, agent, or person having the beneficial use of the building or structure upon which such copy or message may be found, within thirty (30) days after written notification from the Enforcement Officer, and upon failure to comply with such notice within the time specified in such notice, the Enforcement Officer is hereby authorized to issue a citation and/or to cause removal of such copy or message, and any expense incident thereto shall be paid by the owner of the building, sign, or structure upon which such copy or message is displayed. Upon vacating a commercial establishment, the property owner shall be responsible for the removal of all non-conforming signs in conjunction with the business.
- b. It is the intent of this section to recognize that the existence of non-conforming signs is contrary to the best interests of the community. It is considered as much a subject of public health, safety and welfare as is the prohibition of the establishment of new signs in violation of the requirements of this ordinance. It is hereby declared to be the policy of the City of Westland, as expressed in this ordinance, to remove non-conforming signs as

expeditiously as is reasonable and as circumstances permit, having due regard for the rights of the parties concerned.

Any existing sign lawfully erected prior to the effective date of this ordinance, which does not comply with all of the requirements and provisions hereof, may be maintained, but such a non-conforming sign shall not be:

1. Replaced by or changed to another non-conforming sign;
2. Structurally altered so as to prolong the life of the sign or to change the shape, size, type or design of the sign unless the sign is brought into conformance with the requirements of this ordinance;
3. Repaired or reestablished after damage or destruction, if the estimated expense of reconstruction exceeds fifty (50) percent of the cost of an identical new sign;
4. Reestablished or maintained after the activity, business or usage to which it relates has been discontinued for a period of ninety (90) days or longer. In the case where the activity, business or usage which is discontinued occupies a portion of a non-conforming multi-tenant wall or ground sign, that portion of the sign identifying the previous use shall be painted out or replaced with a blank panel of the same color as the background color that it replaces until such time as fifty (50) percent or more of the total sign area is blank, at which time the entire sign structure is to be removed or replaced with a conforming sign; or
5. Changed to any extent, including changing the face or faces when such sign is of a type of construction which permits such a complete change of face; or any changes made in colors, words, letters or symbols used or the message displayed on the sign.

15:3.7 **Garage, Yard and Basement Sale Signs**

Temporary, freestanding garage, yard and basement sale signs shall be permitted in any district subject to the following restrictions:

- a. Area and Number: There shall not be more than one (1) such sign per zoning lot, nor more than three (3) per sale. Each sign shall not exceed six (6) square feet in area.
- b. Location: Each sign shall be located on a separate zoning lot and shall be placed on a lot only after the permission of the property owner has been obtained. No garage, yard or basement sale sign shall be permitted in any public right-of-way nor within three (3) feet of any property line. No wall-mounted signs shall be permitted.
- c. Height: No such sign shall project more than five (5) feet above curb level.
- d. Duration and Frequency of Use: Garage sale signs shall not be located on any zoning lot for more than four (4) consecutive days nor for more than a total of six (6) days during any 90-day period.

15:3.8 Construction and Maintenance

The construction, installation, erection, anchorage and maintenance of all signs shall be subject to the regulations of the Building Code. All electrical wiring associated with freestanding signs shall be installed underground.

15:3.9 Mounting of Signs

All signs shall be mounted on one of the following manners:

- a. Flat against a building or wall;
- b. Back to back in pairs, so that the backs of signs will be screened from public view;

- c. Clustered in an arrangement which will screen the backs of the signs from public view; or.
- d. Otherwise mounted so that the backs of all signs or sign structures showing to public view shall be painted and maintained a neutral color or a color that blends with surrounding environment.

15:3.10 **Limitation on Number of Signs**

In those districts within which a reduction in total sign area is applied as the number of signs increases, the following exemption is offered. If more than four (4) establishments occupy a single zoning lot, the 20 percent reduction in total sign area shall not apply if all signs are grouped in a single location or are part of a common sign for the entire zoning lot. In such instances, each establishment shall be permitted an additional wall-mounted sign of not more than 16 square feet in area and projecting not more than twelve (12) inches from the face of the wall or structure of the building.

15:3.11 **Measurement**

Except as noted, the area of all signs shall be computed by measuring the area of the regular shaped envelope required to enclose the lettering and/or logo and the structures to which the letters and/or logo are attached. In the case of a wall sign attached to the building, the envelope shall be around the letters. The sign support shall not be considered when measuring the area of a ground or freestanding sign. The area of a double-faced freestanding sign shall be computed using only one face of the sign provided that: (1) the outline and dimensions of both faces are identical, and (2) the faces are back-to-back so that only one face is visible at any given location.

The distance between two signs shall be measured along a straight line that represents the shortest distance between the two signs. The distance between a sign and a building, parking lot or storage or processing area shall be measured along a straight line that represents the shortest distance between the sign and the outer edge of the building, parking lot, or storage or processing area. The distance

between a sign and the building or property line shall be measured along a straight line that represents the shortest distance between the sign and the building or property line.

15:4 RESIDENCE DISTRICTS

The following signs shall be permitted in all residence districts:

15:4.1 Nameplate and Identification Sign

Nameplate and identification signs shall be permitted in residence districts subject to the following controls:

- a. Area and Location for One- and Two-Family Residential Uses: There shall be not more than one (1) nameplate or identification which shall be attached to the structure or freestanding, but not closer than three (3) feet to the property line. Said nameplate shall not exceed one (1) square foot in area, for each dwelling unit. On a corner lot, two (2) such nameplates shall be permitted for each dwelling unit, one (1) facing each street. No such sign shall project higher than five (5) feet above the curb line.
- b. Area and Location for Nonresidential Uses: There shall be not more than one (1) identification sign, which shall be attached to the structure, not to exceed twelve (12) square feet in area. On a corner lot, two (2) such signs, one (1) facing each street, shall be permitted. No such sign shall project higher than one story or fifteen (15) feet above curb level, whichever is lower.

15:4.2 Signs Accessory to Parking Areas

Signs accessory to parking areas shall be permitted in residence districts subject to the following controls:

- a. Area and Number: Signs designating parking area entrances or exits shall be limited to one (1) signs for each such exit or entrance, and to a maximum size of two (2) square feet each. One (1) sign per parking area, designating the

conditions of use or identity of such parking area and limited to a maximum size of nine (9) square feet, shall be permitted. On a corner lot, two (2) such signs, one (1) facing each street, shall be permitted. Directional signs, no parking signs, and signs identifying parking spaces for the handicapped shall be permitted as needed within parking area.

15:4.3 Temporary Signs Accessory to Residential Developments or Other Permitted Improvements

Temporary signs accessory to residential developments and other permitted improvements shall be permitted in residence districts subject to the following controls:

- a. The signs shall be only for the purpose of identification of homes, condominiums, apartments, or mobile home sites for sale or rent in the residential development under construction, or for the identification of other nonresidential uses under construction.
- b. Area, Number and Setback: Such signs shall not exceed two (2) in number for each development, or one (1) for each entrance to a subdivision, nor 100 square feet each in area. They shall observe the front yard requirements of the principal use and shall be located at least fifty (50) feet from all other boundaries of the site.
- c. Height: No sign shall project higher than fourteen (14) feet above curb level.
- d. Time Limitation: The sign or signs shall be removed by the applicant or property owner within two (2) years of the date of the issuance of the zoning certificate.

15:4.4 Residential Development Permanent Identification Signs

Residential development permanent identification signs shall be permitted in residence districts subject to the following controls:

- a. Area and Number: There shall be not more than one (1) sign located at each entrance to the subdivision or estate. No such sign shall exceed eight-five (85) square feet in area.
- b. Height: No sign shall project higher than six (6) feet above curb level.

15:4.5 Church Bulletin Boards

Church bulletin boards shall be permitted on lots occupied by Churches in residence districts subject to the following controls:

- a. Area and Number: There shall be not more than one (1) sign per lot, except that on a lot exceeding 100 feet of frontage, one sign shall be permitted for each 100 feet of frontage or portion thereof, and on a corner lot, two (2) signs, one facing each street shall be permitted even if total frontage is less than 100 feet. No sign shall exceed thirty-two (32) square feet in area.
- b. Location: No sign shall be located less than ten (10) feet from any property line.
- c. Height: No sign shall project higher than six (6) feet above the curb level.

15:4.6 Signs for Nonconforming Uses

Each nonconforming nonresidential use in a residential district shall be permitted one (1) accessory sign which shall conform to the requirements of Section 15:5.2.

15:5 OFFICE DISTRICT SIGNS

15:5.1 Signs for Residential District Uses in Office Business District

Signs for residential district uses in the Office Business District shall be governed by the sign regulations for residential district uses set forth in Section 15:4.

15:5.2 Wall-Mounted Identification Signs for Office and Other Nonresidential Permitted Uses

Wall-mounted identification signs shall be permitted in office districts subject to the following controls:

- a. **Area, Size and Number:** A single identification sign, not exceeding sixty-four (64) square feet in area may be displayed. On a corner zoning lot two (2) such signs, one (1) facing each street, shall be permitted.
- b. **Location and Height:** No such sign shall project more than eighteen (18) inches from the face of the wall of the building. The top of such sign shall be no higher than the lower of:
 - (1) Twenty-five (25) feet above grade;
 - (2) The top of the sills of the first level of windows above the first story; and
 - (3) The height of the building at the eaves facing the street on which the sign is located.

15:5.3 Freestanding Identification Signs for Office and Other Nonresidential Permitted Uses

Freestanding identification signs shall be permitted in office districts subject to the following controls:

- a. **Area, Size and Number:** A single freestanding on-premise sign, not exceeding thirty-two (32) square feet in area for buildings up to two (2) stories in height, and not exceeding fifty (50) square feet in area for buildings exceeding two (2) stores in height may be displayed. On a corner zoning lot two (2) such signs, one (1) facing each street, shall be permitted.

- b. Setback: Such sign shall be set back a minimum of fifteen (15) feet from the front lot line of such building or individual use. No sign shall be located less than ten (10) feet from any side or rear property line.
- c. Height: No sign shall project higher than ten (10) feet above curb level.
- d. Distance from Other Permitted Signs: Such sign shall be located at least fifty (50) feet from any other permitted sign on the zoning lot and fifty (50) feet from any existing freestanding sign on an adjacent zoning lot.

15:5.4 Signs for Nonconforming Uses

Signs for nonconforming nonresidential district uses shall conform to the requirements of Section 15:5.2.

15:5.5 Time, Temperature and Stock Market Signs

(As provided in Section 15:6.8.)

15:6 COMMERCIAL DISTRICT SIGNS

15:6.1 Signs for Residential District Uses in Commercial Districts

Signs for residential district uses in commercial districts shall be governed by the sign regulations for residential district uses set forth in Section 15:4. Signs accessory to parking areas shall conform to the requirements in Section 15:4.2.

15:6.2 Wall-Mounted Identification and Business Signs

Wall-mounted on-premise signs shall be permitted in commercial districts subject to the following controls:

- a. Area and Number: The gross area in square feet of all signs on a zoned lot shall not exceed one and one-half (1-1/2) square feet for each lineal foot of building frontage, or one-half (1/2) square foot for each lineal foot of lot

frontage, whichever results in the larger sign area; however, the maximum total of all permitted signs for any establishments shall not exceed two hundred (200) square feet.

- b. Location: No such sign shall project more than eighteen (18) inches from the face of the wall of the building. The top of such sign shall be no higher than the lower of:
 - (1) Twenty-five (25) feet above grade;
 - (2) The top of the sills of the first level of windows above the first story; and
 - (3) The height of the building at the eaves facing the street on which the sign is located.

15:6.3 Ground Signs

- a. For shopping centers in single ownership or under unified control, or individual uses with a minimum frontage of two hundred (200) feet, one (1) additional on-premise ground sign on each street frontage, other than those regulated in Section 15:6.2 above, shall be permitted, subject to the following controls:
 - (1) Area: The gross area in square feet permitted for the additional sign on a zoning lot shall not exceed one-half (1/2) square foot for each lineal foot of frontage of such zoning lot, or a total of one hundred (100) square feet, whichever is less. Up to 75% of the allowable gross area of the sign may be used for an LED or electronic display, provided such display complies with subsection c, below.
 - (2) Setback: Such sign shall be set back a minimum of ten (10) feet from the front lot line of such center or individual use. For each five (5) feet of sign setback in excess of the ten (10) foot minimum, the allowable sign height of such sign may be increased by ten (10) percent of the maximum permitted below.

- (3) Height: Signs shall have a two (2) foot brick or masonry base, and no sign shall project higher than fourteen (14) feet above curb level.
 - (4) Distance from Other Permitted Signs: Such sign shall be located at least fifty (50) feet from any other permitted sign on the zoning lot and fifty (50) feet from any existing freestanding or ground sign on an adjacent zoning lot.
- b. For individual uses, one additional on-premise ground sign on each street frontage, other than those regulated in Section 15:6.2 above will be permitted, subject to the following controls:
- (1) Area: The gross area in square feet permitted for the additional sign on a zoning lot shall not exceed one-third ($1/3$) square foot of frontage of such zoning lot, or a total of forty eight (48) square feet, whichever is less. Up to 75% of the allowable gross area of the sign may be used for an LED or electronic display, provided such display complies with subsection c, below.
 - (2) Setback: Such signs shall be set back a minimum of ten (10) feet from the front lot line of such individual use. For each five (5) feet of sign setbacks in excess of the 10-foot minimum, the allowable sign height of such sign may be increased by ten (10) percent of the maximum permitted below.
 - (3) Height: Signs shall have a two (2) foot brick or masonry base, and no sign shall project higher than eight (8) feet above curb level.
 - (4) Distance from Other Permitted Signs: Such sign shall be located at least thirty-five (35) feet from any other permitted sign on the zoning lot and thirty-five (35) feet from any existing freestanding or ground sign on an adjacent zoning lot.

- c. The LED or electronic display portion of a sign authorized in this section shall meet the following requirements: (1) the sign shall contain only static messages or images; (2) the rate of change between 2 static messages or to exceed more than 1 change per 6 seconds; (3) each change shall be complete in 1 second or less; (4) the sign shall possess and utilize automatic dimming capabilities so that the maximum luminescence level is not more than 0.3 foot candles over ambient light levels measured at a distance of 150 feet; and (5) the sign shall be configured to default to a static display in the event of mechanical failure.

15:6.4 **Permanent Window Signs**

Permanent non-illuminated on-premise signs shall be permitted on the inside of the glass of windows, provided that the total area of such sign does not exceed thirty (30) percent of the area of the window in which it is located and provided that the area of the sign be counted in determining the total area of the signs on the zoning lot.

15:6.5 **Temporary Window Signs**

Temporary non-illuminated on-premise window signs shall be permitted only for uses less than 10,000 square feet in total area and subject to the restriction that the total area of temporary and permanent window signs shall not exceed thirty (30) percent of the area of the window in which they are located.

15:6.6 **Temporary Window Signs Advertising Sales**

Temporary on-premise signs pertaining to special sales or events lasting no more than fifteen (15) days may be affixed to windows provided that their total area does not exceed thirty (30) percent of the window area. Such signs shall not be counted in determining the total area of signs on the zoning lot.

15:6.7 **Signs for Nonconforming Uses**

Signs for nonconforming nonresidential district uses shall conform to all the provisions of this Section (Section 15:6).

15:6.8 Time, Temperature, and Stock Market Signs

Time, temperature, or stock market signs shall be permitted provided the following conditions are met:

- a. The message change shall not be more frequent than once every ten (10) seconds.
- b. The area of these types of signs shall be included within the maximum sign area permitted on the site.
- c. One (1) time, temperature, or stock market sign shall be permitted per street frontage.

15:6.9 Gasoline Service Station Signs

Gasoline service stations may only display the following special signs which are deemed customary and necessary to their respective business:

- a. Numbers: One (1) customary lettering or other insignia on a gasoline pump containing the brand of gasoline sold, lead warning sign, and any other sign required by law. Two (2) non-illuminated double-faced signs per gasoline pump island may be placed for the purpose of displaying gasoline or other commodity prices and for designating "Attendant Served" or "Self Served." One (1) double-face combination identification sign and gasoline price sign shall be permitted in front facing the street. The number of wall-mounted on-premise signs on the building shall be determined by the Planning Director, in accordance with the maximum allowable gross area of these signs. No portable or temporary signs are permitted.
- b. Areas: The signs on the pump shall not exceed three (3) square feet on each pump. The non-illuminated double-faced signs on the pump island shall not

exceed four (4) square feet for each sign. The combined identification sign and gasoline price sign shall not exceed a total of forty eight (48) square feet, which includes the border map, background frame, etc., as a regular shaped envelope. Up to 50% of the allowable gross area of the combined identification sign and gasoline price sign may be used for an LED or electronic display, provided such display complies with subsection c of Section 15:6.3 of this ordinance. The total gross area of the wall-mounted identification or business signs on the building cannot exceed one-half (1/2) square foot for each lineal foot of lot frontage, the maximum total area not to exceed seventy (70) square feet as a regular shaped envelope.

- c. Location: The pump signs and the pump island signs shall be placed at or on their respective locations. The double-faced front combined identification sign and gasoline price sign shall be placed back from the property line so the edge of both signs will not encroach over the street right-of-way line. The wall-mounted identification or business signs shall not project more than eighteen (18) inches from the face of the wall of the building.
- d. Height: The bottom of the pump island signs shall not exceed a maximum height of two (2) feet above the pumps. The combined identification and gasoline price sign shall have a two (2) foot brick or masonry base, and such sign shall project no higher than eight (8) feet above curb level. The top of the wall-mounted identification or business sign on the building shall not exceed the requirements for any other wall-mounted signs, as indicated under Commercial District Signs of this Article of this Ordinance.
- e. Setback: The combined identification and gasoline price sign shall be set back a minimum of ten (10) feet from the front lot line of the parcel or lot of the individual use.
- f. Secondary Uses: In the event that a gasoline service station also contains a secondary use within the structure, a second ground sign is allowed on the zoning lot. This second ground sign may not exceed twenty four (24) square

feet in size. In height, this sign shall have a two (2) foot brick or masonry base, and such sign shall project no higher than eight (8) feet above curb level. This sign shall be set back a minimum of ten (10) feet from the front lot line of the parcel or zoning lot.

15:6.10 Temporary Signs or Banners Advertising a Grand Opening or Special Event

- a. A business shall be allowed up to three (3) temporary signs or banners for a grand opening or special event for a period of not more than seven (7) consecutive days, and no more than two (2) separate occurrences per calendar year.
- b. The signs or banners may be wall mounted or mounted to the ground. If the temporary signs or banners are mounted on the ground, they shall be set back a minimum of ten (10) feet from the front lot line of the zoning lot of the business.
- c. The size of any temporary sign or banner shall not exceed thirty-two (32) square feet.
- d. All temporary signs and banners shall be professionally constructed and shall be securely attached to the ground or the building.
- e. A fee in the amount provided for in the Westland City Code, Chapter 46, Section 46-1(7) shall apply."

15:6.11 Super-Regional Shopping Center Sign Regulation.

The following sign regulations shall apply to shopping centers which contain a minimum of 900,000 square feet of floor area in one contiguous building.

Wall-Mounted Identification and Business Signs

Wall-mounted on-premise signs shall be permitted in commercial districts subject to the:

- a. Area and Number: The gross area in square feet of all signs on a zoned lot shall not exceed one and one-half (1½) square feet for each lineal foot of building frontage, or one-half (½) square foot for each lineal foot of lot frontage, whichever results in the larger sign area; however, the maximum total of all permitted signs for any single establishment shall not exceed four hundred (400) square feet.
- b. Location: No such sign shall project more than eighteen (18) inches from the face of the wall of the building. The top of such sign shall be no higher than the lower of:
 - (1) Twenty-five (25) feet above grade;
 - (2) The top of the sills of the first level of windows above the first story; and,
 - (3) The height of the building at the eaves facing the street on which the sign is located.

Free-Standing Signs

For shopping centers in single ownership or under unified control, or individual uses with a minimum frontage of two hundred (200) feet, one (1) additional on-premise sign on each street frontage, other than those regulated, shall be permitted, subject to the following controls:

- (1) Area: The gross area in square feet permitted for the additional sign on a zoning lot shall not exceed one-half (½) square foot for each lineal foot of frontage of such zoning lot, or a total of one hundred (100) square feet, whichever is less.
- (2) Setback: Such sign shall be set back a minimum of fifteen (15) feet from the front lot line of such center or individual use. For each five (5) feet of sign setback in excess of the fifteen (15) foot minimum, the allowable sign height

of such sign may be increased by ten (10) percent of the maximum permitted below.

- (3) Height: No sign shall project higher than fourteen (14) feet above curb level.
- (4) Distance from Other Permitted Signs: Such sign shall be located at least fifty (50) feet from any permitted sign on the zoning lot and fifty (50) feet from any existing freestanding sign on an adjacent zoning lot.

15:7 INDUSTRIAL DISTRICT SIGNS

15:7.1 Signs for Residential District Uses in Industrial Districts

Signs for residential district uses in industrial districts shall be governed by the sign regulations for residential district uses set forth in Section 15:4. Signs accessory to parking areas shall conform to the requirements of Section 15:4.2.

15:7.2 Signs for Office District Uses and Commercial District Uses in Industrial Districts

Signs for office district uses and commercial district uses in industrial districts shall be governed by the sign regulations for office district and commercial district uses set forth in Section 15:5 and Section 15:6, respectively.

15:7.3 Wall-Mounted Identification and Business Signs

Wall-mounted on-premise signs shall be permitted in industrial districts subject to the following controls:

- a. Area: The gross area in square feet of all signs on a zoning lot shall not exceed one (1) square foot for each lineal foot of lot frontage. Where more than two (2) signs are located on any zoning lot, the third such sign and each succeeding sign, respectively, shall reduce the total allowable sign area by twenty (20) percent.

- b. Location: No such signs shall exceed the dimensions regulated in Section 15:6.2(b).

15:7.4 **Freestanding Industrial Park Signs**

For industrial parks and for individual industrial uses with more than 500 linear feet of frontage, other than those signs regulated in 15:7 above, an on-premise freestanding sign shall be permitted, subject to the following controls:

- a. Area: The gross area in square feet of the additional sign on a zoning lot shall exceed one-half ($1/2$) times the lineal feet of frontage of such zoning lot; however, the gross surface area of such additional sign shall in no case exceed two hundred (200) square feet.
- b. Setback: Such sign shall be set back a minimum of fifteen (15) feet from the front lot line of such industrial park or use. For each five (5) feet of sign setback in excess of the 15-foot minimum, the allowable sign height may be increased by ten (10) percent of the maximum permitted below.
- c. Height: No sign shall project higher than fourteen (14) feet above curb level.
- d. For individual uses with less than five hundred (500) lineal feet of frontage, freestanding signs or ground signs will be regulated under Section 15:5.3.

15:7.5 **Freestanding and Wall-Mounted Advertising Signs**

Freestanding and wall-mounted advertising signs shall be allowed in the industrial districts subject to the following controls:

- a. Advertising signs shall be counted in determining the total sign area permitted on the zoning lot.
- b. Freestanding advertising signs shall not be permitted on zoning lots with another freestanding sign.

- c. Advertising signs shall not exceed fourteen (14) feet in height.

OFF-STREET PARKING TABLE (PARKING CLASSES)

RESIDENTIAL

- | | | |
|---|---|---|
| 1 | One-Family, Duplex Units | 2 parking spaces for each dwelling unit. |
| 2 | Residential, Multiple Family
(Apartments, Condominiums, and
Cooperatives) | |
| | (a) Efficiency and One-Bedroom Units | 1.5 parking spaces for each dwelling unit. |
| | (b) Two-Bedroom Units or more | 2 parking spaces for each dwelling unit. |
| | (c) Accessory Uses -- Maintenance
Facilities | One (1) space for each employee |
| | (d) Accessory Uses -- Community
Buildings | One (1) space for each 300 square feet
of floor area. |
| | (e) Guest Parking Required | One (1) space for each five (5) dwelling units. |
| 3 | Boarding, Rooming, Lodging
Establishments and/or Tourist Homes | 1.1 parking space for each occupancy unit plus
1 parking space for each employee. |
| 4 | Senior Citizen Housing | 1 parking space for each dwelling unit plus 1
parking space for each employee. Should units
revert to general occupancy, then parking
spaces shall be provided as indicated in No. 2
above. |
| 5 | Mobile Homes | As set forth in Article VIII. |

INSTITUTIONAL

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|---|---|---|
| 6 | Church, Chapel, Synagogue, Temple, or
other place of Worship | 1 parking space for each 3 seats or 6 lineal feet
of pews in the main unit of worship |
| 7 | Colleges, Junior College, or University | 1 parking space for each 4 students based on
design capacity in addition to the requirements
for the assembly hall, stadium, or sports arena. |

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|----|--|---|
| 8 | Industrial or Vocational School, including Commercial Schools, Business Schools, Business Machine Schools, and Computer Technology Schools | 1 parking space for every teacher, employee and administrator, and one parking space for each 2 students. Additional parking shall be provided to accommodate any retail sales or service activities conducted. |
| 9 | Elementary, Junior High Schools, and Intermediate Schools | 1 parking space for each teacher, administrator, or other employee in addition to the requirements of the auditorium. The number of teachers, administrators, and other employees shall be based on the design capacity of the facility. If there is no auditorium or assembly hall, then 2 spaces per classroom shall be provided in addition to those for each teacher, administrator, or employee. |
| 10 | Fraternities or Sororities, Dormitories, or other Residence Halls | 1 parking space for each 4 beds or 1 for each 1,000 square feet of floor space, whichever is greater. |
| 11 | Homes for Aged, Nursing Facilities, Convalescent Homes, Convents, Children's Homes, and Orphanages | 1 parking space for each 4 beds plus 1 space for each employee on the premises, based on largest number of employees on the premises at one time. |
| 12 | Hospitals and Sanitariums | 1 parking space for every 2 beds plus 1 for each 5 outpatients plus 1 additional space for each employee, computed on the basis of the greatest number in the largest working shift. In hospitals, bassinets shall not be counted as beds. |
| 13 | Library | 1 parking space for each 300 square feet of floor space, plus 1 parking space per employee on the largest shift. |
| 14 | Museum, Cultural Center, or similar facility | 1 parking space for each 300 square feet of floor space, plus 1 parking space per employee on the largest shift. |

15	Post Office	1 parking space for every 300 square feet of floor area over 4,000 square feet, plus one space for each person employed on the largest shift.
16	Private Civic, Fraternal Club or Lodge	1 parking space for every 50 square feet of floor area, or 1 per 3 persons of maximum occupancy as established by the Fire Marshal, whichever is greater.
17	Private Golf Clubs, Country Clubs	1 parking space for every 2-member family or individual member.
18	Private Swimming Pool Clubs	1 parking space for every 2-member family or individual member.
19	Public Golf Courses	6 parking spaces per golf hole plus 1 parking space per employee.
20	Swimming Pools (Community)	1 parking space for every 4 persons lawfully permitted plus 1 per employee.
21	Senior High Schools	1 parking space for every teacher, employee, or administrator, plus 1 parking space for every 10 students in addition to the requirements for the assembly hall, stadium, or sports arena.
22	Stadium, Sports Arena, or similar place of assembly	1 parking space for each 3 seats or similar vantage accommodation provided or 1 parking space for each 6 lineal feet of benches.
23	Theaters, Auditoriums, Assembly Halls,	<p>(a) With Fixed Seating: 1 parking space for each 3 seats and similar vantage accommodation, or 1 parking space for each 6 lineal feet of benches, or 1 parking space per 3 persons based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee.</p> <p>(b) Without Fixed Seating: 1 parking space for</p>

every 3 persons who may legally be admitted therein at one time under occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee.

COMMERCIAL

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|----|---|--|
| 24 | Ambulance Service and Rescue Squad | Adequate space to accommodate all motor vehicle operated in connection with such use and 1 additional parking space for each employee. |
| 25 | Athletic Clubs, Physical Exercise Establishments, Health Studios, Sauna Baths, Judo Clubs | 1 parking space per patron based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee on a major shift. |
| 26 | Automobile Service and Filling Stations | 1 parking space for each lubrication stall, rack, or pit, plus 1 space for each service vehicle, plus either 1 space for each fuel pump, plus 1 space for each employee on the largest shift, whichever is greater. |
| 27 | Automatic Laundries, Wash Racks | 1 space for each 2 employees. In addition, reservoir parking space equal in number to 30 spaces for the first car each lane and 20 spaces for each additional lane. |
| 28 | Automobile Washes (Self-service or coin operated) | 5 stacking spaces for each washing stall in addition to the stall itself, plus two drying spaces for each washing stall. |
| 29 | Auto Repair, Buffing, and/or Collision | 1 parking space per bay plus 1 space per each employee on the largest shift. The area used to store damaged or inoperative vehicles shall be screened as required for outdoor storage areas in Article XI and shall not be counted as off-street parking. Adequate area shall be provided to store 2 vehicles for every service bay. |

30	Banks, Financial Institutions	1 parking space for every 200 square feet of floor area, plus 1 for each employee.
31	Banks, Financial Institutions with Drive-in Windows	1 parking space for every 200 square feet of floor area plus 8 stacking spaces for the first drive-in window and 6 stacking spaces per each additional window.
32	Beauty Parlor, Barber Shop or Tanning Salon	3 parking spaces per beauty, barber chair or bed
33	Bowling Alleys	5 parking spaces for each bowling lane in addition to the requirements for a place serving food or beverages on the site, plus 1 parking space per employee on the largest shift.
34	Dance Halls, Roller or Skating Rinks, Exhibition Halls, and Assembly Halls without fixed seats	Either 1 parking space for each 50 square feet of floor area, or 1 parking space for every 3 persons based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 space per employee on the largest shift.
35	Day Care Center, Child Care Centers, Nursery School, School of Special Education, and Schools for the Mentally and Physically disadvantaged	1 parking space for each teacher, administrator, or other employee in addition to the requirement of the auditorium. The number of teachers, administrators, and other employees shall be based on the design capability of the facility. If there is no auditorium or assembly hall, then 2 spaces per classroom shall be provided in addition to those for each teacher, administrator or employee.
36	Eating Establishments/Prepared Food Pickup	
	(a) Drive-thru Restaurant	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each employee on the largest shift, whichever is larger, plus

	sufficient area for 8 stacking spaces for the first drive-in window and 6 stacking spaces per each window.
(b) Drive-in Restaurant (eating only allowed in vehicle with no seating facilities)	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each employee on the largest shift, in addition to the spaces provided for customer service.
(c) Drive-in Restaurant with seating facilities (eating allowed in vehicles)	1 parking space per 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or 1 parking space per employee on the largest shift, whichever is larger, in addition to the spaces provided for drive-in service.
(d) Fast-food Restaurant serving portions over a counter or at a cafeteria line	1 parking space for 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or one parking space per employee on the largest shift, whichever is greater.
(e) Snack Bar serving food over a counter to patrons who eat in their cars or in the open air	10 parking spaces per service station, plus 1 space for each employee on the largest shift.
(f) Restaurant serving prepared-to-order meals brought to patrons' tables by waiters or waitresses	1 parking space per 100 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or 1 parking space per employee on the largest shift, whichever is greater.
(g) Restaurant serving prepared-to-order meals brought to patrons' tables by waitresses with entertainment and/or dance license.	One (1) parking space per 75 square feet of gross floor area, plus one (1) space for each employee on the largest shift.
37 Furniture and Appliance Household Equipment Repair Shops, Showroom of a Plumber, Decorator, Electrician, or similar trade, Shoe Repair, and other similar uses.	1 parking space for every 500 feet of floor area.

38	Hotel and Motel or other	1 parking space per rental unit, plus either 1 parking space for each employee on the largest shift, or 1 parking space for each 10 rental units, whichever is greater, plus such spaces as are required for restaurants, bars, taverns, assembly rooms and affiliated facilities.
39	Laundromats and Coin-Operated Dry	1 parking space per each 2 washing and/or dry cleaning machines.
40	Miniature or "Par 3" Golf Courses and Golf Driving Ranges	2 parking spaces for each hole, or tee, plus 1 parking space for each employee.
41	Mortuary Establishments, Funeral Homes and Funeral Chapels	1 parking space for each 50 square feet of area used for services, parlors, and slumber rooms.
42	(New) Motor Vehicle Sales, Rental, and Service Establishments	1 parking space for each 200 square feet of floor area exclusive of the service area, plus 1 parking space for each auto service stall in the service room, plus 1 space per employee on the largest shift.
43	(Used) Motor Vehicle Sales	1 parking space for every 500 square feet of outdoor sales area plus 1 space for each auto service stall, plus 1 space per employee on the largest shift.
44	Pool Room, Billiard Parlor, and Table Game Establishments	Either 1 parking space per pool table, billiard table, or game, plus 1 space for every 20 square feet of floor area or 1 parking space per 3 persons based on occupancy load as established by local, county, and state fire, building, and health codes, whichever is greater.
45	Open Air Businesses, including Nurseries	1 space per 500 square feet of land area being utilized for retail purposes, plus 1 space per employee.
46	Public Utility Facilities, such as	1 parking space per employee. This shall apply

communications equipment buildings,
and electrical substations not open to the
public

to the maximum number of employees on duty
at any one time.

- 47 Retail stores, including Hardware and
Sporting Goods Store, except as
otherwise specified herein.

1 parking space for every 200 square feet of
gross floor area, plus either 1 parking space
per each employee working on the premises
on the largest shift, or 1 space per 1,000
square feet of gross floor area, whichever is
greater.

- 48 Retail Lumber Yards

2.5 parking spaces for each employee on the
largest shift, plus spaces as required above for
enclosed retail sales areas.

- 49 Roadside Vegetable and Fruit Stands

4 parking spaces

- 50 Shopping Centers

Gross Leasable Floor Area (G. L. A.)

Spaces Per 1,000 sq. ft. of G. L. A.

25,000 to 400, 000 sq. ft.
Over 400,000

Four (4) spaces
4.5 spaces

- 51 Supermarkets, Self-Service Food Stores,
and Convenience Food Stores

1 parking space for every 200 square feet of
gross floor area or fraction thereof.

- 52 Tennis Clubs and Court-Type
Recreation Uses

1 parking space per each person permitted by
the capacity of the courts, plus such additional
spaces as may be required herein for affiliated
uses such as bars, restaurants, or assembly
space, plus 1 space per employee.

- 53 Taxi Terminals

1 parking space for each employee on the
largest working shift, plus 1 space per company
vehicle, screened as required in Article XI for
outdoor storage area, plus sufficient spaces to
accommodate the largest number of visitors ma
be expected at any one time.

OFFICE

- | | | |
|----|---|--|
| 54 | Business and Professional Offices of Architects, Engineers, Landscape Architects, Lawyers or similar or allied professions. | 1 parking space for each 200 square feet of floor area. |
| 55 | Professional Offices of Medical or Dental Practitioner's or similar professions | 1 parking space for each 100 square feet of floor area or a minimum of not less than 4 spaces, plus 1 space for each employee. |

INDUSTRIAL

- | | | |
|----|--|--|
| 56 | Manufacturing Establishment or Establishment for Production, Processing, Assembly, Compounding, Preparation, Cleaning, Servicing, Testing, Repair, or Storage of Materials, Goods or Products, and Business Offices accessory thereto. | 5 parking spaces, plus 2 for every employee in the largest working shift or 1 per 2,000 square feet of gross floor area, plus 1 for each 200 square feet of office floor area. |
| 57 | Wholesale and Warehouse Establishments | 1 parking space per employee on the largest shift, plus 1 space per company vehicle, plus sufficient space to accommodate the largest number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area. |
| 58 | Heavy Equipment Storage Yard, Nonretail Lumber and Building | 1 parking space per employee on the largest shift, plus 1 space per company vehicle and piece of mobile equipment plus sufficient space to accommodate the largest number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area. |
| 59 | Uses Under Construction | Space on site shall be provided for all construction workers during periods of construction. |
| 60 | Drive-up windows or pick-up stations | Eight (8) stacking spaces for the first drive-up window or station and six (6) additional stacking spaces per each additional window or pick-up station. |

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ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS16.0

16:1 SCOPE AND APPLICATION

16:1.1 Scope of Regulations

The off-street parking and loading provisions of this Ordinance shall apply as follows:

- a. For all buildings and structures erected and all uses of land established after the effective date of this Ordinance, accessory parking and loading facilities shall be provided as required by the regulations of the districts in which such buildings or uses are located. However, where a building permit has been issued prior to the effective date of this Ordinance and provided that construction is begun within six (6) months of such effective date and diligently prosecuted to completion, parking and loading facilities in the amounts required for the issuance of said building permit may be provided in lieu of any different amounts required by this Ordinance.
- b. When the intensity of use of any building, structure, or premises shall be increased through the addition of dwelling units, gross floor area, seating capacity, or other units of measurement specified herein for required parking or loading facilities, parking and loading facilities as required herein shall be provided for such increase in intensity of use and for 100 percent of any existing building, structure, or premises even if less than 100 percent of the required parking and loading facilities was provided before the increase in intensity. For the purpose of this Section, required parking and loading facilities shall be as set forth in this Ordinance unless modified by a variance granted subsequent to the enactment of this Ordinance. When additional parking and loading areas are provided said additional parking and loading areas and all existing parking and loading areas shall be made to conform to the appropriate site plan regulations set forth in Article XI of this Ordinance.
- c. Whenever the existing use of a building or structure shall hereafter be changed to a new use, parking or loading facilities shall be provided as required by this Ordinance for such new use without regard to any variance which might have been in effect prior to the change of use.

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16:1.2 Existing Parking and Loading Facilities

Accessory off-street parking and loading facilities in existence on the effective date of this Ordinance and located on the same lot as the building or use served shall not hereafter be reduced below, or if already less than, shall not be further reduced below, the requirements for a similar new building or use under the provisions of this Ordinance.

16:1.3 Permissive Parking and Loading Facilities

Nothing in this Ordinance shall be deemed to prevent the voluntary establishment of off-street parking or loading facilities to serve any existing use of land or buildings, provided that all regulations herein governing the location, design, and operation of such facilities are adhered to.

16:1.4 Damage or Destruction

For any conforming or legally nonconforming building or use which is in existence on the effective date of this Ordinance, which subsequently thereto is damaged or destroyed by fire, collapse, explosion or other cause, and which is reconstructed, reestablished, or repaired, off-street parking or loading facilities need not be provided, except that parking or loading facilities equivalent to any maintained at the time of such damage or destruction shall be restored or continued in operation. However, in no case shall it be necessary to restore or maintain parking or loading facilities in excess of those required by this Ordinance for equivalent new uses or construction. Nothing in this section shall be deemed to permit the reconstruction, reestablishment, or repair of any nonconforming use except in accordance with the provisions of Article V.

16:1.5 Submission of Plot Plan

Any application for a building permit, or for an occupancy certificate where no building permit is required, shall include therewith a plot plan--drawn to scale and

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

fully dimensioned--showing any off street parking or loading facilities, as well as all structures, to be provided in compliance with this Ordinance. Whenever a site plan is required in accordance with the provisions of Article XII of this Ordinance, said site plan shall meet the requirements of this Section.

16:2 OFF-STREET PARKING

16:2.1 General Requirements

a. Location

All parking spaces required to serve building or uses erected or established after the effective date of this Ordinance shall be located on the same zoning lot as the building or use served, except that parking spaces to serve commercial or industrial buildings or uses may be located within one hundred (100) feet of the zoning lot on which such use is located if said spaces and uses are located in a commercial or industrial district, and if said spaces are not required to meet the needs of handicapped persons. Buildings or uses existing on the effective date of this Ordinance which are subsequently altered or enlarged so as to require the provision of parking spaces under this Ordinance, may be served by parking facilities located on land other than the zoning lot on which the building or use served is located provided such facilities are within one hundred (100) feet walking distance of a main entrance to the use served. Owners of property, nonconforming as to parking who elect to provide parking and become conforming may locate such parking on land other than the zoning lot on which the building or use is located, as allowed in this section.

- b. Off-street parking spaces, open to the sky, may be located in any yard, except the required front yards in a residence district. Enclosed buildings and carports containing off-street parking shall be subject to applicable yard requirements. Said off-street parking shall be hard surfaced in accordance with the Engineering standards of the City and shall not exceed 33% of the required front yard.

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS¹⁶⁰

c. **Control of Off-Site Parking**

In cases where parking facilities are permitted on land other than the zoning lot on which the principal building or use served is located, such facilities shall be in the same possession as the zoning lot occupied by the building or use to which the parking facilities are accessory. Such possession shall be filed with the Department of Planning of the City of Westland. If possession is by lease, said lease shall be for a term extending not less than twenty (20) years beyond the date on which the property receives final approval for meeting the parking requirements of this Ordinance. The deed or lease shall require such owner or his or her heirs and assigns to maintain the required number of parking facilities for the duration of the use served or of the deed or lease, whichever shall terminate sooner.

d. **Size**

Except for parallel parking spaces, each required off-street parking space shall be at least nine (9) feet in width and at least eighteen (18) feet in length, exclusive of access drives or aisles, ramps, columns, or office or work areas. Such space shall have a vertical clearance of at least seven (7) feet. For parallel parking, the length of the parking space shall be increased to twenty-four (24) feet. All other requirements as to size shall be as hereinafter set forth in the attached Off-Street Parking Chart.

e. **Access**

Except on lots accommodating single-family dwellings, each off-street parking space shall open directly upon an aisle or driveway at least twenty (20) feet wide or such additional width and design as to provide safe and efficient means of vehicular access to such parking space. All off-street parking facilities shall be designed with appropriate means of vehicular access to a street or alley in a manner which will least interfere with traffic movement.

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f. **Collective Provision**

No parking space or portion thereof shall serve as a required space for more than one (1) use. Off-street parking facilities for separate uses may be provided collectively. If parking facilities for separate uses are provided collectively, the total number of spaces so provided shall not be less than the number which would be required if the spaces were provided separately, except that the total number of spaces may be reduced by up to twenty-five (25) percent if such a reduction is specifically approved as part of required site plan review approval. Such an approval shall be granted only on a showing that the parking demands of the two uses do not overlap in time.

g. **Computation**

When determination of the number of off-street parking spaces required by this Ordinance results in a requirement of a fractional space, any fraction of less than one-half ($\frac{1}{2}$) may be disregarded, while a fraction of one-half ($\frac{1}{2}$) or more shall be counted as one (1) parking space. Parking spaces required on an employee basis shall be based on the maximum number of employees on duty or residing, or both, on the premises at any one time. Unless otherwise stated, for the purposes of computing parking requirements, floor area shall be measured in accordance with the definition of "floor area" as set forth in Article XVIII.

h. **Parking Spaces for Physically Handicapped**

- (1) Number: A parking lot servicing each entrance of a building, excepting single- or two-family residential or temporary structures, shall have a number of level parking spaces as set forth in the following table, and identified by above grade signs as reserved for physically handicapped persons.

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Total Spaces in Parking Lot	Required Number of Accessible Spaces
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
Over 1000	100 plus 1 for each 100 over 1000

- (2) Size: Parking spaces reserved for the physically handicapped shall not be less than twelve (12) feet wide and must meet all other applicable requirements as to size as set forth in Article XVI of this Ordinance.
- (3) Location: Parking spaces for the physically handicapped shall be located as close as possible to elevators, ramps, walkways, and entrances. Parking spaces shall be located so that the physically handicapped persons are not compelled to wheel or walk behind parked cars to reach entrances, ramps, walkways, and elevators.
- (4) Curbs: Where a curb exists between a parking lot surface and a sidewalk surface, an inclined curb approach or a curb cut with a gradient of not more than one (1) foot in twelve (12) feet and a width of not less than four (4) feet shall be provided for wheelchair access.

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

I. Design and Maintenance

- (1) Plan: The design of parking lots or areas shall be subject to the approval of the City Engineer, in accordance with Parking Lot Ordinance 189 and Handicappers Parking Ordinance 228.
- (2) Character: Accessory parking spaces may be open to the sky, or enclosed in a building.
- (3) Surfacing: All open off-street parking areas, access lanes, and driveways, including those accessory to single-family and two-family residences shall be surfaced with a dustless all-weather material. All parking areas except those serving one- and two-family residences shall be surfaced as required by Ordinance 189 of the City of Westland.
- (4) Screening and Landscaping: Except for those serving one- and two-family dwellings, all open vehicle parking areas containing more than three (3) parking spaces shall be screened and landscaped as required in Article XI of this Ordinance.
- (5) Lighting: Any lighting used to illuminate off-street parking areas shall be directed away from residential properties and public streets in such a way as not to create a nuisance. However, in no case shall such lighting exceed one (1.0) footcandle power measured at the lot line.
- (6) Wheel Stops: Except for those serving one- and two-family dwellings, all parking lots shall be provided with wheel stops or bumper guards so located that no part of parked vehicles will extend beyond the property line or into required landscaped areas or over any sidewalks whether private or public.
- (7) Shelter Building: No parking lot for accessory off-street parking shall have more than one (1) attendant shelter building. All shelter buildings shall conform to all setback requirements for structures in the district.

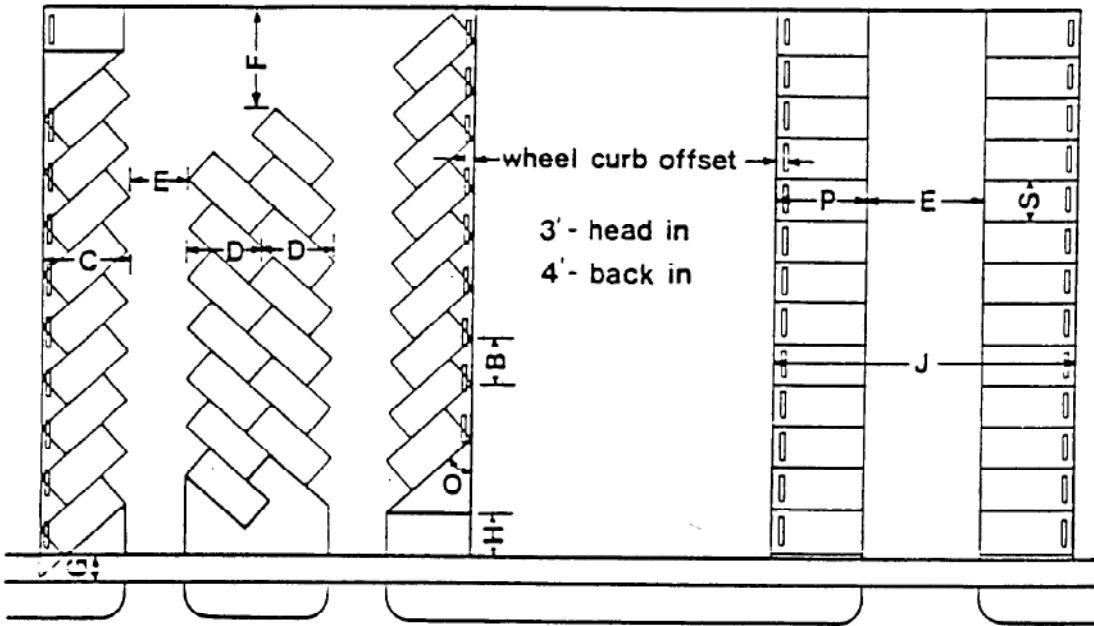
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- (8) Signs: Accessory signs shall be permitted on parking areas in accordance with the provisions specified in Article XV of this Ordinance.
- (9) Repair and Service: No commercial motor vehicle repair work or service of any kind shall be permitted in association with accessory parking facilities except that emergency service required to start vehicles shall be permitted.
- (10) Loud Speakers Prohibited: The use of loud speakers shall be prohibited in all parking areas, except between the hours of 7:00 a.m. and 7:00 p.m. The restriction on the use of loud speakers shall not apply to parking areas serving single- or two-family residences or when loud speakers are used for municipally sponsored civic functions.
- (11) Provisions for bicycle racks, and motorcycle and scooter parking may be provided.

16:2.2 Specific Requirements

All off-street parking spaces hereinafter required by this Ordinance, except those required for one and two-family dwellings, shall be designed in accordance with one of the formulae set forth in the Off-Street Parking Chart, which chart is attached hereto and made a part hereof. Off-street parking spaces shall be provided in accordance with the specific Parking Classes as hereinafter set forth in the Off-Street Parking Table (Parking Classes). whenever any building, structure, or zoning lot contains more than one (1) use listed in the Off-Street Parking Chart then each use shall be considered in determining total parking needs. Parking spaces for accessory uses not specifically enumerated within a parking class shall be assumed to be included in the principal (permitted or special land) use requirement. If, for any reason, the classification of any use, for the purpose of determining the amount of off-street parking, or the number of spaces provided by such use is not readily determinable hereunder, the parking class of such use shall be fixed by the Zoning Board of Appeals.

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS16.0



OFF-STREET PARKING CHART
OFF-STREET PARKING TABLE OF DIMENSIONS (IN FEET)

O	S*	P	B	C	D	E	F	G	H	J
0°	9	18	24.0	9.0	9.0	20	--	0.0	25	36.0
30°	9	18	18.0	17.0	13.0	20	20	13.5	25	52.0
45°	9	18	12.7	19.1	15.9	20	20	6.4	25	56.2
60°	9	18	10.4	20.1	17.8	20	20	2.6	25	60.2
90°	9	18	9.0	18.0	18.0	22	22	0.0	25	58.0
* Provisions for small car parking spaces may be permitted in shopping centers at the discretion of the Planning Commission at the time of site plan review.										

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NOTE: O = PARKING ANGLE
 S = PARKING SPACE WIDTH
 P = PARKING SPACE LENGTH
 B = CURB LENGTH OF PARKING SPACE WIDTH
 C = PERPENDICULAR LENGTH OF STALL (AGAINST WALL)
 D = PERPENDICULAR LENGTH OF STALL (OVERLAP)
 E = AISLE WIDTH
 F = TURN AROUND AISLE WIDTH
 G = OVERHANG OF CURB LENGTH AT PERIPHERY
 H = MINIMUM SETBACK, EXCEPT FOR CB-1 (15 FEET)
 J = WALL-TO-WALL DIMENSION

4 Senior Citizen Housing OFF-STREET PARKING TABLE (PARKING CLASSES)

RESIDENTIAL

- | | | |
|---|---|--|
| 1 | One-Family, Duplex Units | 2 parking spaces for each dwelling unit. |
| 2 | Residential, Multiple Family
(Apartments, Condominiums, and
Cooperatives) | 5 Mobile Homes |

(a) Efficiency and One-Bedroom Units

(b) Two-Bedroom Units or more

(c) Accessory Uses -- Maintenance
Facilities

(d) Accessory Uses -- Community
Buildings

(e) Guest Parking Required

- | | | |
|---|---|--|
| 3 | Boarding, Rooming, Lodging
Establishments and/or Tourist Homes | 1 parking space for each occupancy unit plus
1 parking space for each employee. |
|---|---|--|

INSTITUTIONAL

6 Church, Chapel, Synagogue, Temple, or
Other place of Worship

7 2 parking spaces for each dwelling unit
Colleges, Junior College, or University

One (1) space for each employee

8 Industrial or Vocational School, including
One (1) space for each 300 square feet
of floor area.
Commercial Schools, Business Schools,
Business Machine Schools, and Computer
Technology Schools

One (1) space for each five (5) dwelling units.

9.1 parking space for each occupancy unit plus
1 parking space for each employee.
Elementary, Junior High Schools, and
Intermediate Schools

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

		requirements of the auditorium. The number of teachers, administrators, and other employees shall be based on the design or capacity of the facility. If there is no auditorium or assembly hall, then 2 spaces per classroom shall be provided in addition to those for each teacher, administrator, or employee.	shift.
10	Fraternities or Sororities, Dormitories, or other Residence Halls	17 Private Golf Clubs, Country Clubs 1 parking space for each 4 beds or 1 for each 1,000 square feet of floor space, whichever is greater 18 Private Swimming Pool Clubs	1 par floor occup which
11	Homes for Aged, Nursing Facilities, Convalescent Homes, Convents, Children's Homes, and Orphanages	1 parking space for each 4 beds plus 1 space for each public golf course on the premises, based on largest number of employees on the premises at one time.	1 par individ
12	Hospitals and Sanitariums	20 Swimming Pools (Community) 1 parking space for every 2 beds plus 1 for each 5 outpatients plus 1 additional space for each employed high school on the basis of the greatest number in the largest working shift. In hospitals, bassinets shall not be counted as beds.	1 par perm
13	Library	21 Single-Space Sports Area 300, square feet of floor space, plus 1 parking space per employee on the largest shift.	1 par vanta ing sp
14	Museum, Cultural Center, or similar facility	23 The space, Auditorium, Assembly Halls, floor space, plus 1 parking space per employee on the largest shift.	(a) W er m 6 p lo st e e
15	Post Office	1 parking space for every 300 square feet of floor area over 4,000 square feet, plus one space for each person employed on the largest	

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

		29	Auto Repair, Buffing, and/or Collision	1 par
		(b)	Without Fixed Seating: 1 parking space for every 3 persons who may legally be admitted therein at one time under occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee.	empl store scree in Ar street vide
		30	Banks, Financial Institutions	1 par floor
COMMERCIAL				
24	Ambulance Service and Rescue Squad	3	Adequate space for each ambulance and 1 additional parking space for each employee.	1 par floor drive each
25	Athletic Clubs, Physical Exercise Establishments, Health Studios, Sauna Baths, Judo Clubs	32	Beauty Parlor, Barber Shop or Tanning Salon occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee on a major shift.	3 par bed 5 par addit servin parki shift.
26	Automobile Service and Filling Stations		1 parking space for each lubrication stall, rack, or pit, plus 1 space for each service vehicle, plus either 1 space for each fuel pump, plus 1 space for each roller or skid steer, which is used for the purpose of moving, without fixed seats	Eithe of flo perso estab build great large
27	Automatic Laundries, Wash Racks		1 space for each 2 employees. In addition, reservoir parking space equal in number to 30 spaces for the first car each lane and 20 spaces for each additional lane.	
28	Automobile Washes (Self-service or coin operated)	35	Day Care Center, Child Day Center, Nursery School, School of Special Education, and School for the Mentally and Physically disadvantaged	1 par or oth of the admi

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

		based on the design capability of the facility. (f) If the Restaurant is serving prepared food, then 2 spaces per meal brought to patrons' tables by waiters or waitresses, administrator, or employee.	1 parking area, square space which
36	Eating Establishments/Prepared Food Pickup	(g) Restaurant serving prepared-to-order meals brought to patrons' tables by	One (1) gross empl
	(a) Drive-thru Restaurant	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each employee on the largest shift, whichever is larger, plus 37 sufficient for 8 Appliances, Hoses, and the first drive-Equipment Repair Shop, open on each window. Plumber, Decorator, Electrician, or similar trade, Shoe Repair, and other	1 parking floor
	(b) Drive-in Restaurant (eating only allowed in vehicle with no seating facilities)	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each 38 employee on the largest shift, in addition to the spaces provided for customer service.	1 parking large rental space taver facilities
	(c) Drive-in Restaurant with seating facilities (eating allowed in vehicles)	1 parking space per 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or 1 parking space per employee on the largest shift, whichever is larger, in addition to the spaces 39 provided for drive-ins and Drive-Operated Dry	1 parking clean
	(d) Fast-food Restaurant serving portions over a counter or at a cafeteria line	1 parking space for 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or one parking space per employee on the largest shift, which- 40 ever is greater. Mortuary Establishments, Funeral Homes and Funeral Chapels	2 parking
	(e) Snack Bar serving food over a counter to patrons who eat in their cars or in the open air	10 parking spaces per service station, plus 1 43 space (New) for each vehicle on each shift, and Service Establishments	1 parking floor

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS160

		49 parking space for vegetable and fruit stands, the service room, plus 1 space per employee on the largest shift.	4 par
		50 large Shipping Centers	
43	(Used) Motor Vehicle Sales	1 parking space for every 500 square feet of outdoor sales area plus 1 space for each auto service stall, plus 1 space for 400,000 sq ft on the largest shift. Over 400,000	Space
44	Pool Room, Billiard Parlor, and Table Game Establishments	5 Either 1 parking space for every 200 square feet of floor area or 1 parking space per 52 persons. Tennis Clubs and Country Type as established by local, county, and state fire, building, and health codes, whichever is greater.	1 par gross 1 par the c space uses space
45	Open Air Businesses, including Nurseries	1 space per 500 square feet of land area being utilized for retail purposes, plus 1 space per employee.	1 par larger vehic outdo accor be ex
46	Public Utility Facilities, such as communications equipment buildings, and electrical substations not open to the public	1 parking space per employee. This shall apply to the maximum number of employees on duty at any one time.	
47	Retail stores, including Hardware and Sporting Goods Store, except as otherwise specified herein.	OFFICE 1 parking space for every 200 square feet of gross Business and Professional Office space per each employee, Engineering and Architecture, Architect, Lawyer, space per 1,000 allied square feet of gross floor area, whichever is greater.	1 par floor
48	Retail Lumber Yards	55 Professional Offices of Medical or Dental Practitioners shall employ 2.5 parking spaces as required above for enclosed retail sales areas.	1 par floor space

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56	Manufacturing Establishment or Establishment for Production, Processing, Assembly, Compounding, Preparation, Cleaning, Servicing, Testing, Repair, or Storage of Materials, Goods or Products, and Business Offices accessory thereto.	5 parking spaces, plus 2 for every employee in the largest working shift or 1 per 2,000 square feet of gross floor area, plus 1 for each 200 square feet of office floor area.
57	Wholesale and Warehouse Establishments	1 parking space per employee on the largest shift, plus 1 space per company vehicle, plus sufficient space to accommodate the largest number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area.
58	Heavy Equipment Storage Yard, Nonretail Lumber and Building	1 parking space per employee on the largest shift, plus 1 space per company vehicle and piece of mobile equipment plus sufficient space to accommodate the largest number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area.
59	Uses Under Construction	Space on site shall be provided for all construction workers during periods of construction.
60	Drive-up windows or pick-up stations	Eight (8) stacking spaces for the first drive-up window or station and six (6) additional stacking spaces per each additional window or pick-up station.

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16:3 OFF-STREET LOADING

16:3.1 General Requirements

a. Location

All permitted and required loading berths shall be located as provided herein, and loading berths not so located shall be prohibited. Except as provided in Section "g" below, all required loading berths shall be located on the same zoning lot as the use served. No permitted or required loading berth shall be located within thirty (30) feet of the nearest point of intersection of any two streets. Any permitted or required loading berth may be located in a rear yard including a required rear yard setback area. Any permitted or required loading berth may be located in a non-required front or side yard, but not in a required front or side yard setback area.

b. Size

Unless otherwise specified, a required off-street loading berth shall be at least 10 feet in width by at least 30 feet in length, exclusive of aisle and maneuvering space, and shall have a vertical clearance of at least 15 feet.

c. Access

Each required off-street loading berth shall be designed with appropriate means of vehicular access to a street or alley in a manner which will least interfere with traffic movement. A determination that this standard is met shall be made during site plan approval.

d. Surfacing

All open off-street loading berths shall be surfaced with a dustless all-weather material as required by Ordinance 189 of the City of Westland.

e. Repair and Service

- (1) Residence and Business Districts: No commercial motor vehicle repair work or service of any kind shall be permitted in association with loading facilities in any residential or business district. Emergency service required to start vehicles shall be permitted.

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- (2) Industrial Districts: No motor vehicle repair work or service of any kind shall be permitted in conjunction with loading facilities provided in an Industrial District if such loading facilities are within five hundred (500) feet of a Residence or Business District. Washing of accessory vehicles and emergency service required to start vehicles shall be permitted.

f. **Utilization**

Space allocated to any off-street loading use shall not, while so allocated, be used to satisfy the space requirements for any off-street parking facilities or portions thereof.

g. **Central Loading**

Central loading facilities may be substituted for loading berths on the individual zoning lots provided the following conditions are fulfilled:

- (1) Each zoning lot served shall have direct access to the central loading area without crossing streets or alleys at-grade.
- (2) Total off-street loading berths provided shall meet the minimum requirements herein specified, based on the sum of the several types of uses served. Area of types of uses may be totaled before computing number of loading berths.
- (3) No zoning lot served shall be more than five hundred (500) feet removed from the central loading area.
- (4) The tunnel or ramp connecting the central loading area with the zoning lot served shall be not less than seven (7) feet in width and have a clearance of not less than seven (7) feet.

h. **Minimum Facilities**

Uses for which off-street loading facilities are required herein, but which are located in buildings of less floor area than the minimum prescribed for such required facilities, shall be provided with adequate receiving facilities, accessible by motor vehicle off any adjacent alley, service drive, or open space on the same zoning lot.

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16:3.2 Specific Requirements

a. Residence Districts

Off-street loading facilities accessory to uses allowed in the several residence districts shall be provided in accordance with the following minimum requirements:

- (1) Health and medical institutions. One (1) loading berth shall be provided for buildings containing 10,000 to 100,000 square feet of gross floor area, plus one (1) additional loading berth for each additional 100, 000 square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of two hundred thousand (200,000) square feet in gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
- (2) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing 10,000 to 100,000 square feet of gross floor area, plus one additional loading berth for each additional 100,000 square feet of gross floor area or fraction thereof.
 - (a) Apartment hotels.
 - (b) Educational and cultural institutions.
 - (c) Philanthropic and charitable institutions.
 - (d) Religious institutions.
- (3) Planned Unit Development: Loading berths shall be provided on the basis of the required berths for each individual use.
- (4) Recreational and social facilities: For buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, one (1) loading berth shall be provided, and for each additional one hundred thousand (100,000) square feet of gross floor area.
- (5) For all other nonresidential uses, loading facilities shall be provided in accordance with the following requirements:

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- (a) For buildings containing less than 10,000 square feet of gross floor area, there shall be provided on the same zoning lot adequate receiving facilities (accessible by motor vehicle) off any adjacent alley, service drive, or open space.
- (b) For buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, one (1) off-street loading berth shall be provided.
- (c) For buildings containing over 100,000 square feet of gross floor area, there shall be provided one (1) loading berth for each 100,000 square feet of gross floor area or fraction thereof.
- (vi) Multiple-family dwellings and rooming houses: Parking space shall be set aside for delivery trucks and moving vans as near as possible to the entrance of each multiple-family structure or rooming house, in a location where there will be minimal disruption to traffic circulation and no blockage of tenant parking.

b. **Business Districts**

Off-street loading spaces accessory to uses permitted in the several business districts shall be provided in accordance with the following minimum requirements:

- (1) Any use listed in residence district that also is permitted in any of the several business districts shall provide loading spaces as established for that use in the preceding section for residence districts.
- (2) Establishments containing less than 7,000 square feet of gross floor area shall be provided with adequate facilities, accessible by motor vehicle off any adjacent alley, service drive, or open space on the same zoning lot.
- (3) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing 7,000 to 40,000 square feet of gross floor area. For buildings containing 40,000 to 100,000 square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional 100,000 square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of

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100,000 square feet of gross floor area shall not be less than 10 feet in width by 55 feet in length.

- (a) Cartage and express facilities.
 - (b) Mail order houses.
 - (c) Printing and publishing.
 - (d) Restricted production and repair.
 - (e) Warehousing, storage and wholesale establishments.
- (4) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area; one (1) additional loading berth shall be provided for each additional one hundred thousand (100,000) square feet of gross floor area.
- (a) Banks and financial institutions.
 - (b) Medical and dental clinics.
 - (c) Offices, business, professional and governmental.
 - (d) Recreation buildings and community centers, noncommercial.
- (5) For the uses listed hereunder, one (1) ten (10) foot by fifty (50) foot space shall be provided for buildings containing up to thirty thousand (30,000) square feet; one (1) additional loading berth shall be provided for each additional twenty thousand (20,000) square feet of gross floor area.
- (a) Specialty food and beverage stores.
 - (b) Grocery stores and supermarkets.
- (6) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, plus one (1) additional loading berth for each additional one hundred fifty thousand (150,000) square

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feet of gross floor area or fraction thereof. Each loading berth for buildings in excess of twenty thousand (20,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.

- (a) Clubs and lodges (not-for-profit) containing retail shops, convention halls, auditoriums, exhibition halls, or business or professional offices (other than accessory).
 - (b) Convention halls.
 - (c) Exhibition halls.
 - (d) Radio and television stations and studios.
 - (e) Recording studios.
 - (f) Hotels and motels containing retail shops, convention halls, auditoriums, exhibition halls, or business or professional offices.
 - (g) Stadiums, auditoriums and arenas.
- (7) For all other uses, loading facilities shall be provided in accordance with the following schedule:

<u>Gross Floor Area of Establishments in Thousands of Square Feet</u>	<u>Required Number and Size of Berths</u>
7 to 60	1--(10 ft. x 30 ft.)
61 to 100	2--(10 ft. x 30 ft. each)

For each additional 200,000 square feet in gross floor area or fraction thereof, over 100,000 square feet of gross floor area, one (1) additional loading berth shall be provided, such additional berth to be at least ten (10) feet in width by fifty-five (55) feet in length.

c. **Industrial Districts**

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Off-street loading facilities accessory to uses allowed in the several industrial districts shall not be located in a required front yard setback area, but shall be provided in accordance with the following minimum requirements:

- (1) Any production, processing, cleaning, servicing, testing, repair, or storage of materials, goods, or products: For buildings containing seven thousand (7,000) to forty thousand (40,000) square feet of gross floor area, one (1) loading berth shall be provided. For buildings containing forty thousand (40,000) to one hundred thousand (100,000) square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of ten thousand (10,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
- (2) For uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area; one (1) additional loading berth shall be provided for each additional one hundred thousand (100,000) square feet of gross floor area.
 - (a) Medical and dental clinics.
 - (b) Recreation buildings or community centers.
- (3) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, plus one (1) additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of twenty thousand (20,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
 - (a) Airports and commercial heliports.

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- (b) Air and railroad freight terminals, railroad switching and classification yards, repair shops, and roundhouses.
 - (c) Radio and television stations and studios.
 - (d) Municipal sewage treatment plants.
 - (e) Stadiums, auditoriums and arenas.
- (4) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to two hundred thousand (200,000) square feet of gross floor area, plus one (1) additional two hundred thousand (200,000) square feet of gross floor area or fraction thereof.
 - (a) Trade schools.
- (5) For the uses listed hereunder, there shall be no requirements for off-street loading.
 - (a) Parking lots.
 - (b) Weighing stations.
- (6) Motor freight terminals: For buildings containing five thousand (5,000) to forty thousand (40,000) square feet of gross floor area, one (1) loading berth shall be provided. For buildings containing forty thousand (40,000) to one hundred thousand (100,000) square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of ten thousand (10,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.

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- (7) Planned industrial developments, manufacturing: Loading berths shall be provided on the basis of the required berths for each individual use.
- (8) For all other uses, loading facilities shall be provided in accordance with the following schedule:

<u>Gross Floor Area of Establishments in Thousands of Square Feet</u>	<u>Required Number and Size of Berths</u>
7 to 40	1--(12 ft. x 30 ft.)
41 to 100	2-- (12 ft. x 30 ft. each)

For each additional two hundred thousand (200,000) square feet of gross floor area or fraction thereof, over one hundred thousand (100,000) square feet of gross floor area, one (1) additional loading berth shall be provided, such additional berth to be at least ten (10) feet in width by fifty-five (55) feet in length.

16:4 ACCESS MANAGEMENT

16:4.1 Intent

The intent of access management is to improve traffic operations; reduce potential for crashes; improve pedestrian and transit environments; and preserve the vehicular carrying capacity of roads through regulations on the number, spacing, placement and design of access points (driveways and intersections).

16:4.2 Applicability

The following applications, except those for single-family homes, duplexes or essential service facility structures, must comply with the standards in this Section:

a. **Land Division, Subdivision or Site Condominium**

Any land division or subdivision or site condominium development, including residential developments.

b. **Site Plan Review.** Site changes subject to site plan review in accordance with *Section 12:1*

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Intent and Applicability, changes in or expansions on sites where any of the following will result:

- (i) Any increase in intensity of use of any building, structure, or lot through the addition of dwelling units, increase in floor area, increase in seating capacity, or through other means.
- (ii) The amount of parking required by *Section 16:2 Off-Street Parking* will increase by 20 spaces or by more than 10%, whichever is less.
- (iii) The existing driveway(s) does not meet current geometric engineering design standards enforced by the appropriate governing jurisdiction, as applicable.
- (iv) The site is located along a segment that experiences congestion.
- (v) The site is located along a segment that has experienced high crash rates.
- (vi) Any access that is within 250 feet of a signalized intersection (measured at the edge of the right-of-way).
- (vii) The change will increase auto trips into and out of the site by more than 25% or 50 total trips in the peak hour, as estimated using the most recent edition of the ITE Trip Generation Manual.
- (viii) Any access that does or is expected to exceed 100 total trips per peak hour, or 1,000 total trips daily.

16:4:3 Standards

The following regulations of this Section shall be considered by the Planning Commission and City Council:

a. **Compliance with Sub-Plans**

Where specific sub-plans have been adopted, such as the Ford Road Access Management Plan, access shall generally adhere to the recommendations and standards contained therein. Where conflicts arise, the standards and specific recommendations of the plan shall prevail.

b. **Number of Driveways**

The number of resulting driveways shall be the fewest necessary to provide reasonable access to the site. Each lot shall be permitted reasonable access, which may consist of an individual driveway, a shared access with an adjacent use, or access via a service drive.

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c. **Offsets and Spacing from Intersections**

Driveways shall be either directly aligned or spaced/offset as far from intersections as practical, especially signalized intersections. A minimum spacing or offset of 150 feet is preferred.

d. **Driveway Spacing**

Access points shall be spaced as far as practical from other driveways on the same side of the road, considering the posted speed limit along the road segment. The spacing listed in Table 1 is preferred.

Table 1
Minimum Driveway Spacing* - Same Side

Posted Speed (mph)	Driveway Spacing (in feet)	
	Arterial Road	Other Roads
25	130	90
30	185	120
35	245	150
40	300	185
45	350	230
50 +	455	275

*Unless greater spacing is required by MDOT or Wayne County.

e. **Driveway Offsets on Undivided Roads**

Driveways shall be either aligned with driveways on the opposite side of the road or offset to the greatest distance practical. Consideration for weaving across travel lanes shall be given, especially where signalized intersections are present. The offsets listed in Table 2 are preferred.

Table 2
Minimum Driveway Offset – Opposing Side

Posted Speed (mph)	Driveway Spacing (in feet)
25	255
30	325
35	425
40	525
45	630
50 +	750

f. **Driveway Locations on Divided Roads**

Access points along divided roads shall be located in consideration of median crossovers. Access points shall directly align with or be offset a sufficient distance from median crossovers to allow for weaving across travel lanes and storage within the median. A minimum offset of 250 feet is preferred.

g. **Consideration of Adjacent Sites**

Where the subject site adjoins land that may be developed or redeveloped in the future, the access shall be located to ensure the adjacent site(s) can also meet the access location standards in the future.

h. **Shared Driveways**

Where direct access consistent with the above regulations cannot be achieved, access should be provided via a shared driveway or service drive.

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i. **Access Design**

Where practical given right-of-way constraints, driveways shall be designed with radii, tapers and other geometrics as determined by the appropriate governing jurisdictions that are required to minimize the impacts of inbound right turns on traffic flow.

16:4:4 **Administration**

Applications subject to review shall be processed according to the following:

a. **Submittal Information**

Along with any other information required in *Section 12:3.3 Detailed Information*, the Planning Commission and the City Council may require developments subject to review according to this Section to submit a traffic impact report, prepared by a qualified traffic engineer, to verify the need for additional driveways or to justify a modification.

b. **Allowed Modifications**

It is recognized that certain existing site conditions may prohibit full compliance with this Section. The City Council may, after considering the criteria in (iii) below, modify the standards of this Section in the following situations:

- (i) The modification will allow an existing driveway to remain that does not meet the standards of this Section but that has, or is expected to have very low traffic volumes (less than 50 in- and out-bound trips per day) and is not expected to significantly impact safe traffic operations.
- (ii) The use is expected to generate a relatively high number of trips and an additional driveway will improve overall traffic operations.
- (iii) Practical difficulties exist on the site that make compliance unreasonable (sight distance limitations, existing development, topography, unique site configuration or shape), or existing off-site driveways make it impractical to fully comply with the standards.
- (iv) Because of restricted turning movements or presence of a median that restricts turning movements, the driveway does not contribute to congestion or an unsafe situation.

c. **Modification Criteria**

The City Council may waive certain requirements of this Section upon consideration of the following:

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- (i) The proposed modification is consistent with the general intent of the standards of this ordinance.
- (ii) The appropriate governing jurisdiction endorses the proposed access design.
- (iii) Driveway geometrics have been improved to the extent practical to reduce impacts on traffic flow.
- (iv) Shared access has been provided, or the applicant has demonstrated it is not practical. Such modification is the minimum necessary to provide reasonable access, will not impair public safety or prevent the logical development or redevelopment of adjacent sites and is not simply for convenience of the development.

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16:1 SCOPE AND APPLICATION

16:1.1 Scope of Regulations

The off-street parking and loading provisions of this Ordinance shall apply as follows:

- a. For all buildings and structures erected and all uses of land established after the effective date of this Ordinance, accessory parking and loading facilities shall be provided as required by the regulations of the districts in which such buildings or uses are located. However, where a building permit has been issued prior to the effective date of this Ordinance and provided that construction is begun within six (6) months of such effective date and diligently prosecuted to completion, parking and loading facilities in the amounts required for the issuance of said building permit may be provided in lieu of any different amounts required by this Ordinance.
- b. When the intensity of use of any building, structure, or premises shall be increased through the addition of dwelling units, gross floor area, seating capacity, or other units of measurement specified herein for required parking or loading facilities, parking and loading facilities as required herein shall be provided for such increase in intensity of use and for 100 percent of any existing building, structure, or premises even if less than 100 percent of the required parking and loading facilities was provided before the increase in intensity. For the purpose of this Section, required parking and loading facilities shall be as set forth in this Ordinance unless modified by a variance granted subsequent to the enactment of this Ordinance. When additional parking and loading areas are provided said additional parking and loading areas and all existing parking and loading areas shall be made to conform to the appropriate site plan regulations set forth in Article XI of this Ordinance.
- c. Whenever the existing use of a building or structure shall hereafter be changed to a new use, parking or loading facilities shall be provided as required by this Ordinance for such new use without regard to any variance which might have been in effect prior to the change of use.

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16:1.2 Existing Parking and Loading Facilities

Accessory off-street parking and loading facilities in existence on the effective date of this Ordinance and located on the same lot as the building or use served shall not hereafter be reduced below, or if already less than, shall not be further reduced below, the requirements for a similar new building or use under the provisions of this Ordinance.

16:1.3 Permissive Parking and Loading Facilities

Nothing in this Ordinance shall be deemed to prevent the voluntary establishment of off-street parking or loading facilities to serve any existing use of land or buildings, provided that all regulations herein governing the location, design, and operation of such facilities are adhered to.

16:1.4 Damage or Destruction

For any conforming or legally nonconforming building or use which is in existence on the effective date of this Ordinance, which subsequently thereto is damaged or destroyed by fire, collapse, explosion or other cause, and which is reconstructed, reestablished, or repaired, off-street parking or loading facilities need not be provided, except that parking or loading facilities equivalent to any maintained at the time of such damage or destruction shall be restored or continued in operation. However, in no case shall it be necessary to restore or maintain parking or loading facilities in excess of those required by this Ordinance for equivalent new uses or construction. Nothing in this section shall be deemed to permit the reconstruction, reestablishment, or repair of any nonconforming use except in accordance with the provisions of Article V.

16:1.5 Submission of Plot Plan

Any application for a building permit, or for an occupancy certificate where no building permit is required, shall include therewith a plot plan--drawn to scale and

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fully dimensioned--showing any off street parking or loading facilities, as well as all structures, to be provided in compliance with this Ordinance. Whenever a site plan is required in accordance with the provisions of Article XII of this Ordinance, said site plan shall meet the requirements of this Section.

16:2 OFF-STREET PARKING

16:2.1 General Requirements

a. Location

All parking spaces required to serve building or uses erected or established after the effective date of this Ordinance shall be located on the same zoning lot as the building or use served, except that parking spaces to serve commercial or industrial buildings or uses may be located within one hundred (100) feet of the zoning lot on which such use is located if said spaces and uses are located in a commercial or industrial district, and if said spaces are not required to meet the needs of handicapped persons. Buildings or uses existing on the effective date of this Ordinance which are subsequently altered or enlarged so as to require the provision of parking spaces under this Ordinance, may be served by parking facilities located on land other than the zoning lot on which the building or use served is located provided such facilities are within one hundred (100) feet walking distance of a main entrance to the use served. Owners of property, nonconforming as to parking who elect to provide parking and become conforming may locate such parking on land other than the zoning lot on which the building or use is located, as allowed in this section.

- b. Off-street parking spaces, open to the sky, may be located in any yard, except the required front yards in a residence district. Enclosed buildings and carports containing off-street parking shall be subject to applicable yard requirements. Said off-street parking shall be hard surfaced in accordance with the Engineering standards of the City and shall not exceed 33% of the required front yard.

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c. **Control of Off-Site Parking**

In cases where parking facilities are permitted on land other than the zoning lot on which the principal building or use served is located, such facilities shall be in the same possession as the zoning lot occupied by the building or use to which the parking facilities are accessory. Such possession shall be filed with the Department of Planning of the City of Westland. If possession is by lease, said lease shall be for a term extending not less than twenty (20) years beyond the date on which the property receives final approval for meeting the parking requirements of this Ordinance. The deed or lease shall require such owner or his or her heirs and assigns to maintain the required number of parking facilities for the duration of the use served or of the deed or lease, whichever shall terminate sooner.

d. **Size**

Except for parallel parking spaces, each required off-street parking space shall be at least nine (9) feet in width and at least eighteen (18) feet in length, exclusive of access drives or aisles, ramps, columns, or office or work areas. Such space shall have a vertical clearance of at least seven (7) feet. For parallel parking, the length of the parking space shall be increased to twenty-four (24) feet. All other requirements as to size shall be as hereinafter set forth in the attached Off-Street Parking Chart.

e. **Access**

Except on lots accommodating single-family dwellings, each off-street parking space shall open directly upon an aisle or driveway at least twenty (20) feet wide or such additional width and design as to provide safe and efficient means of vehicular access to such parking space. All off-street parking facilities shall be designed with appropriate means of vehicular access to a street or alley in a manner which will least interfere with traffic movement.

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f. **Collective Provision**

No parking space or portion thereof shall serve as a required space for more than one (1) use. Off-street parking facilities for separate uses may be provided collectively. If parking facilities for separate uses are provided collectively, the total number of spaces so provided shall not be less than the number which would be required if the spaces were provided separately, except that the total number of spaces may be reduced by up to twenty-five (25) percent if such a reduction is specifically approved as part of required site plan review approval. Such an approval shall be granted only on a showing that the parking demands of the two uses do not overlap in time.

g. **Computation**

When determination of the number of off-street parking spaces required by this Ordinance results in a requirement of a fractional space, any fraction of less than one-half ($\frac{1}{2}$) may be disregarded, while a fraction of one-half ($\frac{1}{2}$) or more shall be counted as one (1) parking space. Parking spaces required on an employee basis shall be based on the maximum number of employees on duty or residing, or both, on the premises at any one time. Unless otherwise stated, for the purposes of computing parking requirements, floor area shall be measured in accordance with the definition of "floor area" as set forth in Article XVIII.

h. **Parking Spaces for Physically Handicapped**

- (1) Number: A parking lot servicing each entrance of a building, excepting single- or two-family residential or temporary structures, shall have a number of level parking spaces as set forth in the following table, and identified by above grade signs as reserved for physically handicapped persons.

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Total Spaces in Parking Lot	Required Number of Accessible Spaces
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
Over 1000	100 plus 1 for each 100 over 1000

- (2) Size: Parking spaces reserved for the physically handicapped shall not be less than twelve (12) feet wide and must meet all other applicable requirements as to size as set forth in Article XVI of this Ordinance.
- (3) Location: Parking spaces for the physically handicapped shall be located as close as possible to elevators, ramps, walkways, and entrances. Parking spaces shall be located so that the physically handicapped persons are not compelled to wheel or walk behind parked cars to reach entrances, ramps, walkways, and elevators.
- (4) Curbs: Where a curb exists between a parking lot surface and a sidewalk surface, an inclined curb approach or a curb cut with a gradient of not more than one (1) foot in twelve (12) feet and a width of not less than four (4) feet shall be provided for wheelchair access.

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I. Design and Maintenance

- (1) Plan: The design of parking lots or areas shall be subject to the approval of the City Engineer, in accordance with Parking Lot Ordinance 189 and Handicappers Parking Ordinance 228.
- (2) Character: Accessory parking spaces may be open to the sky, or enclosed in a building.
- (3) Surfacing: All open off-street parking areas, access lanes, and driveways, including those accessory to single-family and two-family residences shall be surfaced with a dustless all-weather material. All parking areas except those serving one- and two-family residences shall be surfaced as required by Ordinance 189 of the City of Westland.
- (4) Screening and Landscaping: Except for those serving one- and two-family dwellings, all open vehicle parking areas containing more than three (3) parking spaces shall be screened and landscaped as required in Article XI of this Ordinance.
- (5) Lighting: Any lighting used to illuminate off-street parking areas shall be directed away from residential properties and public streets in such a way as not to create a nuisance. However, in no case shall such lighting exceed one (1.0) footcandle power measured at the lot line.
- (6) Wheel Stops: Except for those serving one- and two-family dwellings, all parking lots shall be provided with wheel stops or bumper guards so located that no part of parked vehicles will extend beyond the property line or into required landscaped areas or over any sidewalks whether private or public.
- (7) Shelter Building: No parking lot for accessory off-street parking shall have more than one (1) attendant shelter building. All shelter buildings shall conform to all setback requirements for structures in the district.

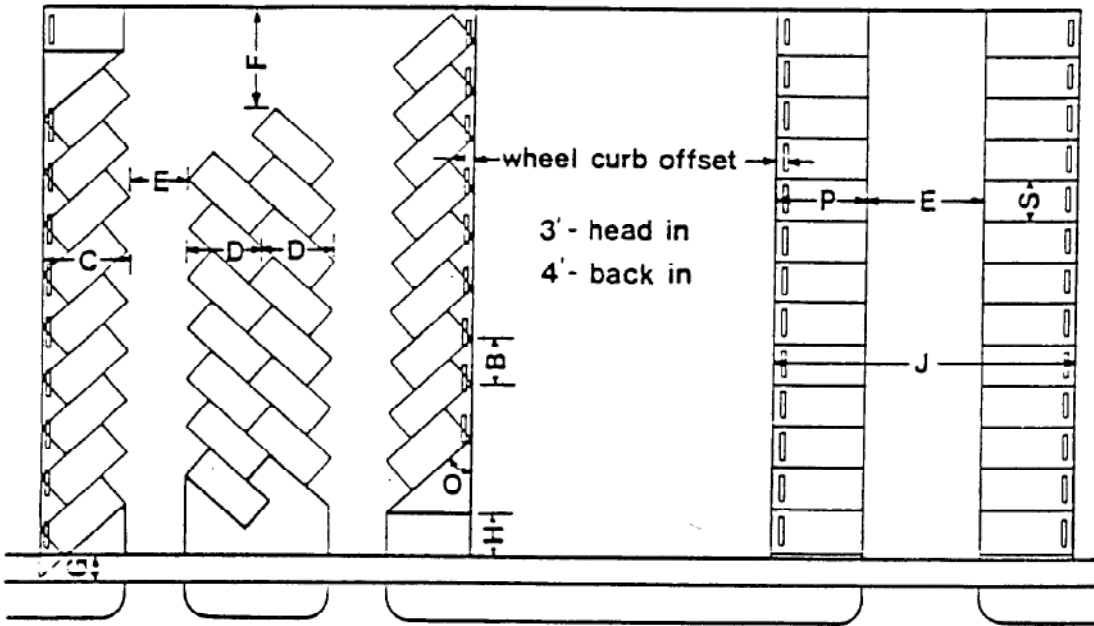
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- (8) Signs: Accessory signs shall be permitted on parking areas in accordance with the provisions specified in Article XV of this Ordinance.
- (9) Repair and Service: No commercial motor vehicle repair work or service of any kind shall be permitted in association with accessory parking facilities except that emergency service required to start vehicles shall be permitted.
- (10) Loud Speakers Prohibited: The use of loud speakers shall be prohibited in all parking areas, except between the hours of 7:00 a.m. and 7:00 p.m. The restriction on the use of loud speakers shall not apply to parking areas serving single- or two-family residences or when loud speakers are used for municipally sponsored civic functions.
- (11) Provisions for bicycle racks, and motorcycle and scooter parking may be provided.

16:2.2 Specific Requirements

All off-street parking spaces hereinafter required by this Ordinance, except those required for one and two-family dwellings, shall be designed in accordance with one of the formulae set forth in the Off-Street Parking Chart, which chart is attached hereto and made a part hereof. Off-street parking spaces shall be provided in accordance with the specific Parking Classes as hereinafter set forth in the Off-Street Parking Table (Parking Classes). whenever any building, structure, or zoning lot contains more than one (1) use listed in the Off-Street Parking Chart then each use shall be considered in determining total parking needs. Parking spaces for accessory uses not specifically enumerated within a parking class shall be assumed to be included in the principal (permitted or special land) use requirement. If, for any reason, the classification of any use, for the purpose of determining the amount of off-street parking, or the number of spaces provided by such use is not readily determinable hereunder, the parking class of such use shall be fixed by the Zoning Board of Appeals.

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS16.0



OFF-STREET PARKING CHART
OFF-STREET PARKING TABLE OF DIMENSIONS (IN FEET)

O	S*	P	B	C	D	E	F	G	H	J
0°	9	18	24.0	9.0	9.0	20	--	0.0	25	36.0
30°	9	18	18.0	17.0	13.0	20	20	13.5	25	52.0
45°	9	18	12.7	19.1	15.9	20	20	6.4	25	56.2
60°	9	18	10.4	20.1	17.8	20	20	2.6	25	60.2
90°	9	18	9.0	18.0	18.0	22	22	0.0	25	58.0
* Provisions for small car parking spaces may be permitted in shopping centers at the discretion of the Planning Commission at the time of site plan review.										

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NOTE:	O	=	PARKING ANGLE
	S	=	PARKING SPACE WIDTH
	P	=	PARKING SPACE LENGTH
	B	=	CURB LENGTH OF PARKING SPACE WIDTH
	C	=	PERPENDICULAR LENGTH OF STALL (AGAINST WALL)
	D	=	PERPENDICULAR LENGTH OF STALL (OVERLAP)
	E	=	AISLE WIDTH
	F	=	TURN AROUND AISLE WIDTH
	G	=	OVERHANG OF CURB LENGTH AT PERIPHERY
	H	=	MINIMUM SETBACK, EXCEPT FOR CB-1 (15 FEET)
	J	=	WALL-TO-WALL DIMENSION

OFF-STREET PARKING TABLE (PARKING CLASSES)

RESIDENTIAL

1	One-Family, Duplex Units	2 parking spaces for each dwelling unit.
2	Residential, Multiple Family (Apartments, Condominiums, and Cooperatives)	
	(a) Efficiency and One-Bedroom Units	1.5 parking spaces for each dwelling unit.
	(b) Two-Bedroom Units or more	2 parking spaces for each dwelling unit.
	(c) Accessory Uses -- Maintenance Facilities	One (1) space for each employee
	(d) Accessory Uses -- Community Buildings	One (1) space for each 300 square feet of floor area.
	(e) Guest Parking Required	One (1) space for each five (5) dwelling units.
3	Boarding, Rooming, Lodging Establishments and/or Tourist Homes	1.1 parking space for each occupancy unit plus 1 parking space for each employee.

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| 4 | Senior Citizen Housing | 1 parking space for each dwelling unit plus 1 parking space for each employee. Should units revert to general occupancy, then parking spaces shall be provided as indicated in No. 2 above. |
| 5 | Mobile Homes | As set forth in Article VIII. |

INSTITUTIONAL

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| 6 | Church, Chapel, Synagogue, Temple, or other place of Worship | 1 parking space for each 3 seats or 6 lineal feet of pews in the main unit of worship |
| 7 | Colleges, Junior College, or University | 1 parking space for each 4 students based on design capacity in addition to the requirements for the assembly hall, stadium, or sports arena. |
| 8 | Industrial or Vocational School, including Commercial Schools, Business Schools, Business Machine Schools, and Computer Technology Schools | 1 parking space for every teacher, employee and administrator, and one parking space for each 2 students. Additional parking shall be provided to accommodate any retail sales or service activities conducted. |
| 9 | Elementary, Junior High Schools, and Intermediate Schools | 1 parking space for each teacher, administrator, or other employee in addition to the requirements of the auditorium. The number of teachers, administrators, and other employees shall be based on the design capacity of the facility. If there is no auditorium or assembly hall, then 2 spaces per classroom shall be provided in addition to those for each teacher, administrator, or employee. |
| 10 | Fraternities or Sororities, Dormitories, or other Residence Halls | 1 parking space for each 4 beds or 1 for each 1,000 square feet of floor space, whichever is greater. |

ARTICLE XVI - OFF-STREET PARKING AND LOADING REQUIREMENTS¹⁶⁰

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| 11 | Homes for Aged, Nursing Facilities, Convalescent Homes, Convents, Children's Homes, and Orphanages | 1 parking space for each 4 beds plus 1 space for each employee on the premises, based on largest number of employees on the premises at one time. |
| 12 | Hospitals and Sanitariums | 1 parking space for every 2 beds plus 1 for each 5 outpatients plus 1 additional space for each employee, computed on the basis of the greatest number in the largest working shift. In hospitals, bassinets shall not be counted as beds. |
| 13 | Library | 1 parking space for each 300 square feet of floor space, plus 1 parking space per employee on the largest shift. |
| 14 | Museum, Cultural Center, or similar facility | 1 parking space for each 300 square feet of floor space, plus 1 parking space per employee on the largest shift. |
| 15 | Post Office | 1 parking space for every 300 square feet of floor area over 4,000 square feet, plus one space for each person employed on the largest shift. |
| 16 | Private Civic, Fraternal Club or Lodge | 1 parking space for every 50 square feet of floor area, or 1 per 3 persons of maximum occupancy as established by the Fire Marshal, whichever is greater. |
| 17 | Private Golf Clubs, Country Clubs | 1 parking space for every 2-member family or individual member. |
| 18 | Private Swimming Pool Clubs | 1 parking space for every 2-member family or individual member. |

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19	Public Golf Courses	6 parking spaces per golf hole plus 1 parking space per employee.
20	Swimming Pools (Community)	1 parking space for every 4 persons lawfully permitted plus 1 per employee.
21	Senior High Schools	1 parking space for every teacher, employee, or administrator, plus 1 parking space for every 10 students in addition to the requirements for the assembly hall, stadium, or sports arena.
22	Stadium, Sports Arena, or similar place of assembly	1 parking space for each 3 seats or similar vantage accommodation provided or 1 parking space for each 6 lineal feet of benches.
23	Theaters, Auditoriums, Assembly Halls,	<p>(a) With Fixed Seating: 1 parking space for each 3 seats and similar vantage accommodation, or 1 parking space for each 6 lineal feet of benches, or 1 parking space per 3 persons based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee.</p> <p>(b) Without Fixed Seating: 1 parking space for every 3 persons who may legally be admitted therein at one time under occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee.</p>

COMMERCIAL

24	Ambulance Service and Rescue Squad	Adequate space to accommodate all motor
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		vehicle operated in connection with such use and 1 additional parking space for each employee.
25	Athletic Clubs, Physical Exercise Establishments, Health Studios, Sauna Baths, Judo Clubs	1 parking space per patron based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 parking space per employee on a major shift.
26	Automobile Service and Filling Stations	1 parking space for each lubrication stall, rack, or pit, plus 1 space for each service vehicle, plus either 1 space for each fuel pump, plus 1 space for each employee on the largest shift, whichever is greater.
27	Automatic Laundries, Wash Racks	1 space for each 2 employees. In addition, reservoir parking space equal in number to 30 spaces for the first car each lane and 20 spaces for each additional lane.
28	Automobile Washes (Self-service or coin operated)	5 stacking spaces for each washing stall in addition to the stall itself, plus two drying spaces for each washing stall.
29	Auto Repair, Buffing, and/or Collision	1 parking space per bay plus 1 space per each employee on the largest shift. The area used to store damaged or inoperative vehicles shall be screened as required for outdoor storage areas in Article XI and shall not be counted as off-street parking. Adequate area shall be provided to store 2 vehicles for every service bay.
30	Banks, Financial Institutions	1 parking space for every 200 square feet of floor area, plus 1 for each employee.
31	Banks, Financial Institutions with Drive-	1 parking space for every 200 square feet of

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	in Windows	floor area plus 8 stacking spaces for the first drive-in window and 6 stacking spaces per each additional window.
32	Beauty Parlor, Barber Shop or Tanning Salon	3 parking spaces per beauty, barber chair or bed
33	Bowling Alleys	5 parking spaces for each bowling lane in addition to the requirements for a place serving food or beverages on the site, plus 1 parking space per employee on the largest shift.
34	Dance Halls, Roller or Skating Rinks, Exhibition Halls, and Assembly Halls without fixed seats	Either 1 parking space for each 50 square feet of floor area, or 1 parking space for every 3 persons based on the occupancy load as established by local, county, and state fire, building, or health codes, whichever is greater, plus 1 space per employee on the largest shift.
35	Day Care Center, Child Care Centers, Nursery School, School of Special Education, and Schools for the Mentally and Physically disadvantaged	1 parking space for each teacher, administrator, or other employee in addition to the requirements of the auditorium. The number of teachers, administrators, and other employees shall be based on the design capability of the facility. If there is no auditorium or assembly hall, then 2 spaces per classroom shall be provided in addition to those for each teacher, administrator, or employee.
36	Eating Establishments/Prepared Food Pickup	
	(a) Drive-thru Restaurant	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each employee on the largest shift, whichever is larger, plus

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	sufficient area for 8 stacking spaces for the first drive-in window and 6 stacking spaces per each window.
(b) Drive-in Restaurant (eating only allowed in vehicle with no seating facilities)	Either 1 parking space per 100 square feet of floor area, or 1 parking space for each employee on the largest shift, in addition to the spaces provided for customer service.
(c) Drive-in Restaurant with seating facilities (eating allowed in vehicles)	1 parking space per 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or 1 parking space per employee on the largest shift, whichever is larger, in addition to the spaces provided for drive-in service.
(d) Fast-food Restaurant serving portions over a counter or at a cafeteria line	1 parking space for 50 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or one parking space per employee on the largest shift, whichever is greater.
(e) Snack Bar serving food over a counter to patrons who eat in their cars or in the open air	10 parking spaces per service station, plus 1 space for each employee on the largest shift.
(f) Restaurant serving prepared-to-order meals brought to patrons' tables by waiters or waitresses	1 parking space per 100 square feet of eating area, plus either 1 parking space per 100 square feet of non-eating area or 1 parking space per employee on the largest shift, whichever is greater.
(g) Restaurant serving prepared-to-order meals brought to patrons' tables by waitresses with entertainment and/or dance license.	One (1) parking space per 75 square feet of gross floor area, plus one (1) space for each employee on the largest shift.

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37	Furniture and Appliance Household Equipment Repair Shops, Showroom of a Plumber, Decorator, Electrician, or similar trade, Shoe Repair, and other similar uses.	1 parking space for every 500 feet of floor area.
38	Hotel and Motel or other	1 parking space per rental unit, plus either 1 parking space for each employee on the largest shift, or 1 parking space for each 10 rental units, whichever is greater, plus such spaces as are required for restaurants, bars, taverns, assembly rooms and affiliated facilities.
39	Laundromats and Coin-Operated Dry	1 parking space per each 2 washing and/or dry cleaning machines.
40	Miniature or "Par 3" Golf Courses and Golf Driving Ranges	2 parking spaces for each hole, or tee, plus 1 parking space for each employee.
41	Mortuary Establishments, Funeral Homes and Funeral Chapels	1 parking space for each 50 square feet of area used for services, parlors, and slumber rooms.
42	(New) Motor Vehicle Sales, Rental, and Service Establishments	1 parking space for each 200 square feet of floor area exclusive of the service area, plus 1 parking space for each auto service stall in the service room, plus 1 space per employee on the largest shift.
43	(Used) Motor Vehicle Sales	1 parking space for every 500 square feet of outdoor sales area plus 1 space for each auto service stall, plus 1 space per employee on the largest shift.
44	Pool Room, Billiard Parlor, and Table Game Establishments	Either 1 parking space per pool table, billiard table, or game, plus 1 space for every 20 square feet of floor area or 1 parking space per

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		3 persons based on occupancy load as established by local, county, and state fire, building, and health codes, whichever is greater.
45	Open Air Businesses, including Nurseries	1 space per 500 square feet of land area being utilized for retail purposes, plus 1 space per employee.
46	Public Utility Facilities, such as communications equipment buildings, and electrical substations not open to the public	1 parking space per employee. This shall apply to the maximum number of employees on duty at any one time.
47	Retail stores, including Hardware and Sporting Goods Store, except as otherwise specified herein.	1 parking space for every 200 square feet of gross floor area, plus either 1 parking space per each employee working on the premises on the largest shift, or 1 space per 1,000 square feet of gross floor area, whichever is greater.
48	Retail Lumber Yards	2.5 parking spaces for each employee on the largest shift, plus spaces as required above for enclosed retail sales areas.
49	Roadside Vegetable and Fruit Stands	4 parking spaces
50	Shopping Centers	
	<u>Gross Leasable Floor Area (G. L. A.)</u>	<u>Spaces Per 1,000 sq. ft. of G. L. A.</u>
	25,000 to 400, 000 sq. ft.	Four (4) spaces
	Over 400,000	4.5 spaces
51	Supermarkets, Self-Service Food Stores, and Convenience Food Stores	1 parking space for every 200 square feet of gross floor area or fraction thereof.

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| 52 | Tennis Clubs and Court-Type Recreation Uses | 1 parking space per each person permitted by the capacity of the courts, plus such additional spaces as may be required herein for affiliated uses such as bars, restaurants, or assembly space, plus 1 space per employee. |
| 53 | Taxi Terminals | 1 parking space for each employee on the largest working shift, plus 1 space per company vehicle, screened as required in Article XI for outdoor storage area, plus sufficient spaces to accommodate the largest number of visitors may be expected at any one time. |

OFFICE

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| 54 | Business and Professional Offices of Architects, Engineers, Landscape Architects, Lawyers or similar or allied professions. | 1 parking space for each 200 square feet of floor area. |
| 55 | Professional Offices of Medical or Dental Practitioner's or similar professions | 1 parking space for each 100 square feet of floor area or a minimum of not less than 4 spaces, plus 1 space for each employee. |

INDUSTRIAL

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| 56 | Manufacturing Establishment or Establishment for Production, Processing, Assembly, Compounding, Preparation, Cleaning, Servicing, Testing, Repair, or Storage of Materials, Goods or Products, and Business Offices accessory thereto. | 5 parking spaces, plus 2 for every employee in the largest working shift or 1 per 2,000 square feet of gross floor area, plus 1 for each 200 square feet of office floor area. |
| 57 | Wholesale and Warehouse Establishments | 1 parking space per employee on the largest shift, plus 1 space per company vehicle, plus sufficient space to accommodate the largest |

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		number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area.
58	Heavy Equipment Storage Yard, Nonretail Lumber and Building	1 parking space per employee on the largest shift, plus 1 space per company vehicle and piece of mobile equipment plus sufficient space to accommodate the largest number of visitors that may be expected at any one time, but with a minimum of 1 space per 1,000 square feet of gross floor area.
59	Uses Under Construction	Space on site shall be provided for all construction workers during periods of construction.
60	Drive-up windows or pick-up stations	Eight (8) stacking spaces for the first drive-up window or station and six (6) additional stacking spaces per each additional window or pick-up station.

16:3 OFF-STREET LOADING

16:3.1 General Requirements

a. Location

All permitted and required loading berths shall be located as provided herein, and loading berths not so located shall be prohibited. Except as provided in Section "g" below, all required loading berths shall be located on the same zoning lot as the use served. No permitted or required loading berth shall be located within thirty (30) feet of the nearest point of intersection of any two streets. Any permitted or required loading berth may be located in a rear yard including a required rear yard setback area. Any permitted or required loading berth may be located in a non-required front or side yard, but not in a required front or side yard setback area.

b. Size

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Unless otherwise specified, a required off-street loading berth shall be at least 10 feet in width by at least 30 feet in length, exclusive of aisle and maneuvering space, and shall have a vertical clearance of at least 15 feet.

c. **Access**

Each required off-street loading berth shall be designed with appropriate means of vehicular access to a street or alley in a manner which will least interfere with traffic movement. A determination that this standard is met shall be made during site plan approval.

d. **Surfacing**

All open off-street loading berths shall be surfaced with a dustless all-weather material as required by Ordinance 189 of the City of Westland.

e. **Repair and Service**

- (1) Residence and Business Districts: No commercial motor vehicle repair work or service of any kind shall be permitted in association with loading facilities in any residential or business district. Emergency service required to start vehicles shall be permitted.
- (2) Industrial Districts: No motor vehicle repair work or service of any kind shall be permitted in conjunction with loading facilities provided in an Industrial District if such loading facilities are within five hundred (500) feet of a Residence or Business District. Washing of accessory vehicles and emergency service required to start vehicles shall be permitted.

f. **Utilization**

Space allocated to any off-street loading use shall not, while so allocated, be used to satisfy the space requirements for any off-street parking facilities or portions thereof.

g. **Central Loading**

Central loading facilities may be substituted for loading berths on the individual zoning lots provided the following conditions are fulfilled:

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- (1) Each zoning lot served shall have direct access to the central loading area without crossing streets or alleys at-grade.
- (2) Total off-street loading berths provided shall meet the minimum requirements herein specified, based on the sum of the several types of uses served. Area of types of uses may be totaled before computing number of loading berths.
- (3) No zoning lot served shall be more than five hundred (500) feet removed from the central loading area.
- (4) The tunnel or ramp connecting the central loading area with the zoning lot served shall be not less than seven (7) feet in width and have a clearance of not less than seven (7) feet.

h. **Minimum Facilities**

Uses for which off-street loading facilities are required herein, but which are located in buildings of less floor area than the minimum prescribed for such required facilities, shall be provided with adequate receiving facilities, accessible by motor vehicle off any adjacent alley, service drive, or open space on the same zoning lot.

16:3.2 **Specific Requirements**

a. **Residence Districts**

Off-street loading facilities accessory to uses allowed in the several residence districts shall be provided in accordance with the following minimum requirements:

- (1) Health and medical institutions. One (1) loading berth shall be provided for buildings containing 10,000 to 100,000 square feet of gross floor area, plus one (1) additional loading berth for each additional 100, 000 square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of two hundred thousand (200,000) square feet in gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.

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- (2) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing 10,000 to 100,000 square feet of gross floor area, plus one additional loading berth for each additional 100,000 square feet of gross floor area or fraction thereof.
 - (a) Apartment hotels.
 - (b) Educational and cultural institutions.
 - (c) Philanthropic and charitable institutions.
 - (d) Religious institutions.
- (3) Planned Unit Development: Loading berths shall be provided on the basis of the required berths for each individual use.
- (4) Recreational and social facilities: For buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, one (1) loading berth shall be provided, and for each additional one hundred thousand (100,000) square feet of gross floor area.
- (5) For all other nonresidential uses, loading facilities shall be provided in accordance with the following requirements:
 - (a) For buildings containing less than 10,000 square feet of gross floor area, there shall be provided on the same zoning lot adequate receiving facilities (accessible by motor vehicle) off any adjacent alley, service drive, or open space.
 - (b) For buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, one (1) off-street loading berth shall be provided.
 - (a) For buildings containing over 100,000 square feet of gross floor area, there shall be provided one (1) loading berth for each 100,000 square feet of gross floor area or fraction thereof.
- (vi) Multiple-family dwellings and rooming houses: Parking space shall be set aside for delivery trucks and moving vans as near as possible to the entrance of each multiple-family structure or rooming house, in a

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location where there will be minimal disruption to traffic circulation and no blockage of tenant parking.

b. **Business Districts**

Off-street loading spaces accessory to uses permitted in the several business districts shall be provided in accordance with the following minimum requirements:

- (1) Any use listed in residence district that also is permitted in any of the several business districts shall provide loading spaces as established for that use in the preceding section for residence districts.
- (2) Establishments containing less than 7,000 square feet of gross floor area shall be provided with adequate facilities, accessible by motor vehicle off any adjacent alley, service drive, or open space on the same zoning lot.
- (3) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing 7,000 to 40,000 square feet of gross floor area. For buildings containing 40,000 to 100,000 square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional 100,000 square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of 100,000 square feet of gross floor area shall not be less than 10 feet in width by 55 feet in length.
 - (a) Cartage and express facilities.
 - (b) Mail order houses.
 - (c) Printing and publishing.
 - (d) Restricted production and repair.
 - (e) Warehousing, storage and wholesale establishments.
- (4) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area; one (1) additional loading

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berth shall be provided for each additional one hundred thousand (100,000) square feet of gross floor area.

- (a) Banks and financial institutions.
 - (b) Medical and dental clinics.
 - (c) Offices, business, professional and governmental.
 - (d) Recreation buildings and community centers, noncommercial.
- (5) For the uses listed hereunder, one (1) ten (10) foot by fifty (50) foot space shall be provided for buildings containing up to thirty thousand (30,000) square feet; one (1) additional loading berth shall be provided for each additional twenty thousand (20,000) square feet of gross floor area.
- (a) Specialty food and beverage stores.
 - (b) Grocery stores and supermarkets.
- (6) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, plus one (1) additional loading berth for each additional one hundred fifty thousand (150,000) square feet of gross floor area or fraction thereof. Each loading berth for buildings in excess of twenty thousand (20,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
- (a) Clubs and lodges (not-for-profit) containing retail shops, convention halls, auditoriums, exhibition halls, or business or professional offices (other than accessory).
 - (b) Convention halls.
 - (c) Exhibition halls.
 - (d) Radio and television stations and studios.
 - (e) Recording studios.

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- (f) Hotels and motels containing retail shops, convention halls, auditoriums, exhibition halls, or business or professional offices.
- (g) Stadiums, auditoriums and arenas.
- (7) For all other uses, loading facilities shall be provided in accordance with the following schedule:

<u>Gross Floor Area of Establishments in Thousands of Square Feet</u>	<u>Required Number and Size of Berths</u>
7 to 60	1--(10 ft. x 30 ft.)
61 to 100	2--(10 ft. x 30 ft. each)

For each additional 200,000 square feet in gross floor area or fraction thereof, over 100,000 square feet of gross floor area, one (1) additional loading berth shall be provided, such additional berth to be at least ten (10) feet in width by fifty-five (55) feet in length.

c. **Industrial Districts**

Off-street loading facilities accessory to uses allowed in the several industrial districts shall not be located in a required front yard setback area, but shall be provided in accordance with the following minimum requirements:

- (1) Any production, processing, cleaning, servicing, testing, repair, or storage of materials, goods, or products: For buildings containing seven thousand (7,000) to forty thousand (40,000) square feet of gross floor area, one (1) loading berth shall be provided. For buildings containing forty thousand (40,000) to one hundred thousand (100,000) square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of ten thousand (10,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.

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- (2) For uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area; one (1) additional loading berth shall be provided for each additional one hundred thousand (100,000) square feet of gross floor area.
 - (a) Medical and dental clinics.
 - (b) Recreation buildings or community centers.
- (3) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to one hundred thousand (100,000) square feet of gross floor area, plus one (1) additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of twenty thousand (20,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
 - (a) Airports and commercial heliports.
 - (b) Air and railroad freight terminals, railroad switching and classification yards, repair shops, and roundhouses.
 - (c) Radio and television stations and studios.
 - (d) Municipal sewage treatment plants.
 - (e) Stadiums, auditoriums and arenas.
- (4) For the uses listed hereunder, one (1) loading berth shall be provided for buildings containing ten thousand (10,000) to two hundred thousand (200,000) square feet of gross floor area, plus one (1) additional two hundred thousand (200,000) square feet of gross floor area or fraction thereof.

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- (a) Trade schools.
- (5) For the uses listed hereunder, there shall be no requirements for off-street loading.
 - (a) Parking lots.
 - (b) Weighing stations.
- (6) Motor freight terminals: For buildings containing five thousand (5,000) to forty thousand (40,000) square feet of gross floor area, one (1) loading berth shall be provided. For buildings containing forty thousand (40,000) to one hundred thousand (100,000) square feet of gross floor area, two (2) loading berths shall be provided, plus one (1) additional loading berth for each additional one hundred thousand (100,000) square feet of gross floor area or fraction thereof. Each such loading berth for buildings in excess of ten thousand (10,000) square feet of gross floor area shall be not less than ten (10) feet in width by fifty-five (55) feet in length.
- (7) Planned industrial developments, manufacturing: Loading berths shall be provided on the basis of the required berths for each individual use.
- (8) For all other uses, loading facilities shall be provided in accordance with the following schedule:

<u>Gross Floor Area of Establishments in Thousands of Square Feet</u>	<u>Required Number and Size of Berths</u>
7 to 40	1--(12 ft. x 30 ft.)
41 to 100	2-- (12 ft. x 30 ft. each)

For each additional two hundred thousand (200,000) square feet of gross floor area or fraction thereof, over one hundred thousand (100,000) square feet of gross floor area, one (1) additional loading

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berth shall be provided, such additional berth to be at least ten (10) feet in width by fifty-five (55) feet in length.

16:4 ACCESS MANAGEMENT

16:4.1 Intent

The intent of access management is to improve traffic operations; reduce potential for crashes; improve pedestrian and transit environments; and preserve the vehicular carrying capacity of roads through regulations on the number, spacing, placement and design of access points (driveways and intersections).

16:4.2 Applicability

The following applications, except those for single-family homes, duplexes or essential service facility structures, must comply with the standards in this Section:

a. **Land Division, Subdivision or Site Condominium**

Any land division or subdivision or site condominium development, including residential developments.

b. **Site Plan Review.** Site changes subject to site plan review in accordance with *Section 12:1 Intent and Applicability*, changes in or expansions on sites where any of the following will result:

- (i) Any increase in intensity of use of any building, structure, or lot through the addition of dwelling units, increase in floor area, increase in seating capacity, or through other means.
- (ii) The amount of parking required by *Section 16:2 Off-Street Parking* will increase by 20 spaces or by more than 10%, whichever is less.
- (iii) The existing driveway(s) does not meet current geometric engineering design standards enforced by the appropriate governing jurisdiction, as applicable.
- (iv) The site is located along a segment that experiences congestion.
- (v) The site is located along a segment that has experienced high crash rates.
- (vi) Any access that is within 250 feet of a signalized intersection (measured at the edge of the right-of-way).
- (vii) The change will increase auto trips into and out of the site by more than 25% or 50 total trips in the peak hour, as estimated using the most recent edition of the ITE Trip Generation Manual.
- (viii) Any access that does or is expected to exceed 100 total trips per peak hour, or 1,000 total trips daily.

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16:4:3 Standards

The following regulations of this Section shall be considered by the Planning Commission and City Council:

a. **Compliance with Sub-Plans**

Where specific sub-plans have been adopted, such as the Ford Road Access Management Plan, access shall generally adhere to the recommendations and standards contained therein. Where conflicts arise, the standards and specific recommendations of the plan shall prevail.

b. **Number of Driveways**

The number of resulting driveways shall be the fewest necessary to provide reasonable access to the site. Each lot shall be permitted reasonable access, which may consist of an individual driveway, a shared access with an adjacent use, or access via a service drive.

c. **Offsets and Spacing from Intersections**

Driveways shall be either directly aligned or spaced/offset as far from intersections as practical, especially signalized intersections. A minimum spacing or offset of 150 feet is preferred.

d. **Driveway Spacing**

Access points shall be spaced as far as practical from other driveways on the same side of the road, considering the posted speed limit along the road segment. The spacing listed in Table 1 is preferred.

e. **Driveway Offsets on Undivided Roads**

Driveways shall be either aligned with driveways on the opposite side of the road or offset to the greatest distance practical. Consideration for weaving across travel lanes shall be given, especially where signalized intersections are present. The offsets listed in Table 2 are preferred.

f. **Driveway Locations on Divided Roads**

Table 1
Minimum Driveway Spacing* - Same Side

Posted Speed (mph)	Driveway Spacing (in feet)	
	Arterial Road	Other Roads
25	130	90
30	185	120
35	245	150
40	300	185
45	350	230
50 +	455	275

*Unless greater spacing is required by MDOT or Wayne County.

Table 2
Minimum Driveway Offset – Opposing Side

Posted Speed (mph)	Driveway Spacing (in feet)
25	255
30	325
35	425
40	525
45	630
50 +	750 16-30

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Access points along divided roads shall be located in consideration of median crossovers. Access points shall directly align with or be offset a sufficient distance from median crossovers to allow for weaving across travel lanes and storage within the median. A minimum offset of 250 feet is preferred.

g. **Consideration of Adjacent Sites**

Where the subject site adjoins land that may be developed or redeveloped in the future, the access shall be located to ensure the adjacent site(s) can also meet the access location standards in the future.

h. **Shared Driveways**

Where direct access consistent with the above regulations cannot be achieved, access should be provided via a shared driveway or service drive.

i. **Access Design**

Where practical given right-of-way constraints, driveways shall be designed with radii, tapers and other geometrics as determined by the appropriate governing jurisdictions that are required to minimize the impacts of inbound right turns on traffic flow.

16:4:4 Administration

Applications subject to review shall be processed according to the following:

a. **Submittal Information**

Along with any other information required in *Section 12:3.3 Detailed Information*, the Planning Commission and the City Council may require developments subject to review according to this Section to submit a traffic impact report, prepared by a qualified traffic engineer, to verify the need for additional driveways or to justify a modification.

b. **Allowed Modifications**

It is recognized that certain existing site conditions may prohibit full compliance with this Section. The City Council may, after considering the criteria in (iii) below, modify the standards of this Section in the following situations:

- (i) The modification will allow an existing driveway to remain that does not meet the standards of this Section but that has, or is expected to have very low traffic volumes (less than 50 in- and out-bound trips per day) and is not expected to significantly impact safe traffic operations.

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- (ii) The use is expected to generate a relatively high number of trips and an additional driveway will improve overall traffic operations.
- (iii) Practical difficulties exist on the site that make compliance unreasonable (sight distance limitations, existing development, topography, unique site configuration or shape), or existing off-site driveways make it impractical to fully comply with the standards.
- (iv) Because of restricted turning movements or presence of a median that restricts turning movements, the driveway does not contribute to congestion or an unsafe situation.

c. **Modification Criteria**

The City Council may waive certain requirements of this Section upon consideration of the following:

- (i) The proposed modification is consistent with the general intent of the standards of this ordinance.
- (ii) The appropriate governing jurisdiction endorses the proposed access design.
- (iii) Driveway geometrics have been improved to the extent practical to reduce impacts on traffic flow.
- (iv) Shared access has been provided, or the applicant has demonstrated it is not practical. Such modification is the minimum necessary to provide reasonable access, will not impair public safety or prevent the logical development or redevelopment of adjacent sites and is not simply for convenience of the development.

ARTICLE XVII - TREE PRESERVATION REQUIREMENTS

17:1 FINDINGS.

The City of Westland finds that rapid growth, the spread of development and increasing demands upon natural resources have had the effect of encroaching upon, despoiling, or eliminating many of the trees, vegetation, natural resources and processes associated therewith, which, if preserved and maintained in an undisturbed and natural condition, constitute important physical aesthetic, recreational health and economic assets to existing and future residents of the City. Specifically, the City finds:

- (a) That trees and woodlands protect public health through the absorption of air pollutants and contamination, by the reduction of excessive noise and mental and physical damage related to noise pollution, and through their cooling effect in the summer months;
- (b) That trees and woodlands are an essential component of the general welfare of the City by maintaining natural beauty, recreational opportunities, wildlife habitat, and irreplaceable heritage for existing and future City residents;
- (c) That trees and woodlands play an important role in filtering waste water which passes through the ground from the surface to ground water tables and lower aquifers;
- (d) That trees and woodlands, through their root systems, stabilize the soil and play an important and effective part in City-wide soil conservation, erosion control and flood control;
- (e) That trees and woodlands appreciably reduce the carbon dioxide content and increase the oxygen content of the air and play a vital role in purifying the air;
- (f) That the protection of such natural resources is a matter of paramount public concern, as provided by Article IV, Section 52 of the Constitution of the State of Michigan and State law.

17:2 PURPOSES.

- (a) To provide for the protection, preservation, proper maintenance and use of trees and woodlands located in this City in order to minimize disturbance to them and to

prevent damage from erosion and siltation, a loss of wildlife and vegetation, and/or from the destruction of the natural habitat;

- (b) To protect the trees and woodlands of this City for their economic support of local property values when allowed to remain uncleared and/or unharvested and for their natural beauty, wilderness character, ecological or historical significance;
- (c) To provide for the paramount public concern for these natural resources in the interest of the health, safety and general welfare of the residents of this City.

17:3 DEFINITION OF TERMS.

The following definitions shall apply in this article:

Activity shall mean any use, operation, development or action caused by any person, including, but not limited to, constructing, operating or maintaining any use or development; erecting buildings or other structure; depositing or removing material; dredging; ditching; land balancing; draining or diverting of water, pumping or discharge of surface water; grading; paving; tree removal or other vegetation removal; excavation, mining or drilling operation.

Agriculture/farming shall mean any land in which the principal use is to derive income from the growing of plants and trees, including, but not limited to, land used principally for fruit and timber production.

City shall mean the City of Westland.

Commercial nursery/tree farm shall mean any commercial establishment which is licensed by the state or federal government for the planting, growing and sale of live trees, shrubs, plants and plant materials for gardening and landscaping purposes.

Planning Department shall mean the City of Westland Planning Department.

Development shall mean man-made change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

D.B.H. shall mean diameter at breast height or the diameter in inches of a tree measured at four (4) feet above the existing grade.

Planning Director shall mean the City of Westland Planning Director.

Land Clearing shall mean those operations where trees and vegetation are removed and which occur previous to construction or building; e.g. road right-of-way excavation, utility excavation, grubbing and any other necessary clearing operation.

Landmark Tree shall mean a tree of the Genus and/or species and diameter listed in Section 17:12 of this Article, and any tree of twenty-four (24") inches D.B.H. or greater.

Person shall mean any individual firm, partnership, association, corporation, company, organization or legal entity of any kind conducting operations within the City of Westland, including all tree removal companies and persons removing trees on behalf of others.

Remove or Removal shall mean the act of removing a tree by digging up or cutting down, or the effective removal through damage to the tree or its root system.

Transplant shall mean the digging up of a tree from one place on a property and the planting of the same tree in another place.

Tree shall mean any woody plant with at least one well-defined stem and having a minimum D.B.H. of three (3) inches.

17:4 TREE PERMIT REQUIRED.

It shall be a violation of this Article for any person, except as otherwise provided herein, to remove, cause to be removed, transplant or destroy a tree within the City without a tree permit issued in accordance with this section.

- (a) A tree permit shall be required for the following except as otherwise exempted under Section 17:5:
 - (i) The removal, transplanting or destruction of any tree with a D.B.H. of six (6) inches or greater on any property.
 - (ii) The removal transplanting or destruction of a Landmark Tree.

17:5 EXCEPTIONS.

Notwithstanding the requirements of Section 17:4, the following activities are allowed without a tree permit, unless otherwise prohibited by statute or ordinance:

- (a) Tree Removal on occupied, single family residential property of less than one acre, or which a valid certificate of occupancy has been issued;
- (b) All agricultural/farming operations or commercial nursery/tree farm operations;
- (c) Activities of utility companies or public tree trimming agencies;
- (d) The removal or transplanting of a pear (pyrus), apple (malus), cherry (prunus), peach (prunus) or plum (prunus) tree;
- (e) The removal of dead trees where the damage resulted from an accident or non-human cause;
- (f) The trimming or care of trees provided that the work is accomplished in accordance with standardized forestry and horticultural practices as established by the American Association of Nurserymen or the National Arborist Association;
- (g) Actions made necessary by an emergency such as tornado, windstorm, flood, freeze, dangerous and infectious insect infestation, or other man-made or natural disaster, in order to prevent injury or damage to persons or property;
- (h) Tree removal in order to perform maintenance or repair of lawfully located roads, sewers, structures and of facilities used in the service of the public to provide transportation, electric, gas, water, telephone, telecommunication, or other services.
- (i) Improvement or maintenance of the Rouge River or its tributaries when such operations are organized or sponsored by the City and are specifically intended to preserve natural resources. Such activities shall include, but not limited to: 1) removal of materials which may cause diverted flows and bank erosion, including the removal of trees, brush and debris; 2) bank stabilization projects which require minimal disturbance of existing conditions; and 3) wildlife and aquatic habitat improvement projects.

17:6 APPLICATION FOR TREE PERMIT.

Applications for a tree permit shall be filed with the Planning Department. When a site is proposed for development necessitating review and approval of a site plan, a special use approval, a planned unit development or a plat, said application for a tree permit shall be made at the same time as such other related application. The application for a tree permit shall consist of the following:

- (a) Three (3) copies of the tree permit application;
- (b) A tree location survey in a form acceptable to the Department which shall bear the following information and details:
 - (i) Minimum scale of 1" = 50'. The scale shall be the same as a related site plan;
 - (ii) The shape and dimensions of the lot or parcel together with the existing and proposed locations of structures and improvements, including existing and proposed utilities;
 - (iii) Locations and dimensions of all setbacks and existing or proposed easements;
 - (iv) All trees of six (6) inches D.B.H. or greater on the project site shall be tagged in the field with identifying numbers, using non corrosive metal tags;
 - (v) Exact locations of all existing trees, determined by actual field survey, of six (6) inches D.B.H. or greater, including trees within the adjoining street right-of-way and all trees to be affected by the development such as trees located within areas of right-of-way improvements or off-site utility work. All such trees proposed to remain, to be relocated or to be removed, shall be so designated and the numbered trees shall be identified by size (D.B.H.), grade at the base of each tree and crown spread to scale. Such verified information shall be provided by a registered land surveyor. The survey shall be accompanied by a separate key identifying the numbered trees by size, common name/genus and condition. This information must be provided by a registered landscape architect, certified arborist or forester, through an on-site inspection, who must verify the contents by seal or signature, whichever applies.
 - (vi) If existing trees are to be relocated, the proposed location for such trees, together with a statement as to how such trees are to be moved, protected and/or stored during land clearance and construction and how they are to be maintained after construction;
 - (vii) A statement showing how trees to remain are to be protected during land clearance, construction and on a permanent basis including the proposed use of tree wells, protective barriers, tunneling or retaining walls;
 - (viii) The number of trees to be removed which are of six (6) inches D.B.H. or greater;

- (ix) The requirements for a tree location survey may be waived by the Department for areas fifty (50) feet or more outside the construction zone. If waived, a statement indicating predominant species and estimated number and size of trees in this area shall be required. The area to remain undisturbed shall be snow fenced prior to any activity.
- (c) An on-site examination shall be made by the Department in lieu of the tree location survey under any of the following conditions:
 - (i) Where a permit is requested to remove or transplant trees on a lot of more than one acre which is zoned for single family purposes and upon which is located an occupied one-family dwelling; or,
 - (ii) Where a permit is requested in connection with the construction of a one-family dwelling on a lot which is more than one acre, zoned for single family purposes and which is not located within a subdivision for which a final plat has been approved subsequent to the effective date of this section; or,
 - (iii) Where a permit is required to remove three (3) or fewer trees.

17:7 REVIEW OF TREE PERMIT.

The City shall process a tree permit application as follows:

- (a) The Planning Department shall review the tree permit application to verify that all required information has been provided. At the request of the applicant or the Planning Department, an administrative meeting may be held to review the proposed application in light of the purpose and review standards of this Section.
- (b) Upon receipt of a complete application, the Planning Department may conduct or authorize the completion of a field investigation to review and verify the accuracy of information received. The receipt of a tree permit application shall constitute permission from the owner of the property to conduct such on-site investigation.
- (c) If a tree permit application relates to a proposed development or activity on a site necessitating site plan review, or special land use, planned unit development or plat approval by the City Council the Council shall consider said application concurrent with its review of the related site plan or other approval. If Council approves a site plan which conforms with the requirements of this Article, that approval together

with any additional terms and conditions attached thereto, will be considered to have fulfilled the requirements for a tree removal permit.

- (d) When a tree permit application is not related to a development or activity necessitating review and approval of the City Council, the Planning Director shall be responsible for granting or denying the application.
- (e) Any person denied a tree permit by the Planning Director may appeal to the City Council. An appeal must be filed in the City Clerk's Office, in writing, within ten (10) days of the date of mailing of the decision being appealed. The City Council upon review, shall determine, with findings, whether or not there has been compliance with the requirements and standards of this Section and based upon its findings, it may reverse or modify the decision rendered by the Planning Director.
- (f) Whenever an application for a tree permit is granted, the City Council or the Planning Director shall:
 - (i) Attach to the granting of the tree permit any reasonable conditions considered necessary to ensure that the intent of this Article will be fulfilled;
 - (ii) Affix a reasonable time to carry out the activities approved in the permit; and,
 - (iii) Require the permit grantee to file with the City a cash bond or irrevocable bank letter of credit in an amount determined necessary to ensure compliance with tree permit conditions and this Article.

17:8 APPLICATIONS WHICH QUALIFY FOR A MANDATORY PERMIT

- (a) Where a permit has been requested with regard to non-residential property for which a valid certificate of occupancy has been issued which is less than one (1) acre in area for the removal or transplanting of three (3) or less trees of six (6) inches D.B.H. or more within a calendar year. This provision shall not apply to Landmark Trees.
- (b) Where a permit has been requested with regard to occupied property for which a valid certificate of occupancy has been issued which is one (1) acre or more in area for the removal or transplanting of eight (8) or less trees of six (6) inches D.B.H. or more within a calendar year. This provision shall not apply to Landmark Trees.

17:9 APPLICATIONS WHICH DO NOT QUALIFY FOR A MANDATORY TREE PERMIT.

The following standards shall govern the granting or denial of an application for a tree permit for property which does not qualify for a permit pursuant to Section 17:8:

- (a) The preservation and conservation of trees, woodlands areas, wildlife and related natural resources and processes shall have priority over development when there are feasible and prudent location alternatives on the site for proposed buildings structures or other site improvements.
- (b) Where the proposed activity consists of land clearing it shall be limited to designated street rights-of-way, drainage and utility areas; and areas necessary for the construction of buildings, structures or other site improvements.
- (c) Where the proposed activity involves residential development, residential units shall to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape.
- (d) The proposed activity shall comply with all applicable statutes and ordinances and shall be evaluated concerning its effect on adjacent properties, the scenic assets and regarding wind block and noise buffer factors.
- (e) The proposed activity shall include necessary provisions for tree relocation or replacement in accordance with Section 17:11 of this Article.
- (f) Tree removal or transplanting shall be limited to the following instances:
 - (i) When removal or transplanting is necessary for the construction of a building, structure or other site improvement, and the permit applicant has shown there is no feasible and prudent location alternative on-site for a proposed building, structure or other site improvement; or,
 - (ii) The tree is dead, in decline, in danger of falling, is located too close to existing buildings or structures, interferes with existing utility service or drainage, creates unsafe vision clearance or does not conform to other City ordinances or regulations.

17: 10 TREE PROTECTION PRIOR TO AND DURING CONSTRUCTION

- (a) Prior to construction and/or land clearing the applicant shall do the following:
 - (i) All trees for which application is being made for removal shall be so identified on-site by red flagging tape prior to field inspection by the

Planning Department. Trees selected for transplanting shall be flagged with a separate distinguishing color.

- (ii) Construction limit fencing shall be erected which restricts access to protected areas and tree protection devices shall be installed where required over tree roots, branches and/or tree trunks. All tree protection fencing and tree protection devices shall be installed as approved by the Planning Department.
 - (iii) Fences and tree protection devices installed shall be maintained and all construction materials, supplies and equipment shall be kept outside of the protected areas.
- (b) During construction, the applicant shall do the following:
- (i) Maintain all fences and tree protection devices as approved by the Planning Department and refrain from causing or permitting any activity near said trees, including, but not limited to, the storage of equipment, supplies, excavation materials, disposal of fuels, solvents or chemicals, or causing the disturbance of any soils or vegetation within protected areas without the prior approval of the Planning Department.
 - (ii) No damaging attachments, wires (other than cable wires for trees), signs or permits may be fastened to any tree protected by this Article.
- (c) The Planning Department shall conduct periodic inspections of the site during land clearing and/or construction in order to insure compliance with this Article.

17: 11 REPLACEMENT OR RELOCATION OF TREES.

Whenever a tree permit allows removal of trees of six (6) inches D.B.H. or greater the permit grantee shall relocate or replace the trees, except as provided in subparagraph (e) below, on a one-to-one basis and all replacement trees must measure two and one-half (2 ½") inch diameter or greater measured six (6") inches above grade. In lieu thereof the City and the permit grantee may agree to replacement trees of varying diameters so long as the market value of said trees would approximate the value of the replacement trees which would be required in accordance with the above formula. In addition:

- (a) Replacement trees shall have shade potential and other characteristics comparable to the removed trees, and shall be State Department of Agriculture nursery grade NO. 1 or better. All replacement trees, or transplanted trees must be approved by the prior to planting and must be planted in standards for planting and transplanting, including,

but not limited to, staking, mulching and watering. All nursery stock and transplanted trees shall be guaranteed for one (1) year.

- (b) The City shall approve tree relocation or replacement locations in order to provide optimum enhancement, preservation and protection of woodlands areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.
- (c) Where it is not feasible and desirable to relocate or replace trees on-site, relocation or replacement may be made at another approved location in the City.
- (d) Where it is not feasible and desirable to relocate or replace trees on-site or at another approved location in the City, the tree permit grantee shall pay into the City Tree Fund, which fund is hereby created, an amount of money approximating the current market value of the replacement trees that would otherwise be required. The City shall use the City Tree Fund for the purpose of maintaining and preserving wooded areas, for planting and maintaining trees within the City and for expenses related to the administration and enforcement of this Article. Prior to the issuance of a tree permit, the applicant shall make a cash deposit with the City of Westland for the value of the trees proposed for removal in accordance with this section.
- (e) Replacement trees shall not be required for a tree which is removed pursuant to a tree permit granted pursuant to either Section 17:8 or for a reason described in paragraph (f)(ii) of Section 17:9.

17:12 LANDMARK TREES

- (a) All trees within the City of twenty-four (24") inches D.B.H. or greater and all trees listed below by Genus and/or species of the listed minimum size D.B.H. shall be considered Landmark Trees, unless an applicant submits an Affidavit from a registered landscape architect, certified arborist or forester that the tree is in such ill health that its anticipated life expectancy is less than five (5) years:

COMMON NAME	BOTANICAL NAME	SIZE D.B.H.
Arborvitae	Thuja	18"
Beech	Fagus	18"
Birch	Betula	18"
Black Gum	Nyssa sylvatica	12"
Blue Beech	Carpinus caroliniana	8"
Cedar, Red	Juniperus virginiana	12"

Chestnut	Castenea	10"
Crabapple	Malus	12"
Dogwood	Comus	8"
Douglas Fir	Pseudotsuga meesii	18"
Fir	Abies	18"
Ginkgo	Ginkgo	18"
Hawthorn	Crataegus	12"
Hemlock	Tsuga	18"
Hickory	Carya	18"
Hornbeam	Astray	8"
Horse Chestnut/Buckeye	Aeschylus glabra came	18"
Kentucky Coffeetree	Gymnocladus dioicus	18"
Larch/Tamarack	Larix	12"
London Plane/Sycamore	Platanus	18"
Magnolia	Magnolia	8"
Maple, Red	Acer rubrum	18"
Maple, Norway	Acer platanoides	18"
Pine	Pinus	18"
Redbud	Cercis canadensis	8"
Sassafras	Sassafras albidum	15"
Serviceberry	Amelanchier	8"
Spruce	Picea	8"
Sweetgum	Liquidambar styaciflua	16"
Tulip Tree	Liriodendron tulipifera	18"
Walnut	Juglans	20"
Wild Cherry	Pnmus	18"
Witch Hazel	Hamamelis virginiana	8"

*If a birch tree has multiple trunks, then its total D.B.H. shall be computed by adding the D.B.H. in inches of each of the trunks.

- (b) When Landmark Trees are permitted to be removed, in addition to compliance with the provisions of Section 17: 11, replacement trees shall be provided to a minimum of thirty (30%) percent of D.B.H. of the tree to be removed. Replacement trees, measured in D.B.H. or calipers, shall be provided either individually or on an accumulative basis to meet the thirty (30%) percent D.B.H. requirement, however, if on an accumulative basis all individual trees shall measure at least two and one-half (2 ½") inch diameter.

17:13 FEES

Applications for a tree permit under this section shall be accompanied by a non-refundable administrative application fee in an amount specified from time to time by resolution of the City Council. In addition, an applicant may be required to pay an additional escrow fee in an amount determined by the Planning Department to pay for the estimated cost of any needed outside consultant(s) who may be retained by the City in connection with the review of the application. In the event the cost of the services of the consultant(s) is less than the escrow fee, the applicant shall be refunded the balance. In the event the cost of the services of the consultant(s) exceeds the amount of the escrow fee, the applicant shall pay the deficiency to the City prior to the issuance of a tree permit. A denial of an application for a tree permit shall not affect the applicant's obligation to pay the escrow fee provided for in this Section.

17:14 CIVIL FEE FOR ILLEGALLY REMOVED TREES

In addition to any penalty provided for in the event of a conviction for a violation of this Article, and notwithstanding whether or not the City has commenced a civil suit for injunctive relief any person who removes or causes any tree to be removed except in accordance with this Section shall forfeit and pay to the City a civil fee equal to the total value of trees illegally removed or damaged as computed from the International Society of Arboriculture shade tree value formula. The civil fee shall accrue to the City, and, if necessary, the City may file a civil action to recover such fee. The City shall place any sum collected in the City Tree Fund. Alternatively, the City may require replacement of illegally removed or damaged trees as restitution in lieu of such fee. Replacement will be on an inch-to-inch basis computed by adding the total diameter measured at D.B.H. in inches of the illegally removed or damaged trees. The City may use other reasonable means to estimate the tree loss if destruction of the illegally removed or damaged trees prevents exact measurement. The City may also require a combination of civil fee payment and tree replacement.

17:15 INJUNCTION

Any activity conducted in violation of this Article is declared to be a nuisance per se, and the City may commence a civil suit in any Court of competent jurisdiction for an order abating or enjoining the violation.

17:16 STOP-WORK ORDER

The City may also issue a stop-work order or withhold issuance of a certificate of occupancy, permits or inspections until the provisions of this Section, including any conditions attached

to a tree permit, have been fully met. Failure to obey a stop-work order shall constitute a violation of this Section.

17:17 APPROVED SITE PLANS AND PLATS

This Article shall not apply to a site plan or plat which has received final approval prior to the effective date of this Article so long as the site plan or plat remains in effect and in good standing pursuant to this ordinance.

18:1 **CONSTRUCTION OF LANGUAGE**

In the construction of this Ordinance the rules and definitions contained in this Article shall be observed and applied, except when the context clearly indicated otherwise. In further amplification and for clarity of interpretation of the context, the following definitions of word use shall apply:

18:1.1 Words used in the present tense shall include the future; and words used in the singular number shall include the plural number, and the plural the singular.

18:1.2 The word "shall" is mandatory and not discretionary.

18:1.3 The word 'may' is permissive.

18:1.4 The word "lot" shall include the words "piece", "parcel", and plots"; the word "building" includes all other structures of every kind regardless of similarity to buildings; and the phrase "used for" shall include the phrases "arranged for," "designed for," "intended for," "maintained for," and "occupied for."

18:1.5 All "measured distances" shall be to the nearest foot. If a fraction is one-half (1/2) foot or less, the full number next below shall be taken.

18:2 **DEFINITIONS**

18:2.1 **Accessory Building or Use**

An accessory building or use is a building or use which is:

- a. Conducted or located on the same zoning lot as the principal building or use served, except as may be specifically provided elsewhere in this Ordinance;
- b. Clearly incidental to, subordinate in purpose to, and serves the principal use;
and

- c. Either in the same ownership as the principal use or is clearly operated and maintained solely for the comfort, convenience, necessity, or benefit of the occupants, employees, customers, or visitors of or to the principal use.

18:2.2 **Adult Foster Care Family Home**

A private state licensed residence with the approved capacity to receive six (6) or fewer adults to be provided with foster care for five (5) or more days a week and for two (2) or more consecutive weeks. The adult foster care family home licensee must be a member of the household and an occupant of the residence.

18:2.3 **Adult Foster Care Group Home**

A state licensed facility approved to receive adults who are provided supervision, personal care and protection in addition to room and board, for twenty-four (24) hours a day, five (5) or more days a week, and for two (2) or more consecutive weeks for compensation. An adult foster care facility does not include adult foster care family home, hospitals, alcohol or substance abuse rehabilitation center, or a residential center for persons released from or assigned to a correctional facility.

18:2.4 **Agriculture**

The use of land for agricultural purposes (with the exception of the raising of livestock), including farming, agriculture, horticulture, floriculture, viticulture, and the necessary accessory uses for packing, treating, or storing the produce; provided, however, that the operations of any such accessory uses shall be secondary to that of the normal agricultural activities.

18:2.5 **Alley**

A public or private right-of-way primarily designed to serve as secondary access to the side or rear of those properties whose principal frontage is on a street.

18:2.6 Automobile Laundries, Wash Racks

A building, or portion thereof, containing facilities for washing more than one automobile at any one time, using production-line methods with a chain conveyor, blower, steam-cleaning device, or other mechanical devices.

18:2.7 Automobile Wash, Custom

Any use which includes the washing of automobiles or other motor vehicles primarily by hand without the use of large mechanical equipment such as chain conveyors, blowers, steam-cleaning devices, and similar mechanical devices.

18:2.8 Automobile Wash, Self-Service or Coin Operated

Any building or structure, or portion thereof, containing facilities which provide space, water, equipment, or soap for the complete or partial hand washing of automobiles by the automobile owners.

18:2.9 Basement

That portion of a building which has less than one-half (1/2) of its average height above lot grade.

18:2.10 Block

A tract of land bounded by streets, or by a combination of streets and public parks, cemeteries, railroad rights-of-way, shore lines of waterways, municipal boundary lines, township lines, or county lines.

18:2.11 Block Face

A block face is the portion of any block which fronts on the same street.

18:2.12 Building

Any structure built, used, designed, or intended for the support, shelter, protection, or enclosure of persons, animals, chattels, or property of any kind, and which is permanently affixed to the land.

18:2.13 Building Height, Principal

The vertical distance measured from the average ground level of the grade of the front building wall to the highest point of the coping of a flat roof or to the deck line of a mansard roof, or to the average height between eaves and ridge for gable, gambrel, or hip roof. For height of building used in determining building separations, use definition in Article VIII.

18:2.14 Building Length

The longer or longest dimension of a building. For length of building used in determining building separations, use definitions in Article VIII.

18:2.15 Bulk

The term used to indicate the size and setbacks of buildings or structures and the location of same with respect to one another, and includes:

- a. Height and area of buildings.
- b. Location of exterior walls in relation to lot lines, streets, or other buildings.
- c. Gross floor area of buildings in relation to lot area (floor area ratio).
- d. All open spaces allocated to buildings.
- e. Amount of lot area required for each dwelling unit.

18:2.16 Canopy

A roof-like structure projection from a wall and supported in whole or in part by vertical supports from the ground, and erected primarily to provide shelter from the weather.

18:2.17 Certificate, Occupancy

The written approval of the Enforcement Officer that authorizes a person or persons to occupy or use a premises, as established in Section 3:8 of this Ordinance. The "occupancy certificate" may consist of a standardized independent form bearing the signature of the Enforcement Officer or it may be represented as a part of the building permit application.

18:2.18 Certificate, Zoning

The written approval of the Enforcement Officer certifying that the applicant's plans and drawings comply with all applicable provisions of this Ordinance. The "zoning certificate" may consist of a standardized independent form bearing the signature of the Enforcement Officer, or it may be represented as a part of the building permit application.

18:2.19 Child Care Center

Any establishment which provides supplemental parental care and supervision, and/or educational instruction to two (2) or more children during the whole or any portion of the day.

18:2.20 Church

A building owned by a religious organization which is principally used for public worship.

18:2.21 Clinic, Medical or Dental

An individual or organization offering medical and/or dental services. A clinic shall not include in-patient care.

18:2.22 Club or Lodge, Private (Nonprofit)

A nonprofit association of persons, who are bona fide members paying dues, which owns, hires, or leases a building, or portion thereof; the use of such premises being restricted to members and their guests. The affairs and management of such "private club or lodge" are conducted by a board of directors, executive committee, or similar body chosen by the members. It shall be permissible to serve food, meals, and beverages on such premises.

18:2.23 Drive-In Restaurant

Any establishment whose principal business is the sale of foods, frozen desserts, or beverages to the customer in a ready-to-consume state, and whose method of operation involves delivery of the prepared food, so as to allow the consumption of foods, frozen desserts, or beverages in a motor vehicle on the premises or elsewhere on the premises, but outside any completely enclosed structure. An establishment may combine the functions and characteristics of a drive-in restaurant, a drive-through restaurant, a fast-food restaurant, and/or a standard restaurant if its method of operation also includes the method or methods of operation attributable to these uses. Establishments which combine the functions and characteristics of more than one type of restaurant shall meet the parking and loading standards established for each type in proportion to the area or number of employees assigned to each function.

18:2.24 Drive-Through Restaurant

Any establishment whose principal business is the sale of foods, frozen desserts, or beverages to the customer in a ready-to-consume state, and whose method of operation involves delivery of the prepared food to the customer in a motor vehicle for consumption off the premises. An establishment may combine the functions and characteristics of a drive-through restaurant, a fast-food restaurant, and/or standard restaurant if its method of operation also includes the method or methods of operation attributable to these uses. Establishments which combine the functions and characteristics of more than one type of restaurant shall meet the parking and loading standards established for each type in proportion to the area or number of employees assigned to each function.

18:2.25 **Dwelling, Attached**

A dwelling joined to another dwelling at one or more sides by party walls.

18:2.26 **Dwelling, Detached**

A dwelling entirely surrounded by open space on the same lot.

18:2.27 **Dwelling Unit**

Any room or group of rooms located within a dwelling and forming a single habitable unit with facilities that are used, or intended to be used for living, sleeping, cooking and eating by one family as defined herein.

18:2.28 **Dwelling, Single-Family or One-Family**

A building containing only one (1) dwelling unit and no other uses except uses accessory thereto.

18:2.29 **Dwelling Two-Family Duplex**

A dwelling, two-family duplex, is a building containing two (2) dwelling units and no other uses except uses accessory thereto. Each dwelling unit in a two-family duplex shall have direct access at grade to the exterior of the structure.

18:2.30 **Dwelling Multiple-Family**

A building, or portion thereof, containing three (3) or more dwelling units arranged either side by side or one above the other.

18:2.31 **Dwelling, Townhouse**

A building, or portion thereof, containing three (3) or more dwelling units arranged side by side, separated from each other by a fire wall and having separate direct means of egress and ingress to each dwelling unit from the outside.

18:2.32 Elderly or Handicapped Persons

- a. Persons who are 55 years of age or over; or a family where either the husband or wife is 55 years of age or older, unless for special U.S. Federal or State of Michigan program, when the requirements of Section 202 of the Housing Act of 1959, or Title II of the Social Security Act may apply.
- b. Handicapped persons under 55, if determined to have physical impairments which:
 1. Are expected to be of long, continued, and indefinite duration.
 2. Substantially impede the ability to live independently, and
 3. Are of such a nature that the ability to live independently could be improved by more suitable housing conditions.

18:2.33 Housing for the Elderly or Handicapped

A building or buildings containing dwellings and related facilities such as dining, recreation services, or therapy areas, where the occupancy of the dwelling is restricted to elderly or handicapped persons as defined herein. Such use may include facilities for independent or semi-independent living, day care, personal care nursing facilities or services to the elderly of the community when it is an ancillary part of one of the above operations. Any combination of the foregoing uses may be allowed and still be considered as qualifying under this definition.

18:2.34 Enforcement Officer

The Building Official and such duly appointed deputies or assistants of the Building Official designated as being responsible for enforcing and administering all requirements of this Zoning Ordinance.

18:2.35 Establishment, Business

A place of business carrying on operations, the ownership and management of which are separate and distinct from those of any other place of business located on the same zoning lot.

18:2.36 Extended Medical Care Facilities

Medical facilities designed to accommodate patients in need of lengthy recuperative periods requiring nursing attention and periodic medication.

18:2.37 Family

An individual or group of individuals occupying a dwelling unit as a single housekeeping unit in accordance with the standards of Section 4:12.

18:2.38 Family Day Care Home

A private dwelling in which up to six (6) minor children are received for care and supervision for periods of less than twenty-four (24) hours a day.

18:2.39 Fast-Food Restaurant

Any establishment whose principal business is the sale of foods, frozen desserts, or beverages to the customer in a ready-to-consume state, and whose method of operation involves delivery of the prepared food to the customer at a counter or cafeteria line for consumption at the counter where it is served, or at tables, booths, or stands inside the structure or out, but not in a motor vehicle on the site. An establishment may combine the functions and characteristics of a fast-food restaurant, a drive-through restaurant, a drive-in restaurant, and /or a standard restaurant. Establishments which combine the functions and characteristics of more than one type of restaurant shall meet the parking and loading standards established for each type in proportion to the area or number of employees assigned to each function.

18:2.40 Floodplain

That area of land adjoining a watercourse or other body of water which has been or may be hereafter covered by floodwater. No building shall be constructed with a floodplain.

18:2.41 Floor Area

Floor area (for determining off-street parking and loading requirements) shall mean the sum of the gross horizontal areas of the several floors of the building, or portion thereof, devoted to such use, including accessory storage areas located within selling or working space such as counters, racks, or closets, and any floor area devoted to retailing activities, to the production or processing of goods, or to business or professional offices. However, "floor area" for the purposes of measurement for off-street parking spaces shall not include: floor area devoted primarily to off-street parking or loading facilities, including aisles, ramps, and maneuvering space; or mechanical floor area.

18:2.42 Garage Residential

Any structure which is enclosed on all sides, which has doors to permit the access and egress of motor vehicles, which is designed and intended primarily to protect parked motor vehicles from the elements, and which is accessory to a residential structure. Such a garage may be either attached to or detached from the principal structure.

18:2.43 Gasoline Filling and Service Station

A place for the dispensing, sale or offering for sale of motor fuel directly to users of motor vehicles, together with the sale of minor accessories and the servicing of and minor repair of motor vehicles.

18:2.44 Grade

The average level of the finished surface of the ground adjacent to the exterior walls of the building or structure.

18:2.45 Gross Leasable Floor Area (GLA)

The total floor area designed for tenant occupancy and exclusive use, including both owned and leased areas. GLA does not include common areas and other parts of the building not designed for rental for tenants.

18:2.46 Group Day Care Home

A private dwelling in which more than six (6) but not more than twelve (12) minor children are given care and supervision for periods of less than twenty-four (24) hours a day.

18:2.47 Guest, Permanent

A person who occupies or has the right to occupy a hotel or motel or apartment hotel accommodation as his domicile and place of permanent residence.

18:2.48 Home Occupation

An accessory use of a nonresidential nature carried on within a dwelling by a member of the family residing in the dwelling (see Section 4:12).

18:2.49 Hotel or Motel

An establishment which is open to transient guests, in contradistinction to a boarding rooming, or lodging house, and is commonly known as a hotel in the community in which it is located; and which provides customary hotel services such as maid service, the furnishing and laundering of linen, telephone and secretarial or desk service, and use and upkeep of furniture, and bellboy service.

18:2.50 Industrial Park

A special or exclusive type of planned industrial area or building designed and equipped to accommodate a community of four or more industries, providing them with all necessary facilities and services in attractive surroundings among compatible neighbors. Industrial Parks may be promoted or sponsored by private developers, community organizations, or government organizations.

18:2.51 Junk (or Salvage) Yard

An open area where waste or scrap materials are bought, sold, exchanged, stored, baled, packed, disassembled, or handled, including, but not limited to, scrap iron and other metals, paper, rags, rubber tires, and bottles. A "junk or salvage yard" includes an auto wrecking yard, but does not include uses established entirely within enclosed buildings.

18:2.52 Kennel

Any lot or premise on which three (3) or more dogs or cats four (4) months or older are either permanently or temporarily boarded for remuneration or where such pets are kept for breeding purposes.

18:2.53 Lot

A parcel of land which is either a "lot of record" or a "zoning lot."

18:2.54 Lot of Record

A lot which is part of a subdivision, the plat of which has been recorded in the office of the Register of Deeds of Wayne County; or a parcel of land, the deed to which was recorded in the office of said Register of Deeds prior to the adoption of this Ordinance.

18:2.55 Lot, Corner

A lot situated at the intersection of two streets, the interior angle of such intersection not exceeding 135 degrees.

18:2.56 Lot, Interior

A lot other than a corner lot.

18:2.57 Lot, Through

A lot having a pair of opposite lot lines along two more or less parallel public streets, and which is not a corner lot. On a "through lot" both street lines shall be deemed front lot lines.

18:2.58 Lot, Zoning

A single tract of land located within a single block, which (at the time of filing for a building permit) is designated by its owner or developer as a tract to be used, developed, or built upon as a unit, under single ownership or control. Therefore, a "zoning lot or lots" may or may not coincide with a lot of record.

18:2.59 Lot Area, Gross

The area of a horizontal plan bounded by the front, side, and rear lot lines, but not including any area occupied by the waters of a lake or river.

18:2.60 Lot Depth

The mean horizontal distance between the front lot line and the rear lot line of a lot, measured within the lot boundaries.

18:2.61 Lot Line, Front

The boundary of a lot which is along an existing or dedicated public street or, where no public street exists, is along a public way. The owner of a corner lot may select either street lot line as the front lot line. In the case of landlocked or partially landlocked land, the front lot line shall be that lot line that faces the access to the lot.

18:2.62 **Lot Line, Rear**

The boundary of a lot which is most distant from, and is, or is mostly nearly, parallel to the front lot line.

18:2.63 **Lot Line, Side**

Any boundary of a lot which is not a front lot line or rear lot line.

18:2.64 **Lot Width**

The horizontal distance between the side lot lines, measured at the two points where the rear of the required minimum front yard setback line (set forth in the Schedule of Regulations) intersects the side lot lines.

18:2.65 **Marquee**

A roof-like structure of a permanent nature which projects from the wall of a building.

18:2.66 **Mezzanine**

The story between the floor and ceiling of a main story and extending over only part of the main floor.

18:2.67 **Mini- or Self-Storage Warehouse**

A building or group of buildings in a controlled access and fenced compound that contains varying sizes of individual, compartmentalized, and controlled access stalls or lockers for the storage of customer's goods or wares.

18:2.68 **Mobile Home**

A dwelling unit designed to be transported on streets and highways to the place where it is to be occupied as a dwelling unit complete and ready for year round and permanent occupancy; except for minor and incidental unpacking and assembly operations, such as anchoring, connection to the city water and sewer systems, and similar operations. A mobile home shall be construed to remain a mobile home subject to all regulations applying thereto, whether or not wheels, axles, hitch or other appurtenances of mobility are removed, and regardless of the nature of the foundation provided. A mobile home shall not be construed to be a travel trailer or other form of recreational vehicle.

18:2.69 **Mobile Home Park**

A parcel or tract of land developed with facilities for locating mobile homes, provided each mobile home contains a kitchen, flush toilet, and shower or bath. It shall not include a sales lot in which automobiles or unoccupied mobile homes are parked for the purpose of inspection or sale. Mobile home parks shall comply with all requirements of the State of Michigan Mobile Home Commission Rules and approved amendments for the City of Westland.

18:2.70 **Motel**

(See Hotel)

18:2.71 **Motor Freight Terminal**

A building or area in which freight, shipped by motor truck or railroad, is received, assembled, sorted, and /or rerouted for local, intrastate, or interstate shipment by motor truck.

18:1.72 **Nursery**

A space, building or structure, or combination thereof, for the storage of live trees, shrubs or plants offered for retail sales on the premises including products used for gardening or landscaping. The definition of nursery within the meaning of this

Ordinance does not include any space, building or structure used for the sale of fruits, vegetables or Christmas trees.

18:2.73 **Nonconforming Building or Structure**

A lawfully-established building or structure that does not conform to the regulations of this Ordinance.

18:2.74 Nonconforming Use

A lawfully-established use of land or buildings which do not conform to the use regulations of this Ordinance.

18:2.75 Nursery School

A daytime group facility which has as its main objective a developmental program for pre-school children and whose staff meets the educational qualifications as established by the State of Michigan.

18:2.76 Occupant Load

The occupant load of an establishment or use is the maximum number of persons that can avail themselves of the services (or goods) of such establishment, at any one time, with reasonable safety and comfort, as determined in the Building Code.

18:2.77 Open-Space Area

The difference between the whole site area and the ground area covered by structures, except the paved active recreation areas, patios, terraces, pedestrian circulation areas, swimming pools, and other similar site components may be incorporated with the approval of the City Council.

18:2.78 Parking Lot

An area for the parking of vehicles together with access aisles and drives which is located outside of street rights-of-way. Parking lots may also include loading areas and associated maneuvering space.

18:2.79 Parking Space

An area of definite length and width which is fully accessible for the parking of permitted vehicles. Said area shall be exclusive of drives, aisles and entrances giving access thereto.

18:2.80 Performance Guarantee

A financial guarantee to ensure that all improvements, facilities, or work required by this Ordinance will be completed in compliance with this Ordinance and other City ordinances, regulations and the approved plans and specifications of a development.

18:2.81 Planned Unit Development (PUD)

An integrated and coordinated development of various land uses, comprehensively planned and approved through a rezoning and site plan review process which permits additional flexibility in building site plan design, usable open spaces and preservation of natural features meeting the intent of the Planned Unit Development articles of this Ordinance.

18:2.82 Principal Building

A building or group of buildings in which is conducted the main or principal use of the lot on which said building is located.

18:2.83 Property Lines

The lines bounding a zoning lot, as defined herein .

18:2.84 Public Way

Any sidewalk, street, alley, highway, or other public thoroughfare.

18:2.85 Reservoir Parking

Those off-street parking spaces allocated to automobiles awaiting entrance to a particular establishment.

18:2.86 Rest Home, Nursing Home, or Convalescent Home

A rest home, nursing home, or convalescent home shall be defined as specified in State of Michigan Act 139, Public Acts of 1956, as amended.

18:2.87 Roadside Stand

A structure for the display and sale of agricultural products, with no space for customers within the structure itself. All products displayed at a roadside stand shall be produced on the premises where the stand is located. (Ord. #38-A, se . 31.32 & 31.33)

18:2.88 Setback

The minimum distance maintained between the property line and the nearest supported member of any structure on the lot excluding residential accessory structures.

18:2.89 Shopping Center

A group of architecturally unified commercial establishments built on a site which is planned, developed, owned, and managed as an operating unit related in its location, size, and type of businesses to the trade area that the center serves.

18:2.90 Sign

A name, identification, description, display, or illustration which is affixed to, or represented directly or indirectly upon, a building, structure, or piece of land, and which directs attention to an object, project, place, activity, person, institution, organization, or business. However, a "sign" shall not include any display of official court of public office notices nor shall it include the flag, emblem, or insignia of a nation, political unit, school, or religious group. A "sign" shall not include a sign located completely within an enclosed building, which sign is not visible from outside the building, unless the context shall so indicate.

18:2.91 Sign, Advertising

A sign which directs attention to a business, commodity, service, or entertainment not exclusively related to the premises where such sign is located or to which it is affixed.

18:2.92 Sign, Billboard

An off-premise sign with an area in excess of two hundred (200) square feet.

18:2.93 Sign, Business

A sign which directs attention to a business or profession conducted, or to a commodity, service, or entertainment sold or offered, upon the premises where such sign is located or to which it is affixed

18:2.94 Sign, Flashing

Any illuminated sign on which the artificial light is not maintained stationary or constant in intensity and color at all times when such sign is in use. For the purpose of this Ordinance, any moving, illuminated sign shall be considered a "flashing sign."

18:2.95 Sign-Gross Area of

The entire area within a single continuous perimeter enclosing the extreme limits of such sign and in no case passing through or between any adjacent elements of same. However, such perimeter shall not include any structural elements lying outside the limits of such sign and not forming an integral part of the display. When two (2) sides of a double-faced sign are located not more than thirty-six (36) inches apart at the narrowest point and display identical messages or other representation, the gross area shall include only one of the sides: Any additional side of a multifaced sign shall be considered as a separate sign for purposes of computing the total gross area of the sign. The gross area of a fascia shall be calculated by the

total square footage encompassed by the fascia, including the area between letters.

18:2.96 Sign, Monument

An identification sign which is so designed and constructed as to complement the premises being identified. Ordinarily, the letters or numbers of such sign are engraved into or raised upon natural stone, heavy lumber, or masonry.

18:2.97 Sign, Obsolete

Any sign which no longer correctly directs or exhorts any person; or advertises a business, service, product, tenant, or activity no longer conducted, available, or in existence.

18:2.98 Sign, Off-Premise

A sign other than an on-premise sign.

18:2.99 Sign, On-Premise

A sign which advertises only goods, services, facilities, events, or attractions offered on the premises where the sign is located. Premises include the contiguous land under single ownership or control, which is used, developed, or built upon as a unit, and which is not divided by a public street.

18:2.100 Sign, Portable/Temporary

A free-standing sign, not permanently anchored or secured to either a building or the ground, such as, but not limited to, "A" frame, "T" shaped or inverted "T" shaped, including those mounted on wheeled trailers.

18:2.101 Signs, Political

A sign whose message relates to a candidate to political office, or to a political party, or to a political issue or an ideological opinion.

18:2.102 **Sign, Roof**

A sign erected upon or above a roof or parapet wall of a building and which is wholly or partially supported by said building.

18:2.103 **Sign, Window**

Any temporary sign affixed to the interior or exterior of a window, or any sign located inside a building within six (6) feet of the interior side of a window and displayed so as to attract the attention of persons outside the building. Merchandise which is included in a window display shall not be considered as part of a window sign.

18:2.104 **Site Condominium Building Envelope**

The ground area occupied, or to be occupied, by the principal structure which is, or is intended to be, placed on a building site, together with any attached accessory use.

18:2.105 **Site Condominium Building Site**

Regardless of use, that portion of the condominium project designed and intended for separate ownership and use, as described in the Master Deed.

18:2.106 **Site Condominium Subdivision**

A division of land, on the basis of condominium ownership, which is not subject to the provisions of the Subdivision Control Act, Public Act 288 of 1967, as amended.

18:2.107 **Story**

That part of a building between any floor and the floor next above, and if there be no floor above, then the ceiling above. A basement is a story if its ceiling is six (6) feet or more above the level from which the height of the building is measured, or

if it is used for business purposes, or if it contains any dwelling units other than one (1) dwelling unit for the caretaker of the premises.

18:2.108 Standard Restaurant

Any establishment whose principal business is the sale of foods, frozen desserts, or beverages to the customer in a ready-to-consume state, and whose method of operation involves only the serving of the prepared food to the customer at tables or booths inside the structure or out. An establishment may combine the functions and characteristics of a standard restaurant, fast-food restaurant, a drive-in restaurant, or a drive-through restaurant. Establishments which combine the functions and characteristics of more than one type of restaurant shall meet the parking and loading standards established for each type in proportion to the area or number of employees assigned to each function.

18:2.109 Street

A public or private right-of-way which affords a primary means of vehicular access to abutting property, whether designated as a street, avenue, highway, road, boulevard, lane, throughway, or however otherwise designated, but does not include driveways to buildings.

18:2.110 Structural Alteration

Any change, other than incidental repairs, which would prolong the life of the supporting members of a building, such as the addition, removal, or alteration of bearing walls, columns, beams, girders, or foundations.

18:2.111 Structure

Anything which is constructed or erected which requires permanent location on the ground or attachment to something having permanent location on the ground.

18:2.112 Structure Temporary

A building, trailer or other structure which is permitted in conjunction with a construction project upon approval of the Building Director (see Section 4:10).

18:2.114 Use

The purpose or activity for which the land or building thereon is designed, arranged, or intended, or for which it is occupied or maintained

18:2.115 Use, Principal

The main use of land or buildings as distinguished from a subordinate or accessory use. A "principal use" may be a "permitted" use or a "special use."

18:2.116 Use, Special Land

A use (either public or private) which because of its unique characteristics, cannot be properly classified as a permitted use in a particular district or districts. After due consideration, in each case, of the impact of such use upon neighboring land and of the public need for the particular use at the particular location, such "special land use" may or may not be granted, subject to the terms of this Ordinance.

18:2.117 Use, Permitted

A use which may be lawfully established in a particular district or districts provided it conforms with all requirements, regulations, and standards of such district.

18:2.118 Veterinary Clinic

A building or any portion thereof used for the treatment of house pets as outpatients and in no event having exterior or interior kennels and overnight lodging appurtenant thereto or a part thereof.

18:2.119 Warehouse

A building used for short and/or long-term storage in connection with manufacturing, freight handling, and retailing.

18:2.120 Warehouses for Families and Small Businesses {Mini-Warehouses}

A building or a group of buildings in a controlled access and fenced compound that contains varying sizes of individual, compartmentalized, and controlled-access stalls or lockers for the storage of family or small business goods or wares.

18:2.121 Yard

An open space on the same zoning lot with a building or structure, unoccupied and unobstructed from its lowest level to the sky, except as otherwise permitted in Article IV. A "yard" extends along a lot line, and to a depth or width specified in the setback requirements for the zoning district in which such zoning lot is located.

18:2.122 Yard, Front

An unoccupied area extending the full width of the property on which a principal building is located and situated between the front lot line and a line parallel thereto passing through the nearest point of the principal building.

18:2.123 Yard, Rear

An area extending the full width of the property on which a principal building is located and situated between the rear lot line and a line parallel thereto passing through the nearest point of the principal building.

18:2.124 Yard, Required

A yard which is located between a front, side, or rear property line and the required front, side, or rear setback line.

18:2.125 Yard, Side

An unoccupied area extending from the front yard to the rear yard on which a principal building is located and situated between the side lot line and a line parallel thereto passing through the nearest point of the principal building.

18:2.126 **Yard, Corner Side**

A side yard which adjoins a public street.

18:2.127 **Yard, Interior Side**

A yard which is located immediately adjacent to another zoning lot or to an alley separating such side yard from another zoning lot.

18:2.128 **Yard, Unrequired**

A yard which is located between the front, side or rear of the principal structure on a lot and the required front, side or rear setback line.

ARTICLE XX - EFFECTIVE DATE, PUBLICATION AND ADOPTION 20.0

20:1 EFFECTIVE DATE

The provisions of this Ordinance are hereby declared to be immediately necessary for the preservation of the peace, health, safety and welfare of the People of the City of Westland and shall be effective immediately upon adoption and publication in the manner prescribed by law.

20:2 PUBLICATION

The City Clerk shall, within fifteen (15) days following adoption of this Ordinance, cause to be published a Notice of Adoption in accordance with the provisions of Act 638 of the Public Acts of Michigan, 1978.

20:3 ADOPTION

This Ordinance was adopted by the City Council of the City of Westland by Authority of Act 207 of the Public Acts of Michigan, as amended, at a regular meeting thereof held on the 4th day of August, 1997.

On motion by Councilman Barns, supported by Councilman Pickering, the foregoing Ordinance was adopted.

ROLL CALL	AYES	NAYS	ABSENT
	Glenn S. Anderson	None	Charles T."Trav" Griffin
	Justine Barns		
	Sandra A. Cicirelli		
	Richard LeBlanc		
	Charles W. Pickering		
	Sharon P. Scott		

I, DIANE J. FRITZ, City Clerk of the City of Westland, hereby certify that the foregoing is a true and accurate copy of an ordinance adopted by the City Council of the City of Westland, County of

ARTICLE XX - EFFECTIVE DATE, PUBLICATION AND ADOPTION 20.0

Wayne, Michigan, at a regular meeting held on the 4th day of August, 1997, Ordinance No. 248, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meeting Act, being Act 267, Public Acts of Michigan 1976, and that the minutes of said meeting were kept and will be or have been available as required by said Act.

Adopted: August 4, 1997

Published: August 14, 1997

Effective: August 14, 1997

DIANE J. FRITZ
WESTLAND CITY CLERK

STANDARD OPERATING PROCEDURE POLLUTION PREVENTION AND GOOD HOUSEKEEPING

DPS FACILITY

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN ROAD, WESTLAND, MICHIGAN 48185



UPDATED JULY 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations. The following standard operating procedure is intended for the City of Westland DPS facility, which has been deemed as a high priority based on the operations that are conducted at the site.

SECTION B –FACILITY ASSESSMENT AND PRIORITIZATION

The MDEQ NPDES Phase II Stormwater Discharge Permit Application requires a standard operating procedure (SOP) for identifying the structural and non-structural stormwater controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff. The DPS was assessed for its potential to discharge pollutants to the waters of the state and as deemed a high priority based on the following applicable criteria:

1. Amount of urban pollutants stored at the site (i.e. sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash, bacteria, or other site-specific pollutants)
2. Potential for polluting activities to be conducted outside

Based on these criteria, the DPS facility has been deemed a high priority site which has prompted the need for a site specific standard operating procedure to prevent or minimize the potential for pollutants from entering surface waters of the state as outlined in the NPDES permit application.

SECTION C –INVENTORY AND ASSESSMENT

The following is an inventory and assessment of stormwater controls (i.e. catch basins, detention basins, etc.) and facility operations that occur on site.

- Stormwater catch basins (8) – with catch basin inserts to reduce sediment in runoff
- Storm sewer manhole structures (7)
- Salt dome (1)
- Fuel Station - (2) 1,000 gallon diesel and (2) 1,000 gallon gas
- Vehicle washing area (1) – performed indoors
- Dumpsters (2)
- Used oil tank - (1) full enclosed 500 gallon secondary containment vessel
- Stockpiles (4)
- Recycling Drop-off Area – Items collected: cardboard, batteries, used motor oil, scrap metal

C.1 DPS Inventory and Description of Materials and Activities

The City of Westland's DPS Facility is located at 37137 Marquette Street and consists of one building, whose purposes include DPS office space, fleet maintenance, water and sewer maintenance, and general storage. Municipal activities that occur at the facility include the following:

- Fuel Storage and Fueling
- Maintenance and cleaning of vehicles and equipment
- Salt storage
- Stockpiled Materials
- Recycling Drop-off Area

SECTION D – FUEL STORAGE AND FUELING

The City of Westland's DPS Facility currently has four (4) above-ground storage tanks (2-diesel, 2- gasoline) with a maximum capacity of 1,000 gallons each. Part 5 Rules indicate that fuel storage areas "shall be designed, constructed, maintained, and operated to prevent the release of polluting materials through sewers, drains, or otherwise directly or indirectly into any public sewer system or to the surface or groundwater's of this state." The City has met this requirement through the proper storage and pollution prevention methods currently in place. These include the following:

- The above ground gasoline and diesel fuel tanks are located outside within a designated fueling area. It is equipped with an emergency power shut-off, leak detection and volume monitoring controls. The tank is only filled on an as need basis.
- All bulk liquid tanker delivery vehicles will only be allowed on site of contact has been made with properly trained personnel and it has been confirmed that these personnel will be present at the delivery point.
- Properly trained personnel will be in attendance to monitor the entire transfer process. They are authorized to terminate or to order the driver to terminate the transfer and have the driver move the tanker in case of an emergency. Attending personnel will be alert, have an unobstructed view of the cargo tank connections and be within 25 feet of the cargo tank during transfer operations.
- Properly trained DPS staff will direct the tanker for proper positioning, verify, and provide access to the correct fill port. Access to other fill ports or unlocking pipeline caps in anticipation of other delivery vehicles is strictly prohibited.
- Properly trained DPS staff will ensure a potential spill or release cannot enter storm drains by placing a protective barrier on or around affected storm drains (i.e. spill blanket).
- Wheel chocks or other approved methods to prevent the tanker from moving during the transfer process or driving off without following proper disconnection practices.
- Inspection of the truck to ensure that there are no leaks will be conducted before and after the transfer operation.
- Connected hoses and connections will be reviewed and verified prior to the transfer.
- The available volume of the tank will be verified prior to transfer to prevent over-filling.

- During removal of the transfer lines, trained staff will ensure that excess material is drained into the appropriate receiving tank or receptor to prevent a release of materials to the environment.
- Trained staff will monitor the termination process and inspect the lower most tanker manifold for evidence of leaks or damage prior to the tanker's departure.
- A spill kit will be stationed next to the storage tanks at all times.

A fueling log is maintained to track and record the volume of fuel dispersed for City vehicles and equipment. Completion of these logs is mandatory and used as secondary control to track the volume of fuel stored in the tanks.

All other vehicle fluids are stored indoors. Floor drains within the DPS building are connected to the sanitary sewer. Vehicle maintenance activities are conducted indoors.

SECTION E – ON SITE WASTE DISPOSAL

A total of two (2) dumpsters are kept on site for office trash and construction refuse. The dumpsters are not used for the disposing of hazardous materials. The lids of the dumpsters are to be closed at all times.

E.1 Household Hazardous Waste

The City periodically hosts a household hazardous waste event, which is coordinated by Wayne County. The event is open to all Wayne County residents.

SECTION F – VEHICLE WASHING AND MAINTENANCE

Vehicle maintenance activities are conducted by DPS staff for the City of Westland's DPS vehicle fleet. Maintenance activities conducted by DPS staff include, but are not limited to: oil changes and other vehicle fluids, brakes, tune ups, and general repair tasks. A maintenance log is maintained, which is used to document all vehicle maintenance and repair activities.

Vehicle washing activities are conducted indoors of the DPS garage. The area is sloped inward to contain wash water to prevent wash water from flowing outside of the garage. Wash water is collected by a catch basin located within the garage and is connected to the sanitary sewer.

SECTION G – WINTER OPERATIONS

The City DPS field staff applies rock salt as part of their deicing procedures during the winter months. Bulk storage of road salt is located at DPS Yard.

G.1 Salt Storage and Loading

The City of Westland has one salt dome, which has a maximum capacity of 5,000 tons of salt. The floor is comprised of an impervious cement pad. Loading of salt takes place at the structure entrance on a paved surface. The loading area is maintained after each use, with excess salt being swept back inside the storage facility.

Salt storage and application training is performed annually to DPS staff. Staff has been trained to minimize any track-out from loading operations. Salt application vehicles are calibrated before the winter season.

G.2 Snow Removal

The City may declare a snow emergency if 6" or more of snow has fallen. Vehicles must be removed from city streets for snow plowing. Failure to do so may result in your vehicle being ticketed and/or towed. Major roads are plowed prior to residential streets.

The City also has a snow plow tracking GPS system in place. This allows City staff to more efficiently manage street maintenance responses to ice and snow conditions by tracking the location conditions, and status of plow systems (e.g. plow blade, spreader) in real time and to create reports of vehicle activities.

SECTION H – ROAD, PARKING LOT, AND SIDEWALK MAINTENANCE

Road, parking lot, and sidewalk maintenance activities includes pothole repair, sidewalk repair/replacement, and curb and gutter repair. These services are addressed by DPS field staff as determined in the field on an as needed basis. Materials are purchased in quantities as needed to reduce waste. Left over materials are stored in designated stockpile areas at the DPS Yard. Disposing of concrete washout and other excess repair materials into the storm sewer is strictly prohibited by the City.

H.1 Stockpiled Materials

Designated stockpile areas are located in the southern portion of the property. Stockpiled materials include topsoil, sand, gravel, and woodchips. The stockpiles are located on an unpaved portion of the property. Drainage from this area goes to a catch basin that has perimeter controls in place to prevent erosion. When not in use, the stockpiles are covered with a tarp to minimize erosion.

SECTION I – NON-STRUCTURAL CONTROLS

The City of Westland is committed to employing preventative maintenance practices through the use of several nonstructural controls to prevent stormwater pollution. These nonstructural controls are everyday types of activities undertaken by employees at the facility. The non-structural controls implemented at the DPS facility are as follows:

I.1 Routine Inspections and Good Housekeeping Procedures

Preventive maintenance involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. DPS foremen meet with DPS field staff on a daily basis to discuss daily assignments and objectives. A routine inspection is conducted by facility staff during site walkthroughs during normal operations activities and will be performed at least once per month. The purpose of these inspections is to

identify and prevent conditions that could lead to stormwater pollution. A log of corrective actions will be kept on file.

Staff inspects all vehicles consistent with Commercial Drivers License Procedures, and performs detailed vehicle inspections every month. Completed vehicle maintenance records and fueling logs are kept on file at the DPS facility.

Part 5 rules also require surveillance of polluting materials. The routine inspections will include this information for the salt storage and fueling areas.

I.2 Comprehensive Site Inspections

The comprehensive site inspection will include the areas and equipment identified in the preventive maintenance program, good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with this SOP. All DPS related activities will be evaluated during the comprehensive inspection. In contrast to the routine inspections, comprehensive inspections will focus on areas that have a reasonable potential for significant materials to contaminate stormwater runoff. The comprehensive site inspection for DPS areas will be conducted every (six) 6 months which generally coincides with a planned cleaning of the entire facility. Documentation of the comprehensive site inspection results will be prepared and kept on file.

I.3 Employee Training Program

Employee training programs will be implemented to inform appropriate personnel at all levels of responsibility of safety, environmental impacts, and good housekeeping practices. The standard operating procedure for employee training can be found in the City's general Pollution Prevention and Good Housekeeping Standard Operating Procedure.

SECTION J – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE POLLUTION PREVENTION AND GOOD HOUSEKEEPING

MUNICIPAL GOLF COURSE

THE CITY OF WESTLAND
36300 WARREN ROAD, WESTLAND, MICHIGAN 48185



UPDATED JULY 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations. The following standard operating procedure is intended for the City of Westland's Municipal Golf Course, which has been deemed as a high priority based on the operations that are conducted at the site.

SECTION B –FACILITY ASSESSMENT AND PRIORITIZATION

The MDEQ NPDES Phase II Stormwater Discharge Permit Application requires a standard operating procedure (SOP) for identifying the structural and non-structural stormwater controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff. The golf course was assessed for its potential to discharge pollutants to the waters of the state and as deemed a high priority based on the following applicable criteria:

1. Amount of urban pollutants stored at the site (i.e. sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash, bacteria, or other site-specific pollutants)
2. Potential for polluting activities to be conducted outside
3. Proximity to water bodies

Based on these criteria, the golf course has been deemed a high priority site which has prompted the need for a site specific standard operating procedure to prevent or minimize the potential for pollutants from entering surface waters of the state as outlined in the NPDES permit application.

SECTION C –INVENTORY AND ASSESSMENT

The following is an inventory and assessment of stormwater controls (i.e. catch basins, detention basins, etc.) and facility operations that occur on site.

Westland Municipal Golf Course – 500 South Merriman Road

- Stormwater catch basins (10)
- Storm sewer manhole structures (3)
- Dumpster (1)
- 300 gallon above ground storage tanks (gasoline, diesel) (2)
- Materials stockpiles (1)
- Equipment washing area (1)
- Detention Ponds (3)

C.1 Golf Course Inventory and Description of Materials and Activities

The following golf course activities occur at the maintenance facility of the golf course. They include the following:

- Fuel Storage and Fueling
- Maintenance and cleaning of vehicles and equipment
- Stockpiled materials
- Storage of pesticides and herbicides

SECTION D – FUEL STORAGE AND FUELING

The City's golf course currently has two (2) above ground storage tanks with a maximum capacity of 300 gallons each. One tank is filled with diesel fuel, while the other is filled with gasoline. Part 5 Rules indicate that fuel storage areas "shall be designed, constructed, maintained, and operated to prevent the release of polluting materials through sewers, drains, or otherwise directly or indirectly into any public sewer system or to the surface or groundwater's of this state." The City has met this requirement through the proper storage and pollution prevention methods currently in place. These include the following:

- The above ground gasoline and diesel fuel tanks are located outside within a designated fueling area. It is equipped with an emergency power shut-off, leak detection and volume monitoring controls. The tank is only filled on an as need basis.
- All bulk liquid tanker delivery vehicles will only be allowed on site of contact has been made with properly trained personnel and it has been confirmed that these personnel will be present at the delivery point.
- Properly trained personnel will be in attendance to monitor the entire transfer process. They are authorized to terminate or to order the driver to terminate the transfer and have the driver move the tanker in case of an emergency. Attending personnel will be alert, have an unobstructed view of the cargo tank connections and be within 25 feet of the cargo tank during transfer operations.
- Properly trained staff will direct the tanker for proper positioning, verify, and provide access to the correct fill port. Access to other fill ports or unlocking pipeline caps in anticipation of other delivery vehicles is strictly prohibited.
- Properly trained staff will ensure a potential spill or release cannot enter storm drains by placing a protective barrier on or around affected storm drains (i.e. spill blanket).
- Wheel chocks or other approved methods to prevent the tanker from moving during the transfer process or driving off without following proper disconnection practices.
- Inspection of the truck to ensure that there are no leaks will be conducted before and after the transfer operation.
- Connected hoses and connections will be reviewed and verified prior to the transfer.
- The available volume of the tank will be verified prior to transfer to prevent over-filling.
- During removal of the transfer lines, trained staff will ensure that excess material is drained into the appropriate receiving tank or receptor to prevent a release of materials to the environment.

- Trained staff will monitor the termination process and inspect the lower most tanker manifold for evidence of leaks or damage prior to the tanker's departure.
- A spill kit will be stationed next to the storage tanks at all times.

A fueling log is maintained to track and record the volume of fuel dispersed for golf course maintenance vehicles and equipment. Completion of these logs is mandatory and used as secondary control to track the volume of fuel stored in the tanks.

All other vehicle fluids are stored indoors. Floor drains within the maintenance buildings are connected to the sanitary sewer. Vehicle maintenance activities are conducted indoors.

SECTION E – ON SITE WASTE DISPOSAL

One (1) dumpster is kept on site for office trash and construction refuse. The dumpster is not used for the disposing of hazardous materials. The lids of the dumpsters are to be closed at all times.

SECTION F – VEHICLE WASHING AND MAINTENANCE

Vehicle maintenance activities are conducted by golf course staff only. Maintenance activities conducted by golf course staff include, but are not limited to, oil changes and other vehicle fluids, brakes, tune ups, and general repair tasks. A maintenance log is maintained to document all vehicle maintenance and repair activities.

Vehicle washing activities are conducted outdoors in a designated paved area adjacent to the maintenance building. There are no catch basins near the washing area. Wash water flows over a vegetated area adjacent to the designated washing area where it is allowed to infiltrate. The City is pursuing a groundwater permit for washing activities.

SECTION G – STRUCTURAL STORMWATER CONTROLS

The following structural stormwater controls are in place at the golf course maintenance facility to prevent or minimize impacts to stormwater.

G.1 Materials Stockpiles

A designated stockpile area is located at the golf course maintenance facility. Stockpiled materials at these locations include sand. The sand stockpile has an earthen berm around the perimeter. The front is left open to provide access for loading. When not in use, the stockpiles are covered with a tarp to minimize erosion.

G.2 Materials Storage

The golf course maintenance facility is used for pesticide and herbicide storage. All storage structures remain locked at all times except during times of access. Golf course staff tracks the quantity of material that is stored in both structures using a tracking log.

Lastly, both structures have spill containment kits that are immediately accessible in the event of a spill.

SECTION H – NON-STRUCTURAL CONTROLS

The City of Westland is committed to employing preventative maintenance practices through the use of several nonstructural controls to prevent stormwater pollution. These nonstructural controls are everyday types of activities undertaken by employees at the facility. The non-structural controls implemented at the golf course are as follows:

H.1 Routine Inspections and Good Housekeeping Procedures

Preventive maintenance involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. The golf course superintendent meets with maintenance staff on a daily basis to discuss daily assignments and objectives. A routine inspection is conducted by maintenance staff during site walkthroughs during normal operations activities and will be performed at least once per month. The purpose of these inspections is to identify and prevent conditions that could lead to stormwater pollution. A log of corrective actions will be maintained at each golf course maintenance facility.

Staff inspects all vehicles consistent with Commercial Drivers License Procedures, and performs detailed vehicle inspections every month. Completed vehicle maintenance records and fueling logs are kept on file at the golf course maintenance facility.

Part 5 rules also require surveillance of polluting materials. The routine inspections will include this information for the salt storage and fueling areas.

H.2 Comprehensive Site Inspections

The comprehensive site inspection will include the areas and equipment identified in the preventive maintenance program, good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with this SOP. All golf course related activities will be evaluated during the comprehensive inspection. In contrast to the routine inspections, comprehensive inspections will focus on areas that have a reasonable potential for significant materials to contaminate stormwater runoff. The comprehensive site inspection for golf course maintenance areas will be conducted every (six) 6 months which generally coincides with a planned cleaning of the entire facility. Documentation of the comprehensive site inspection results will be prepared and kept on file.

H.3 Employee Training Program

Employee training programs will be implemented to inform appropriate personnel at all levels of responsibility of safety, environmental impacts, and good housekeeping practices. The standard operating procedure for employee training can be found in the City's general Pollution Prevention and Good Housekeeping Standard Operating Procedure.

SECTION I – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE POLLUTION PREVENTION AND GOOD HOUSEKEEPING

GENERAL PROCEDURES

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN ROAD, WESTLAND, MICHIGAN 48185



UPDATED OCTOBER 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations.

SECTION B – FACILITY ASSESSMENT AND PRIORITIZATION

City owned and operated facilities have been assessed for their potential to discharge pollutants to the waters of the state. Each facility was evaluated based on the following criteria:

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

Based on these criteria, the potential for each facility to discharge pollutants to the waters of the state were rated high, medium, or low. For “low” priority facilities where no assessment factors are present, catch basin cleaning and street sweeping will be performed as indicated in the applicable procedures for these activities. For “medium” priority facilities, appropriate BMPs are considered based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the state. “High” priority facilities have specific procedures that are included in Appendix H of the Stormwater Management Plan (SWMP).

SECTION C– UPDATES AND PRIORITY REVISION

This inventory shall be updated within 120 days as facilities and structural stormwater controls are added, removed, or no longer owned or operated by the applicant. Priority level assessments shall be revised within 120 days prior to discharging stormwater at a new facility, or when the storage of materials, equipment, or vehicles changes at a facility.

SECTION D – MUNICIPAL INVENTORY AND ASSESSMENT

The following table identifies the City’s owned or operated facilities with a discharge of stormwater to surface waters of the state. **Table 1** includes a list of properties owned or operated by the City that has stormwater controls on site and provides the estimated number of stormwater structural controls (i.e. catch basins, detention basins, etc.) at each site, along with the priority level of potential discharge of pollutants to waters of the state.

Table 1

Facility Name	Structural Controls	Priority Level	Assessment Factors	BMP's Implemented
DPS Yard/Recycling Center	Catch Basins (8) Storm Manholes (7) Fuel Station (4 tanks) Salt Dome (1) Vehicle Wash Area (1) Dumpsters (2) Stockpiles (4) Oil Tank (1)	High	1, 3	See Section E
City Hall	Catch Basins (18) Storm Manholes (10) Detention Basin (1)	Low	1,4	Catch basin cleaning Street sweeping Basin maintenance
Dorsey Community Center	Catch Basins (0) Storm Manholes (0) Dumpsters (1)	Low	1	Catch basin cleaning Street sweeping
Library	Catch Basins (17) Storm Manholes (1) Dumpsters (1)	Low	1	Catch basin cleaning Street Sweeping
Police Station	Catch Basins (9) Storm Manholes (2)	Low	1	Catch basin cleaning Street sweeping
Central City Fire Station	Catch Basins (4) Storm Manholes (2) Detention Basin (1)	Low	1,4	Catch basin cleaning Street sweeping
Merriman Road Fire Station	Catch Basins (0) Storm Manholes (1)	Low	1	Catch basin cleaning Street sweeping
Annapolis Road Fire Station	Catch Basins (5) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Ford Road Fire Station	Catch Basins (2) Storm Manholes (1)	Low	1	Catch basin cleaning Street sweeping
Palmer Road Fire Station	Catch Basins (0) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Municipal Golf Course	Catch Basins (10) Storm Manholes (3) Fuel Station (2 tanks) Stockpiles (1) Detention Basins (3) Equipment Wash Area (1)	High	1,4	See Section E
Colburn Park/Senior Friendship Center	Catch Basins (5) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Liberator Park	Catch Basins (2) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Firefighter's Park	Catch Basins (2) Storm Manholes (3)	Low	1	Catch basin cleaning Street sweeping
Curtis Woods/Kiwanis Park	Catch Basins (1) Storm Manholes (5)	Low	1	Catch basin cleaning Street sweeping
Rotary Park	Catch Basins (3) Storm Manholes (2)	Low	1	Catch basin cleaning Street sweeping

Table 1 (cont'd)

Facility Name	Structural Controls	Priority Level	Assessment Factors	BMP's Implemented
Samuel J. Corrado Park	Catch Basins (0) Storm Manholes (2)	Low	1	Catch basin cleaning Street sweeping
Stottlemeyer Park	Catch Basins (0) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Tattan Park	Catch Basins (3) Storm Manholes (0) Detention Basin (1) Underground Storage (1) Oil/water Separator (1) Bioswale (1)	Low	1	Catch basin cleaning Street sweeping Basin maintenance Underground storage maintenance Oil/water separator maintenance Bioswale maintenance
Voss (Civitan) Park	Catch Basins (2) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Hix Road Park	Catch Basins (0) Storm Manholes (0)	Low	1	Catch basin cleaning Street sweeping
Jaycee Park	Catch Basins (7) Storm Manholes (2) Dumpsters (1)	Low	1	Catch basin cleaning Street sweeping
Tom Brown Central City Park	Catch Basins (6) Storm Manholes (3)	Low	1	Catch basin cleaning Street sweeping
Jefferson Community Center	Catch Basins (3) Storm Manholes (2)	Low	1	Catch basin cleaning Street sweeping

In addition to the properties in Table 1, Westland also owns other lots with no structural stormwater controls. There are currently 5,358 catch basins throughout the City that are operated/maintained by the City of Westland. There are also two storm water pump stations owned and operated by the City. One is located along Newburgh Road, south of Cherry Hill at the railroad underpass. The other is located near Middlebelt and Annapolis.

SECTION E –SITE SPECIFIC SOP FOR HIGH PRIORITY SITES

The MDEQ NPDES Phase II Stormwater Discharge Permit Application requires a standard operating procedure (SOP) for identifying the structural and non-structural stormwater controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff.

E.1 Inventory and Description of Materials and Activities

The City of Westland's Department of Public Services (DPS) operations is conducted at their 37137 Marquette Street facility. The City also operates a golf course. Both of these sites are considered high priority sites due to the following operations:

DPS Facility – 37137 Marquette Street

- Fuel/Oil Storage and Fueling
- Salt Storage
- Stockpiled materials
- Maintenance and cleaning of vehicles and equipment (done indoors)

Municipal Golf Course – 500 South Merriman Road

- Fuel/Oil Storage and Fueling
- Stockpiled materials
- Maintenance and cleaning of equipment
- Storage of fertilizers, pesticides and herbicides

Site specific standard operating procedures have been developed for the DPS facility and the golf course and are included as a separate document. Please see the Standard Operating Procedures – Westland DPS Facility, Standard Operating Procedures and Westland Municipal Golf Course, Standard Operating Procedures.

SECTION F –CATCH BASIN MAINTENANCE PRIORITY

High Priority streets and catch basins have one or more of the following criteria:

- Immediately adjacent to stockpiles or potentially polluting materials that have with secondary containment measures or other BMPs;
- Frequently used, City-owned and maintained parking lots that have a high potential for pollutant runoff; and/or
- Receive drainage from unpaved roadways and/or parking lots.

Medium Priority streets and catch basins have one or more of the following criteria:

- City-owned and maintained streets with higher rate of sediment accumulation.
- Streets within the municipality zoned as industrial with heavy truck traffic; and/or

Low Priority streets and catch basins have one or more of the following criteria:

- City-owned parking lots with no material storage or handling;
- Catch basins located within vegetated areas; and/or
- City-owned and maintained streets with low sediment accumulation.

The DPS Yard is classified a high priority due to the presence of stockpiles, fuel tanks, and the storage and use of other polluting materials. The City does not own or operate any major thoroughfares that would be classified a high priority.

The industrial area of the City that is located near Ford and Hix Roads is considered medium priority due to the sediment associated with industrial activities in the area.

All other City-owned streets, parking lots and catch basins are classified as low priority due to their limited potential for pollutant runoff or other environmental impacts.

SECTION G –STREET SWEEPING PRIORITY

City owned and maintained streets have been prioritized for street sweeping. The criteria for the priority levels that include low, medium, and high are defined as follows:

Low Priority – Residential streets or parking lots within the City that have minimal sediment accumulation rates.

Medium Priority – Major roads throughout the City that have a higher rate of sediment accumulation rates in comparison to low priority residential streets.

High Priority – Areas that are of high priority have a high rate of sediment accumulation and will require more frequent sweeping. These areas are typically located in areas where sediment is easily mobilized and transported by runoff. Additionally, areas that prompt resident complaint or are subject to excessive road sediments are also considered a high priority area.

Street sweeping program activities are not implemented under the following conditions:

- Street sweeping is not conducted on County or State roads
- Sweeping activities are not conducted during wet and inclement weather
- Street sweeping activities are not conducted on private streets or parking lots

SECTION H – SCHEDULE OF STREET SWEEPING AND CATCH BASIN INSPECTIONS

The frequency of street sweeping and catch basin inspections associated with each priority level is provided in **Table 2** below.

Table 2

Maintenance Activity	Priority Level – Schedule		
	High	Medium	Low
Street Sweeping	4x /year	2x /year	1x /year
Catch Basin Inspections	Monthly	1x /year	1x /permit cycle

A summary of the municipal properties and streets and their designated priority level is provided in **Table 3** below, followed by the criteria by which the specific priority levels were determined.

Table 3

Maintenance Activity	Priority Level – Municipal Properties		
	High	Medium	Low
Street Sweeping	DPS Parking lot	Major Roads	All Other City-Owned Streets and Parking Lots
Catch Basin Inspections	DPS Yard	Industrial Area near Ford & Hix Roads	All Other City-Owned Catch Basins

If the DPS receives a complaint, a determination of the area will be made by DPS staff to increase sweeping on a more frequent interval as well as to reclassify the area to a higher priority rating. Catch basins that prompt resident complaints or are subject to isolated instances where structures are plugged or damaged will be maintained and inspected by DPS. At that time, it will be determined if the catch basin will require maintenance on a more frequent interval and warrants a reclassification to a higher priority rating.

In the event a priority rating is changed for catch basin inspections or street sweeping, this procedure will be updated within 120 days.

SECTION I – CATCH BASIN INSPECTION, MAINTENANCE, AND CLEANING METHODOLOGY

The City is currently in the process of cleaning all catch basins. This process will take 2 years (completion in December 2020). After this process is completed, the City will begin implementing the following procedure:

Catch basins are visually inspected during normal work activities or if a complaint is registered by a resident. A visual inspection of the structure will identify any structural defects which may include collapse, cracking, frame damage, pipe collapse, blockage, etc. and will be documented using a standardized form. Structural repairs are prioritized based on public safety concerns. During the inspection, if it is determined that the catch basin sump is more than 50% full of accumulated sediment and debris, it will be advanced to the next priority level and cleaned. Catch basins will be serviced using a vactor truck to remove solids and liquids from the structure. At no time is collected sediment and water allowed to be discharged back into the storm sewer system during the cleaning process. Catch basins that are located on private property are not inspected, cleaned, or maintained by the City.

The catch basins at the DPS Yard that are located near the material storage areas are equipped with a filter insert (or “silt sack”) to prevent sediment and debris from entering the storm sewer. The filter inserts are inspected for integrity and amount of sediment accumulated during the monthly routine inspection.

SECTION J –STREET SWEEPING METHODOLOGY

The City of Westland DPS sweeps City-owned properties with an Elgin Broom Bear sweeper according to the manufacturer's operating instructions. All other street sweeping is performed by a licensed contractor. Collected sediment from street sweeping activities is disposed of as described in Section K.

SECTION K – DISPOSAL OF COLLECTED MATERIAL

Street sweeping debris is put into roll-off containers on site and immediately taken to a landfill for disposal.

Collected material from catch basin cleaning is dewatered, with the clear liquid discharged into the sanitary sewer. The vactor is dumped directly into an approved dumpster. The load is manifested and taken to an approved landfill.

SECTION L – OTHER STRUCTURAL STORMWATER CONTROLS

In addition to implementing the catch basin maintenance and street sweeping programs, the City also performs inspections of detention basins and pump stations that are maintained by the City.

L.1 Detention Basin Inspections

Detention basins that are owned and operated by the City are inspected on a 5-year cycle. Inspections assess the vegetation, erosion, flow channelization, bank stability, inlet/outlet conditions, embankment, and sediment and debris accumulations. Sediment is removed from the basin forebay. If it is determined that maintenance activities are needed, the City will document the needed maintenance actions using a standardized inspection form and perform any maintenance activities as needed.

L.2 Pump Stations

The City currently owns and operates two (2) storm water pump stations. One is located along Newburgh Road, south of Cherry Hill at the railroad underpass. The other is located near Middlebelt and Annapolis. Routine inspection of the pump station is conducted on a quarterly basis. Any maintenance is conducted on an as needed basis and documented using the City's log.

L.3 Bioswales

Bioswales are inspected and maintained on an annual basis. Inspections will assess the vegetation, presence of invasive species, erosion, flow channelization, bank stability, inlet/outlet conditions, embankment, and sediment and debris accumulations. The inspections will also determine if the basin is properly dewatering 24-48 hours after a major storm event. Based on the inspections, maintenance tasks may include re-seeding and/or replanting bare areas, removal of accumulated sediment, floatables and litter, and

treatment of invasive species will be undertaken if the swale has reduced functional capacity. Debris from maintenance is recycled with yard waste.

L.4 Underground Stormwater Detention Systems

Underground detention systems collect stormwater run-off during a storm event, and then release it at an allowable discharge rate into the storm sewer system. While routine maintenance of these systems is low, the systems are inspected once annually for accumulated sediment and debris at the inlet and outlet orifices. If determined necessary, the sediment and debris will be removed. Inspection and cleaning activities will be conducted during dry weather conditions.

L.5 Oil/Water Separator (OWS)

The interior of the OWS will be inspected twice per year and entails a visual inspection of the amount of sediment and oil that has accumulated in the chambers. Cleaning of the unit will be completed when sediment has accumulated to a depth of two feet and/or oil is evident on the upper surface of the standing water in the unit. Cleaning will be completed during a period of dry weather when no flow is entering the unit. After removing the manhole lid, the sediment and oil can be removed from the unit using a Vac-truck. After all of the solids have been removed, the manhole lid is replaced securely to prevent stormwater runoff from entering the unit from above.

The City does not have any other structural controls that are owned or maintained by the City. In the event additional structural stormwater controls are constructed, this procedure will be updated and revised to include the new controls within 120 days.

SECTION M – NEW APPLICANT OWNED FACILITIES

In the event the City acquires or constructs new structural stormwater controls, the design of these structures will comply with the stormwater standards that have been established by Wayne County. Site plans will be reviewed by the City, or its consultants, to ensure the appropriate standards are met.

SECTION N – CERTIFIED PESTICIDE APPLICATOR

The DPS department does not have a certified pesticide applicator on staff and does not apply or store pesticides or fertilizers. In the event the application of pesticides or fertilizers is needed, the City retains the services of a licensed applicator.

SECTION O – EMPLOYEE TRAINING

Employee training programs will be implemented to inform appropriate personnel at all levels of responsibility of safety, environmental impacts, and good housekeeping practices. The City participates in training opportunities that are made available by SEMCOG, Wayne County, the Alliance of Rouge Communities, the Alliance of Downriver Watersheds, and others as deemed appropriate. Employee training components for the City of Westland DPS Department is included in Table 4.

Table 4

Employees Trained	Training Description and Frequency
New Westland DPS Employees (upon hire)	Upon hire, employees will: <ul style="list-style-type: none">• View the Municipal Storm Water Pollution Prevention Storm Watch training video.• Read and become familiar with the City’s SOPs.• Participate in a job shadow program where new staff is paired with an experienced staff member for 30 days.
All DPS Field Employees (once during permit cycle)	<ul style="list-style-type: none">• View the Municipal Stormwater Pollution Prevention Storm Watch training video.• Review proper materials storage and handling.• Review good housekeeping and pollution prevention practices.• Review examples of illicit discharges to the storm sewer system• Review Westland Spill Response Procedures
Key staff	<ul style="list-style-type: none">• Attendance of key staff to relevant training workshops by the Alliance of Rouge Communities, Alliance of Downriver Watersheds, SEMCOG, or others, when available.

SECTION P –CONTRACT REQUIREMENTS AND OVERSIGHT

The contractors hired by the City to perform municipal operations that potentially impact stormwater are required to follow appropriate pollution prevention BMPs indicated in the City’s contract language. In cases where an outside contractor is hired to perform services that could impact stormwater, the contracting company will be required to follow appropriate pollution prevention BMPs. All work performed by outside contractors are monitored by City staff through daily observation to ensure quality of work, adherence to the specified contract language, and to ensure that potential impacts to stormwater are minimized.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of stormwater pollution related incidents pertaining to activities or work performed by the contractor.
- Number of incidents where the City required corrective action by the contractor

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION Q – COMPLAINT PROCEDURE

Complaints received by the public are logged into the City's computer system and then routed to the appropriate department for follow up. Investigation into complaints routed to the DPS department is conducted with 2 to 48 hours after the complaint has been received by the City. At that time, the DPS will make a determination to correct any problems, or contact the responsible parties for appropriate action.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of complaints routed to the DPS department for follow up.
- Number of incidents that prompted additional corrective actions by the DPS or other responsible party

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION R – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE POLLUTION PREVENTION AND GOOD HOUSEKEEPING

SPILL RESPONSE

PREPARED FOR:

THE CITY OF WESTLAND
36300 WARREN RD., WESTLAND, MI 48185



UPDATED JULY 2018

SECTION A – PERSONNEL

The following City personnel have been identified as key staff on charge of spill response planning, implementation and maintenance of the Spill Response Plan.

Name	Phone
Westland Police Dispatch – Spill Coordinator	(734) 722-9600
Westland Fire Department – Spill Coordinator	(734) 467-3201
Ramzi El-Gharib – Spill Coordinator 1	(734) 728-1770
Hassan Saab – Spill Coordinator 2	(734) 467-7951

A.1 Responsibilities

- The **Facility Responsible Person** has primary responsibility for coordinating the response to emergencies, including chemical spills
- **Supervisors** should ensure that employees are familiar with these procedures and receive the necessary training
- **All employees** should follow these procedures in the event of a chemical spill

A.2 Emergency Contact Numbers

The following telephone numbers should be posted near telephones and in other conspicuous locations:

Name	Affiliation	Phone
Westland Police Dispatch	Westland Police Department	(734) 722-9600
Westland Fire Department	Westland Fire Department	(734) 467-3201
Ramzi El-Gharib – Spill Coordinator 1	Westland DPS	(734) 728-1770
Hassan Saab – Spill Coordinator 2	Westland DPS	(734) 467-7951
MDEQ 24-Hour Pollution Emergency Alerting System (PEAS)		1-800-292-4706
MDEQ Southeast Michigan District Office		(586) 753-3700
City of Detroit Wastewater Treatment Plant		(313) 297-9400
National Response Center		1-800-424-8802

SECTION B – CLEAN-UP PROCEDURES

Spilled chemical should be effectively and quickly contained and cleaned up. Employees should clean up spills themselves ***only if properly trained and protected***. Employees who are not trained in spill cleanup procedures should report the spill to the Responsible Person(s) listed above, warn other employees, and leave the area.

The following general guidelines should be followed for evacuation, spill control, notification of proper authorities, and general emergency procedures in the event of a chemical incident in which there is potential for a significant release of hazardous materials.

B.1 Evacuation

Persons in the immediate vicinity of a spill should *immediately evacuate* the premises (except for employees with training in spill response in circumstances described below). If the spill is of “medium” or “large” size, or if the spill seems hazardous, immediately notify emergency response personnel.

B.2 Spill Control Techniques

Once a spill has occurred, the employee needs to decide whether the spill is small enough to handle without outside assistance. Only employees with training in spill response should attempt to contain or clean up a spill.

NOTE: If you are cleaning up a spill yourself, make sure you are aware of the hazards associated with the materials spilled, have adequate ventilation, and proper personal protective equipment. Treat all residual chemical and cleanup materials as hazardous waste.

Spill control equipment should be located wherever significant quantities of hazardous materials are received or stored. Material Safety Data Sheets (MSDSs), absorbents, over-pack containers, container patch kits, spill dams, shovels, floor dry, acid/base neutralizers, and “caution-keep out” signs are common spill response items.

B.3 Spill Response and Clean-up

Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures vary depending on the size of the spill.

Small Spills: Any spill where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal personnel and usually do not require an emergency response by police or fire department HAZMAT teams.

- Quickly control the spill by stopping or securing the spill source. This could be as simple as up-righting a container and using floor-dry or absorbent pads to soak up spilled material. Wear gloves and protective clothing, if necessary.

- Put spill material and absorbents in secure containers if any are available.
- Consult with the Facility Responsible Person and the MSDS for spill and waste disposal procedures.
- Use Dry Cleanup Methods and **never** wash spills down the drain, onto a storm drain or onto the driveway or parking lot.
- Both the spilled material and the absorbent may be considered hazardous waste and must be disposed of in compliance with state and federal environmental regulations.

Medium Spills: Spills where the major dimension exceeds 18 inches, but is less than 6 feet. Outside emergency response personnel (police and fire department HAZMAT teams) may be called for medium spills. Common sense, however, will dictate when it is necessary to call them.

- Immediately try to help contain the spill at its source by simple measures only. This means quickly up-righting a container, or putting a lid on a container, if possible. Do not use absorbents unless they are immediately available. Once you have made a quick attempt to contain the spill, or once you have quickly determined you cannot take any brief containment measures, leave the area and alert Emergency Responders at 911. Closing doors behind you while leaving helps contain fumes from spills. Give police accurate information as to the location, chemical, and estimated amount of the spill.
- Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off. This eliminates various sources of ignition in the area. Advise Emergency Responders on how to turn off engines or electrical sources. Do not go back into the spill area once you have left. Help emergency responders by trying to determine how to shut off heating, air conditioning equipment, or air circulating equipment, if necessary.
- If emergency responders evacuate the spill area, follow their instructions in leaving the area.
- After emergency responders have contained the spill, be prepared to assist them with any other information that may be necessary, such as MSDSs and questions about the facility. Emergency responders or trained personnel with proper personal protective equipment will then clean up the spill residue. Do not re-enter the area until the responder in charge gives the all clear. Be prepared to assist these persons from outside the spill area with MSDSs, absorbents, and containers.

- Reports must be filed with proper authorities. It is the responsibility of the spiller to inform both his/her supervisor and the emergency responders as to what caused the spill. The response for large spills is similar to the procedures for medium spills, except that the exposure danger is greater.

Large Spills: Any spill involving flammable liquid where the major dimension exceeds 6 feet in diameter; and any “running” spill, where the source of the spill has not been contained or flow has not been stopped.

- Leave the area and notify Emergency Responders (911). Give the operator the spill location, chemical spilled, and approximate amount.
- From a safe area, attempt to get MSDS information for the spilled chemical for the emergency responders to use. Also, be prepared to advise responders as to any ignition sources, engines, electrical power, or air conditioning/ventilation systems that may need to be shut off. Advise responders of any absorbents, containers, or spill control equipment that may be available. This may need to be done from a remote area, because an evacuation that would place the spiller far from the scene may be needed. Use radio or phone to assist from a distance, if necessary.
- Only emergency response personnel, in accordance with their own established procedures, should handle spills greater than 6 feet in any dimension or that are continuous. Remember, once the emergency responders or HAZMAT team is on the job cleaning up spills or putting out fires, the area is under their control and no one may re-enter the area until the responder in charge gives the all clear.
- Provide information for reports to supervisors and responders, just as in medium spills.

SECTION C – REPORTING SPILLS

All chemical spills, regardless of size, should be reported as soon as possible to the Facility Responsible Person. The Responsible Person will determine whether the spill has the potential to affect the environment outside of the facility and must be reported to local, state, or federal agencies. Examples of spills that could affect the outside environment include spills that are accompanied by fire or explosion and spills that could reach nearby water bodies.

C.1 Reporting Thresholds

The spill coordinator will report spills to MDEQ PEAS for spills that involve the following:

- Salt spills over 50 pounds or 50 gallons of brine onto the ground or into water (required by Part 5 rules)
- Gasoline release of 32 gallons or more onto the ground (required by Part 201)
- Oil release of 50 pounds (approximately 7½ gallons) onto the ground (required by Part 5 rules)
- Any amount of oil or fuel that reaches surface water or shorelines, call MDEQ PEAS and the National Response Center (as required by the Clean Water Act and Part 31)
- Any spill that is in doubt about reporting

C.2 Reporting Requirements

Within ten (10) days of release, submit a written report for the reportable releases to the following:

- MDEQ Water Resources Division Field Operations Chief, PO Box 30273, Lansing, Michigan 48909-7773
- Wayne County Department of Public Health, 33030 Van Born Road, Wayne, Michigan 48184

Note: the optional report form EPQ 3465 can be found at:

http://www.michigan.gov/deg/0,4561,7-135-3307_29894_5959-20341--,00.html

The MDEQ may request other follow-up reports depending on the situation.

SECTION D – SPILL KIT INVENTORY

The following is a list of spill response equipment that will be maintained by the designated spill response coordinators at all locations where fuel products are stored and dispensed.

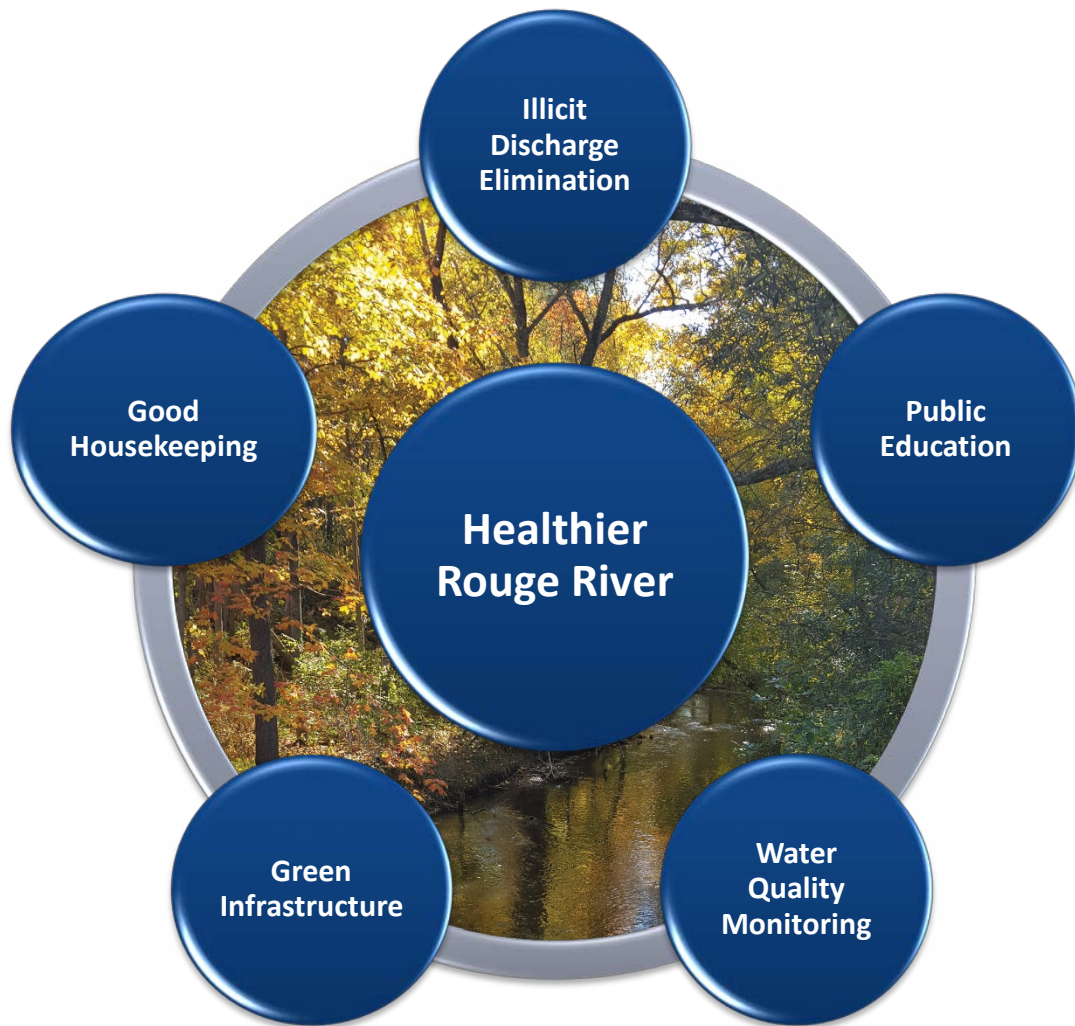
D.1 Minimum Spill Response Equipment

- 20 pounds of floor dry
- 1 shovel
- 1 broom
- Caution tape
- 2 Absorbent booms
- 20 Absorbent Pads
- Container for clean-up (30 gallons)
- Sample bottles

SECTION E – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

ROUGE RIVER COLLABORATIVE TOTAL MAXIMUM DAILY LOAD (TMDL) IMPLEMENTATION PLAN FOR MUNICIPAL STORMWATER PERMITTEES



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September 5, 2019

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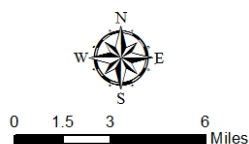
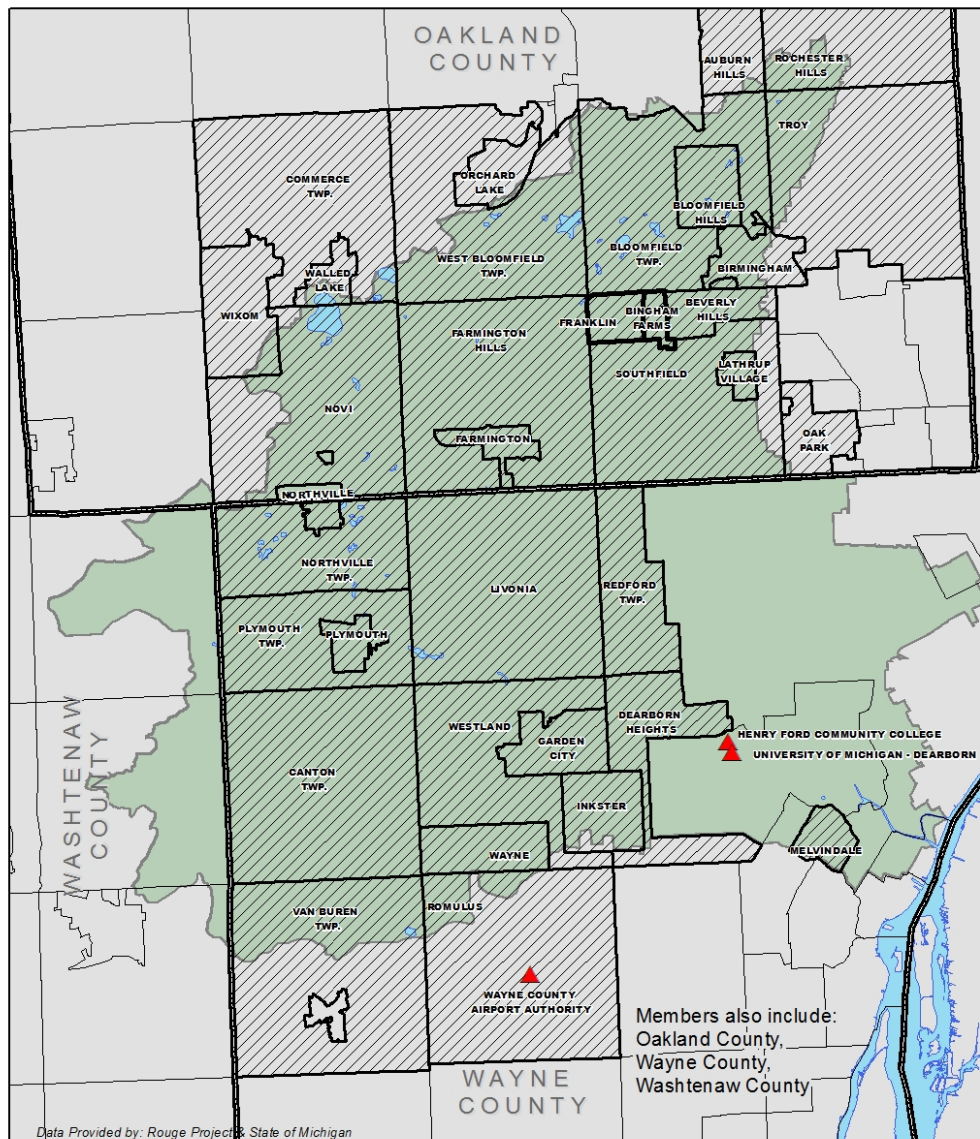
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Attachment A	List of Participating Members
Attachment B	BMP Selection Criteria and Ranking

A. Introduction

The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.



ARC Member Communities

February 2017

This Collaborative Plan (Plan) presents the watershed-wide approach to effectively and efficiently address the pollutants contained within approved Total Maximum Daily Load (TMDL) Assessments for the Rouge River watershed. This Plan was developed by the Technical Committee of the Alliance of Rouge Communities (ARC) in response to the requirements under the State of Michigan’s Permit Application for Discharges of Storm Water to Surface Waters of the State from a Municipal Separate Storm Sewer System (MS4), revised October 2015.

This Plan is intended to meet the TMDL elements of the permit application: questions 85 – 88. These requirements are as follows:

- Provide a procedure for identifying and prioritizing BMPs to reduce the TMDL pollutants,
- Provide a list of BMPs that will be implemented to reduce the TMDL pollutants, and
- Provide a monitoring plan to assess the effectiveness of the BMPs.

The U.S. Environmental Protection Agency (EPA) requires a TMDL Assessment for waterbodies identified on the state’s impaired waters list. EPA has approved three TMDL Assessments within the Rouge River watershed as listed below. The *E. coli* and biota assessments apply to the entire watershed, while the dissolved oxygen (DO) assessment only applies to the City of Northville, Northville Township and the City of Novi.

- *Escherichia coli* (*E. coli*) (MDEQ, 2007a)
- Biota (MDEQ, 2007b)
- Dissolved Oxygen for Johnson Creek (up to 6 Mile Road) (MDEQ, 2007c)

This Plan will address each of these parameters within the limits of the MS4 permit. **As such, this should not be considered an implementation plan to address all sources, only those under the authority of the MS4 permit.**

This Plan will be implemented by the participating communities through the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in **Attachment A**.

B. Background

Within the TMDL Assessments, the MDEQ established primary and secondary targets for municipal stormwater permittees as shown in **Table 1**¹. When the primary target is met, the waterbody has achieved the goals of the TMDL and the waterbody would be eligible for removal from the state’s impaired waters list. The secondary target parameters can be thought of as surrogates that will be useful in determining the success of the selected best management practices that are needed to reduce pollutant loads. In all three assessments, the MDEQ opted to assign collective targets to the MS4 permittees rather than individual targets. This would seem to indicate that the MDEQ recognizes that demonstration of progress can be shown on a watershed-basis rather than within jurisdictional boundaries. It should be noted that the *E. coli* target is equivalent to the state’s full body contact standards for recreational waters which will be very difficult to achieve in urban stormwater runoff.

¹ For ease of understanding, this document refers to concentration-based, rather than load-based targets. The pollutant load targets listed in the TMDLs are based on these concentrations.

Table 1 – TMDL Targets for Municipal Stormwater Permittees

Parameter	TMDL Targets for MS4 Permittees Primary (1°) and Secondary (2°)	Notes
<i>E. coli</i>	1°: 300 cfu/100 ml and 130 cfu/100 ml	Daily geometric mean value 30 day geometric mean value
Biota	1°: Procedure 51 scores ≥ Acceptable 2°: Suspended solids ≤ 80 mg/l	For 2 successive years Annual average during wet weather
Dissolved Oxygen	1°: 7 mg/L 2°: Suspended solids ≤ 80 mg/l*	Johnson Creek is considered a cold water stream, thus has a target of 7 mg/L; all other reaches of the Rouge River have a target of 5 mg/L.

*This concentration is presumed for the purposes of this document, but it was not explicitly listed in the DO TMDL.

B.1. *E. coli* Conditions

Between May and October 2005, the MDEQ evaluated *E. coli* conditions on a routine basis during a range of weather conditions at approximately 70 locations across the watershed. Issues were found during both dry and wet weather conditions at most sites as indicated in **Table 2**. MDEQ also determined that human sources of *E. coli* were likely present at a few sites based on DNA analyses. However, only a few samples with elevated *E. coli* levels were evaluated for the presence of human DNA (MDEQ, 2007a).

Table 2 – Summary of *E. coli* Data from the *E. coli* TMDL

River Branch	Range of Exceedances by Site (% of samples above the standard)		
	Above the Monthly Standard of 130 cfu/100 ml	Above the Daily Standard of 300 cfu/100 ml	Above the Partial Body Contact Standard of 1,000 cfu/100 ml
Lower	89 – 100%*	41 – 100%	9 – 83%
Main	59 – 100%	40 – 100%	0 – 71%
Middle	89 – 100%	39 – 100%	9 – 91%
Upper	100%	90 – 100%	48 – 86%

*Table interpretation note: at least one site had 89% of samples exceed the monthly standard and at least one site had all (100%) samples exceed the monthly standard. The remaining sites fell within this range.

B.2. Suspended Solids Conditions

For the Biota TMDL, the MDEQ calculated the mean suspended solids concentration of each major river branch using data collected by the Rouge Project between 1994 and 2001 (**Table 3**). Data was considered wet weather if the sample was taken after a dry period (generally three days minimum) followed by a precipitation event (generally greater than 0.25 inches) that caused the river to respond significantly (Hufnagel 1996). In addition, an annual sediment load of 33,800 tons/year was calculated using the Simple Method model based on 33 inches of annual rainfall, 2003 land use data and event mean concentrations developed by Cave, et al for various land uses. Based on the secondary target of 80 mg/l during wet weather, a suspended solids loading target of approximately 29,000 tons/year was established. This would require a 15% reduction in sediment loads from stormwater permittees (MDEQ, 2007b).

Table 3. Suspended Solids Concentrations by River Branch

River Branch	Mean Suspended Solids Concentration (mg/l)	
	Wet Weather*	Dry Weather
Lower	191	37
Main	114	27
Middle	95	19
Upper	152	30
Watershed-wide	138	28

*The secondary TMDL target is 80 mg/l as an annual average during wet weather.

B.3. Dissolved Oxygen Conditions

For dissolved oxygen, the MDEQ determined that 3% of samples collected within the TMDL reach of Johnson Creek (a cold water stream) were below the target of 7 mg/l. This result was primarily based on 43,000 hourly DO values collected at 7 Mile Road by the Rouge Project between 1994 and 1996. The instances of low DO occurred primarily during low flow (non-runoff) conditions and high flows often resulted in higher levels of DO. Based on available data of other suspect pollutants, the MDEQ determined sediment oxygen demand was the primary factor affecting the low DO levels in Johnson Creek. They also noted that low base flow conditions were also contributing to the low DO levels. It is noted that data used in this assessment was at least 10 years old which may not reflect conditions at the time the assessment was written.

Based on modeling, the MDEQ estimated that the existing suspended sediment load from MS4s was 650 tons/year and that an 85% reduction was needed to meet the target of 96 tons/year. This should result in Johnson Creek meeting the 7 mg/l DO target for cold water streams during low flow conditions (MDEQ, 2007c). Note that the MDEQ did not explicitly state the concentration of suspended sediment needed to meet the target, only the load.

B.4. Pollutant Sources

The Alliance of Rouge Communities (ARC) determined the suspected sources and causes associated with each of the TMDL parameters as shown in Tables 4 and 5. Only those sources regulated under the MS4 permit are included in these tables.

Table 4 – Sources and Causes of *E. coli*

Suspected Sources*	Suspected Causes
Failing Septic Systems (OSDS)	<ul style="list-style-type: none">• Historical lack of septic system maintenance, education, inspection and correction.• Undetected or uncorrected illicit discharges.
Illicit Sanitary Connections to a Storm System	<ul style="list-style-type: none">• Undetected or uncorrected illicit discharges.
Pet Waste/Urban Animal Waste	<ul style="list-style-type: none">• Little knowledge of the importance of pet waste /urban animal waste management.• Loss of pervious areas via urban development.
Re-suspended Sediment	<ul style="list-style-type: none">• Excessive peak discharges• Unsatisfactory infrastructure maintenance.

*Additional sources not regulated under the MS4 permit but contributing to the pollutant are uncontrolled combined sewer overflows, sanitary sewer overflows, sanitary sewer maintenance, wastewater treatment plant flows, and runoff impacted by animal waste from agricultural lands.

Table 5 – Sources and Causes of Sediment

Suspected Sources*	Suspected Causes
Roads/Highways/Bridges and Related Infrastructure on Municipal Properties	<ul style="list-style-type: none">• Loss of pervious areas via urban development.• Insufficient stormwater infrastructure maintenance.
Infrastructure on commercial & industrial properties	<ul style="list-style-type: none">• Poor housekeeping.• Insufficient stormwater infrastructure maintenance.

*Additional pollutant sources not regulated under the MS4 permit but likely contributing to the pollutant are eroding streambanks, and runoff from agricultural lands and communities not regulated to discharge stormwater.

B.5. Summary

Based on the information discussed above, addressing the indicator pollutants/parameters shown in **Table 6** will make progress toward addressing the impairments identified in the TMDLs.

Table 6. Indicators to be Addressed in this Plan

Indicators	Associated TMDLs
<i>E. coli</i>	<i>E. coli</i>
Suspended Solids	Biota Dissolved Oxygen <i>E. coli</i>
Stream flow	Biota Dissolved Oxygen <i>E. coli</i>

C. BMP Prioritization Procedure

Several criteria were used to prioritize the best management practices (BMPs) that should be implemented to address the impairments. These criteria are as follows:

- A. Ability of the BMP to affect human health impacts caused by direct contact with the river.
 - Low, moderate, high
- B. Ability of the BMP to impact the concentrations of *E. coli* and suspended solids in the river and/or reduce peak stream flows.
 - Low, moderate, high
- C. Ability of the BMP to impact multiple TMDL parameters
 - Low, moderate, high
- D. Anticipated level of impact of the BMP as compared to added cost to implement it.
 - Low, moderate, high
- E. Legal authority to implement the BMP.
 - Yes or no
- F. Are there prerequisite projects that need to be completed before the BMP can be implemented?
 - Yes or no.

This process will be reviewed and updated, if necessary, by the ARC within 90 days of the end of the permit term. The review will be based on the results of monitoring data and other measurables provided in Section E.

D. Selected BMPs

Using the criteria listed above, several BMPs were evaluated for implementation as shown in Attachment B. Those BMPs with the highest scores are listed in **Table 7** along with the associated TMDL pollutant. These BMPs will be implemented by ARC members on an ongoing basis or according to the frequencies/schedules listed in the collaborative plans and stormwater management plans (SWMP).

Table 7 – Best Management Practices to be Implemented

Best Management Practice	Associated TMDL Parameter
TMDL #1: Activities listed in the Rouge River Watershed Collaborative Illicit Discharge Elimination Plan and Wayne County's SWMP	<i>E. coli</i>
TMDL #2: Review and approval of developer stormwater plans following the new Post-Construction Stormwater Standards	SS and Stream Flow
TMDL #3: Construction of stormwater management measures for permittee-owned projects on public property following the new Post-Construction Stormwater Standards	SS and Stream Flow
TMDL #4: Construction of stormwater management measures on privately owned sites following new Post-Construction Stormwater Standards	SS and Stream Flow
TMDL #5: Activities listed in the Rouge River Watershed Collaborative Public Education Plan including education on septic system maintenance, the impacts of improperly disposed of pet waste, the impacts of feeding waterfowl, and the pollution complaint line	<i>E. coli</i> and SS
TMDL #6: Conduct catch basin cleaning as listed in each permittee's SWMP	SS and <i>E. coli</i>
TMDL #7: Conduct street sweeping as listed in each permittee's SWMP	SS and <i>E. coli</i>
TMDL #8: Proper management of materials stockpiles as listed in each permittee's SWMP	SS

Note: SS=Suspended solids

E. Evaluating Effectiveness

E.1. Evaluation Metrics and Milestones

The effectiveness of this Plan will be measured using the tracking metrics indicated in **Table 8**. The milestones included below are based on each permittee's commitment in their SWMP. This information will be included in the permittees' biennial report to the MDEQ.

Table 8 – Tracking Metrics for Evaluating Effectiveness

Metric	Milestone	BMP*
A. Success of Collaborative IDEP Plan Success of Wayne County IDEP Plan	See plans	TMDL #1
B. Status of adoption of Post-Construction Stormwater Standards by Permittee	100% of permittees adopt new standards	TMDL #2, #3
C. Number of stormwater plans reviewed for private sites under new standards vs previous standards	100%	TMDL #2
D. Percentage of permittee projects constructed under new standards vs previous standards; and Percentage of private projects constructed under new standards vs previous standards	100%	TMDL #3, #4
E. Success of Collaborative PEP Plan	See plan	TMDL #5
F. Number of catch basins cleaned	100%	TMDL #6
G. Miles of streets swept	100%	TMDL #7
H. Number of stockpiles showing no impact to stormwater runoff	100%	TMDL #8

*As described in Table 7.

Effectiveness will also be determined by monitoring results as described below and outlined in **Table 9**. The dates below assume that some of the Rouge permittees will be issued their permits by the end of 2019.

Table 9. Monitoring Plan

Parameter	Anticipated Monitoring Sites	Frequency	Schedule
Dissolved oxygen	Event 1 and 2: Johnson Creek at 7 Mile east of Sheldon Road	Event 1: 5 months Event 2: 2 months	Event 1: May – Oct 2017 Event 2: May – Oct 2022, if needed
<i>E. coli</i>	Event 1: A) Communities: Terminus of initial priority areas and Priority outfalls with discharge B) Wayne County: Priority area outfalls with discharge Event 2: Communities and Wayne County: Terminus of initial priority areas and Priority outfalls that required advanced investigations (Category A and B outfalls) plus select Category C outfalls for a minimum of 100 sites	Event 1: A) 1 time B) 1 time Event 2: 1 time	Event 1: A) 2018 B) 2017-2018 Event 2: May – Oct 2022
Suspended solids	Event 1: 90 sites (Figure 1) Event 2: Sites with average wet weather TSS > 80 mg/l and with single samples > 120 mg/L from Event 1.	Event 1: 5 times Event 2: 1 time	Event 1: May – Oct 2017 Event 2: May – Oct 2022

For *E. coli*, Event 1 sampling will take place at the terminus of the initial priority areas and priority outfalls that are being screened as part of the Collaborative IDEP Plan. At these sites, one dry weather sample will be collected. The initial priority areas are identified on **Figures 1 and 2** and the priority outfalls will be determined in 2018. In addition, Event 1 sampling will take place at the Wayne County-owned outfalls in 2017 and 2018. These outfalls are in the ARC's initial priority areas. This sampling is part of the county's outfall dry-weather screening process. Approximately, 500 outfalls (400 community-owned and 150 county-owned) will be screened during this process. We estimate that 175 samples will be collected based on the assumption that 40% of the community and 10% of the county outfalls will have discharge.

For Event 2, *E. coli* sampling will take place during dry weather at the terminus of the initial priority areas and at priority outfalls that had *E. coli* concentrations > 5,000 cfu/100 mL (Category A and B outfalls per the Collaborative IDEP Plan) during Event 1. In addition, outfalls with *E. coli* between 1,000 and 5,000 cfu/100 mL (Category C outfalls per the Collaborative IDEP Plan) during Event 1 will be sampled so that a minimum of 100 locations are sampled during Event 2. The Event 1 samples will be compared to the Event 2 samples to determine the effectiveness of reducing *E. coli* levels.

DO levels in Johnson Creek were evaluated in 2017 as shown in **Figure 3**. This will be the Event 1 data. Although the data is still provisional, it is expected that the water quality standard of 7 mg/L will be met more than 90% of the time. As a result, the creek is expected to be removed from the impaired waters list in the 2020 Integrated Report. However, if the creek is not removed from the impaired waters list, Johnson Creek will be re-monitored at the same location (7 Mile and Sheldon roads) for Event 2. This monitoring will consist of continuous readings for a period of two months during the summer. This data will be compared to the 2017 results collected during the same period.

Suspended sediment levels were measured at 90 sites across the watershed in 2017 as shown in **Figure 4** for Event 1. Samples were collected on a routine basis to include both dry and wet weather conditions.

The monitoring sites were selected to catch tributaries prior to the confluence with the larger branches of the River. This was done to better identify pollutant sources. Sites were also located throughout the main branches of the Rouge to capture water quality from those stormwater outfalls discharging directly to the main branches. Effort was made to include monitoring sites in all MS4 permittee's jurisdictions that have open streams that drain to the Rouge. For Event 2, suspended sediment sampling will be repeated during wet weather at sites where the average wet weather TSS values exceeded 80 mg/l and where single sample values exceeded 120 mg/L in 2017. This sampling will occur one time during wet weather. The Event 1 and Event 2 data will be compared to the values included in **Table 3** (from the Biota TMDL Assessment) to determine if progress has been made in achieving the wet weather suspended sediment target of 80 mg/L.

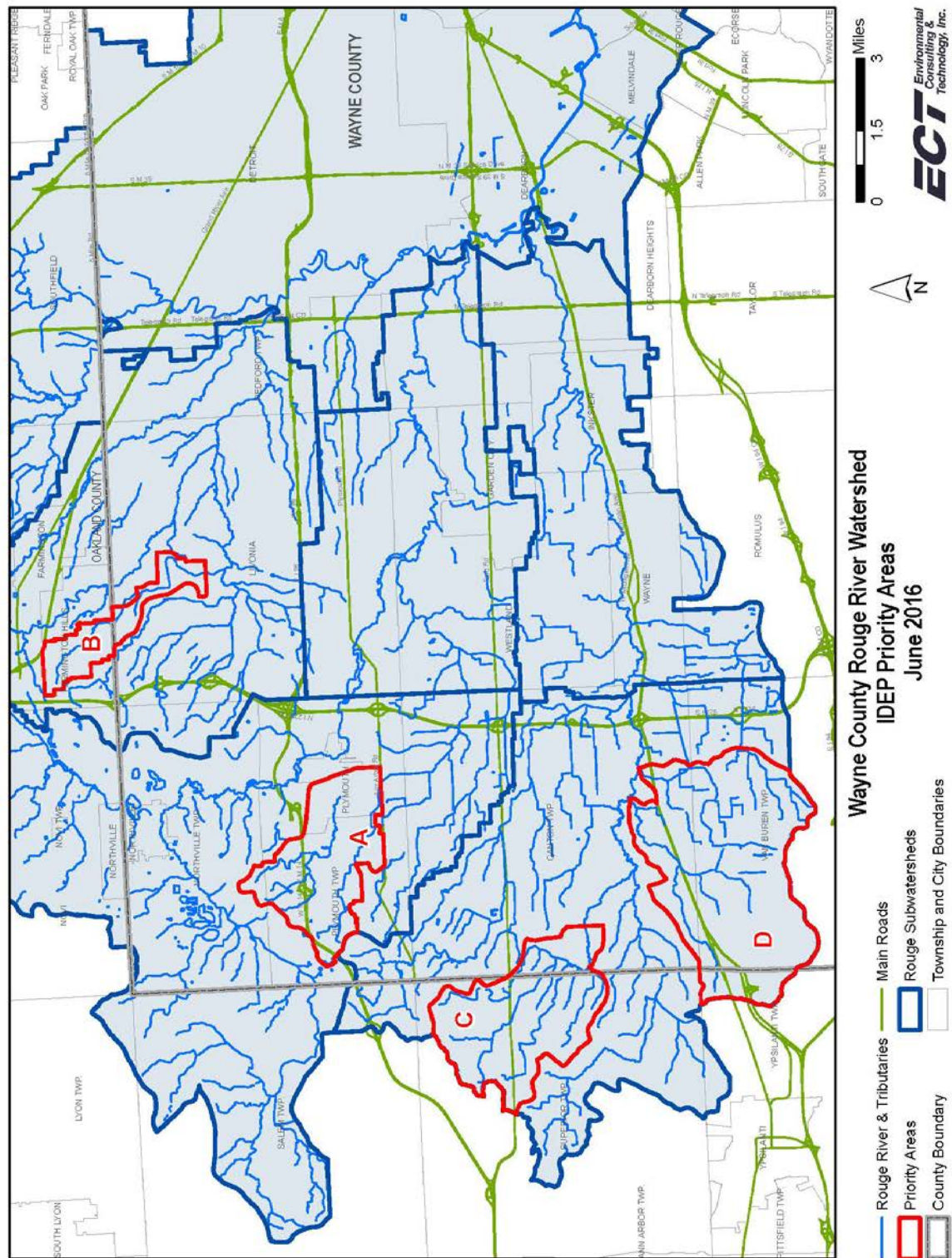
Two reports will be prepared as part of this plan. First a metric summary report will be developed following the submittal of the permittees second progress report. This report will describe the progress toward meeting the milestones provided in **Table 8**. In addition, a TMDL effectiveness report will be prepared that summarizes the monitoring data outlined in **Table 9**. This report will compare the most recent data to the previously collected data to determine if the permittees are making progress toward meeting the pollutant reduction goals established in the *E. coli*, Biota and DO TMDL Assessment reports.

Schedule: Metric Summary Report: Due March 30, 2023
 TMDL Monitoring Report: Due March 30, 2023

ARC Member Responsibilities:

- ARC (as contracted by the permittees)
 - Conduct instream monitoring for DO and TSS.
 - Collect *E. coli* samples at priority outfalls and at terminus of initial priority areas as part of the Collaborative IDEP Plan by October 30, 2022.
 - Collect tracking metrics data from permittees.
 - Evaluate Metrics A and E.
 - Prepare the Metric Summary and TMDL Monitoring reports.
- Counties (WCDPS)
 - Collect *E. coli* samples at priority outfalls in years 2017 and 2018 and resample priority outfalls in 2022. Provide raw data to ARC staff by October 30, 2022.
 - Keep records of Metrics B, C, D, F, G and H as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.
- Cities and Villages
 - Keep records of Metrics B, C, D, F, G and H as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.
- Townships and Schools
 - Keep records of Metrics C, D, F and H as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.

Figure 1 – Initial *E. coli* Priority Areas in Wayne County



Rouge River Collaborative TMDL Implementation Plan for
Municipal Stormwater Permittees

Figure 3. Dissolved Oxygen Levels for Johnson Creek at 7 Mile Road – provisional data

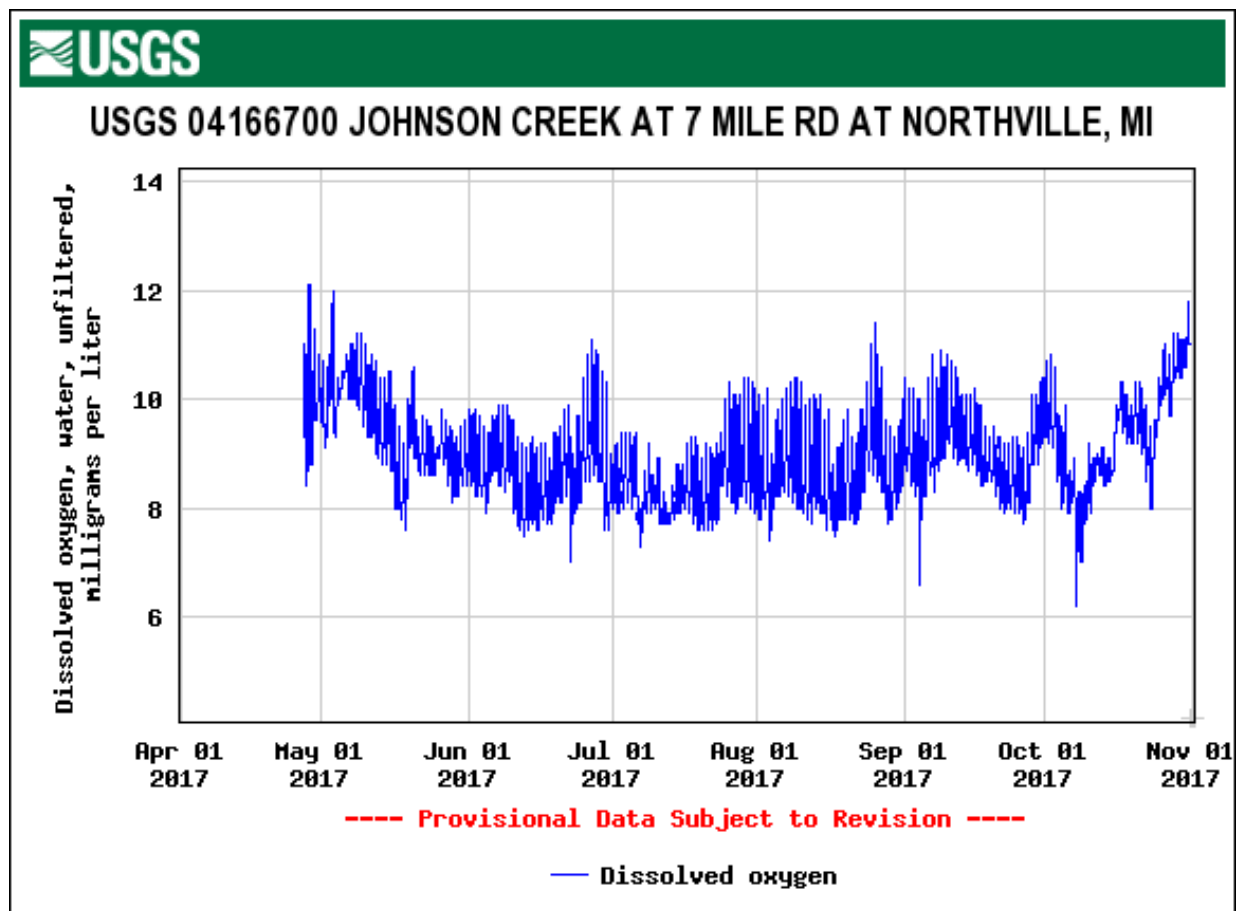
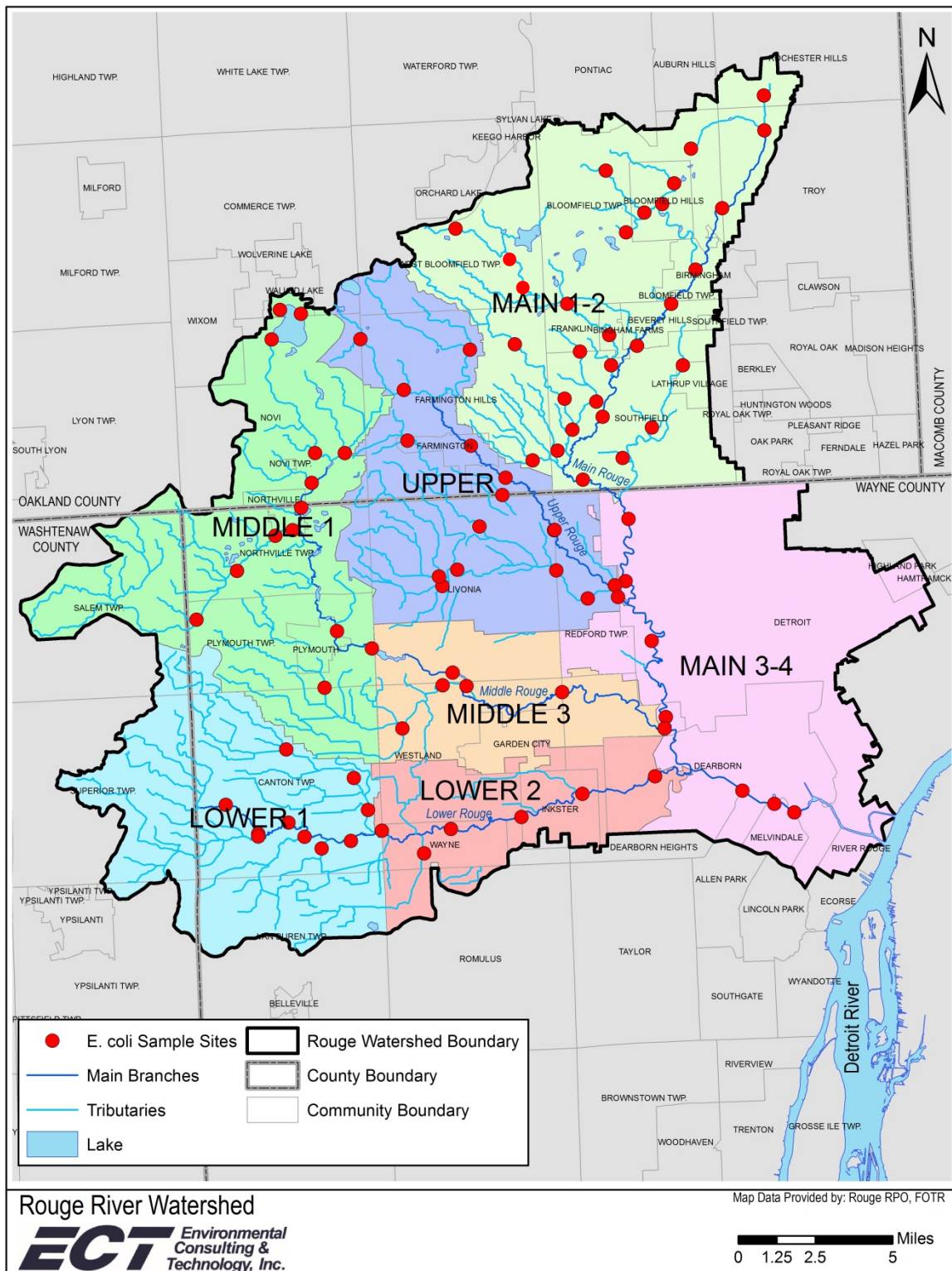


Figure 4 – 2017 (Event 1) TSS Monitoring Locations



E.2. Delisting Criteria

Certain conditions must be met in order to remove the Rouge River from Categories 4a and 5 of the impaired waters list². Conditions that may apply to the Rouge watershed and would justify delisting or recategorization of a waterbody include (MDEQ 2017, Chapter 4.13):

- The source of impairment for the initial designated use support determination was an untreated combined sewer overflow (CSO) and updated information reveals that it has been eliminated or control plan elements have been implemented but data are not yet available to document restoration (recategorized to 4b);
- Reassessment of the waterbody using updated monitoring data or information, techniques, or water quality standards, indicates that the waterbody now supports the designated use (move to Category 1 or 2), or that additional monitoring or information is needed to determine whether the designated use is supported (move to Category 3);
- Reexamination of the monitoring data or information used to make the initial designated use support determination reveals that the decision was either incorrect or inconsistent with the current assessment methodology; and
- Reassessment of a waterbody indicates that the cause of impairment is not a pollutant (recategorized to 4c).

Sampling data must be collected that are at least as rigorous as was originally used to list the waterbody. The sampling requirements and other criteria needed to delist or recategorize waterbodies for an impairment are described below.

E. coli – To be delisted, any known raw sewage discharges must be eliminated (such as untreated CSOs or sanitary sewer overflows (SSOs) and monitoring must prove attainment of water quality standards. This monitoring must be conducted a minimum of 5 weeks with a minimum of 3 samples collected at each location. A 10% exceedance threshold exists for the standards - meaning that up to 10% of the samples can exceed the standard but still meet water quality standards. Both partial and total body contact standards must be met in order for the waterbody to be removed. Additionally, weather conditions must be similar to those used in the original assessment (MDEQ 2017, Chapter 4.7.1.1).

Biota – To be delisted per the Biota TMDL, fish and macroinvertebrate communities must be reestablished so that they receive an ‘acceptable’ or ‘excellent’ rating based on a minimum of two Procedure 51 biological assessments conducted in successive years (MDEQ 2007b). However, the 2016 Integrated Report states that one bioassessment result is generally considered sufficient to make this determination (MDEQ 2017, Chapter 4.6.2.1).

Dissolved Oxygen – To be delisted, time-series samples need to be collected over a period of time that represent wet and dry weather conditions so as to capture environmental variability. As with *E. coli*, a 10% exceedance threshold is applied (MDEQ 2017, Chapter 4.5.1.1).

For any impairment, once a data set is collected that demonstrates that the river is attaining water quality standards, the final decision for delisting is made by MDEQ.

² Waterbodies in Categories 4a and 5 are impaired, but TMDL assessments are complete on 4a waterbodies while TMDL assessment are still needed on Category 5 waterbodies. Once a TMDL assessment is approved by EPA, the impairment is addressed in the next issuance of a MS4's stormwater permit.

F. References

Alliance of Rouge Communities (ARC). *Rouge River Watershed Management Plan* June 21, 2012.

Hufnagel, C. *1993-1994 Sampling Program Overview*. Rouge River National Wet Weather Demonstration Project Technical Memorandum RPO-SAM-TM43.

Michigan Department of Environmental Quality. *Total Maximum Daily Load for E. coli in the Rouge River, Wayne and Oakland Counties, Michigan*. August 2007a.

Michigan Department of Environmental Quality). *Total Maximum Daily Load for Biota in the Rouge River Watershed including Bishop and Tonquish Creeks, Washtenaw, Wayne and Oakland Counties, Michigan*. August 2007b.

Michigan Department of Environmental Quality. *Total Maximum Daily Load for Dissolved Oxygen in Johnson Creek, Wayne and Washtenaw Counties, Michigan*. June 2007c.

Michigan Department of Environmental Quality. *Water Quality and Pollution Control in Michigan 2016 Sections 303(d), 305(b), and 314 Integrated Report*. January 2017.

Attachment A

Participating ARC Members

Permittee (listed alphabetically)	
Communities	
Beverly Hills, Village of	Northville, City of
Bingham Farms, Village of	Northville Township
Birmingham, City of	Novi, City of
Bloomfield Hills, City of	Oak Park, City of
Bloomfield Township	Plymouth, City of
Canton Township	Plymouth Township
Dearborn Heights, City of	Redford Township
Farmington, City of	Southfield, City of
Farmington Hills, City of	Troy, City of
Franklin, Village of	Walled Lake, City of
Garden City, City of	Wayne, City of
Inkster, City of	Westland, City of
Lathrup Village, City of	West Bloomfield Township
Livonia, City of	
Melvindale, City of	
Counties	
Oakland County*	
Wayne County	
Schools	
Henry Ford College	

*Participating but this plan is not part of their pending permit application.

Attachment B

BMP Selection Criteria and Ranking

