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

(Submission #: 2EF-S3NM-0TN2, version 3)

#### Summary hello? Submission #: 2EF-S3NM-0TN2 Date Submitted: 10/17/2018 4:06 PM National Pollutant Discharge Elimination System (NPDES) Submitted Form: Status: Municipal Separate Storm Sewer System (MS4) Application Form (Reissuance) Submitted By: Laura Gruzwalski Submission Creator: Laura Gruzwalski Active Steps: Reference #: **Description:** National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Application Form (Reissuance)

#### Notes

There are currently no Submission Notes.

#### **Details**

Existing Permit Details Existing Permit ID (Read Only)

NONE PROMDED

Existing Permit Number (Read Only)

NONE PROVIDED

#### Section 1. Applicant Information

**Applicant Information** 

Contact		
Prefix: NONE PROVIDED	First Name: NONE PROVIDED	Last Name: NONE PROVIDED
Company: West Bloomfield Township	Title: NONE PROMDED	Ext: NONE PROVIDED
Phone: NONE PROVIDED	Fax: NONE PROMDED	Email: NONE PROVIDED
Address		
Address Line 1:4550 Walnut Lake Road		
Address Line 2: NONE PROMDED		
Description: NONE PROVIDED		
City: West Bloomfield	State: Michigan	Postal Code: 48325
Country: USA	County: NONE PROMDED	

#### Section 2. MS4 Location Information

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

West Bloomfield Township

Identify the Primary Municipal Facility or the Mailing Address Location

Asite 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** 

42.5603826,-83.37333439999997 NONE PROVIDED

Section 3. MS4 Contacts (1 of 3) 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		
Storm Water Billing Contact Storm Water Program Manager Application Contact		
Contact		
Contact		
Prefix: Ms.	First Name: Amy	Last Name: Neary
Company: West Bloomfield Township	Title: Development Services Diretor	Ext: NONE PROVIDED
Phone: 248-451-4828	<b>Fax:</b> 248-451-4871	Email: aneary@wbtownship.org
Address		
Address Line 1: 4550 Walnut Lake Road		
Address Line 2: NONE PROVIDED		
Description: NONE PROVIDED		
City: West Bloomfield	State: Mchigan	Postal Code: 48325
Country: USA	County: NONE PROMDED	
Section 3. MS4 Contacts (2 of 3) CONTACTS		
A contact must be provided for each of the roles the 'Ctrl' key while selecting each role. Use the "-	listed below. You may assign more than one " (repeat section) button to add an additiona	e role to a single contact by holding down al contact.

Contact

**Application Contact** 

Contact

Contact		
Prefix: Mr.	First Name: John	Last Name: Roda
Company: West Bloomfield	Title: Environmental Manager, MSES, PWS	Ext: NONE PROVIDED
Phone: 248-451-4829	Fax: 248-451-4871	Email: jroda@wbtownship.org
Address		
Address Line 1: 4550 Walnut Lake Road		
Address Line 2: NONE PROMDED		
Description: NONE PROMDED		
City: West Bloomfield	State: Michigan	Postal Code: 48325
Country: USA	County: NONE PROVIDED	
A contact must be provided for each of the roles the 'Ctrl' key while selecting each role. Use the " Contact Application Contact	listed below. You may assign more than one i +" (repeat section) button to add an additional	ole to a single contact by holding down contact.
Contact		
Contact		
Prefix: Ms.	First Name: Pamela	Last Name: Sych
Company: West Bloomfield Township	Title: Engineer	Ext: NONE PROMDED
Phone: 248-451-4815	<b>Fax:</b> 248-451-4871	Email: psych@wbtownship.org
Address		
Address Line 1: 4550 Walnut Lake Road		
Address Line 2: NONE PROVIDED		
Description: NONE PROMDED		
City: Wet Bloomfield	State: Michigan	Postal Code: 48325
Country: USA	County: NONE PROMDED	
Section 4: Regulated Area, Outfalls/Po Regulated Area	pints of Discharge, and Nested Juris	dictions (1 of 1)
Identify the urbanized area within the applicant's MS4 owned or operated by a city, village, townsh and the nested MS4 identified below that is loca The 2010 Census maps are located at the Urba	jurisdictional boundary as defined by the 2010 nip, county, district, association, or other public ted in an urbanized area and discharges storr nized Area Link below.	Census. The regulated MS4 means an body created by or pursuant to state law n water into surface waters of the state.

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 than 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- Attachment

NPDES-Appendix A-Map of Urbanized Area.pdf - 04/01/2016 02:27 PM

Response Ltr to DEQ Jul 2018.pdf - 07/12/2018 03:10 PM

WBT Outfall\_Discharge Pt Table.pdf - 07/12/2018 03:13 PM

Comment: All outfalls were recently field verified. The table has been revised and is attached. The GIS maps are being updated. We will provide revisions once these are finalized (approximately September 2018).

**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** 

Contact		
Prefix: NONE PROMDED	First Name: NONE PROMDED	Last Name: NONE PROMDED
Company: NONE PROVIDED	Title: NONE PROVIDED	Ext: NONE PROVIDED
Phone: NONE PROMDED	Fax: NONE PROVIDED	Email: NONE PROMDED
Address		
Address Line 1: NONE PROMDED		
Address Line 2: NONE PROMDED		
Description: NONE PROVIDED		
City: NONE PROMDED	State: NONE PROMDED	Postal Code: NONE PROVIDED
Country: NONE PROVIDED	County: NONE PROVIDED	

## 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 NREPA451, 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-**Attachment

NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf - 04/01/2016 03:35 PM NPDES-Appendix F-Code Enforcement & Code Violation General Information.pdf - 04/01/2016 04:56 PM NPDES-Appendix Z Chapter 8 Ordinance Code Building and Building Regulations.zip - 04/01/2016 06:35 PM NPDES-Appendix AA Chapter 12 Ordinance Floodplain.zip - 04/01/2016 06:37 PM NPDES-Appendix BB-Chapter 13 Ordinance Soild Waste Management.zip - 04/01/2016 06:37 PM NPDES-Appendix CC Chapter 14.5 Ordinance Fertilizers.pdf - 04/01/2016 06:38 PM NPDES-Appendix DD Chapter 23 Ordinance Vegetation.pdf - 04/01/2016 06:38 PM NPDES-Appendix EE Chapter 24 Articles IV-V.zip - 04/01/2016 06:39 PM NPDES-Appendix EE Chapter 24 Articles IV-V.zip - 04/01/2016 06:39 PM NPDES-Appendix FF Chapter 26 Zoning Ordinance.zip - 04/01/2016 06:39 PM App C ERP\_Revised.pdf - 06/21/2018 09:16 AM

Comment: The Township has detailed ordinances in place; Chapter 8 Grading and Drainage, Chapter 12 Floodplain, Chapter 13 Solid Waste Management, Chapter 14.5 Fertilizer Provision, Chapter 23 Vegetation, Chapter 24 Water Supply, Chapter 26 Zoning

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- Attachment** 

NPDES-Attachment Apdf - 04/01/2016 03:19 PM

ARC PPP\_FINAL.pdf - 05/03/2018 02:23 PM

Comment: We became a member of the ARC in 2017 and are implementing the ARC PPP Plan.

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.

Please see the PPP, Page 4

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):

Please see the PPP, Page 4

#### Section 6. Public Education Program

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

Yes

#### **PEP Procedures-Attachment**

NPDES-Appendix L- Protect Our Watersheds.zip - 04/01/2016 06:42 PM NPDES-Appendix M Storm Drains Aren't Garbage Cans.pdf - 04/01/2016 06:42 PM NPDES-Appendix N IDEP website information.pdf - 04/01/2016 06:42 PM NPDES-Appendix O-Oakland County 24 Hour Pollution Hotline Information.pdf - 04/01/2016 06:43 PM NPDES-Appendix P RiverSafe Home Survey.pdf - 04/01/2016 06:43 PM NPDES\_Appendix Q Waterfront Wisdom Brochure.pdf - 04/01/2016 06:43 PM Appendix-R Healthy Lawn Care Tips.pdf - 04/01/2016 06:46 PM Appendix-S Household Hazardous Waste Events.pdf - 04/01/2016 06:46 PM Appendix-T Septic and Well Program.pdf - 04/01/2016 06:46 PM NPDES-U Low Impact Development.pdf - 04/01/2016 06:47 PM NPDES-Appendix V Mchigan Business Prevention Partnership.pdf - 04/01/2016 06:48 PM ARC PEP\_FINAL.pdf - 05/03/2018 02:26 PM Comment: We became a member of the ARC in 2017 and are implementing the ARC PEP Plan.

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).

See PEP, page 2-3

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.

See PEP, Page 6-20

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.

#### See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 6-0

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.

See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 6-20

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.

See PEP, Page 16

#### 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 Ellimination Program Procedures- Attachment

NPDES-Appendix G-Facilities and Structural Controls-IDEP Dry Weather Screening Table.pdf - 04/01/2016 07:10 PM NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf - 04/01/2016 08:05 PM NPDES-Appendix Z Chapter 8 Ordinance Code Building and Building Regulations.zip - 04/01/2016 08:09 PM NPDES-Appendix BB-Chapter 13 Ordinance Soild Waste Management.zip - 04/01/2016 08:10 PM NPDES-Appendix CC Chapter 14.5 Ordinance Fertilizers.pdf - 04/01/2016 08:11 PM NPDES-Appendix DD Chapter 23 Ordinance Vegetation.pdf - 04/01/2016 08:11 PM NPDES-Appendix EE Chapter 24 Articles I-III.zip - 04/01/2016 08:12 PM NPDES-Appendix EE Chapter 24 Articles IV-V.zip - 04/01/2016 08:12 PM NPDES-Appendix EE Chapter 24 Articles VI-end of Chapter 24.zip - 04/01/2016 08:13 PM NPDES-Appendix FF Chapter 26 Zoning Ordinance.zip - 04/01/2016 08:13 PM ARC IDEP FINAL.pdf - 05/03/2018 02:27 PM Non-Stormwater Discharges SOP.pdf - 06/21/2018 09:20 AM Twp Water Supply Ord\_Ch 24.pdf - 06/29/2018 11:56 AM Twp Ordinances Summary.pdf - 07/09/2018 09:34 AM WBT Outfall\_Discharge Pt Table.pdf - 07/12/2018 03:13 PM App A Application Summary\_Revised.pdf - 10/17/2018 03:56 PM Comment: We became a member of the ARC in 2017 and are implementing the ARC IDEP Plan.

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, asbuilt drawings, or other hard copy or digital representation of the storm sewer system. (e.g., The Department of Public Works office)

Storm sewer maps of Township owned properties are kept in the Township Informational Technologies Department, GIS Division. The outfall/discharge point table was updated recently. GIS maps are currently being updated.

#### 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.

We are not prioritizing our outfalls at this time. We are working with the ARC on a collaborative IDEP approach.

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.

NA- not prioritizing our outfalls

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 nonstorm 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.

See ARC IDEP Plan. We will work with the ARC to perform dry-weather screening in the coming months.

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.

See ARC IDEP Plan. We will work with the ARC to perform dry-weather screening in the coming months.

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.

See ARC IDEP Plan. We will work with the ARC to perform dry-weather screening in the coming months.

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.

See ARC IDEP Plan Page 24-25

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."

#### Not Applicable

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.)

#### See ARC IDEP Plan Page 23

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.

#### See ARC IDEP Plan

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.

See ARC IDEP Plan

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.

See ARC IDEP Plan Page 1-15

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.

See ARC IDEP Plan Page 26-27

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).

#### See Non-Stormwater Discharges SOP

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.

See Non-Stormwater Discharges SOP

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. (Aswimming 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.

See Non-Stormwater Discharges SOP

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.

See Appendix Z, BB, CC, DD, EE (I-111), EE (IV-V), (EE VI-end), and FF. These are the ordinances that apply. See also Twp Ordinances Summary.

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.

See Appendix Z, BB, CC, DD, EE (I-111), EE (IV-V), (EE VI-end), and FF. These are the ordinances that apply. See also Twp Ordinances Summary.

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.

See Appendix Z, BB, CC, DD, EE (I-111), EE (IV-V), (EE VI-end), and FF. These are the ordinances that apply. See also Twp Ordinances Summary.

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.

See Appendix Z, BB, CC, DD, EE (I-111), EE (IV-V), (EE VI-end), and FF. These are the ordinances that apply. See also Twp Ordinances Summary.

#### 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- Attachment

NPDES-Appendix J Grading Soil Erosion & Sedimentation Control Permit (SESC) Permit Guidelines.pdf - 04/01/2016 08:21 PM

NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf - 04/01/2016 08:28 PM

NPDES-Appendix F-Code Enforcement & Code Violation General Information.pdf - 04/01/2016 08:28 PM

Construction SW Runoff Control SOP.pdf - 06/21/2018 09:20 AM

Twp Ordinances Summary.pdf - 07/09/2018 09:34 AM

App A Application Summary\_Revised.pdf - 10/17/2018 03:57 PM

Comment: See Attachment Summary A page 17, and refer to the Engineering Permit Application Package found at www.wbtownship.org, departments, engineering, then permits.

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.

See Appendix E, F, and Construction SW Runoff Control SOP, and Twp Ordinances Summary.

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.

See Appendix E, F, and Construction SW Runoff Control SOP, and Twp Ordinances Summary.

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.

See Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (VI-end), FF, and Twp Ordinances Summary.

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).

See Construction SW Runoff SOP.

#### 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- Attachment

NPDES-Appendix J Grading Soil Erosion & Sedimentation Control Permit (SESC) Permit Guidelines.pdf - 04/01/2016 08:48 PM

NPDES-Appendix GG-Development Services Department Engineering Permit Application.zip - 04/01/2016 08:59 PM

Twp Water Supply Ord\_Ch 24.pdf - 06/21/2018 09:23 AM

App HH SW Permit App & SW Mgt Ord\_Ch 24.pdf - 06/21/2018 10:12 AM

Twp Ordinances Summary.pdf - 10/03/2018 11:50 AM

App A Application Summary\_Revised.pdf - 10/17/2018 04:00 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.

See Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (M-end), and FF. These are the ordinances that apply. See the Twp Ordinances Summary and Chapter 24 - Part 1 and 2.

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.

See Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (M-end), and FF. These are the ordinances that apply. See SW Application Packet (Page 5) and Appendix A

#### **Federal Facilities**

Federal facilities are subject to the Energy Independence and Security Act of 2007. Section 438 of this legislation establishes postconstruction 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 PROMDED

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

See Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (V-end), and FF. These are the ordinances that apply. Refer to the Water Supply Ordinance, Part 2, I.A (Page 39); II.A (Page 39-40); II.A 1.e. (Page 41-42, 46-47); Water Supply Ordinance, Part 2, II.D.2. (Page 52-53).

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 Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (M-end), and FF. These are the ordinances that apply.

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

The MDEQ's memo dated March 24, 2006 providing the 90 percent annual non-exceedance storm statistics.

Other rainfall data source (page and paragraph of attachments)

#### NONE PROVIDED

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 Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (VI-end), and FF. These are the ordinances that apply. See Appendix Y. See Appendix GG. Water Supply Ordinance, Part 2, II.D.2 (Page 53-55).

#### 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.AMDEQ 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 Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (V-end), and FF. Water Supply Ordinance, Part 2, I.A (Page 39); II.A (Page 39-40); I.a., d. (Page 40); II.A1.e. (Page 41-42, 46-47); Water Supply Ordinance, Part 2, D.2. (Page 52-53).

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.

Not Applicable

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 Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (V-end), and FF. Waterways Ordinance, Part 1, C. (Page 35-38); Water Supply Ordinance, Part 2, 6.B. (Page 45); Water Supply Ordinance, Part 2, D.3. (Page 53).

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 Appendix Z, BB, CC, DD, EE (I-III), EE (IV-V), EE (M-end), and FF. Waterways Ordinance, Part 2, 6. (Page 45); Water Supply Ordinance, Part 2, V.B. (Page 55).

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 a10-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.

#### Water Supply Ordinance, Section 24-214 - Off-site stormwater management is allowable

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.

#### Water Supply Ordinance, Section 24-214 - Off-site stormwater management is allowable

45. Provide the reference the 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 project site. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

#### Water Supply Ordinance, Section 24-214 - Off-site stormwater management is allowable

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.

#### Not Applicable.

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.

#### Not Applicable.

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.

#### Not Applicable.

49. Provide the reference to the ordinance or regulatory mechanism submitted above that requires a schedule for completing offsite 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.

#### Not Applicable.

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.

#### Not Applicable.

51. Describe the tracking system implemented, or to be implemented, to track off-site mitigation and/or in-lieu projects.

This would be identified in the required Storm Water Management Plan. All provisions for performance guarantees shall apply to offsite stormwater conveyance and detention.

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.

Not Applicable.

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.

• Water Supply Ordinance, Section 24-211 (a) (Page 11) • Water Supply Ordinance, Section 24-215 (Page 13) • SW Mgt Ordinance, Part 1 (Appendix) (Page 33-38) • Zoning Ordinance, Chapter 26, Section 6.1 (Page 18-22)

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.

• Water Supply Ordinance, Section 24-211 (a) (Page 11) • Water Supply Ordinance, Section 24-215 (Page 13); 24-217 • SW Mgt Ordinance, Part 1 (Appendix) (Page 33-38) • Zoning Ordinance, Chapter 26, Section 6.1 (Page 18-22)

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.

• Water Supply Ordinance, Section 24-221 (Page 14); Section 24-222 (Page 15) • SW Mgt Ordinance, Part 2, Division 3 (Page 53) • SW Mgt Ordinance, Part 2, Section X (Page 57-58) • The Township requires performance guarantees and maintenance agreements per the Waterways Ordinance, Division 4.

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.

• Water Supply Ordinance, Section 24-221 (Page 14); Section 24-222 (Page 15) • SW Mgt Ordinance, Part 2, Division 3 (Page 53) • SW Mgt Ordinance, Part 2, Section X (Page 57-58) • The Township requires performance guarantees and maintenance agreements per the Waterways Ordinance, Division 4.

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 BIMPs installed and implemented to meet the performance standards. If not available at this time, provide the date the procedure will be available.

• Water Supply Ordinance, Section 24-221 (Page 14); Section 24-222 (Page 15) • SW Mgt Ordinance, Part 2, Division 3 (Page 53) • SW Mgt Ordinance, Part 2, Section X (Page 57-58) • The Township requires performance guarantees and maintenance agreements per the Waterways Ordinance, Division 4.

58. Does the maintenance agreement or other legal mechanism allow the applicant to complete the following? (Check if yes)

Track the transfer of operation and maintenance responsibility of the BMP (e.g., deed restrictions)

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.

The Township is only responsible for inspection of its own facilities and BMPs. Refer to the Waterways Ordinance, Part 2, Section X (57-58) for requiring the property owner or applicant to perform inspections and maintenance.

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.

• Water Supply Ordinance, Section 24-221 (Page 14); Section 24-222 (Page 15) • SW Mgt Ordinance, Part 2, Division 3 (Page 53) • SW Mgt Ordinance, Part 2, Section X (Page 57-58) • The Township requires performance guarantees and maintenance agreements per the Waterways Ordinance.

#### Section 10. Pollution Prevention and Good Housekeeping Program

Pollution Prevention and Good Housekeeping Program Procedures- Attachment(s)

NPDES-Appendix W Detention Basin Checklist.pdf - 04/01/2016 09:18 PM Vegetated Swale Checklist.pdf - 05/03/2018 02:59 PM App Y GH\_PIPP Plan.pdf - 06/21/2018 12:49 PM DB Checklist.pdf - 06/21/2018 01:05 PM Pervious Pavement Checklist.pdf - 06/21/2018 01:05 PM Twp Fertilizer Ord\_Ch 14.5.pdf - 06/29/2018 12:22 PM App AApplication Summary\_Revised.pdf - 10/17/2018 04:01 PM App Y GH\_PIPP Plan Revised.pdf - 10/17/2018 04:01 PM PLot, Pathway, CB Maintenance SOP Revised.pdf - 10/17/2018 04:01 PM WBT Facilities List.pdf - 10/17/2018 04:01 PM Comment: NONE PROVIDED

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.

See the revised Township Facilities List.

Facilities that may have the high potential to discharge pollutants:

Salt storage facilities Fleet maintenance facilities Materials storage and Public Works yards

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

Vehicle storage Administration buildings and libraries Fire Stations Fuel Farms Parks Police Stations Public parking lots

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

Detention basins Oil/water separators Porous pavement Pump Stations Rain gardens Secondary containment Underground storage vaults or tanks Vegetated swales Other Other: Stormwater Ceptors (2)

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)

Up to date maps can be found at the Informational Technologies Department, GIS Division.

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.

See the Prioritization Process document.

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 waterslif 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.

See the Prioritization Process document.

If not applicable

#### NONE PROMDED

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.

See the revised Facilities List and Prioritization Process document.

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)

See Attachment A Summary, pages 19-22. See Appendix Y. See the Facilities List and Prioritization Process document.

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)

See Attachment A Summary, pages 19-22. See Appendix Y. See the Prioritization Process document.

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)

See Attachment A Summary, pages 19-22. See Appendix Y. See the Prioritization Process document.

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)

See Appendix A (revised) - Page 5 and 35. See PIPP, Page 5

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.

See Attachment A Summary, pages 19-22. See Appendix Y.

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.

See the Prioritization Process document.

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

See the Facilities List and Prioritization Process document.

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.

See the PLot, CB, and Pathway SOP and Prioritization Process document.

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.

See the PLot, CB, and Pathway SOP and Prioritization Process document.

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.

See the PLot, CB, and Pathway SOP and Prioritization Process document and Appendix Y.

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.

See the Water Supply Ordinance and Stormwater Management Ordinance Packet

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) 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.

See Appendix Y, the PLot, CB, and Pathway SOP, and Prioritization Process document.

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.

See Appendix Y, the PLot, CB, and Pathway SOP, and Prioritization Process document.

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.

Township maps are located at the Informational Technologies Department, GIS division. Please see the Facilities List and Prioritization Process document.

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.

See PLot, Pthway, CB Maint SOP and Prioritization Process document.

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.

See Appendix Y, the PLot, CB, and Pathway SOP, and Prioritization Process document.

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.

See the Fertilizer Ordinance, Ch. 14.5

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.

See Appendix Y, See Fertilizer Ordinance, Ch. 14.5.

**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.

See Appendix Y and SOPs, and IDEP Plan (Page 14).

#### 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-Attachment

ARC TMDL Plan\_Draft.pdf - 05/03/2018 03:03 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.

The Township relies on the BMPs to be implemented by the ARC Collaborative TMDL Plan.

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 Draft ARC TMDL Plan.

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 Draft ARC TMDL Plan.

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 data may be submitted for review as part of the plan to meet part of the monitoring requirement.

See Draft ARC TMDL Plan.

#### Section 12. Phase I only – Industrial Facility Inspection Program

Industrial Facility Inspection Program Procedures- Attachment

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 PROMDED

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 PROMDED

Section 13. Certify and Submit Comments (As needed) Additional Documents (As needed)- Attachment

NPDES-Appendix HH Storm Water Permit Package.pdf - 04/01/2016 09:20 PM

Comment: The Township requires a detailed application process for woodland and wetland properties. Refer to www.wbtownship.org select government, department, engineering and environmental to see these and pavement and grinder pump requirements.

#### **Attachments**

Date	Attachment Name	Context
4/1/2016 2:27 PM	NPDES-Appendix A-Map of Urbanized Area.pdf	v3 - Section 4: Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdictions
4/1/2016 3:19 PM	NPDES-Attachment Apdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 3:35 PM	NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 4:56 PM	NPDES-Appendix F-Code Enforcement & Code Violation General Information.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:35 PM	NPDES-Appendix Z Chapter 8 Ordinance Code Building and Building Regulations.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:37 PM	NPDES-Appendix AA Chapter 12 Ordinance Floodplain.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:37 PM	NPDES-Appendix BB-Chapter 13 Ordinance Soild Waste Management.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:38 PM	NPDES-Appendix CC Chapter 14.5 Ordinance Fertilizers.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:38 PM	NPDES-Appendix DD Chapter 23 Ordinance Vegetation.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:39 PM	NPDES-Appendix EE Chapter 24 Articles IV-V.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:39 PM	NPDES-Appendix EE Chapter 24 Articles VI-end of Chapter 24.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:39 PM	NPDES-Appendix FF Chapter 26 Zoning Ordinance.zip	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
4/1/2016 6:42 PM	NPDES-Appendix L- Protect Our Watersheds.zip	v3 - Section 6. Public Education Program
4/1/2016 6:42 PM	NPDES-Appendix M Storm Drains Aren't Garbage Cans.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:42 PM	NPDES-Appendix N IDEP website information.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:43 PM	NPDES-Appendix O-Oakland County 24 Hour Pollution Hotline Information.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:43 PM	NPDES-Appendix P RiverSafe Home Survey.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:43 PM	NPDES_Appendix Q Waterfront Wisdom Brochure.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:46 PM	Appendix-R Healthy Lawn Care Tips.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:46 PM	Appendix-S Household Hazardous Waste Events.pdf	v3 - Section 6. Public Education Program
4/1/2016	Appendix-T Septic and Well Program.pdf	v3 - Section 6. Public Education Program

6:46 PM <b>Date</b>	Attachment Name	Context
4/1/2016 6:47 PM	NPDES-U Low Impact Development.pdf	v3 - Section 6. Public Education Program
4/1/2016 6:48 PM	NPDES-Appendix V Michigan Business Prevention Partnership.pdf	v3 - Section 6. Public Education Program
4/1/2016 7:10 PM	NPDES-Appendix G-Facilities and Structural Controls- IDEP Dry Weather Screening Table.pdf	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:05 PM	NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:09 PM	NPDES-Appendix Z Chapter 8 Ordinance Code Building and Building Regulations.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:10 PM	NPDES-Appendix BB-Chapter 13 Ordinance Soild Waste Management.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:11 PM	NPDES-Appendix CC Chapter 14.5 Ordinance Fertilizers.pdf	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:11 PM	NPDES-Appendix DD Chapter 23 Ordinance Vegetation.pdf	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:12 PM	NPDES-Appendix EE Chapter 24 Articles I-III.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:12 PM	NPDES-Appendix EE Chapter 24 Articles IV-V.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:13 PM	NPDES-Appendix EE Chapter 24 Articles VI-end of Chapter 24.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:13 PM	NPDES-Appendix FF Chapter 26 Zoning Ordinance.zip	v3 - Section 7. Illicit Discharge Elimination Program
4/1/2016 8:21 PM	NPDES-Appendix J Grading Soil Erosion & Sedimentation Control Permit (SESC) Permit Guidelines.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
4/1/2016 8:28 PM	NPDES-Appendix E-Spill Notification & Complaint Concern Reporting Form.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
4/1/2016 8:28 PM	NPDES-Appendix F-Code Enforcement & Code Violation General Information.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
4/1/2016 8:48 PM	NPDES-Appendix J Grading Soil Erosion & Sedimentation Control Permit (SESC) Permit Guidelines.pdf	v3 - Section 9. Post-Construction Storm Water Runoff Program
4/1/2016 8:59 PM	NPDES-Appendix GG-Development Services Department Engineering Permit Application.zip	v3 - Section 9. Post-Construction Storm Water Runoff Program
4/1/2016 9:18 PM	NPDES-Appendix W Detention Basin Checklist.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
4/1/2016 9:20 PM	NPDES-Appendix HH Storm Water Permit Package.pdf	v3 - Section 13. Certify and Submit
5/3/2018 2:23 PM	ARC PPP_FINAL.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program
5/3/2018 2:26 PM	ARC PEP_FINAL.pdf	v3 - Section 6. Public Education Program
5/3/2018 2:27 PM	ARC IDEP_FINAL.pdf	v3 - Section 7. Illicit Discharge Elimination Program
5/3/2018 2:59 PM	Vegetated Swale Checklist.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
5/3/2018 3:03 PM	ARC TMDL Plan_Draft.pdf	v3 - Section 11. Total Maximum DailyLoad Implementation Plan
6/21/2018 9:16 AM	App C ERP_Revised.pdf	v3 - Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program

<b>Date</b> 2018 9:20 AM	Ana Storne we ha Fiecharges SOP.pdf	Contection 7. Illicit Discharge Elimination Program
6/21/2018 9:20 AM	Construction SW Runoff Control SOP.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
6/21/2018 9:23 AM	Twp Water Supply Ord_Ch 24.pdf	v3 - Section 9. Post-Construction Storm Water Runoff Program
6/21/2018 10:12 AM	App HH SW Permit App & SW Mgt Ord_Ch 24.pdf	v3 - Section 9. Post-Construction Storm Water Runoff Program
6/21/2018 12:49 PM	App Y GH_PIPP Plan.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
6/21/2018 1:05 PM	DB Checklist.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
6/21/2018 1:05 PM	Pervious Pavement Checklist.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
6/29/2018 11:56 AM	Twp Water Supply Ord_Ch 24.pdf	v3 - Section 7. Illicit Discharge Elimination Program
6/29/2018 12:22 PM	Twp Fertilizer Ord_Ch 14.5.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
7/9/2018 9:34 AM	Twp Ordinances Summary.pdf	v3 - Section 7. Illicit Discharge Elimination Program
7/9/2018 9:34 AM	Twp Ordinances Summary.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
7/12/2018 3:10 PM	Response Ltr to DEQ Jul 2018.pdf	v3 - Section 4: Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdictions
7/12/2018 3:13 PM	WBT Outfall_Discharge Pt Table.pdf	v3 - Section 4: Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdictions
7/12/2018 3:13 PM	WBT Outfall_Discharge Pt Table.pdf	v3 - Section 7. Illicit Discharge Elimination Program
10/3/2018 11:50 AM	Twp Ordinances Summary.pdf	v3 - Section 9. Post-Construction Storm Water Runoff Program
10/17/2018 3:56 PM	App A Application Summary_Revised.pdf	v3 - Section 7. Illicit Discharge Elimination Program
10/17/2018 3:57 PM	App A Application Summary_Revised.pdf	v3 - Section 8. Construction Storm Water Runoff Control Program
10/17/2018 4:00 PM	App A Application Summary_Revised.pdf	v3 - Section 9. Post-Construction Storm Water Runoff Program
10/17/2018 4:01 PM	App A Application Summary_Revised.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
10/17/2018 4:01 PM	App Y GH_PIPP Plan Revised.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
10/17/2018 4:01 PM	PLot, Pathway, CB Maintenance SOP Revised.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
10/17/2018 4:01 PM	Prioritization Process Revised.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program
10/17/2018 4:01 PM	WBT Facilities List.pdf	v3 - Section 10. Pollution Prevention and Good Housekeeping Program

## **Status History**

# DateUserProcessing Status10/3/2018 9:30:03 AMLaura GruzwalskiDraft

10/17/2018 4:06:26 PM <b>Date</b>	Laura Gruzwalski <b>User</b>	Submitted Processing Status	
Processing Steps			
Step Name	Assigned To/Completed By	Date Completed	
Form Submitted	Laura Gruzwalski	10/17/2018 4:06:26 PM	

West Bloomfield Township Facilities Table					
				Potential for	Priority Cleaning
ID	Name of Facility	Facility Address	Located in MS4	Pollutant Runoff	Schedule
BP-1	Bloomer Park	7581 Richardson	MS4	Low	Low
ВК-2	Bloomfield Knolls Park	1750 Hembert	MS4	Low	Low
CSP-3	Community Sports Park (Keith Park)	2750 Keith Rd.	MS4	Low	Low
DSP-4	Drake Sports Park	6801 Drake	MS4	Medium	High
FA-5	Family Aquatic Center	6200 Farmington Rd.	MS4	Low	Low
FS-1	Fire Station #1	4601 Orchard Lake Rd.	MS4	Medium	Low
FS-2	Fire Station #2	6925 West Maple Rd.	MS4	Medium	Low
FS-3	Fire Station #3	3340 Green Lake Rd.	MS4	Medium	Low
FS-4	Fire Station #4	5842 Greer Rd.	MS4	Medium	Low
FS-5	Fire Station #5	5425 West Maple Rd.	MS4	Medium	Low
KF-6	Karner Farms	5911 Halsted Rd.	MS4	Low	Low
TC-9	Fire Station #9 (Tri-City Fire Station)	3300 Orchard Lake Rd.	MS4	Medium	Low
MP-7	Marshbank Park	2805 Hiller Rd.	MS4	High	High
SF-8	Schulak Farms	6889 West Maple Rd.	MS4	Low	Low
SM-9	Sylvan Manor Park	2294 Woodrow Wilson Blvd.	MS4	Low	Low
WS-2	Water & Sewer Building	2400 Haggerty Rd.	MS4	High	High
WT-3	Water Tower	7366 Commerce Rd.	MS4	Low	Low
WAL-2	West Acres Library	7321 Commerce Rd.	MS4	Low	Low
CC-1A	West Bloomfield Library	4550 Walnut Lake Rd.	MS4	Low	Medium
CC-1B	West Bloomfield Parks Building	4550 Walnut Lake Rd.	MS4	Low	Medium
CC-1C	West Bloomfield Civic Center	4500 Walnut Lake Rd.	MS4	Medium	High
CC-1D	Police Station	4500 Walnut Lake Rd.	MS4	Medium	Medium
NP-10	West Bloomfield Nature Preserve	4655 Arrowhead	MS4	Low	Low
		Structural & Non-Structural Co	ontrols		-
NA	Rain Gardens (2)	Marshbank Park, Schulak Farms	MS4	NA	Low
		Marshbank Park, Water & Sewer			
NA	Bioswales (9)	Building	MS4	NA	Low
	Twp-Owned Detention/Retention	Marshbank Park, Drake Sports			
NA	Basins (11)	Park, Water & Sewer Building	MS4	NA	Low
		Marshbank Park, Water & Sewer			
NA	Partial Porous Pavement	Building	MS4	NA	Medium

				Potential for	<b>Priority Cleaning</b>
ID	Name of Facility	Facility Address	Located in MS4	Pollutant Runoff	Schedule
	Privately-Owned				
NA	Detention/Retention Basins (204)	Township-Wide	MS4	NA	Low
NA	Pump Stations (23)	Water &Sewer Building	MS4	Medium	Medium
NA	Catch Basins (2586)	Township-Owned	MS4	Medium	Low
		Civic Center Campus, Water &			
NA	Prioritized Catch Basins	Sewer Building	MS4	Medium	Medium
NA	Outfalls/Discharge Points (21)	Township-Wide	MS4	NA	High
NA	Oil/Water Separators (6)	Fire Station 1-5/9	MS4	NA	Medium
		Fire Station 5, Water & Sewer			
NA	Stormwater Ceptor (2)	Building	MS4	NA	Medium
		Fire Station 2, 4,5, 9, Water &			
NA	Fueling Stations (6)	Sewer Building, Police Station	MS4	High	Medium

## Catch Basin, Parking Lot and Safety Path Maintenance SOP West Bloomfield Township

## Description

Catch Basins, parking lots, and safety paths can be significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from catch basin, parking lot, and safety path maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address lot and pathway sweeping, and repair will reduce pollutants in stormwater.

## <u>Objectives</u>

- Contain
- Educate
- Reduce/Minimize

<b>Targeted Constituents</b>		
Sediment	$\checkmark$	
Nutrients	$\checkmark$	
Trash	$\checkmark$	
Metals	$\checkmark$	
Bacteria	$\checkmark$	
Oil and Grease	$\checkmark$	
Organics	$\checkmark$	
Oxygen Demanding	$\checkmark$	

## Approach

- We have adopted a ban on driveway sealants containing coal tar. All sealing contractors are required to be licensed with the Township.
- We enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.
- Please see the Prioritization Process document for details on our catch basin and parking lot inspection and cleaning frequencies.

## Catch Basin, Parking Lot & Pathway Inspections, Sweeping and Cleaning

- The Township Parks and Water Utilities Departments perform their own catch basin cleaning and parking lot sweeping. Sweeping and catch basin cleaning at the Civic Center is performed by a contractor. All materials are taken to a Type II landfill for proper disposal.
- Refer to the Prioritization Process document for more details.
- Catch basins located adjacent to storage yards have silt sacks that are inspected and maintained.
- Pathways are broom swept once per year by the Parks Department.

## Catch Basin, Parking Lot & Pathway Repair and Maintenance

• Pathway sweeping is performed by Township staff. Maintenance and repair of the pathways, parking lots, and catch basins are performed by a contractor.

## Patching, resurfacing, and surface sealing

- Patching, resurfacing, and surface sealing is performed by a contractor.
- Contractors are encouraged to utilize best management practices to minimize pollutant runoff.

## Equipment cleaning maintenance and storage

• We inspect equipment frequently and repair any leaks.

## Bridge Inspections

N/A – The Township does not own or maintain any bridges.

## Training

We will train employees regarding proper sweeping operation and repair and maintenance at least once within the permitting period. All new employees will be trained within the first year of hire. We will utilize a training log or sign-in sheet to document training. We will train employees on

#### PART ONE PROCEDURES FOR SUBMISSION AND REVIEW OF DEVELOPMENT PLANS

The following procedures and standards shall apply in the administration of the Stormwater Management Ordinance, of which this appendix is a part. However, if and to the extent there are procedures, requirements and/or standards that are more rigorous or strict which are specified elsewhere in the Township's Ordinance Code, or in other applicable law, rule or regulation, the more rigorous or strict standards shall apply. In the event there is an ambiguity with regard to the particular standard that is applicable, such ambiguity shall be resolved by the Township Board.

- I. PURPOSE AND APPLICATION
  - A. PURPOSE
    - 1. To ensure that drainage or stormwater management systems are adequate to address stormwater management needs within a proposed development, and for protecting downstream landowners from flooding and degradation of water quality. The procedures, standards and recommendations set forth in these procedures and standards are designed for these purposes.
    - 2. To ensure that all stormwater facilities necessary for a proposed development will have an appropriate governmental unit responsible in perpetuity for performing maintenance or for overseeing the performance of maintenance by a private entity, such as a property owner's association.
  - B. APPLICATION
    - 1. These procedures and standards provide minimum standards to be complied with by developers, and in no way limit the authority of the Township to adopt or publish and/or enforce higher standards as a condition of approval of developments.
    - 2. Stormwater management technologies are rapidly developing and improving; these procedures and standards will be revised as necessary by the Township Board after recommendation by the Planning Commission and Wetland Board, with the most recently dated sheets being applicable.
- II. SUBMISSION OF PRELIMINARY PLAN
  - A. SUBMISSION AND GENERAL INFORMATION REQUIREMENTS FOR APPROVAL OF STORMWATER MANAGEMENT PLANS
    - 1. A preliminary plan showing the layout of the area intended to be developed will be submitted by the developer. This plan will be prepared under the direction of, and sealed by, a registered professional engineer or a registered land surveyor, and shall fit on a sheet of paper that does not exceed 24" by 36", drawn to a standard engineering scale.
    - 2. Three prints prepared in accordance with the procedures and standards set forth in this section, will be submitted together with a letter of transmittal requesting that the plan be reviewed and, if found satisfactory, approved. The names of the owner and engineering or surveying firm, with mailing addresses, fax and telephone numbers for each, will be included with the transmittal.
    - 3. The plan will include:
      - a. The location by means of a small location map;
      - b. The township, city or village in which the parcel is situated;
      - c. The section and part of section in which the parcel is situated;

- d. The proposed drainage system for the development;
- e. The proposed street, alley and lot layouts and approximate dimensions;
- f. The location and description of all on-site features and all adjacent off-site features within 50 feet, and all other off-site features that may be impacted in determining the overall requirements for the development. For example:
  - (1) Adjoining roads and developments;
  - (2) Railroads;
  - (3) High tension power lines or underground transmission lines;
  - (4) Cemeteries;
  - (5) Parks;
  - (6) Natural and artificial watercourses, wetlands and wetland boundaries, environmental feature boundaries, floodplains, lakes, bays, existing stormwater storage facilities, conveyance swales (natural or artificial), approximate location of woodlands, natural beauty roads, lagoons, and trees with a caliper at breast height of greater than eighteen (18) inches (and Arborvitae (white cedar), Crabapple, Flowering Dogwood, Hawthorn, Hophornbeam, Hornbeam, Juniper, Magnolia, Maple, amur, Redbud and Witch Hazel trees with a caliper at breast height greater than twelve (12) inches);
  - (7) Designated natural areas;
  - (8) Any proposed environmental mitigation features;
  - (9) Drains, sewers and water mains;
  - (10) Existing and proposed easements;
- g. The number of acres.
- h. Contours, at two-foot intervals or less, with U.S.G.S. datum.
- i. A map, at the U.S.G.S. scale, showing the drainage boundary of the proposed development and its relationship with existing drainage patterns.
- j. Any water course passing through the development, along with the following:
  - (1) Area of upstream watershed and current zoning.
  - (2) Preliminary calculations of runoff from the upstream area for both the 100-year and 1.5-year 24-hour design storms, for fully-developed conditions according to the current land use plan for the area.
- k. Soil borings may be required at various locations including the sites of proposed retention/detention facilities, and as needed in areas where high ground water tables exist.
- 4. All calculations used in designing all components of stormwater management systems must be submitted along with plans.
- 5. Easement information will be shown, consistent with Part Two, Section XIII of these procedures and standards.
- 6. A description of the mechanism to be established to provide for long-term maintenance of the development's stormwater management system, and the government agency responsible for maintenance oversight if maintenance is to be performed by a private entity. A County drainage district may be required to be established for future maintenance.
- 7. Should the applicant propose to begin with only a portion of the total area, the original plan will include the proposed master stormwater management layout for the entire area based

upon preliminary engineering. The first phase will be clearly superimposed upon the overall plan in order to illustrate clearly the method of development that the applicant intends to follow. Each subsequent plan will follow the same procedure until the entire area controlled by the applicant is developing.

Final approval of only one portion or phase does not ensure final acceptance of any subsequent phases or the master stormwater management layout for the entire area. Deviations or modifications, if any, shall be reviewed for approval by the township.

#### B. DRAINAGE INFORMATION REQUIREMENTS FOR STORMWATER MANAGEMENT PLANS AND ENGINEERED GRADING PLANS

#### 1. REQUIRED STORMWATER MANAGEMENT INFORMATION

The plan will include:

- a. The general stormwater management scheme for the proposed developmentindicating how stormwater management will be provided and where drainage will outlet.
- b. A description of the offsite outlet and evidence of its adequacy. If no adequate watercourse exists to effectively handle a concentrated flow of water from the proposed development, discharge will be reduced to sheet flow prior to exiting the site, and cannot exceed 0.15 cfs/acre. Additional volume controls may be required in such cases and/or acquisition of rights-of-way from downstream property owners receiving the stormwater flow.
- c. Any on-site and/or off-site stormwater management facilities and appropriate easements, dedicated to the entity that will be responsible for future maintenance.
- d. Any drainage originating outside of the development limits that flows onto or across the development. (In general, drainage from off-site shall not be passed through on-site stormwater storage facilities.)
- e. Any natural watercourses and County Drains that traverse or abut the property.
- 2. Proposed drainage for the development will conform to any established County drainage districts.
- 3. The proposed drainage plan will, in every way feasible, respect and conform to the natural drainage patterns within the site and the watershed in which it is located.
- 4. Proposed drainage shall complement any local stormwater management plans that may exist and/or comply with any article in effect.
- 5. The increased volume of water discharged from a development shall not create adverse impacts to downstream property owners, wetlands and water courses (e.g. flooding; excessive soil saturation; crop damage; erosion; degradation in water quality or habitat destruction).

#### C. DEVELOPMENT APPROVAL

- 1. The Township Planning Commission, Wetland Board (or Township Board on Appeal), Township Engineer and Township Environmental Director, as applicable, shall review a proposed plan. If the proposed plan is not approved as originally submitted, the Township Engineer will notify the applicant in writing, setting forth the reasons for withholding approval, and will state the changes necessary to obtain approval. If the proposed plan as submitted meets all requirements, one approved copy of the plan will be returned to the applicant. Approval of the plan is required before the Township will proceed with review of final construction plans.
- 2. Payment of all fees is prerequisite to approval.

#### III. FINAL STORMWATER MANAGEMENT APPROVAL

- A. Final plan review will be completed by the Township within a reasonable time following submission by the applicant. If the plan is not acceptable, written notice of rejection and the reasons therefor by way of minutes of the reviewing body and/or statement of the revision will be given to the applicant. If the Township approves the plan, it will affix a signature to it and the plan will be executed.
- B. As a condition of final plan approval, the Township will require the following:
  - 1. Before approval of the final plan, copies of all necessary Wetland, Floodplain, Inland Lakes and Streams, Erosion Control or other needed state, federal or local permits relating to stormwater management have been provided by the applicant for the Township file.
  - 2. A satisfactory agreement that assures long-term maintenance of all drainage improvements will be in place before submission of the final plan. Documentation of maintenance agreement will be supplied to the Township and approved by the Township Board.
  - 3. The applicant will post cash or a letter of credit in an amount not less than 10% of the cost of the stormwater facilities for projects of less than \$100,000 or 5% of the cost for projects over \$100,000 (See Sections C and D below). This deposit will be held for one year after the date of completion of construction and final inspection of the stormwater facilities, or until construction on all phases in the development are completed, whichever time period is longer.

This deposit will be returned to the applicant (in the case of cash) or allowed to expire (in the case of a letter of credit), as provided above, provided all stormwater facilities are clean, unobstructed and in good working order, as determined by the Township Engineer.

- 4. Reproducible mylars of the as-built stormwater management system(s) will be submitted by the applicant or his/her engineer to the commissioner along with the final plan, or upon completion of system construction. The mylars are to be of quality material and 3 mils in thickness.
- 5. Complete development agreements (including deed restrictions) must be submitted for the Township's review and approval prior to recording.

#### IV. FINAL CONSTRUCTION APPROVAL

A. The applicant will submit final stormwater management facility construction plans with a letter of transmittal. Plans will be prepared under the direction of, and sealed by, a registered professional engineer and will be in accordance with Part Two of this Appendix.

The Township Engineer and Environmental Management Director will review final construction plans to assure that the construction plan conforms with the approved Final Stormwater Management Plan, and that adequate storm drainage will be provided and that the proposed stormwater management system provides adequately for water quantity and quality management to ensure protection of property owners and watercourses both within the proposed development and downstream. Submission requirements shall include, but will not be limited to the following:

 Two complete sets of construction plans are required, or more as required by the Township Engineer, drawn to a scale no smaller than 1" = 50', and on sheets no larger than 24" × 36". The scales used shall be standard engineering scales and shall be consistent throughout the plans. When plans have been completed with computer aided design technology, a copy of the electronic file shall also be provided. Construction plans shall include the following:

a. Development layout of lots, roads and utility and drainage easements.

- b. Plans, profiles and details of all roads and storm sewers. The storm sewer details will include type and class of pipe, length of run, percent of slope, invert elevations, rim elevations, and profile of the hydraulic gradient, as specified in Part Two of these procedures and standards.
- c. A storm sewer computation sheet indicating the number of acres, calculated to the nearest tenth of an acre, contributing to each specific inlet/outlet, the calculated hydraulic gradient elevation, maximum flow in cfs and the flow velocities for enclosed systems.
- d. Plans, profiles and details of all open ditch drains, drainage swales and drainage structures.
- e. Plans and details of the proposed soil erosion and sedimentation control measures, both temporary (during construction) and permanent.
- f. Plans and details of retention detention facilities.
- g. A drainage area map, overlaid onto a copy of the site grading plan, which clearly shows the areas tributary to each inlet an/or storage basin.
- h. Topographic maps, at two foot contour intervals or less on U.S.G.S. datum, showing existing and proposed grades of the entire area to be subdivided, as well as off-site topography over at least 100' of the adjoining property. Maps will also show all existing water courses, lakes and wetlands, and the extent of all off-site drainage areas contributing flow to the development.
- i. The number of acres proposed to be developed and, for phased developments, the number of acres in each phase.
- j. Locations of all drain fields as approved by the Oakland County Environmental Services Division and of all expansion areas. Drain fields shall not be located within drainage easements.
- 2. Specifications governing construction of stormwater management facilities.
- 3. Design data and criteria used for sizing all drainage structures, channels and retention basins, including weighted runoff coefficient calculations.
- 4. A stormwater facility maintenance plan, schedule, and budget estimating the costs that will be associated with system maintenance (See Part Two, Section X. D.)
- 5. In addition to the foregoing, a single sheet including the entire site plan along with all proposed storm drainage facilities and drainage easements shall be submitted.
- A soil erosion permit under "The Michigan Soil Erosion and Sedimentation Control Act", P.A. 451, Part 91 Public Acts of 1994 as amended, will be obtained from the appropriate agency prior to any construction.
- C. The applicant will make arrangements acceptable to the Township for inspection during construction and for final verification of the construction by a registered professional engineer prior to the approval of the final construction plans.
- D. Review of construction plans by the Township will not proceed until plan approval has been granted. The Land Division Act of 1996 gives no time limit in which final construction plans must be reviewed.
- E. Approval of construction plans by the Township is valid for one calendar year. If an extension beyond this period is needed, the applicant will submit a written request to the Township for an extension. The Township may grant one year extensions of the approval, and may require updated or additional information if needed. Township action under this provision may be taken administratively provided that no changes to the plans and/or standards have occurred. In the event one or more such changes have occurred, Township action under this provision shall be taken by the final reviewing body.

F. For site condominiums, complete Master Deed documents (including "Exhibits" drawings) must be submitted for the Township's review and approval prior to recording.

- V. DRAINS UNDER THE JURISDICTION OF THE DRAIN COMMISSIONER
  - A. Drainage districts will not be altered when designing development drainage, except as provided under Section 433 of Act 40, Public Act 1956 as amended.
  - B. Existing county or Township drain easements will be indicated on the plans as well as the final plan and will be designated as "Oakland County Drain" or "Township of West Bloomfield Drain", as applicable. County drain easements prior to 1956 were not required by statute to be recorded immediately; therefore, it may be necessary to check the permanent records of the Drain Office to see if a drain easement is in existence on the subject property.
  - C. A permit will be obtained from the Drain Commissioner's Office prior to tapping or crossing any county drain. The permit must be obtained prior to final plan approval.
  - D. Proposed relocations of county drains will be processed through the office of the Drain Commissioner.
  - E. If a development is being developed in an area where special drainage problems are anticipated at the site, on adjacent properties or downstream, more stringent design requirements than are contained within Part Two of these procedures and standards may be required.

#### PART TWO - DESIGN CRITERIA FOR STORMWATER MANAGEMENT SYSTEMS

This Part II sets forth specific design and construction standards that will be used by the Township in review of proposed stormwater management systems in accordance with the objectives of managing both the quantity and quality of stormwater runoff.

It is difficult or impossible to develop one set of uniform standards that is capable of accommodating all variables and unique site circumstances. In particular, it is recognized that these standards may be difficult to realize on small sites. Waivers or variances from specific provisions of these standards may be requested, and alternatives consistent with the overall intent of stormwater quantity and quality management may be proposed, subject to the approval of the appropriate Township body responsible for final decision making on the application in accordance with the procedure and standards in the Stormwater Management Article.

I. DEVELOPMENT DRAINAGE — GENERAL REQUIREMENTS

#### A. STORMWATER DISCHARGE

- 1. In no event will the maximum design rate or volume of discharge exceed the maximum capacity of the downstream land, channel, pipe or watercourse to accommodate the flow. It is the applicant's obligation to meet this standard. Should a stormwater system, as built, fail to comply, it is the applicant's responsibility to design and construct, or to have constructed at his/her expense, any necessary additional and/or alternative stormwater management facilities. Such additional facilities will be subject to the Township's review and approval.
- 2. If no adequate watercourse exists to effectively handle a concentrated flow of water from the proposed development, discharge will be reduced to the equivalent of the pre-existing sheet flow prior to exiting the site, and cannot exceed 0.15 cfs/acre. Additional volume controls may be required in such cases and/or acquisition of rights-of-way from downstream property owners receiving the stormwater flow.
- 3. Discharge shall outlet within the watershed where flows originate, and shall not be diverted to another watershed without approval of the appropriate Township body administering the application.

#### B. DETERMINATION OF SURFACE RUNOFF

- 1. The "rational method" of calculating stormwater runoff is generally acceptable for sites less than 150 acres in size; however, it may not be considered an adequate design tool for sizing large drainage systems. More precise methodologies for predicting runoff such as runoff hydrographs are widely available, and may be required by the Township for sizing the drainage systems on large sites and/or smaller sites that are deemed potentially problematic. Acceptable alternative methods will include (See Appendices I and J for more information):
  - a. Corps of Engineers HEC-1.
  - b. Soil Conservation Service UD-21, TR-20 and TR-55.
  - c. U.S. EPA's SWMM.
  - d. Continuous simulation (e.g. HSPF).
- 2. Unless a continuous simulation approach to drainage system hydrology is used, all design rainfall events will be based on the SCS Type II distribution.
- 3. Computations of runoff hydrographs that do not rely on a continuous accounting of antecedent moisture conditions will assume a conservative wet antecedent moisture condition.
- II. DESIGN STANDARDS FOR CONSTRUCTED STORMWATER MANAGEMENT FACILITIES
  - A. RETENTION AND DETENTION SYSTEMS

### 1. Background.

- a. Whereas basin design for flood control is concerned with capturing and detaining/retaining relatively infrequent, severe runoff events, such as the 10-, 25-, or 100-year Storm, designs for water quality control require that the more frequent storm events (e.g. 2-year storm or less) must be addressed as well. The need for managing smaller storms is directly related to urbanization within Oakland County and the accompanying increase in impervious area, which affects surface water quality in two important ways.
- b. Eroded soil and other pollutants that accumulate on impervious surfaces, such as metals, fertilizers, pesticides, oils and grease, are flushed off by the early stages of runoff, which then carries a shock loading of these pollutants into receiving waterways. By capturing and treating the first 0.5 inch of runoff, a high percentage of pollutants that are washed off of the land can be removed from stormwater before it enters into the drainage system.
- c. As recent studies by the MDEQ have shown, development has caused stream flow fluctuations to rise dramatically. As impervious surface area increases and opportunities for infiltration are reduced, the frequency and duration of bankfull flow conditions, typically represented by the 1.5-year storm event, have intensified. As a result, streams adjust their capacities to convey the increased flows, which can then lead to channel and bank erosion and the destruction of aquatic habitat.
- d. To manage both water quantity and quality, basins must be designed to capture and treat three different storm events:
  - (1) The 100-year storm event.
  - (2) The bankfull flood: The 1.5-year/24 hour storm event.
  - (3) The "first flush": The first 0.5 inch of runoff from the entire contributing watershed.
- e. Controlling both extremely large events, to prevent flooding, and more frequent events, to mitigate water quality impacts and channel erosion, can be achieved through the proper design of detention/retention basins. Among alternatives, wet ponds and constructed marsh systems are the most effective for achieving control of both stormwater volume and quality. Extended detention ponds providing two-stage pond designs (containing an upper, dry stage and a lower stage with a permanent pool) are also acceptable.
- If all of the property in the proposed development is five (5) acres or less, including all f. past, present and future phases, an applicant may apply for authority to design a basin system for less than the 100 year storm standard. The application for such authority shall specify the standard proposed, and shall include all calculations and other supporting information demonstrating the legitimate reasons why such authority should be granted. In reviewing the application, the reviewing personnel and bodies shall determine whether the grant of authority for the standard proposed, or some other standard less than the 100 year storm standard, would be in the public interest, which would require meeting all of the following standards: natural resource and feature preservation; safety; potential problems that may result; engineering advantages and disadvantages, and any other relevant factor. If authority to design a basin system for less than the 100 year storm standard is granted under this paragraph f, an open space as large as, and contiguous to, the area to be utilized for the approved basin shall be set aside and preserved by a conservation easement or other mechanism approved by the Township Attorney as adequate, with the view of ensuring the availability of an area to construct a system meeting the 100 year storm standard in the event that smaller storage facility fails to fully function as intended.
- 1. GENERAL REQUIREMENTS
The following criteria will apply to the design of all stormwater retention and detention facilities.

- a. In general, wet ponds and stormwater marsh systems will be preferred to dry ponds. Dry ponds providing extended storage will be accepted when the development site's physical characteristics or other local circumstances make the use of a wet pond infeasible.
- b. When discharge is within a watershed where thermal impacts are a primary concern, dry ponds will be preferred to wet ponds, and extended detention (first flush and bankfull) requirements may be reduced to twelve (12) hours. Shade plantings on the west and south sides of facilities are encouraged unless such plantings would not thrive or are not otherwise in the public interest.
- c. Public safety will be a paramount consideration in stormwater system and pond design. Providing safe retention is the applicant's responsibility. Pond designs will incorporate gradual side slopes, vegetative and barrier plantings, and safety shelves. Where further safety measures are required, the applicant is expected to include them within the proposed development plans.
- d. Stormwater management systems incorporating pumps are not permitted, absent a variance under Article VIII of the Stormwater Management Article, which shall require a showing that there is no feasible and prudent alternative, and that it is in the public interest.
- e. Storage volumes and release rates.

On-site management of storm drainage will be designed for control of flooding, downstream erosion and water quality. Submission of flow calculations, cross sections and other pertinent data will be required.

(1) The volume of storage provided for flood control will be equal to or in excess of that required for a 100-year frequency storm.

The allowable release rate from the flood control storage volume will normally be between 0.1 and 0.15 cfs per acre of the property being drained, or as determined by the Township body responsible for final decision making on the application after recommendation by the Township Engineer and/or other applicable Township Engineer. If discharge does not outlet to a clearly defined downstream channel, the allowable release rate shall not exceed 0.10 cfs per acre.

(2) The volume and storage provided for controlling the "bankfull" flood, will be equal to or in excess of the total rain from a 1.5-year storm, which can be determined by:

5160 × acreage × the relative imperviousness factor C

The release rate from the "bankfull" storage volume will be such that this volume will be stored not less than 24 nor more than 40 hours.

(3) The "first flush" of runoff will be captured and detained for at least 24 hours or within a permanent pool. The first flush is defined as the first 0.5 inch of runoff over the entire site, which can be determined by:

1815 × acreage × the relative imperviousness factor C

f. A sediment forebay will be provided at the inlet of all stormwater management facilities, to provide energy dissipation and to trap and localize incoming sediments.

- (1) The forebay will be a separate cell, which can be formed by gabions or an earthen berm.
- (2) Capacity of the forebay shall account for 15 years of sediment accumulation, and will not be included in calculating overall basin stormwater storage capacity.
- (3) Direct maintenance access to the forebay for heavy equipment will be provided.
- (4) An adequate disposal area shall be provided for accumulated sediment.
- g. Basin inlet/outlet design.
  - (1) Velocity dissipation measures will be incorporated into basin designs to minimize erosion at inlets and outlets, and to minimize the resuspension of pollutants.
  - (2) To the extent feasible, the distance between inlets and outlets will be maximized. The length and depth of the flow path across basins and marsh systems can be maximized by:
    - [i. Reserved.]
    - ii. Increasing the length to width ratio of the entire design.
    - iii. Increasing the dry weather flow path within the system to attain maximum sinuosity.

If possible, inlets and outlets shall be offset at opposite longitudinal ends of the basin.

- (3) The use of V-notched wiers, dual outlets, or other designs to assure an appropriate detention time for all storm events is required.
- (4) The outlet will be well protected from clogging. A reverse-slope submerged orifice or a hooded, broad crested wier are recommended options. If a reverse-slope pipe is used, an adjustable valve may be necessary to regulate flows.
- (5) Where a pipe outlet or orifice plate is to be used to control discharge, it will have a minimum diameter of 3 inches. If this minimum orifice size permits release rates greater than those specified in these procedures and standards, alternative outlet designs will be utilized that incorporate self-cleaning flow restrictors, such as perforated risers and "V" notch orifice plates that provide the required release rate. Calculations verifying this rate are to be submitted to the Township for approval.
- (6) Backwater on the outlet structure from the downstream drainage system will be evaluated when designing the outlet.
- (7) Riser design.
  - (i) Orifices used to maintain a permanent pool level shall be designed to withdraw water at least one foot below the surface of the water.
  - (ii) Hoods or trash racks shall be installed on the riser to prevent clogging.
  - (iii) The riser shall be placed near or within the embankment, to provide for ready maintenance access.
  - (iv) Inlet and outlet barrels and risers will be constructed of materials that will reduce future maintenance requirements. The riser pipe shall be a minimum of four feet in diameter.
  - (v) Where feasible, a drain for completely de-watering the pond shall be installed for maintenance purposes.

- (8) All outlets will be designed to be easily accessible for heavy equipment required for maintenance purposes.
- h. Vegetative plantings associated with retention/detention facilities.
  - (1) Basin designs will be accompanied by a landscaping plan that uses native plant species.
  - (2) A permanent buffer strip of natural vegetation at least 25 feet in width will be maintained or restored around the perimeter of all wet basins and ponds. No lawn care chemical applications shall be applied to the buffer area.
  - (3) Viability of plantings will be monitored by the Township for two years after plantings are installed by the applicant, and reinforcement and replacement plantings provided by the applicant as needed.
- i. For safety purposes and to minimize erosion, basin side slopes will generally not be flatter than 20:1 nor steeper than 6:1. Steeper slopes may be allowed if fencing at least 5 feet in height is provided.
- j. Anti-seep collars shall be installed on any piping passing through the sides or bottom of the basin to prevent leakage through the embankment.
- k. A minimum of one foot of freeboard will be required above the 100-year stormwater elevation on all detention/retention facilities.
- I. All basins will have provisions for a defined emergency spillway, routed such that it can be picked up by the main outflow channel.
- m. Adequate maintenance access from public or private right-of-way to the basin will be reserved. The access will be on a slope of 5:1 or less, stabilized to withstand the passage of heavy equipment, and will provide direct access to both the forebay and the riser/outlet.
- n. For sites where chemicals may be stored and used (e.g. certain commercial and industrial developments) a spill response plan will be developed that clearly defines the emergency steps to be taken in the event of an accidental release of harmful substances that may migrate to the stormwater system. As a result of this plan, design elements such as shut-off valves or gates may be needed.
- o. The placement of retention/detention basins within a floodplain is discouraged. Where retention/detention basins are proposed within a floodplain, information will be provided to verify that the facility will operate as designed during flood events.

## 2. PERMANENT RETENTION PONDS

a. Storage volume.

Retention basins will be capable of storing two consecutive 100-year storms, which can be determined by:

33.000 × acreage × the relative imperviousness factor C

- (1) An overflow assessment will be required. The assessment shall include descriptions of the surrounding areas that would be impacted in the event of an overflow.
- (2) The applicant must submit a soil boring log, taken within the basin bottom area to a depth of 25 feet below existing ground or 20 feet below proposed basin bottom elevation.
- (3) The volume required may be modified based upon the percolation rate of the soil, groundwater table elevation and a recommendation from a licensed hydrogeological consulting engineer.

## 3. WET DETENTION BASINS

a. Storage volume.

Storage volume on a gravity outflow wet basin is defined as "the volume of detention provided above the invert of the outflow device". Any volume provided below the invert of the outflow device will not be considered as detention.

At a minimum, the volume of the permanent pool shall be at least:

 $2.5 \times 0.5$  inch  $\frac{15}{2} \times$  runoff coefficient × site drainage area.

- b. Wet detention pond configuration will be as follows:
  - (1) Surface area to volume ratio shall be maximized to the extent feasible;
  - (2) In general, depths of the permanent pool shall be varied and average between 3 and 6 feet;
  - (3) A minimum length to width ratio of 3:1 shall be used unless structural measures are used to extend the flow path;
  - (4) Ponds shall be wedge-shaped, narrower at the inlet and wider at the outlet;
  - (5) Irregular shorelines are preferred.
- c. A marsh fringe shall be established near the inlet or forebay within the basin and around at least 50% of the pond's perimeter.
- d. A shelf, a minimum of 4 feet wide at a depth of one foot, will surround the interior of the perimeter to provide suitable conditions for the establishment of aquatic vegetation, and to reduce the potential safety hazard to the public.
- e. To avoid drawdowns, a reliable supply of baseflow and/or groundwater will be required.
- f. If underlying soils are highly permeable (e.g. in the "A" or "B" hydrologic groupings), the bottom of the basin shall be lined with an impermeable geotextile or a 6 inch clay liner.
- g. In-line detention basins are strongly discouraged in all circumstances; and are prohibited on water courses greater than 2 square miles upstream or on a county drain. In-line basins are also prohibited if the waterway to be impounded traverses any area outside of the proposed development.

## 4. EXTENDED DETENTION BASINS

- a. A two-stage design is required, with separate outlet controls to detain both the 1.5year and larger rain events.
  - (1) Lower stage.
  - (2) The lower stage shall contain a shallow, permanent pool designed to store and treat the "first flush", or 0.5 inch of runoff over the entire site. This pool shall be managed as a shallow marsh or wetland, and average 6-12 inches in depth.
  - (3) At a minimum, the volume of runoff detained in the entire lower stage shall be equivalent to the runoff volume produced by a 1.5-year storm.
  - (4) Upper stage.

The upper stage shall be sized for the 100-year, 24-hour storm, as provided in Part 2 Section 11.A.1.d.i. of these procedures and standards, and shall be graded to remain dry except during large storms.

A low flow channel, stabilized against erosion, will be provided through the dry portion of the basin. This channel shall have a minimum grade of 0.5%, and the remainder of the basin shall drain toward this channel at a grade of at least 1%. The low flow channel shall end at the lip of the lower stage, where riprap or gabion baffles will be placed to prevent scour and resuspension.

## 5. STORMWATER WETLAND SYSTEMS

- a. Background.
  - (1) Stormwater wetlands are defined as constructed systems explicitly designed to mitigate the stormwater quality and quantity impacts associated with development. They do so by temporarily storing stormwater runoff in shallow pools that create growing conditions suitable for emergent and riparian wetland plants. The runoff storage, complex microtopography and emergent plants in the stormwater wetland together form an ideal system for the removal of urban pollutants. Because of their water quality benefits, the use of stormwater wetlands is encouraged.
  - (2) As a general rule, stormwater wetlands shall not be located within delineated natural wetland areas, nor be confused with created wetlands that are used to mitigate the loss of natural wetlands.
  - (3) The design of an effective and diverse stormwater wetland requires a sophisticated understanding of hydrology and wetland plant ecology. Therefore, wetland construction, reconstruction or modification must be overseen by a qualified professional with specific wetland expertise. An excellent reference for the design of stormwater wetlands is by Thomas R. Scheuler, "Design of Stormwater Wetland Systems" (published by the Metropolitan Washington Board of Governments).
- b. Standards.
  - (1) Stormwater wetland systems must be designed to perform in conformance with all standards for storage volume and discharge rate established in these procedures and standards.
  - (2) The developer will provide for the monitoring of wetland plantings and replacement as needed for a two-year period after construction.

## 6. UNDERGROUND STORAGE FACILITIES

If all of the property in the proposed development is five (5) acres or less, including all past, present and future phases, or if the proposed development constitutes a redevelopment of a use previously approved by the Township and constructed and used by the property owner for at least ten years prior to applying for approval of the proposed development under consideration, then underground storage facilities shall be permitted, in whole or part, in lieu of surface stormwater basins; provided, that, with the exception of a redevelopment project qualifying under this section which does not have an existing stormwater storage basin, approval under this section shall be conditioned upon it being demonstrated by the applicant that it would be in the public interest not to disturb the area that would otherwise be used to construct the basin.

An applicant seeking approval for an underground storage facility shall specify the total system proposed, including any surface basins as well as proposed underground facilities, and shall include all calculations and other supporting information demonstrating the legitimate reasons why the proposed system should be approved. The applicant shall demonstrate all of the following in order to secure approval of an underground storage facility:

a. Natural resource and feature preservation shall be enhanced;

- b. Public safety shall be preserved or enhanced;
- c. The absence of potential problems that may result;
- d. Engineering advantages;
- e. The storage facility shall function as well or better than the surface stormwater basin in terms of water quality and quantity considerations; and
- f. Both of the following standards shall be met:
  - (1) An open space as large as, and in the location of, the area that would have been required for the surface basin shall be set aside and preserved by a conservation easement or other mechanism approved by the Township Attorney as adequate, with the view of ensuring the availability of an area to construct a back-up system if the underground storage facility fails to fully function as intended; and
  - (2) The intensity of development would be equal to or less than that which would be permitted with the surface stormwater basin proposed to be eliminated.
- g. The proposed system shall meet the following standards:
  - (1) It shall be a groundwater recharge or infiltration type system.
  - (2) In calculating the storage volume in order to meet the 100 year storm standard, the void space in the bedding material under and around the facility shall not be counted or included.
  - (3) The emergency overflow elevation for the discharge from the underground storage system on the property shall be at least six (6") inches higher than the lowest rim elevation of the catch basin on the site, including all parking lot curbs and similar structures restraining water leaving the site.
- B. STORMWATER CONVEYANCE

All stormwater conveyance structures will be constructed in accordance with governing specifications. (Michigan Department of Transportation, Oakland County Road Commission, or Township). In the event of no other governing specifications, the latest edition of the Michigan Department of Transportation standards will be observed.

Stormwater conveyance systems incorporating pumps are not permitted, absent a variance, which shall require a showing that there is no feasible and prudent alternative, and that it is in the public interest.

## 1. NATURAL STREAMS AND CHANNELS

- a. Natural streams are to be preserved. Natural swales and channels shall be preserved, whenever possible.
- b. If channel modification must occur, the physical characteristics of the modified channel will meet the existing channel in length, cross-section, slope, sinuosity, vegetation and carrying capacity.
- c. Streams and channels will be expected to withstand all events up to the 100-year storm without increased erosion. Armoring banks with riprap and other manufactured materials will be accepted only where erosion cannot be prevented in any other way, such as by the use of vegetation.
- 2. VEGETATED SWALES/OPEN DITCHES
  - a. Open swale/ditch drainage Systems will be preferred to enclosed storm sewers where applicable governmental standards and site conditions permit, provided, that appropriate safety measures shall be observed.
  - b. Swales shall:

- (1) Follow natural, pre-development drainage paths insofar as possible be well vegetated, wide and shallow.
- c. Open ditch flow velocities will be neither siltative nor erosive. In general, the minimum acceptable velocity will be 2.0 ft./sec., and the maximum acceptable velocity will be 6.0 ft./sec.
- d. Open ditch slopes will depend on existing soils and vegetation and, whenever possible, will be greater than 1.5%. For slopes less than 1.5%, additional inspection will be necessary to ensure proper, positive drainage. In no case shall slopes be less than 1.0%, unless other techniques such as infiltration devices are implemented. Maintenance for such devices must be detailed in the overall Maintenance Plan.
- e. Side slopes of ditches shall be no steeper than 3:1. Soil conditions, vegetative cover and maintenance ability will be the governing factors for determining slope requirements.
- f. Slopes and bottoms of open ditches and swales will be stabilized to prevent erosion.
- g. Swale length shall be a minimum of 200 feet whenever possible, to increase the contact time of stormwater.
- h. In general, a 5-foot clearance will be provided between open swale/ditch inverts and underground utilities unless special provisions are employed. Special provisions, for example, could be the encasement of utility lines in concrete when crossing under the channel, in no case will less than 2 feet of clearance be allowed.
- i. Permanent metal or plastic markers will be placed on each side of the drain to show the location of underground utilities.
- j. All bridges will be designed to provide a two foot minimum flood stage freeboard to the underside of the bridge. Footings will be at least one foot below the invert grade of the channel. Depending on soils, additional footing depth may be required.
- k. A series of check dams or drop structures across swales shall be provided to enhance water quality performance and reduce velocities.
- I. Designers shall consider integrating additional redundant pollutant removal enhancement features such as stilling basins and stone infiltration trenches.
- 3. ENCLOSED DRAINAGE STRUCTURES (ALSO SEE ORDINANCE CODE SECTION 24-180)
  - a. Enclosed storm drain systems will be sized to accommodate the 10-year storm, with the hydraulic gradient generally kept below the top of the pipe.
  - b. Restricted conveyance systems designed to create backflow into stormwater storage facilities are not permitted.
  - c. Drainage structures will be located as follows:
    - (1) To assure complete positive drainage of all areas of the development.
    - (2) At all low points of streets and rear yards.
    - (3) Such that there is no flow across a street intersection.
    - (4) For smaller enclosed pipes (12-30 inches), manholes will not be spaced more than 350 feet apart. Longer runs may be allowed for larger sized pipe but in all cases maintenance access must be deemed adequate by the Township.
    - (5) In conformance with any more stringent local requirements.
  - d. The catch basin or inlet covers shall be designed to accept the 10-year design storm. No ponding of water shall occur during this storm event.

- e. Discharge from enclosures will be as follows:
  - (1) All outlets will be designed so that velocities will be appropriate to, and will not damage, receiving waterways.
  - (2) Outlet protection using riprap or other approved materials will be provided as necessary to prevent erosion.
  - (3) The soils above and around the outlet will be compacted and stabilized to prevent piping around the structure. Riprap extending 3 feet above the ordinary high water mark is recommended for all outlets.
  - (4) When the outlet empties into a detention/retention facility, channel or other watercourse, it will be designed such that there is no overfall from the end of the apron to the receiving waterway.
- f. Pipe will conform to the following criteria:
  - (1) In order to avoid accumulation of sediment in the drain, pipe will be designed to have minimum velocity flowing full of 3 ft/sec., with the exception of sediment chambers. In isolated circumstances, 2 ft/sec. will be allowed. The allowable maximum velocity flowing full will be 10 ft/sec. Special cases where topography is steep may be granted exception.
  - (2) Pipe joints will be such as to prevent excessive infiltration or exfiltration.
  - (3) All materials will be of such quality as to guarantee a maintenance-free expectancy of at least 50 years and will meet all appropriate A.S.T.M. standards.
- g. If sump pump leads are required to be connected into an enclosed system, these taps shall be made directly into storm sewer structures.

## 4. DETERMINATION OF CHANNEL SIZE

a. The "Mannings" formula will be used to size the open channel or pipe.

"Mannings Formula"

n

Q		=	flow,	in	cubic	;	feet	ре	er	second
А		=	cross	secti	ional a	area,	in	S	quare	feet
n	=	Mannings	coefficient	of	roughness	(See	Appendix	Е	for	reference)
R		=	hydraulic		radius	=	A/P,		in	feet
Ρ			=			wetted				perimeter
S = slope of the bottom of the drain										

If the "Mannings" formula is not used, the alternative method used will be approved by the Township Engineer.

- b. A minimum "n" of 0.035 will be used for the roughness coefficient unless special treatment is given to the bottom and side slopes, such as sodding, riprap or paving.
- 5. DETERMINATION OF CULVERT SIZE
  - a. Under Michigan State Law (Act 451, PA. Part 301 of 1994), crossroad culverts draining two square miles or more must be reviewed and approved by the Michigan Department of Natural Resources.
  - b. Crossroad culverts draining less than 2 square miles of upstream watershed will be sized by the applicants engineer and approved by the MDOT, Oakland County Road Commission and Oakland County Drain Commissioner's office.

- c. In general, culverts will pass the 100-year storm flow with the velocity not exceeding 8 feet per second, and with no increase in adverse water conditions occurring off of the development property or flooding of structures within the development. A minimum of one foot of freeboard is required.
- d. Acceptable methods of determining the quantity of water needed to pass through the culvert are listed below. The applicant's engineer may use any of the methods listed or another if approved by the Township Engineer:
  - (1) Rational method.
  - (2) U.S.D.A. soil conservation service method.
  - (3) The Michigan Department of Natural Resources Method.
  - (4) Continuous flow modeling.
- e. The discharge velocity from culverts shall consider the effect of high velocities, eddies, or other turbulence on the natural channel, downstream property and roadway embankment. The culvert exit velocity shall not cause downstream channel erosion or scour.
- f. Sizing of culvert crossings will consider entrance and exit losses as well as tailwater conditions on the culvert. Once the design flow is determined, the required size of the culvert will be determined by one of the following methods:
  - (1) The "Mannings" formula.
  - (2) The inlet headwater control/outlet tailwater control nomographs.
  - (3) Other methods approved by the Township.
- g. Wing walls, headwalls and all other culvert extremities will be designed to assure the stability of the surrounding soil. It is recommended that Michigan Department of Transportation standard designs be observed unless special exemption is given by the entity having jurisdiction.
- C. ADDITIONAL STORMWATER MANAGEMENT BMPS: INFILTRATION TRENCHES AND SAND FILTERS

A variety of best management practices, other than those detailed within these procedures and standards, provide effective water quality and quantity control. The following section provides design standards for only two of many approaches that may be acceptable to the Township.

- 1. INFILTRATION TRENCHES
  - a. Background.
    - (1) Infiltration devices are designed to capture and treat stormwater runoff from smaller rain events, that are managed for water quality purposes. They function to reduce runoff at its source, since the diverted "first flush" is not discharged to surface water but is stored until it is gradually removed by infiltration and evaporation. Through these mechanisms, infiltration can remove pollutants, provide groundwater recharge and help reduce the volume of runoff leaving a site. Infiltration devices are generally incorporated as one component of an overall stormwater system that utilizes other management approaches as well.
    - (2) While the concept of infiltration best conforms to the stormwater management goals of water quantity and quality control stated within these procedures and standards, in practice, infiltration approaches to stormwater management have limited application. Although many infiltration devices are very effective for removing fine sediment particles and the pollutants associated with them, coarse sediments and oil will clog infiltration systems, and must be removed prior to entering them. Clogging of infiltration devices is a primary reason for failure,

causing many to fail during the first few years of operation. The use of erosion control measures, sedimentation basins and grass filter strips to pre-treat runoff is essential, as well as a very aggressive maintenance program. In addition, studies have shown that many infiltration facilities fail or do not work as designed due to poor initial site selection. Therefore, soil suitability and the contributing drainage area must be carefully assessed. The potential for groundwater contamination must also be seriously considered prior to implementation.

(3) Infiltration approaches to stormwater management are particularly attractive for small catchment areas of less than 10 acres in size, where the employment of more traditional BMP's such as wet ponds, artificial marshes, and/or extended detention dry ponds is often neither feasible nor desirable.

NOTE: Infiltration basins will not be permitted due to universally high failure rates.

- b. Design criteria for infiltration trenches.
  - (1) Infiltration trenches are limited to small tributary areas of approximately 5 acres.
  - (2) Infiltration trenches are not feasible where the slope of the site is greater than 20%, unless proper energy dissipation devices are installed. Trenches are also not recommended where the slope of the contributing watershed is greater than 5%. The slope of the trench bottom shall be close to zero to evenly distribute exfiltration.
  - (3) Minimum design volume will be based on infiltration of 0.5 inch runoff over the entire drainage basin.
  - (4) All trenches will be designed to hold water for a minimum of 6 hours and a maximum of 72 hours.
  - (5) Filter fabric will be used to line the sides of the trench, and either filter fabric or 6 inches of sand will be used on the trench bottom. (Filter fabric placed 6 to 12 feet below the surface of an open trench can prevent the need for major rehabilitation).
  - (6) Cleaned, washed stone aggregate, 1.5 to 3 inches in diameter, will be used within the stone reservoir.
  - (7) The trench bottom will be a minimum of 4 feet above seasonally high groundwater and bedrock.
  - (8) To remain operative in freezing weather, the bottom of the trench will be placed 3 feet below the frost line.
  - (9) Stormwater pretreatment.
    - [i. Reserved.]
    - ii. A sediment settling basin, or other stormwater management practice, will be provided to remove coarse sediment from stormwater flows before they reach infiltration trenches.
    - iii. The use of pretreatment systems that provide some degree of storage (e.g. sump pits, swales with check dams or plunge pools) is encouraged.
    - iv. For surface trenches, a minimum 25 foot wide grass buffer is required as a filter.
    - v. Underground trenches will receive water directed through an oil/grit separator or other form of pretreatment that will remove both coarse solids and oils where applicable.

- (10) Where an overflow pipe is provided for flows in excess of design, the pipe will be placed near the surface of the trench and outlet to an acceptable point of discharge.
- (11) Underground trenches will be readily accessible for maintenance purposes.
- (12) An observation well, consisting of a perforated vertical pipe within the trench, will be installed in every trench to monitor performance.
- c. Infiltration trenches will not be built downslope of new construction until the entire development area has been permanently stabilized.
- d. Infiltration trenches shall be located on soils in hydrologic groups "A" or "B" as designated by the U.S. Soil Conservation Service. Where infiltration trenches are proposed, a sufficient number of soil borings will be provided in each location to allow evaluation of site suitability.

(For SCS Soil Hydrologic Groupings, see Appendix J)

- e. The bottom of the trench will be roto-tilled after construction, to reduce the possibility of initial soil compaction (caused by excavation with heavy equipment).
- f. A legally enforceable and binding maintenance agreement will be included in the property deed for each trench. All trenches will require annual inspection and maintenance.
- 2. SAND FILTERS
  - a. Background.
    - (1) Sand filters are a technique for treating stormwater, whereby the first flush of runoff is diverted into an off-line, self-contained bed of sand. The runoff is then strained through the sand, collected in underground pipes and returned back to the stream or channel. Enhanced sand filters utilize layers of peat, limestone, and/or topsoil, and may also have a grass cover crop. In general, sand filters have a limited ability to reduce peak discharges and are usually designed solely to improve water quality.
    - (2) Because sand filters are a self-contained, artificially constructed soil system, they have few constraining factors and can be applied to most development sites, including those too small to be effectively served by ponds (i.e. small in fill developments). Sand filters are also useful in areas with concerns over groundwater contamination and poor soil infiltration rates, and as end-of-pipe retro fits. The upper limit on sand filters appears to be about 50 acres; however, most have a contributing watershed between 0.5 and 10 acres.
    - (3) While the technology is still developing, a number of standard sand filter designs are available and may be acceptable to the Township.
    - (4) In general, all designs incorporate three basic components:
      - 1. A pretreatment wet pool or sedimentation basin;
      - 2. An on-line diversion weir for isolating the stormwater to be treated; and
      - 3. An oft-line sand filter bed area. A good reference for the design of sand filters is by Warren Bell, P. E., "A Catalogue of Stormwater Quality Best Management Practices for Ultra-Urban Watersheds". A copy of this paper is available through the Townships office.
  - b. General standards for the design of sand filter systems are as follows:
    - (1) The system shall be designed to capture and treat the first 0.5 inch of runoff from the impervious portion of the contributing watershed.

- (2) Pretreatment of stormwater will be required before discharge into the sand filter. The following pretreatment mechanisms may be acceptable to the Township:
  - (i) Wet pool.
  - (ii) Sedimentation basins.
  - (iii) Oil-grit separators.
  - (iv) Grass filter strips.
- (3) Sufficient sediment storage volume will be provided within pre-treatment devices, so that clean-out intervals are reduced to once every 2 to 3 years.
- (4) Design stormflows will be conveyed to the sand filter bed basin at a nonerosive velocity. Generally, this velocity will be less than one foot per second.
- (5) An over-sized perforated hood/trash guard will be incorporated into weir designs to minimize clogging of the baseflow pipe.
- (6) Excess runoff volumes will be returned to the receiving conveyance channel via a rip-rapped baseflow/overflow channel.
- (7) Sand filter bed.
  - (i) A variety of formulas for sizing sand filter beds are available, and may be acceptable to the Township.
  - (ii) The maximum surface ponding time for the design runoff volume will be limited to 24 hours.
  - (iii) An impermeable liner may be required to eliminate potential groundwater infiltration/exfiltration problems.
- (8) Because of the potential for system failure due to bed clogging, sand filter system use is restricted to stabilized drainage areas.
- (9) Regular inspection and timely periodic removal of sediment and trash will be required. Grass cover crops, when provided, will be mowed whenever they exceed 10 cm. height (approx. once per week) and all grass cuttings removed.
- (10) The filter bed area will be clearly marked, and an appropriate drainage easement provided.

#### D. MANUFACTURED TREATMENT SYSTEMS

1. DESCRIPTION

Underground swirl concentrators, "treatment system", are devices used to remove sediment and other particulate matter from stormwater runoff. These systems provide a mechanism for pretreatment of stormwater runoff and may be used upstream of detention facilities or upstream of wetlands that have been approved to manage stormwater runoff. The Township Engineer must approve use of these treatment systems as part of the overall site stormwater management system to ensure maximum ecological benefits.

## 2. GENERAL PERFORMANCE AND DESIGN SPECIFICATIONS

- a. The system may be used in lieu of a sediment forebay as approved by the Township Engineer.
- b. The treatment system must include a "swirl chamber" with a tangential inlet that facilitates a swirling flow pattern to allow settlement of solids and prevent resuspension of settled particulates.
- c. Systems that have demonstrated 80% removal of the annual total suspended solids load based on third party independent testing are required.

- d. The system must treat 100% of the runoff from the 2-year/24-hour storm event and remove a minimum of 80% of the total suspended solids (TSS) load based on a 110-micron particle size.
- e. Rain events larger than the 2-year/24-hour event shall bypass the system without causing any resuspension of trapped sediments and without causing reentrainment of floatable contaminants.
- f. The system shall not create any backwater in the upstream pipe network during any dry weather conditions.
- g. The treatment system must prevent oil and floatable contaminants from entering downstream piping during routine maintenance and during rain events.
- h. Direct access must be provided to the sediment and floatable chambers to facilitate maintenance. There must be no appurtenances or restrictions within these chambers.
- i. Systems that require confined space entry for inspections or maintenance are not approved for use as a treatment system.
- j. If the system is proposed in traffic areas, then it must be designed to handle H20 loadings.

## 3. MAINTENANCE GUIDELINES

- a. Treatment systems shall be maintained according to the manufacturer's recommendations. An inspection and maintenance manual must be provided for review specific to the model.
- b. At a minimum, the system must be inspected and cleaned every 6 months, or more frequently if recommended by the manufacturer or directed in the reasonable exercise of discretion by the Township Engineer.
- c. All treatment systems shall be cleaned of accumulated sediment and other materials prior to turnover to the long-term property owner(s).
- d. Maintenance requirements for these treatment systems shall also be provided as described in *Section X. Stormwater Management System Maintenance Plans* of the ordinance to which this Appendix applies [of this Appendix].
- 4. PLAN SUBMITTALS

Calculations associated with the sizing and selection of the appropriate model for the selected type of treatment system shall be included in all plan submissions as outlined in *Part One Procedures for Submission and Review of Development Plans* of this Appendix.

## III. NATURAL WETLANDS (ALSO SEE ORDINANCE CODE, CHAPTER 12)

This section governs natural wetlands (as distinct from stormwater wetland systems that are constructed expressly for stormwater management purposes), when a natural wetland is incorporated in an overall stormwater management scheme.

- A. Wetlands will be protected from damaging modification and adverse changes in runoff quality and quantity associated with land developments. Before approval of the final development plan, all necessary wetland permits from the Michigan Department of Environmental Quality (MDEQ) and the Township will be in place.
- B. Direct discharge of untreated stormwater to a natural wetland is prohibited. All runoff from the development will be pretreated to remove sediment and other pollutants prior to discharge to a wetland. Such treatment facilities will be constructed before property grading begins.
- C. Site drainage patterns will not be altered in any way that will modify existing water levels in protected wetlands without proof that all applicable permits from the MDEQ and the Township have been obtained.

- D. Wetland construction, reconstruction, or modification will be overseen by a qualified professional with specific wetland expertise working in conjunction with the Township Engineer and Township Environmental Director.
- E. Whenever possible, a permanent buffer strip, preferably vegetated with native plant species, will be maintained or restored around the periphery of wetlands. (*Also see* environmental feature setback provisions of Ordinance Code, Article 26, the Zoning Ordinance).
- F. Wetlands will be protected during construction by appropriate soil erosion and sediment control measures.
- IV. LOT GRADING (ALSO SEE ORDINANCE CODE, CHAPTER 8)

Final lot grading shall be in accordance with all Township Code provisions, and in accordance with all plans approved by the Township and County.

- A. The grading of lots will be such that surface runoff is away from homes and toward swales, ditches or drainage structures. Provision for drainage through properly graded stormwater conveyance systems will be made for all areas within the proposed development.
- B. Where finished grades indicate a substantial amount of drainage across adjoining lots a drainage swale of sufficient width, depth and slope will be provided on the lot line to intercept this drainage. To ensure that property owners do not alter or fill drainage swales, easements will be required over areas deemed necessary by the Township, as stipulated below in this Part Two.

#### V. SOIL EROSION, SEDIMENTATION AND POLLUTION CONTROL

Discharge of sediment or other polluting materials to a waterway shall be prohibited.

A. SOIL EROSION/SEDIMENTATION CONTROL

All erosion control measures will be regularly inspected and maintained.

- 1. DURING CONSTRUCTION
  - a. The development plan shall be fitted to the topography and soil so as to create the least erosion potential.
  - b. An approved soil erosion permit from the local enforcing agent, as well as a National Pollution Discharge Elimination System (NPDES) permit where applicable, will be required.
  - c. Sediment shall not be permitted to leave the site. Recommended procedures to achieve this goal are as follows:
    - (1) Wherever feasible, natural vegetation shall be retained and protected.
    - (2) The smallest practical area of raw land shall be exposed at any one time (i.e. only areas under active construction).
    - (3) The entire site shall be planted with temporary vegetation immediately after mass grading operations.
    - (4) Temporary vegetation and/or mulching shall be used to protect critical areas exposed during development.
    - (5) Sediment basins where needed shall be installed and maintained by the applicant.
    - (6) The permanent, final vegetation and structures shall be installed as soon as practicable in the development.
  - d. Areas within open drain rights-of-way that have been cleaned, reshaped or disturbed in any manner will be stabilized with seed and mulch or sod as quickly as possible.

- e. All storm sewer facilities that are or will be functioning during construction will be protected, filtered, or otherwise treated to prevent sediment from entering the system. Construction activities will be complete before the construction of any stormwater management facilities susceptible to clogging (e.g. infiltration trenches).
- 2. PERMANENT EROSION CONTROL MEASURES
  - a. Before entering any natural water course, protected wetland, county drain or other body of water, best management practices will be utilized to remove pollutants, including sediment, from stormwater runoff. Pollutant removal methods will include capture and treatment of the "first flush" and "bankfull" (1.5-year) storm events, as previously described in this Part II, above.
  - b. Headwalls, grounted riprap or other stabilization measures will be provided where necessary to prevent erosion. Permanent erosion protection will be placed at bends, drain inlets and outlets, and other locations as needed in all open ditches. Outlets to ditches will be placed at the average low water elevation of the water course.
  - c. Ditches with steep grades or unstable soils will be protected by sod, vegetative erosion control, geotextile fabric, rip rap or other means to prevent scour. Every effort shall be made to reduce the velocity of flow as much as possible at all storm drain outlets. Outlet velocities will be nonerosive.
  - d. All detention/retention basins will be permanently stabilized to prevent erosion.

## B. OTHER POLLUTION CONTROL

- 1. Discharge of runoff that may contain oil, grease, toxic chemicals, or other polluting materials is prohibited. Measures will be employed to reduce and trap pollutants and meet any prevailing federal, state, or local water quality requirements.
- 2. In commercial and industrial developments where large amounts of oil and grease may accumulate, appropriate methods for separating pollutants will be required. When used, a separator approved by the Township Engineer will be installed off-line or in locations where flow velocities have been determined to be lower than scouring velocity in a ten year storm. Where off-line facilities are proposed, a maintenance program, including an identified method and site for waste disposal, is required.
- 3. For sites where chemicals may be stored and used (e.g. certain commercial and industrial developments) a spill response plan must be developed that clearly defines the emergency steps to be taken in the event of an accidental release of harmful substances to the stormwater system.
- 4. Structures designed to remove trash and other debris from stormwater will be installed as required on stormwater management facilities prior to their outlet.
- 5. Additional water quality protection measures may be required depending on the nature and location of the development and the receiving waters.

## VI. BUFFER STRIPS

Buffer strips shall be established adjacent to all surface waters through deed restrictions or provisions of master condominium agreements. Buffer strips are defined as zones where construction, paving, and chemical application is prohibited. Plantings capable of filtering stormwater shall be established or preserved. Widths shall be determined on a case by case basis, based on such considerations as slope, soils, and size of drainage area.

#### VII. FLOODPLAINS

It is the responsibility of the developer to demonstrate that any activity proposed within a 100-year floodplain will not diminish flood storage capacity. In certain instances an analysis to determine the 100-year floodplain may be required. Compensatory storage will be required for all lost floodplain storage.

#### VIII. EASEMENTS

A. Wording relative to easement information shown on the final development plan will be as specifically required by the Township. If a Township Drain is to be established, or if a county drain is to be established under the Michigan Drain Code, related easement language will be depicted on final mylar plans and exhibit B condominium drawings as follows:

"\_\_\_\_\_ private easement to Township of West Bloomfield or Oakland County Drain Commissioner for drainage" — as applicable.

In addition, language will be included in the deed restrictions for the development and/or condominium master deed as shown in Appendix L.

B. The location and purpose of drainage easements shall be clearly described in development deed restrictions or condominium master deeds.

Language shall be included within the development deed restriction or condominium master deed that clearly notifies property owners of the presence stormwater management facilities and accompanying easements, as well as restrictions on use or modification of these areas.

- C. If a utility is to be located within the right-of-way of any county drain or drainage easement, it will be located such that it will not significantly increase the expense of maintaining the drainage facility.
- D. Retention/detention basins or other stormwater management facilities will have sufficient easements for maintenance purposes. Easements will be sized and located to accommodate access and operation of equipment, spoils deposition, and other activities identified in the development's stormwater system maintenance plan.
- E. Easement widths will be sized by the Township and be situated in such a way as to allow maximum maintenance access (for example, by offsetting them from the centerline). In general, easement widths will conform to the following:
  - 1. Open channels and water courses: A minimum of 50 feet total width. Additional width may be required in some cases, including but not limited to: water courses with floodplains delineated by FEMA; sandy soils, steep slopes, at access points from road crossings.
  - 2. Back lot drainage (open swales): minimum of 30 feet total width.
  - 3. Enclosed storm drains: A minimum of 20 feet will be required, situated in such a way as to allow maximum maintenance access. Additional width will be required in some cases, including but not limited to pipe depth exceeding 4 feet from the top of pipe, sandy soils and steep slopes.
- F. Drain fields (septic areas) shall not be located within drainage easements.

## IX. SAFETY CONSIDERATIONS

- A. Drainage system components, especially all ponds, will be designed to protect the safety of all persons coming in contact with the system. The following criteria will apply:
  - 1. The side slopes of all detention basins shall not exceed 6:1 (horizontal to vertical), and will be as gradual as practicable to prevent accidental falls into the basin and for stability and ease of maintenance. If steeper slopes are proposed, continuous fencing at least 5 feet in height shall be provided. Fencing materials shall meet with the approval of the Township. Side slopes of open channels will not be steeper than 3:1.
  - 2. Velocities throughout the surface drainage system will be controlled to safe levels taking into consideration rates and depths of flow.
  - 3. All wet detention basins will have a level safety ledge at least 4 feet in width and one foot below the normal water depth, and other design and landscaping features as may be needed to provide for protection of the public.

- 4. Signs may be required, to alert residents to use limitations of any stormwater basin if the Township will have permanent maintenance jurisdiction.
- B. For sites where chemicals may be stored and used (e.g., certain commercial and industrial developments), a spill response plan will be developed which clearly defines the emergency steps to be taken in the event of an accidental release of large quantities of harmful substances into the drainage system.

## X. STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLANS

- A. Property deed restrictions (or condominium master deed documents) will specify the following timeframe for action to address needed maintenance of stormwater management facilities. Deed restrictions (or condominium documents) will also specify that, should the private entity fail to act within this timeframe, the responsible governmental entity may, but shall not be obligated to, perform the needed maintenance and assess the costs against the property owners within the development or condominium association by allowing such costs, together with a reasonable administrative fee be recovered (or collected prior to undertaking work), with the particular language and means to be approved by the Township Attorney.
  - 1. Routine maintenance of stormwater management facilities will be completed within 30 days of receipt of written notification that action is required, unless other acceptable arrangements are made with the supervising governmental entity.
  - 2. Emergency maintenance will be completed within 36 hours of written notification.
- B. The applicant may fulfill his or her obligation to ensure that a governmental entity will be responsible for drainage system maintenance by establishing a county drainage district, or any other similar mechanism approved by the Township, to provide for the permanent maintenance of stormwater management facilities and necessary funding.

If a County Drain is not established, the applicant will submit evidence of a legally binding agreement with another governmental agency responsible for maintenance oversight.

- C. A legally binding private maintenance agreement will be executed before final project approval is granted. The agreement shall be referenced on the property deed (or condominium master deed document) so that it is binding on all subsequent property owners.
- D. Maintenance plans will be submitted with all construction plans and included in the bylaws of all developments and site condominiums and will include the following information:
  - 1. The maintenance plan shall include the components of an estimated annual maintenance budget itemized in detail by task. The financing mechanism shall also be described.
  - 2. A copy of the final approved drainage plan for the development that delineates the facilities and all easements, maintenance access, and buffer areas.
  - 3. A listing of appropriate tasks defined for each component of the system described, and a schedule for their implementation. The following areas will be covered:
    - a. Maintenance of facilities such as pipes, channels, outflow control structures and pumps.
    - b. Debris removal from catch basins, channels and dry and wet basins.
    - c. Dredging operations for both channels and basins to remove sediment accumulation.
  - 4. The party responsible for performing each of the various maintenance activities described, which will be recorded with final approved plans and plans.
  - 5. A detailed description of the procedure for both preventative and corrective maintenance activities. The preventative maintenance component will include:
    - a. Periodic inspections, adjustments and replacements;
    - b. Record-keeping of operations and expenditures.

	<mark>6.</mark>	Provision for the routine and nonroutine inspection of all components within the system described:						
		a. Wet weather inspections of structural elements, (including inspection for sediment accumulation in detention basins) shall be conducted annually, with as-built plans in hand. These shall be carried out by a professional engineer reporting to the responsible agency or owner.						
		b. Housekeeping inspections, such as checking for trash removal, shall take place at least annually.						
		c. Emergency inspections on an as-needed basis, upon identification of severe problems, shall be carried out by a professional engineer.						
	7.	A description of ongoing landscape maintenance needs. Landscaping shall consist of low maintenance and/or native plant species. The viability of plantings will be monitored by the applicant for at least one year after establishment and plantings will be replaced as needed. The Township is not responsible for landscape maintenance.						
	<mark>8.</mark>	Provision for the maintenance of vegetative buffers by homeowner's associations, conservation groups or a public agency. Buffers will be inspected annually for evidence of erosion or concentrated flows through or around the buffer.						
E. The stormwater drainage system will be designed to minimize and facilitate maintenance								
	<mark>1.</mark>	Riser pipes placed near or within pond embankments.						
	<mark>2.</mark>	Easily accessible trash racks.						
3. Alternate outflows for wet detention basins that can be used to completely de for sediment removal (pumping may be considered if drainage by gravity is not								
	4. Sediment forebays for localizing sediment deposition and removal.							
	<mark>5.</mark>	Access for heavy equipment.						
	<mark>6.</mark>	On-site area for spoil deposition, wherever possible.						
F.	Infil fron clog requ	tration systems, including porous pavement, must be aggressively maintained and protected clogging by sediment (including the maintenance of grass buffer strips). In the event of ging by accumulated sediments, partial or total reconstruction of infiltration facilities may be uired.						
-								

Porous pavement shall be vacuum swept and jet hosed at least four times per year to remove any grit or sediment trapped in the pores of the open-graded asphalt. Evidence of a regular service contract for performing this activity will be required.

## Footnotes:

## --- (5) ---

0.5" represents the mean storm event. This was determined by adding the total precipitation rainfall recorded at Detroit Metro Airport from 1977 to 1987 and dividing by the total number of storm events. Storms below 0.2" of total precipitation, snowfall, and snowmelt were omitted.

- Sec. 24-214. Off-site stormwater management.
- (a) Requirements.
  - (1) In lieu of on-site stormwater detention, the use of off-site stormwater conveyance, infiltration, and/or detention areas may be proposed. Off-site stormwater management facilities shall be designed to comply with the requirements specified in part two of the appendix and all other standards provided by this article that are applicable to on-site facilities.
  - (2) Off-site stormwater management areas may be shared with other landowners, provided that the terms of the proposal are approved by the township board and township attorney. If applicable, approval shall also be required by the wetlands board. Approval hereunder shall not be granted for off-site stormwater management unless the applicant demonstrates to the township board, following recommendation by the township engineer, environmental director and applicable board or commission, that the use of off-site stormwater management areas shall protect water quality and natural resources to an equal or greater extent than would be achieved by the use of on-site stormwater management areas.
  - (3) Adequate provision and agreements providing for maintenance and inspection of stormwater management facilities shall be made, and the documents recorded instrument, including an access easement, approved by the township.
  - (4) Accelerated soil erosion shall be managed off-site as well as on-site.
- (b) *Performance guarantees, inspections, maintenance, and enforcement.* All provisions for performance guarantees shall apply to off-site stormwater conveyance and detention.

(Ord. No. C-644, § 4.08, 10-25-04)

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix HH

**Development Services Department** 

Storm Water Permit Package



DEVELOPMENT SERVICES DEPARTMENT

STORM WATER PERMIT APPLICATION PACKET



## DEVELOPMENT SERVICES

4550 Walnut Lake Road West Bloomfield, MI 48325 (248) 451-4818 Phone (248) 451-4871 Facsimile www.wbtwp.com

# STORM WATER MANAGEMENT MAINTENANCE PERMIT APPLICATION

## APPLICATION MUST BE FILLED OUT COMPLETELY

Date			Case No	
I. Applicant Information			and a standard and a standard and a standard	
Name			Telephone Number	
Address			Email Address	
City	State	Zip Code	Cost Estimate	
I. Property Owner Information	(if different from ap	plicant)		
lame			Telephone Number	
lddress			Email Address	
Sity	State	Zip Code		
II. Property Information				
Street Address				
Subdivision and Lot		Parcel ID #		
IV. Description of Work Describe the Work to be or Already Purpose of work (construct residence	Performed (add, fill exca	vate, etc) h, etc)		
IV. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be o	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the )	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Previous Storm Water M Yes (When: Applicant agrees to the following co	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the )	ructures e township for this Property?	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms and	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to of Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms an Plot Plan/Site Plan	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application? Yes lanagement Applications Case #: nditions: nd Conditions (see back	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following col Agree to all Permit Terms an Plot Plan/Site Plan Copy of Contract or Cost Es	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application? Case #: nditions: nd Conditions (see back timate	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms at Plot Plan/Site Plan Copy of Contract or Cost Es V. Signature	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F Application? Yes lanagement Applications Case #: nditions: nd Conditions (see back timate	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	

Date

Date

Signature of Applicant

Signature of Property Owner

## THIS IS NOT A PERMIT!!! VIOLATORS ARE SUBJECT TO CRIMINAL PENALTIES

An MDEQ, County, or other permit DOES NOT GRANT PERMISSION to fill, dredge, build, install or take any other action in the absence of a West Bloomfield Township permit. THIS APPLICATION IS NOT A PERMIT! Any work, filling, dredging, sanding or other action may NOT be taken in the wetlands, watercourse, floodway, floodplain, or environmental features setback (25 feet from a wetland or watercourse) unless and until a township permit has been granted.



# STORM WATER MANAGEMENT MAINTENANCE PERMIT: TERMS AND CONDITIONS

The following terms and conditions shall apply and be considered a part of every use permit unless the final permit approval decision by wetland review board, planning commission or township board specifically decides otherwise.

The following terms and conditions apply to all permits:

- A pre-construction meeting between the petitioner and the director or director's designee and any contractors/subcontractors is required prior to any construction. A copy of the permit shall be posted in a visible location onsite.
- At the time of the pre-construction meeting, the exact location of the request must be measured in the field by the director or director's designee and then field staked by the petitioner or any contractor prior to installation.
- Soil protection measures shall be installed prior to any construction and be inspected by the director or director's designee for proper location and installation.
- The petitioner and his/her contractor(s) shall be responsible for maintaining all soil erosion and sedimentation control measures throughout the duration of the project with daily inspections.
- Materials (organic or inorganic), spoils, and/or equipment shall not be stored within the wetland, environmental features setback area, and 100-year floodplain during and after construction.
- Direct discharge of storm water, sump water, or wastewater unless pretreated is not allowed to wetlands and/or watercourses. Any existing direct discharge must be eliminated and discharged in a location approved by the director or director's designee.
- Fill material beyond the request shall not be deposited within any wetland, environmental features setback area and/or 100-year floodplain.
- Ongoing monitoring by the director or designee shall be conducted with inspection reports recorded in the case file.
- A final inspection by the director or director's designee shall be conducted with a report added to the case file.
- Invasive and noxious plant eradication by herbicide applications must be completed by a certified applicator with documentation of the work upon completion submitted to the Development Services Department.
- 11. The property owner(s) shall be given a copy of the township's fertilizer ordinance.
- The petitioner shall place sufficient funds in an escrow account to cover the costs connected with the application, including consultant fees, issuance of a permit, and monitoring.
- 13. The initiation of any work on a permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of the permit.

If you have any questions, please visit our website for more information <u>www.wbtwp.com</u> or call the Development Services Department at (248) 451-4818.

## STORM WATER PERMIT INFORMATION

- Except for those activities expressly exempted by section 24-206, every new development (as defined in this article), or redevelopment in the Township of West Bloomfield shall have either a stormwater management plan or an engineered site grading plan, depending on the type of activity, as listed below.
- No development or preparation for development on a site shall occur unless and until an application has been submitted and approved for a stormwater management plan or engineering site grading plan.
- 3. Requirement for a stormwater management plan. A stormwater management plan shall be submitted and reviewed in accordance with requirements of sections 24-207 - 24-215. Approval of final development plans, site plans, and final preliminary subdivision and condominium plans shall not be granted prior to approval of the stormwater management plan. The following types of developments and earth changes require a stormwater management plan:
  - Land development proposals subject to site plan review requirements in the Township of West Bloomfield Zoning article.
  - Subdivision plat proposals.
  - Site condominium developments pursuant to the Condominium Act, P.A. 59 of 1978 as amended; MCLA 559.101 et seq.
  - Any development on property divided by land division in connection with which one or more
    public or private roads are created or extended, and/or in connection with which more than
    three (3) parcels of less than one (1) acre are created. A private road shall include: an
    existing drive which, following the land division, serves more than one (1) home; and a new
    private road approved by the township meeting ordinance design standards.
  - Any proposal to mine, excavate, or clear and grade or other-wise develop one (1) acre or more of land for purposes other than routine single-family residential landscaping and gardening, or any proposal within five hundred (500) feet of the top of the bank of an inland lake or stream.
  - Development projects of federal, state and local agencies and school districts.
  - Maintenance of a stormwater basin constructed prior to the effective date of the regulations
    of which this subsection is a part.

- 4. Requirement for an engineered site grading plan. An engineered site grading plan shall be submitted and reviewed in accordance with requirements of sections <u>24-216</u> - 24-217. The engineered site grading plan shall be approved by the township engineer prior to the issuance of any building permit. The following types of new construction of single-family housing units require an engineered site grading plan:
  - Development on acreage parcels (lot splits) for which a stormwater management plan is not required.
  - Development on platted subdivision lots.
  - · Development on site condominium units.
- 5. The following fees will apply to all storm water management permits:

TYPE OF REQUEST	FEE
Projects involving replacement of inlet/outlet structures, sediment removal of not more than 500 cubic yards, native landscaping, vegetation removal and/or clean-out of structures <sup>1</sup>	\$800.00
Additional Plan Review	\$150.00
Re-inspection Fee (per failed inspection)	\$ 75.00
Cash Escrow	\$2,000.00

<sup>1</sup>Application covers two plan reviews and as-built plan review if required.

## CHAPTER 24 – WATER SUPPLY & SEWAGE DISPOSAL SYSTEMS SEC. 24.222 - STORMWATER MANAGEMENT

## ARTICLE VI. - STORMWATER MANAGEMENT [69]

DIVISION 1. - GENERALLY DIVISION 2. - PLAN REQUIREMENTS AND FACILITY DIVISION 3. - ENGINEERED SITE GRADING PLANS DIVISION 4. - PERFORMANCE GUARANTEES, EASEMENTS AND MAINTENANCE DIVISION 5. - VARIANCES AND APPEALS DIVISION 6. - ENFORCEMENT; EFFECT; AND APPLICABILITY

## FOOTNOTE(S):

<sup>(69)</sup> Editor's note— The appendix referenced throughout Art. VI is set out in its entirety immediately following § 24-229 (Back)

(69) Cross reference— Floodplain, floodway, watercourse and wetland protection, Ch. 12. (Back)

#### DIVISION 1. - GENERALLY

Sec. 24-201. - Purposes, Sec. 24-202. - Construction of language, Sec. 24-203. - Abrogation and conflict of authority. Sec. 24-204. - Definition of terms, Sec. 24-205. - Applicability, Sec. 24-206. - Exempt activities,

## Sec. 24-201. - Purposes.

The purposes of this article shall be:

- (a) To protect public health, safety and welfare by requiring stormwater management whenever new, expanded or modified developments are proposed.
- (b) To assure that stormwater runoff from development is controlled so that the water quality in watercourses, groundwater recharged by stormwater and habitat situated in areas impacted by stormwater, including, without limitation, watercourses and wetlands, are protected, and that siltation and pollution are minimized.
- (c) To provide for cost-effective and functionally-effective stormwater management, and to reduce the need for future remedial projects.
- (d) To prevent soil erosion and sedimentation.

## Sec. 24-203. - Abrogation and conflict of authority.

Nothing in this article shall be interpreted to conflict with present or future state statutes in the same subject matter. Conflicting provisions of this article shall be abrogated to the extent of the conflict. The provisions of this article shall be construed, if possible, to be consistent with and in addition to relevant state regulations and statutes.

In their interpretation and application, the provisions of this article shall be held to be minimum requirements and shall be liberally construed in favor of achieving the objectives of this article, and shall not be deemed a limitation or repeal of any other powers granted by state statutes.

This article is not intended to repeal, abrogate or impair any existing ordinances, easements, covenants, or deed restrictions. However, where this article imposes greater restrictions, the provisions of this article shall prevail. If there is another ordinance that is inconsistent, the terms of the article that promotes the protection of natural resources to the greatest extent shall apply, including water quality, wetlands, woodlands, watercourses, environmental feature setbacks and other natural areas and habitat.

(Ord. No. C-644, § 1.03, 10-25-04)

## Sec. 24-204. - Definition of terms.

The following terms, phrases, words and derivatives shall have the meaning defined below:

Accelerated soil erosion. The increased movement of soils that occurs as a result of the impact of development upon the flow of stormwater.

BMP or Best Management Practice. BMPs are any structural, vegetative or managerial practice used to treat, prevent or reduce water pollution. Such practices include temporary seeding on exposed soils, detention and retention basins for stormwater control, and scheduling the implementation of all BMPs to ensure their effectiveness.

Conveyance facility. A storm drain, as defined in this article.

Detention basin. A structure or facility, natural or artificial, which stores stormwater on a temporary basis and releases it at a controlled rate. A detention basin may drain completely after a storm event, or it may be a pond with a fixed minimum water elevation between runoff events.

Development. Any change in land, buildings, structures and/or vegetative cover that tends to alter stormwater impact. This term shall not include customary lawn maintenance or gardening, but shall include redevelopment. "Redevelopment" shall be deemed to be included within the definition of "development" for purposes of this article if the amount of square footage of proposed building or structure improvement and/or the creation of new impervious surface area is (are) significant in terms of stormwater management, as determined in the discretion of the township engineer in consultation with the township environmental director; provided, however, application of this article to redevelopment shall not have the result of entirely prohibiting reasonable use of property, and any dispute on this issue shall be resolved by the township board upon petition by an aggrieved property owner as an appeal, as provided in sections <u>24-223</u>—24-226 of this article.

Discharge. Any addition or introduction of any pollutant, stormwater, or any other substance into the stormwater system or into groundwater.

Disturbed area. An area of land subjected to development.

Receiving body of water. Any watercourse or wetland into which stormwaters are directed, either naturally or artificially.

Retention basin. A holding area for stormwater, either natural or man made, which does not have an outlet to adjoining watercourses or wetlands. Water is removed from retention basins through infiltration and/or evaporation processes, and retention basins may or may not have a permanent pool of water.

Runoff. That part of precipitation which flows over the land.

Sediment. Mineral or organic particulate matter that has been removed from its site of origin by the processes of soil erosion, is in suspension in water, or is being transported.

Soil erosion. The wearing away of land by the action of wind, water, gravity or a combination thereof.

Soil erosion control measures. A structure, facility, barrier, berm, process, vegetative cover, basin, and/or other installations designed to control accelerated soil erosion. Temporary measures are installed to control soil erosion during construction or until soils in the contributing drainage area are stabilized. Permanent measures remain after the project is completed.

Storage facility. A basin, structure, or area, either natural or human made, which is capable of holding stormwater for the purpose of controlling or eliminating discharge from the site.

Storm drain. A conduit, pipe, swale, natural channel or manmade structure which serves to transport stormwater runoff. Storm drains may be either enclosed or open.

Stormwater discharge. The volume of water passing a given point at a given time expressed in cubic feet per second. Also referred to as rate of flow.

Stormwater management. Drawings and written information prepared by a registered engineer, registered landscape architect or registered surveyor which describe the way in which accelerated soil erosion and/or stormwater flows are proposed to be controlled, both during and after construction, having as its purpose to ensure that the objectives of this article are met.

Stormwater management measure and facility. Any facility, structure, channel, area, process or measure which serves to control stormwater runoff in accordance with the purposes and standards of this article.

Stormwater management system. Entire stormwater conveyance and storage facilities and all appurtenances thereto.

Swale. Defined contour of land with gradual slopes that transports and directs the flow of stormwater.

Township. Township of West Bloomfield.

Township board. West Bloomfield Township Board.

Watercourse. Any natural or manmade waterway or other body of water having reasonably well defined banks. Rivers, streams, creeks and brooks and channels, whether continually or intermittently flowing, as well as lakes and ponds are watercourses for purposes of stormwater management.

- (b) Requirement for an engineered site grading plan. An engineered site grading plan shall be submitted and reviewed in accordance with requirements of sections <u>24-216</u>—24-217. The engineered site grading plan shall be approved by the township engineer prior to the issuance of any building permit. The following types of new construction of single-family housing units require an engineered site grading plan:
  - Development on acreage parcels (lot splits) for which a stormwater management plan is not required.
  - (2) Development on platted subdivision lots.
  - (3) Development on site condominium units.

(Ord. No. C-644, § 3.01, 10-25-04)

## Sec. 24-206. - Exempt activities.

- (a) Notwithstanding the requirements of <u>section 24-205</u>, neither a stormwater management plan nor an engineered site grading plan shall be required for activities commonly associated with farming, horticulture and silviculture including plowing, irrigation, irrigation ditching, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, provided, however, such activities must be bona fide commercial enterprises, being undertaken without the expectation of being converted to some other use within the foreseeable future.
- (b) Routine single-family residential landscaping and/or gardening which conforms with the stormwater management plan or site grading plan approved by the township, and which does not otherwise materially alter stormwater flow from the property in terms of rate and/or volume.
- (c) Development on one single-family lot, parcel or condominium unit where the township engineer and township environmental director determine that, due to the size of the site, or due to other circumstances, the quantity, quality and/or rate of stormwater leaving the site will not be meaningfully altered.

(Ord. No. C-644, § 3.02, 10-25-04)

## DIVISION 2. - PLAN REQUIREMENTS AND FACILITY

- Sec. 24-207. Preapplication conference.
- Sec. 24-208. Contents of stormwater management plan.
- Sec. 24-209. Plan submission.
- Sec. 24-210. Revision of plan.
- Sec. 24-211. Review procedures.
- Sec. 24-212. Review fees.
- Sec. 24-213. Standards for stormwater management plan approval.
- Sec. 24-214. Off-site stormwater management.
- Sec. 24-215. Submittal, review and approval procedures requirements,

- (b) For developments subject to site plan review, the proprietor shall submit a stormwater management plan to the planning department at the time that the preliminary site plan is submitted.
- (c) For developments subject to subdivision plan review, the proprietor shall submit a stormwater management plan to the planning department at the time that the tentative preliminary plan is submitted.
- (d) For other earth changes or activities subject to stormwater management plan requirements, the plan shall be submitted to the planning department before construction drawings are submitted.
- (e) Compliance with the requirements of this article does not eliminate the need for the proprietor to obtain required permits and approvals from county and state agencies. Such permits and approvals include, but are not limited to, soil erosion permits from the Township of West Bloomfield engineering department, drainage approvals from the Oakland County Drain Commissioner, road drainage approvals from the Oakland County Road Commission, wetlands permits from the township and Michigan Department of Environmental Quality, and dam construction permits from the Michigan Department of Natural Resources.
- (f) Compliance with the requirements of this article does not eliminate the need for the proprietor to comply with other applicable township ordinances and regulations.
- (g) Upon submission of a stormwater management plan, as provided above, such plan shall be forwarded to the engineering and environmental departments for review and recommendation to the planning commission; provided, however, if the site plan, subdivision plat or other earth change plan is revised, then, the stormwater management plan shall be rereviewed and a new recommendation made by the engineering and environmental departments to ensure continued compliance with all other applicable ordinances administered by such departments.

(Ord. No. C-644, § 4.03, 10-25-04)

## Sec. 24-210. - Revision of plan.

If it becomes necessary to alter a development or earth change proposal after the stormwater management plan has been approved, a revised stormwater management plan must be submitted, reviewed and approved in accordance with the procedure set forth above. All requirements and standards for stormwater management plans (section 24-215) shall apply.

(Ord. No. C-644, § 4.04, 10-25-04)

## Sec. 24-211. - Review procedures.

- (a) Planning commission review.
  - (1) The planning commission shall, following recommendation by the township engineer, review appropriate stormwater management plans to assure compliance with the approval standards listed in <u>section 24-213</u> of this article.
  - (2) Engineered site grading plans do not require planning commission review.
  - (3) When the stormwater management plan appears on the planning commission's agenda for the first time, it shall be distributed to township staff as applicable.

- (3) Unless otherwise approved, stormwater runoff shall be conveyed, e.g., to a stormwater storage facility, through swales and vegetated buffer strips, rather than through enclosed pipes, so as to decrease runoff velocity, allow for natural infiltration, allow suspended sediment particles to settle, and to remove pollutants.
- (4) Runoff rates from detention basins shall conform with the requirements specified in part two of the appendix for the first flush, bankful, and 100-year storm.
- (5) Watercourses shall not be deepened, widened, dredged, cleared of vegetation, straightened, stabilized or otherwise altered without applicable permits or approvals from the township, relevant county agencies and the applicable State of Michigan Department(s).
- (6) Drainage systems shall be designed to protect public health and safety, and the environmental integrity of the township, and to facilitate efficient and effective maintenance.
- (7) The stormwater management plan shall demonstrate a zero percent increase over the discharge or runoff permitted by applicable law and ordinances in relation to the predevelopment and postdevelopment stormwater runoff.
- (8) Stormwater storage facilities shall be designed in accordance with the specifications set forth in the appendix, part two.
- (b) Soil erosion control.
  - Cutting, filling and grading shall conform with the requirements specified in part two of the appendix.
  - (2) All development and other earth changes shall be designed, constructed and completed in such a manner that the exposed area of any disturbed land is limited to the shortest practical period of time. Proposed erosion control measures shall be submitted to the Township of West Bloomfield engineering department and environmental department for determination that such measures comply with the Township of West Bloomfield Grading and Soil Erosion Control Ordinance [section <u>8-305</u> et seq.].
  - (3) Approved soil erosion control measures shall be properly installed and maintained between the disturbed area and any down gradient watercourses (including rivers, streams, creeks, lakes, ponds and other watercourses), wetlands, environmental feature setback areas, roadways and property lines.
  - (4) Sediment resulting from accelerated soil erosion shall be removed from runoff water before it leaves the site of the development.
  - (5) Temporary and permanent soil measures designed and constructed for the conveyance of water around, through or away from the development or earth change area shall be designed to limit the water flow to a nonerosive velocity.
  - (6) Temporary soil measures shall be removed after permanent soil measures have been implemented and stabilized. All developments and earth change areas shall be stabilized with permanent soil measures.

#### Sec. 24-214. - Off-site stormwater management.

## (a) Requirements.

- (1) In lieu of on-site stormwater detention, the use of off-site stormwater conveyance, infiltration, and/or detention areas may be proposed. Off-site stormwater management facilities shall be designed to comply with the requirements specified in part two of the appendix and all other standards provided by this article that are applicable to on-site facilities.
- (2) Off-site stormwater management areas may be shared with other landowners, provided that the terms of the proposal are approved by the township board and township attorney. If applicable, approval shall also be required by the wetlands board. Approval hereunder shall not be granted for off-site stormwater management unless the applicant demonstrates to the township board, following recommendation by the township engineer, environmental director and applicable board or commission, that the use of off-site stormwater management areas shall protect water quality and natural resources to an equal or greater extent than would be achieved by the use of on-site stormwater management areas.
- (3) Adequate provision and agreements providing for maintenance and inspection of stormwater management facilities shall be made, and the documents recorded instrument, including an access easement, approved by the township.
- (4) Accelerated soil erosion shall be managed off-site as well as on-site.
- (b) *Performance guarantees, inspections, maintenance, and enforcement.* All provisions for performance guarantees shall apply to off-site stormwater conveyance and detention.

(Ord. No. C-644, § 4.08, 10-25-04)

- (3) Adequate provision and agreements providing for maintenance and inspection of stormwater management facilities shall be made, and the documents recorded instrument, including an access easement, approved by the township.
- (4) Accelerated soil erosion shall be managed off-site as well as on-site.
- (b) Performance guarantees, inspections, maintenance, and enforcement. All provisions for performance guarantees shall apply to off-site stormwater conveyance and detention.

(Ord. No. C-644, § 4.08, 10-25-04)

## Sec. 24-215. - Submittal, review and approval procedures requirements.

- (a) Four (4) copies of construction drawings and engineering specifications shall be submitted to the engineering department and environmental department following stormwater management plan approval but prior to the issuance of any construction or building permits.
- (b) Construction drawings and engineering specifications shall be subject to review and approval by the township engineer and environmental director, and a copy shall be transmitted to the Oakland County drain commissioner and to the wetlands board if applicable.
- (c) A construction permit shall not be issued unless the detailed engineering drawings and specifications meet the standards of this article, applicable township ordinances, engineering standards and practices, and any applicable requirements of other government agencies.

(Ord. No. C-644, § 5.01, 10-25-04)

## **DIVISION 3. - ENGINEERED SITE GRADING PLANS**

Sec. 24-216. - Contents of engineered site grading plans. Sec. 24-217. - Review procedures and standards.

## Sec. 24-216. - Contents of engineered site grading plans.

- (a) Four (4) copies of engineered site grading plans for single-family homes and private road developments shall be submitted by the proprietor to the engineering department and environmental department; provided, however, if and to the extent the same information has been previously submitted as required under a separate ordinance requirement, then, the applicant shall provide copies of the previous submission, together with new information required hereunder which has not been previously submitted.
- (b) The engineered site grading plan shall include the following site information, subject to the exception specified in subparagraph (a), above:
  - The legal property description and a north indicator.
  - (2) Existing grades on a fifty-foot grid to a minimum of fifty (50) feet beyond the site property line and sufficient intermediate grades to determine such things as ditches, swales, adjacent pavement, buildings and other pertinent features.

## Sec. 24-219. - Performance guarantees.

The proprietor shall post an acceptable form of an irrevocable letter of credit, cash escrow or certified check for purposes of providing performance security. The performance guarantee shall be an amount determined by the township engineer after recommendation by the environmental director, equal to one and one-half (1½) times the amount required to complete stormwater management and facilities as specified in the stormwater management plan or engineered site grading plan, as applicable, together with reasonable administrative expenses. Required performance guarantees shall be provided to the township after stormwater management plan or engineered site grading plan approval but prior to the initiation of any earth change.

After determination by the township engineer and environmental director for site plans, or by the Oakland County drain commissioner for site condominiums and subdivisions, that all facilities are completed in compliance with the approved plan, the posted performance guarantee remaining shall be released.

(Ord. No. C-644, § 7.02, 10-25-04)

## Sec. 24-220. - Stormwater management easements.

- (a) Necessity of easements. Stormwater management easements shall be provided in a form required by the applicable approving body of the township and the township attorney, and recorded as directed as part of the approval of the applicable township body to assure:
  - (1) Access for inspections;
  - (2) Access to stormwater management facilities for maintenance purposes; and
  - (3) Preservation of primary and secondary drainageways which are needed to serve stormwater management needs of other properties.
- (b) Easements for off-site stormwater management. The proprietor shall obtain easements assuring access to all areas used for off-site stormwater management, including wetlands.
- (c) Recording of easements. Easements shall be recorded with the Oakland County register of deeds according to Oakland County requirements.
- (d) Recording prior to building permit issuance. The proprietor must provide the township clerk with evidence of the recording of the easement prior to final subdivision plat or condominium approval or other applicable final construction approval.

(Ord. No. C-644, § 7.03, 10-25-04)

## Sec. 24-221. - Maintenance agreement.

(a) Purpose of maintenance agreement. The purpose of the maintenance agreement is to provide the means and assurance that maintenance of stormwater management and facilities shall be undertaken.

- (1) Administrative review and approval for proposed restorative maintenance of pre-existing storage and/or sedimentation basin facilities shall be authorized where all of the following criteria are met:
  - a. There are detailed plans and specifications for the facility approved by and on file with the township.
  - b. The proposed restorative maintenance involves the removal of materials for the reestablishment of contours in the approved plans and specifications on file with the township and/or the repair or replacement of pipes, inlets and/or outlet structures, and shall not involve an alteration of the facility from the previously approved plans and specifications except to allow an improvement of pipe size or inlet/outlet structure intended to enhance performance of the facility.
  - c. Any and all materials to be removed as part of such maintenance shall be removed from the site.
  - d. The township engineer has no reason to believe that the proposed restorative maintenance will result in a facility that will not function as intended, i.e., no reason to believe that alterations of the facility (other than as authorized in subparagraph b., above) shall be required in order to achieve a facility that will function in the intended manner.
  - e. No part of the proposed restoration and/or maintenance is requested to be performed in a natural wetland (i.e., this criterion shall not apply to a wetland created as a result of the establishment of a constructed facility).
- (2) An application for such maintenance shall be filed with the township engineer and township environmental director, and shall include a certified survey prepared by a land surveyor or civil engineer registered with the state of Michigan showing and describing all of the following:
  - a. The existing conditions of the facility;
  - b. A restoration plan, including the scope and specifications of work to be performed, demonstrating the requirements of this section 24-222 and also demonstrating that there shall be a minimum disturbance of the area.
  - c. A restoration and revegetation plan.
  - d. A proposed bond securing the completion of the restoration and revegetation plan.
- (3) The maintenance shall be performed using best management practices.
- (4) The application shall be accompanied by the fee in the amount established by resolution of the township board.
- (5) An application meeting the requirements of this subsection (a) may be reviewed and approved by the township engineer and township environmental director.

For appeals, the application shall be submitted within fourteen (14) calendar days of the decision being appealed, and shall specify all grounds on the basis of which the appeal is being sought.

(Ord. No. C-644, § 8.02, 10-25-04)

## Sec. 24-225. - Hearing required.

Variances from the terms of this article shall not be granted unless and until a hearing shall be held by township board determines that the applicant has demonstrated all of the requirements of <u>section</u> <u>24-224</u>. Appeals shall be determined based upon the records and files of the township, and, an appeal shall be granted, following a hearing, only if the applicant has demonstrated that the administrative decision being appealed represented an abuse of discretion, or was otherwise unlawful; provided, however, if the township board determines that the files and records of the township are not adequate for determining the appeal, the township board shall then specify the limited procedure to be utilized to supplement the record for appeal purposes.

(Ord. No. C-644, § 8.03, 10-25-04)

## Sec. 24-226. - Conditions for approval.

The township board may prescribe appropriate conditions and safeguards consistent with the purposes and standards of this article in connection with the grant of a variance or appeal.

(Ord. No. C-644, § 8.04, 10-25-04)

#### DIVISION 6. - ENFORCEMENT; EFFECT; AND APPLICABILITY

Sec. 24-227. - Enforcement. Sec. 24-228. - Effect of approval in remedies. Sec. 24-229. - Applicability to pending projects.

## Sec. 24-227. - Enforcement.

- (a) Any person found to be in violation of any of the provisions of this article shall be responsible for a municipal civil infraction.
- (b) Penalties for municipal civil infraction. The following civil fines shall apply in the event of a determination of responsibility for a municipal civil infraction under this article.
  - (1) First offense. A civil fine for a first offense violation shall be in an amount of one thousand dollars (\$1,000.00), plus costs and other sanctions, for each offense.
  - (2) Repeat offense. A civil fine shall be in an amount of two thousand dollars (\$2,000.00), plus costs and other sanctions, for a second or subsequent determination that a person is responsible for violation of this article within any three (3) year period.
- (c) In addition to ordering the person determined to be responsible for a municipal civil infraction to pay a civil fine, costs, damages, and expenses, the judge or magistrate shall be authorized to issue any judgment, writ or order necessary to enforce, or enjoin violation of, this article, and require restoration or other appropriate action under the circumstances.
- (d) Continuing offense. Each act of violation, and on each day upon which any such violation shall occur, shall constitute a separate offense.
- Sec. 24-214. Off-site stormwater management.
- (a) Requirements.
  - (1) In lieu of on-site stormwater detention, the use of off-site stormwater conveyance, infiltration, and/or detention areas may be proposed. Off-site stormwater management facilities shall be designed to comply with the requirements specified in part two of the appendix and all other standards provided by this article that are applicable to on-site facilities.
  - (2) Off-site stormwater management areas may be shared with other landowners, provided that the terms of the proposal are approved by the township board and township attorney. If applicable, approval shall also be required by the wetlands board. Approval hereunder shall not be granted for off-site stormwater management unless the applicant demonstrates to the township board, following recommendation by the township engineer, environmental director and applicable board or commission, that the use of off-site stormwater management areas shall protect water quality and natural resources to an equal or greater extent than would be achieved by the use of on-site stormwater management areas.
  - (3) Adequate provision and agreements providing for maintenance and inspection of stormwater management facilities shall be made, and the documents recorded instrument, including an access easement, approved by the township.
  - (4) Accelerated soil erosion shall be managed off-site as well as on-site.
- (b) *Performance guarantees, inspections, maintenance, and enforcement.* All provisions for performance guarantees shall apply to off-site stormwater conveyance and detention.

(Ord. No. C-644, § 4.08, 10-25-04)

#### STORMWATER MANAGEMENT MAINTENANCE AND EASEMENT AGREEMENT

This Agreement made by

and is enforceable by the Charter Township of West Bloomfield ("Township"), whose address is 4550 Walnut Lake Road, West Bloomfield, MI 48325.

#### RECITALS

A. Owner holds title to the land located in the Township of West Bloomfield, County of Oakland, State of Michigan, that is described in the attached **Exhibit A** ("Property").

B. The Township has approved development of the Property that is to include stormwater management measures and facilities ("Facilities") to treat and manage stormwater drainage in accordance with an approved Stormwater Management Plan on file with the Township.

C. The Township's Stormwater Management Ordinance, codified in Article VI, Chapter 24 of the Township Ordinance Code ("Ordinance"), and approvals of the development of the Property require this Agreement.

D. The attached **Exhibit B** identifies the Township approved Stormwater Management Plan and any conditions of that approval and includes the Township approved plan for routine, emergency and long-term maintenance of the Facilities as required by the Ordinance and a detailed annual budget for maintenance and inspection of the Facilities for the three (3) years following completion of construction.

#### AGREEMENT

#### OWNER HEREBY COVENANTS AND AGREES:

1. This Agreement shall be enforceable by the Township and its successors, assigns or transferees, shall be permanently recorded with the Oakland County Register of Deeds, shall run with the Property and shall be binding on Owner and Owner's heirs, successors, assigns, agents and transferees, including any subdivision or condominium associations that may hereafter be assigned, entitled to or have title, possession, use or control of portions of the Property upon which Facilities are to be located, operated and maintained. This Agreement shall be incorporated by reference into any Master Deed, with each deed or other conveyance of an interest in the Property by Owner to state that it is subject to this Agreement and include the liber and page where this Agreement is recorded.

2. To promptly provide written notice to the Township Planning and Engineering Departments of the name and address of each successor, assign, agent and transferee described in Section 1, with all such persons and entities considered an "Owner" for purposes of this Agreement.

3. Entry, actions and/or rights on or related to the Property or Facilities by or of the Township as provided in this Agreement may be by the Township's employees, agents consultants and/or contractors with qualifications and experience appropriate to the subject matter.

4. An access easement is hereby granted to the Township to enter on and over such portions of the Property as reasonably necessary to inspection, maintenance and/or repair of the Facilities and the preservation of primary and secondary drainageways which are needed to serve stormwater management needs of other properties. Except for emergencies, entry shall be preceded by at least 24 hours verbal or written notice to Owner, with the right of entry for non-emergency maintenance, repair or preservation purposes first requiring a determination that the Township may do so under the procedure described in Section 8.

5. In the absence of a written and recorded document confirming that the Oakland County Drain Commissioner, Township or other government agency has assumed such responsibilities, Owner shall, at its expense perpetually preserve, maintain, and repair all Facilities as necessary for them to be in good working order and to function as designed and intended, with this obligation including all wetlands which are part of the Stormwater Management Plan.

6. Owner shall, at its expense, perform the routine, emergency and long-term maintenance of the Facilities as described in Exhibit B, providing at least 14 days prior written notice to the Township Engineering/Environmental Director of the intention to proceed with respect to each maintenance activity. Maintenance or repair activities not described in Exhibit B shall not be undertaken by Owner without first applying for and obtaining any new Township permits and approvals as may be required by the Ordinance.

7. Owner shall maintain a written log of all inspection, maintenance and repair activities on the Facilities and make the log available to the Township upon request.

8. (a) If there is a material failure or refusal to maintain the Property or Facilities in the manner and condition required by this Agreement, the Township may serve written notice upon the Owner specifying the deficiencies and the actions required and time allowed for correction. Routine maintenance deficiencies shall be corrected within 30 days of the notice, with maintenance determined to be required by the Township as an emergency to be completed within 36 hours of the notice. The Owners shall cure the specified deficiencies within those times or such longer period as may be approved in writing by the Township.



(b) If the deficiencies are not corrected in the time and manner required by the Township under the notice described in subsection (a), the Township may provide a second written notice to Owner of the right to be heard at a specified time and place for a hearing before the Township Board on the existence of the deficiencies and whether the Township should correct them. At the hearing, the time for correcting the deficiencies and the hearing itself may be extended and/or continued to a date certain. Upon conclusion of the hearing, if the Township Board determines that the material failure or refusal identified in the Township's notices existed and has not been corrected, the Township shall thereupon have the power and authority, but not the obligation, to enter upon the Property and perform the maintenance, repair, preservation and other actions necessary to correcting the deficiencies. Upon such a Township Board determination, Owner shall be obligated to advance to and/or reimburse the Township for (as determined by the Township) all costs that have been or will be incurred by the Township in administering and enforcing this Agreement, including actual costs and expenses of inspections, consultants and correction, legal fees and an administrative fee equal to 25% of those amounts.

(c) All notices, determinations, decisions and actions by the Township under this Agreement shall be without liability for trespass and shall not be considered a taking or to vest any rights to use and enjoy the Property in the general public.

(d) Owner's payment to the Township of the costs incurred by the Township in administering and enforcing this Agreement shall be secured by a lien on the Property which may be perfected by filing a Notice of Lien with the Oakland County Register of Deeds. Any of such costs that are not paid by the Owner within 30 days of Township billing shall be delinquent and may be collected by the Township through legal action against the Owner and/or by placement and collection on the tax rolls as a delinquent special assessment. In addition and not as an alternative to the preceding procedures and remedies, the Township may compel and shall be entitled to specific performance by the Owner of the requirements of this Agreement by action in and Orders and/or Judgments of the Oakland County Circuit Court, with Owner to pay all court costs and attorney fees incurred by the Township in connection with any and all court actions authorized by this subsection.

9. Owner represents and warrants to the Township that it and its signatory have the authority and capacity to execute this Agreement and bind the Property and Owner's heirs, successors, assigns and transferees as provided.

10. Invalidation of any provision of this Agreement by Judgment or Court Order shall in no way affect the validity of any other provision which shall remain in full force and effect.

This Agreement was acknowledged before me on		,
by	, the authorized	of
Owner,		, for and on its behalf.

Form of Agreement drafted by: Gary L. Dovre (P27684) 30903 Northwestern Highway P.O. Box 3040 Farmington Hills, MI 48333-3400

C:\NrPortbl\imanage\DOVREG\982440\_6.DOC

Notary Public, Oakland County My Commission Expires: Acting in Oakland County

By:\_\_\_\_\_

When recorded return to: Charter Township of West Bloomfield Attn: Township Clerk 4550 Walnut Lake Road, PO Box 250130 West Bloomfield, MI 48325-0130



Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix HH

**Development Services Department** 

Storm Water Permit Package



DEVELOPMENT SERVICES DEPARTMENT

STORM WATER PERMIT APPLICATION PACKET



## DEVELOPMENT SERVICES

4550 Walnut Lake Road West Bloomfield, MI 48325 (248) 451-4818 Phone (248) 451-4871 Facsimile www.wbtwp.com

## STORM WATER MANAGEMENT MAINTENANCE PERMIT APPLICATION

#### APPLICATION MUST BE FILLED OUT COMPLETELY

Date	Case No.			
I. Applicant Information			and a standard and a standard and a standard	
Name			Telephone Number	
Address			Email Address	
City	State	Zip Code	Cost Estimate	
I. Property Owner Information	(if different from ap	plicant)		
Name		Telephone Number		
lddress			Email Address	
Sity	State	Zip Code	_	
II. Property Information				
Street Address				
Subdivision and Lot		Parcel ID #		
IV. Description of Work Describe the Work to be or Already Purpose of work (construct residence	Performed (add, fill exca	vate, etc) h, etc)		
IV. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be o	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the )	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Previous Storm Water M Yes (When: Applicant agrees to the following co	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the )	ructures e township for this Property?	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms and	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application?	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to of Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms an Plot Plan/Site Plan	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application? Yes lanagement Applications Case #: nditions: nd Conditions (see back	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following col Agree to all Permit Terms an Plot Plan/Site Plan Copy of Contract or Cost Es	Performed (add, fill exca e, build pool, sand beach or Already Deposited or F Application? Ves lanagement Applications Case #: nditions: nd Conditions (see back timate	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	
V. Description of Work Describe the Work to be or Already Purpose of work (construct residence Amount and Type of Material to be of Has Any Work Been Done prior to a Have Any Previous Storm Water M Yes (When: Applicant agrees to the following co Agree to all Permit Terms at Plot Plan/Site Plan Copy of Contract or Cost Es V. Signature	Performed (add, fill exca ee, build pool, sand beach or Already Deposited or F Application? Yes lanagement Applications Case #: nditions: nd Conditions (see back timate	vate, etc) h, etc) Removed, including St D No been Submitted to the ) of application	ructures	

Date

Date

Signature of Applicant

Signature of Property Owner

#### THIS IS NOT A PERMIT!!! VIOLATORS ARE SUBJECT TO CRIMINAL PENALTIES

An MDEQ, County, or other permit DOES NOT GRANT PERMISSION to fill, dredge, build, install or take any other action in the absence of a West Bloomfield Township permit. THIS APPLICATION IS NOT A PERMIT! Any work, filling, dredging, sanding or other action may NOT be taken in the wetlands, watercourse, floodway, floodplain, or environmental features setback (25 feet from a wetland or watercourse) unless and until a township permit has been granted.



## STORM WATER MANAGEMENT MAINTENANCE PERMIT: TERMS AND CONDITIONS

The following terms and conditions shall apply and be considered a part of every use permit unless the final permit approval decision by wetland review board, planning commission or township board specifically decides otherwise.

The following terms and conditions apply to all permits:

- A pre-construction meeting between the petitioner and the director or director's designee and any contractors/subcontractors is required prior to any construction. A copy of the permit shall be posted in a visible location onsite.
- At the time of the pre-construction meeting, the exact location of the request must be measured in the field by the director or director's designee and then field staked by the petitioner or any contractor prior to installation.
- Soil protection measures shall be installed prior to any construction and be inspected by the director or director's designee for proper location and installation.
- The petitioner and his/her contractor(s) shall be responsible for maintaining all soil erosion and sedimentation control measures throughout the duration of the project with daily inspections.
- Materials (organic or inorganic), spoils, and/or equipment shall not be stored within the wetland, environmental features setback area, and 100-year floodplain during and after construction.
- Direct discharge of storm water, sump water, or wastewater unless pretreated is not allowed to wetlands and/or watercourses. Any existing direct discharge must be eliminated and discharged in a location approved by the director or director's designee.
- Fill material beyond the request shall not be deposited within any wetland, environmental features setback area and/or 100-year floodplain.
- Ongoing monitoring by the director or designee shall be conducted with inspection reports recorded in the case file.
- A final inspection by the director or director's designee shall be conducted with a report added to the case file.
- Invasive and noxious plant eradication by herbicide applications must be completed by a certified applicator with documentation of the work upon completion submitted to the Development Services Department.
- 11. The property owner(s) shall be given a copy of the township's fertilizer ordinance.
- The petitioner shall place sufficient funds in an escrow account to cover the costs connected with the application, including consultant fees, issuance of a permit, and monitoring.
- 13. The initiation of any work on a permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of the permit.

If you have any questions, please visit our website for more information <u>www.wbtwp.com</u> or call the Development Services Department at (248) 451-4818.

#### STORM WATER PERMIT INFORMATION

- Except for those activities expressly exempted by section 24-206, every new development (as defined in this article), or redevelopment in the Township of West Bloomfield shall have either a stormwater management plan or an engineered site grading plan, depending on the type of activity, as listed below.
- No development or preparation for development on a site shall occur unless and until an application has been submitted and approved for a stormwater management plan or engineering site grading plan.
- 3. Requirement for a stormwater management plan. A stormwater management plan shall be submitted and reviewed in accordance with requirements of sections 24-207 - 24-215. Approval of final development plans, site plans, and final preliminary subdivision and condominium plans shall not be granted prior to approval of the stormwater management plan. The following types of developments and earth changes require a stormwater management plan:
  - Land development proposals subject to site plan review requirements in the Township of West Bloomfield Zoning article.
  - Subdivision plat proposals.
  - Site condominium developments pursuant to the Condominium Act, P.A. 59 of 1978 as amended; MCLA 559.101 et seq.
  - Any development on property divided by land division in connection with which one or more
    public or private roads are created or extended, and/or in connection with which more than
    three (3) parcels of less than one (1) acre are created. A private road shall include: an
    existing drive which, following the land division, serves more than one (1) home; and a new
    private road approved by the township meeting ordinance design standards.
  - Any proposal to mine, excavate, or clear and grade or other-wise develop one (1) acre or more of land for purposes other than routine single-family residential landscaping and gardening, or any proposal within five hundred (500) feet of the top of the bank of an inland lake or stream.
  - Development projects of federal, state and local agencies and school districts.
  - Maintenance of a stormwater basin constructed prior to the effective date of the regulations
    of which this subsection is a part.

- 4. Requirement for an engineered site grading plan. An engineered site grading plan shall be submitted and reviewed in accordance with requirements of sections <u>24-216</u> - 24-217. The engineered site grading plan shall be approved by the township engineer prior to the issuance of any building permit. The following types of new construction of single-family housing units require an engineered site grading plan:
  - Development on acreage parcels (lot splits) for which a stormwater management plan is not required.
  - Development on platted subdivision lots.
  - · Development on site condominium units.
- 5. The following fees will apply to all storm water management permits:

TYPE OF REQUEST	FEE
Projects involving replacement of inlet/outlet structures, sediment removal of not more than 500 cubic yards, native landscaping, vegetation removal and/or clean-out of structures <sup>1</sup>	\$800.00
Additional Plan Review	\$150.00
Re-inspection Fee (per failed inspection)	\$ 75.00
Cash Escrow	\$2,000.00

<sup>1</sup>Application covers two plan reviews and as-built plan review if required.

#### CHAPTER 24 – WATER SUPPLY & SEWAGE DISPOSAL SYSTEMS SEC. 24.222 - STORMWATER MANAGEMENT

#### ARTICLE VI. - STORMWATER MANAGEMENT [69]

DIVISION 1. - GENERALLY DIVISION 2. - PLAN REQUIREMENTS AND FACILITY DIVISION 3. - ENGINEERED SITE GRADING PLANS DIVISION 4. - PERFORMANCE GUARANTEES, EASEMENTS AND MAINTENANCE DIVISION 5. - VARIANCES AND APPEALS DIVISION 6. - ENFORCEMENT; EFFECT; AND APPLICABILITY

#### FOOTNOTE(S):

<sup>(69)</sup> Editor's note— The appendix referenced throughout Art. VI is set out in its entirety immediately following § 24-229 (Back)

(69) Cross reference— Floodplain, floodway, watercourse and wetland protection, Ch. 12. (Back)

#### DIVISION 1. - GENERALLY

Sec. 24-201. - Purposes, Sec. 24-202. - Construction of language, Sec. 24-203. - Abrogation and conflict of authority. Sec. 24-204. - Definition of terms, Sec. 24-205. - Applicability, Sec. 24-206. - Exempt activities,

#### Sec. 24-201. - Purposes.

The purposes of this article shall be:

- (a) To protect public health, safety and welfare by requiring stormwater management whenever new, expanded or modified developments are proposed.
- (b) To assure that stormwater runoff from development is controlled so that the water quality in watercourses, groundwater recharged by stormwater and habitat situated in areas impacted by stormwater, including, without limitation, watercourses and wetlands, are protected, and that siltation and pollution are minimized.
- (c) To provide for cost-effective and functionally-effective stormwater management, and to reduce the need for future remedial projects.
- (d) To prevent soil erosion and sedimentation.

#### Sec. 24-203. - Abrogation and conflict of authority.

Nothing in this article shall be interpreted to conflict with present or future state statutes in the same subject matter. Conflicting provisions of this article shall be abrogated to the extent of the conflict. The provisions of this article shall be construed, if possible, to be consistent with and in addition to relevant state regulations and statutes.

In their interpretation and application, the provisions of this article shall be held to be minimum requirements and shall be liberally construed in favor of achieving the objectives of this article, and shall not be deemed a limitation or repeal of any other powers granted by state statutes.

This article is not intended to repeal, abrogate or impair any existing ordinances, easements, covenants, or deed restrictions. However, where this article imposes greater restrictions, the provisions of this article shall prevail. If there is another ordinance that is inconsistent, the terms of the article that promotes the protection of natural resources to the greatest extent shall apply, including water quality, wetlands, woodlands, watercourses, environmental feature setbacks and other natural areas and habitat.

(Ord. No. C-644, § 1.03, 10-25-04)

#### Sec. 24-204. - Definition of terms.

The following terms, phrases, words and derivatives shall have the meaning defined below:

Accelerated soil erosion. The increased movement of soils that occurs as a result of the impact of development upon the flow of stormwater.

BMP or Best Management Practice. BMPs are any structural, vegetative or managerial practice used to treat, prevent or reduce water pollution. Such practices include temporary seeding on exposed soils, detention and retention basins for stormwater control, and scheduling the implementation of all BMPs to ensure their effectiveness.

Conveyance facility. A storm drain, as defined in this article.

Detention basin. A structure or facility, natural or artificial, which stores stormwater on a temporary basis and releases it at a controlled rate. A detention basin may drain completely after a storm event, or it may be a pond with a fixed minimum water elevation between runoff events.

Development. Any change in land, buildings, structures and/or vegetative cover that tends to alter stormwater impact. This term shall not include customary lawn maintenance or gardening, but shall include redevelopment. "Redevelopment" shall be deemed to be included within the definition of "development" for purposes of this article if the amount of square footage of proposed building or structure improvement and/or the creation of new impervious surface area is (are) significant in terms of stormwater management, as determined in the discretion of the township engineer in consultation with the township environmental director; provided, however, application of this article to redevelopment shall not have the result of entirely prohibiting reasonable use of property, and any dispute on this issue shall be resolved by the township board upon petition by an aggrieved property owner as an appeal, as provided in sections <u>24-223</u>—24-226 of this article.

Discharge. Any addition or introduction of any pollutant, stormwater, or any other substance into the stormwater system or into groundwater.

Disturbed area. An area of land subjected to development.

Receiving body of water. Any watercourse or wetland into which stormwaters are directed, either naturally or artificially.

Retention basin. A holding area for stormwater, either natural or man made, which does not have an outlet to adjoining watercourses or wetlands. Water is removed from retention basins through infiltration and/or evaporation processes, and retention basins may or may not have a permanent pool of water.

Runoff. That part of precipitation which flows over the land.

Sediment. Mineral or organic particulate matter that has been removed from its site of origin by the processes of soil erosion, is in suspension in water, or is being transported.

Soil erosion. The wearing away of land by the action of wind, water, gravity or a combination thereof.

Soil erosion control measures. A structure, facility, barrier, berm, process, vegetative cover, basin, and/or other installations designed to control accelerated soil erosion. Temporary measures are installed to control soil erosion during construction or until soils in the contributing drainage area are stabilized. Permanent measures remain after the project is completed.

Storage facility. A basin, structure, or area, either natural or human made, which is capable of holding stormwater for the purpose of controlling or eliminating discharge from the site.

Storm drain. A conduit, pipe, swale, natural channel or manmade structure which serves to transport stormwater runoff. Storm drains may be either enclosed or open.

Stormwater discharge. The volume of water passing a given point at a given time expressed in cubic feet per second. Also referred to as rate of flow.

Stormwater management. Drawings and written information prepared by a registered engineer, registered landscape architect or registered surveyor which describe the way in which accelerated soil erosion and/or stormwater flows are proposed to be controlled, both during and after construction, having as its purpose to ensure that the objectives of this article are met.

Stormwater management measure and facility. Any facility, structure, channel, area, process or measure which serves to control stormwater runoff in accordance with the purposes and standards of this article.

Stormwater management system. Entire stormwater conveyance and storage facilities and all appurtenances thereto.

Swale. Defined contour of land with gradual slopes that transports and directs the flow of stormwater.

Township. Township of West Bloomfield.

Township board. West Bloomfield Township Board.

Watercourse. Any natural or manmade waterway or other body of water having reasonably well defined banks. Rivers, streams, creeks and brooks and channels, whether continually or intermittently flowing, as well as lakes and ponds are watercourses for purposes of stormwater management.

- (b) Requirement for an engineered site grading plan. An engineered site grading plan shall be submitted and reviewed in accordance with requirements of sections <u>24-216</u>—24-217. The engineered site grading plan shall be approved by the township engineer prior to the issuance of any building permit. The following types of new construction of single-family housing units require an engineered site grading plan:
  - Development on acreage parcels (lot splits) for which a stormwater management plan is not required.
  - (2) Development on platted subdivision lots.
  - (3) Development on site condominium units.

(Ord. No. C-644, § 3.01, 10-25-04)

#### Sec. 24-206. - Exempt activities.

- (a) Notwithstanding the requirements of <u>section 24-205</u>, neither a stormwater management plan nor an engineered site grading plan shall be required for activities commonly associated with farming, horticulture and silviculture including plowing, irrigation, irrigation ditching, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, provided, however, such activities must be bona fide commercial enterprises, being undertaken without the expectation of being converted to some other use within the foreseeable future.
- (b) Routine single-family residential landscaping and/or gardening which conforms with the stormwater management plan or site grading plan approved by the township, and which does not otherwise materially alter stormwater flow from the property in terms of rate and/or volume.
- (c) Development on one single-family lot, parcel or condominium unit where the township engineer and township environmental director determine that, due to the size of the site, or due to other circumstances, the quantity, quality and/or rate of stormwater leaving the site will not be meaningfully altered.

(Ord. No. C-644, § 3.02, 10-25-04)

#### DIVISION 2. - PLAN REQUIREMENTS AND FACILITY

- Sec. 24-207. Preapplication conference.
- Sec. 24-208. Contents of stormwater management plan.
- Sec. 24-209. Plan submission.
- Sec. 24-210. Revision of plan.
- Sec. 24-211. Review procedures.
- Sec. 24-212. Review fees.
- Sec. 24-213. Standards for stormwater management plan approval.
- Sec. 24-214. Off-site stormwater management.
- Sec. 24-215. Submittal, review and approval procedures requirements,

- (b) For developments subject to site plan review, the proprietor shall submit a stormwater management plan to the planning department at the time that the preliminary site plan is submitted.
- (c) For developments subject to subdivision plan review, the proprietor shall submit a stormwater management plan to the planning department at the time that the tentative preliminary plan is submitted.
- (d) For other earth changes or activities subject to stormwater management plan requirements, the plan shall be submitted to the planning department before construction drawings are submitted.
- (e) Compliance with the requirements of this article does not eliminate the need for the proprietor to obtain required permits and approvals from county and state agencies. Such permits and approvals include, but are not limited to, soil erosion permits from the Township of West Bloomfield engineering department, drainage approvals from the Oakland County Drain Commissioner, road drainage approvals from the Oakland County Road Commission, wetlands permits from the township and Michigan Department of Environmental Quality, and dam construction permits from the Michigan Department of Natural Resources.
- (f) Compliance with the requirements of this article does not eliminate the need for the proprietor to comply with other applicable township ordinances and regulations.
- (g) Upon submission of a stormwater management plan, as provided above, such plan shall be forwarded to the engineering and environmental departments for review and recommendation to the planning commission; provided, however, if the site plan, subdivision plat or other earth change plan is revised, then, the stormwater management plan shall be rereviewed and a new recommendation made by the engineering and environmental departments to ensure continued compliance with all other applicable ordinances administered by such departments.

(Ord. No. C-644, § 4.03, 10-25-04)

#### Sec. 24-210. - Revision of plan.

If it becomes necessary to alter a development or earth change proposal after the stormwater management plan has been approved, a revised stormwater management plan must be submitted, reviewed and approved in accordance with the procedure set forth above. All requirements and standards for stormwater management plans (section 24-215) shall apply.

(Ord. No. C-644, § 4.04, 10-25-04)

#### Sec. 24-211. - Review procedures.

- (a) Planning commission review.
  - (1) The planning commission shall, following recommendation by the township engineer, review appropriate stormwater management plans to assure compliance with the approval standards listed in <u>section 24-213</u> of this article.
  - (2) Engineered site grading plans do not require planning commission review.
  - (3) When the stormwater management plan appears on the planning commission's agenda for the first time, it shall be distributed to township staff as applicable.

- (3) Unless otherwise approved, stormwater runoff shall be conveyed, e.g., to a stormwater storage facility, through swales and vegetated buffer strips, rather than through enclosed pipes, so as to decrease runoff velocity, allow for natural infiltration, allow suspended sediment particles to settle, and to remove pollutants.
- (4) Runoff rates from detention basins shall conform with the requirements specified in part two of the appendix for the first flush, bankful, and 100-year storm.
- (5) Watercourses shall not be deepened, widened, dredged, cleared of vegetation, straightened, stabilized or otherwise altered without applicable permits or approvals from the township, relevant county agencies and the applicable State of Michigan Department(s).
- (6) Drainage systems shall be designed to protect public health and safety, and the environmental integrity of the township, and to facilitate efficient and effective maintenance.
- (7) The stormwater management plan shall demonstrate a zero percent increase over the discharge or runoff permitted by applicable law and ordinances in relation to the predevelopment and postdevelopment stormwater runoff.
- (8) Stormwater storage facilities shall be designed in accordance with the specifications set forth in the appendix, part two.
- (b) Soil erosion control.
  - Cutting, filling and grading shall conform with the requirements specified in part two of the appendix.
  - (2) All development and other earth changes shall be designed, constructed and completed in such a manner that the exposed area of any disturbed land is limited to the shortest practical period of time. Proposed erosion control measures shall be submitted to the Township of West Bloomfield engineering department and environmental department for determination that such measures comply with the Township of West Bloomfield Grading and Soil Erosion Control Ordinance [section <u>8-305</u> et seq.].
  - (3) Approved soil erosion control measures shall be properly installed and maintained between the disturbed area and any down gradient watercourses (including rivers, streams, creeks, lakes, ponds and other watercourses), wetlands, environmental feature setback areas, roadways and property lines.
  - (4) Sediment resulting from accelerated soil erosion shall be removed from runoff water before it leaves the site of the development.
  - (5) Temporary and permanent soil measures designed and constructed for the conveyance of water around, through or away from the development or earth change area shall be designed to limit the water flow to a nonerosive velocity.
  - (6) Temporary soil measures shall be removed after permanent soil measures have been implemented and stabilized. All developments and earth change areas shall be stabilized with permanent soil measures.

- (3) Adequate provision and agreements providing for maintenance and inspection of stormwater management facilities shall be made, and the documents recorded instrument, including an access easement, approved by the township.
- (4) Accelerated soil erosion shall be managed off-site as well as on-site.
- (b) Performance guarantees, inspections, maintenance, and enforcement. All provisions for performance guarantees shall apply to off-site stormwater conveyance and detention.

(Ord. No. C-644, § 4.08, 10-25-04)

#### Sec. 24-215. - Submittal, review and approval procedures requirements.

- (a) Four (4) copies of construction drawings and engineering specifications shall be submitted to the engineering department and environmental department following stormwater management plan approval but prior to the issuance of any construction or building permits.
- (b) Construction drawings and engineering specifications shall be subject to review and approval by the township engineer and environmental director, and a copy shall be transmitted to the Oakland County drain commissioner and to the wetlands board if applicable.
- (c) A construction permit shall not be issued unless the detailed engineering drawings and specifications meet the standards of this article, applicable township ordinances, engineering standards and practices, and any applicable requirements of other government agencies.

(Ord. No. C-644, § 5.01, 10-25-04)

#### **DIVISION 3. - ENGINEERED SITE GRADING PLANS**

Sec. 24-216. - Contents of engineered site grading plans. Sec. 24-217. - Review procedures and standards.

#### Sec. 24-216. - Contents of engineered site grading plans.

- (a) Four (4) copies of engineered site grading plans for single-family homes and private road developments shall be submitted by the proprietor to the engineering department and environmental department; provided, however, if and to the extent the same information has been previously submitted as required under a separate ordinance requirement, then, the applicant shall provide copies of the previous submission, together with new information required hereunder which has not been previously submitted.
- (b) The engineered site grading plan shall include the following site information, subject to the exception specified in subparagraph (a), above:
  - The legal property description and a north indicator.
  - (2) Existing grades on a fifty-foot grid to a minimum of fifty (50) feet beyond the site property line and sufficient intermediate grades to determine such things as ditches, swales, adjacent pavement, buildings and other pertinent features.

#### Sec. 24-219. - Performance guarantees.

The proprietor shall post an acceptable form of an irrevocable letter of credit, cash escrow or certified check for purposes of providing performance security. The performance guarantee shall be an amount determined by the township engineer after recommendation by the environmental director, equal to one and one-half (1½) times the amount required to complete stormwater management and facilities as specified in the stormwater management plan or engineered site grading plan, as applicable, together with reasonable administrative expenses. Required performance guarantees shall be provided to the township after stormwater management plan or engineered site grading plan approval but prior to the initiation of any earth change.

After determination by the township engineer and environmental director for site plans, or by the Oakland County drain commissioner for site condominiums and subdivisions, that all facilities are completed in compliance with the approved plan, the posted performance guarantee remaining shall be released.

(Ord. No. C-644, § 7.02, 10-25-04)

#### Sec. 24-220. - Stormwater management easements.

- (a) Necessity of easements. Stormwater management easements shall be provided in a form required by the applicable approving body of the township and the township attorney, and recorded as directed as part of the approval of the applicable township body to assure:
  - (1) Access for inspections;
  - (2) Access to stormwater management facilities for maintenance purposes; and
  - (3) Preservation of primary and secondary drainageways which are needed to serve stormwater management needs of other properties.
- (b) Easements for off-site stormwater management. The proprietor shall obtain easements assuring access to all areas used for off-site stormwater management, including wetlands.
- (c) Recording of easements. Easements shall be recorded with the Oakland County register of deeds according to Oakland County requirements.
- (d) Recording prior to building permit issuance. The proprietor must provide the township clerk with evidence of the recording of the easement prior to final subdivision plat or condominium approval or other applicable final construction approval.

(Ord. No. C-644, § 7.03, 10-25-04)

#### Sec. 24-221. - Maintenance agreement.

(a) Purpose of maintenance agreement. The purpose of the maintenance agreement is to provide the means and assurance that maintenance of stormwater management and facilities shall be undertaken.

- (1) Administrative review and approval for proposed restorative maintenance of pre-existing storage and/or sedimentation basin facilities shall be authorized where all of the following criteria are met:
  - a. There are detailed plans and specifications for the facility approved by and on file with the township.
  - b. The proposed restorative maintenance involves the removal of materials for the reestablishment of contours in the approved plans and specifications on file with the township and/or the repair or replacement of pipes, inlets and/or outlet structures, and shall not involve an alteration of the facility from the previously approved plans and specifications except to allow an improvement of pipe size or inlet/outlet structure intended to enhance performance of the facility.
  - c. Any and all materials to be removed as part of such maintenance shall be removed from the site.
  - d. The township engineer has no reason to believe that the proposed restorative maintenance will result in a facility that will not function as intended, i.e., no reason to believe that alterations of the facility (other than as authorized in subparagraph b., above) shall be required in order to achieve a facility that will function in the intended manner.
  - e. No part of the proposed restoration and/or maintenance is requested to be performed in a natural wetland (i.e., this criterion shall not apply to a wetland created as a result of the establishment of a constructed facility).
- (2) An application for such maintenance shall be filed with the township engineer and township environmental director, and shall include a certified survey prepared by a land surveyor or civil engineer registered with the state of Michigan showing and describing all of the following:
  - a. The existing conditions of the facility;
  - b. A restoration plan, including the scope and specifications of work to be performed, demonstrating the requirements of this section 24-222 and also demonstrating that there shall be a minimum disturbance of the area.
  - c. A restoration and revegetation plan.
  - d. A proposed bond securing the completion of the restoration and revegetation plan.
- (3) The maintenance shall be performed using best management practices.
- (4) The application shall be accompanied by the fee in the amount established by resolution of the township board.
- (5) An application meeting the requirements of this subsection (a) may be reviewed and approved by the township engineer and township environmental director.

For appeals, the application shall be submitted within fourteen (14) calendar days of the decision being appealed, and shall specify all grounds on the basis of which the appeal is being sought.

(Ord. No. C-644, § 8.02, 10-25-04)

#### Sec. 24-225. - Hearing required.

Variances from the terms of this article shall not be granted unless and until a hearing shall be held by township board determines that the applicant has demonstrated all of the requirements of <u>section</u> <u>24-224</u>. Appeals shall be determined based upon the records and files of the township, and, an appeal shall be granted, following a hearing, only if the applicant has demonstrated that the administrative decision being appealed represented an abuse of discretion, or was otherwise unlawful; provided, however, if the township board determines that the files and records of the township are not adequate for determining the appeal, the township board shall then specify the limited procedure to be utilized to supplement the record for appeal purposes.

(Ord. No. C-644, § 8.03, 10-25-04)

#### Sec. 24-226. - Conditions for approval.

The township board may prescribe appropriate conditions and safeguards consistent with the purposes and standards of this article in connection with the grant of a variance or appeal.

(Ord. No. C-644, § 8.04, 10-25-04)

#### DIVISION 6. - ENFORCEMENT; EFFECT; AND APPLICABILITY

Sec. 24-227. - Enforcement. Sec. 24-228. - Effect of approval in remedies. Sec. 24-229. - Applicability to pending projects.

#### Sec. 24-227. - Enforcement.

- (a) Any person found to be in violation of any of the provisions of this article shall be responsible for a municipal civil infraction.
- (b) Penalties for municipal civil infraction. The following civil fines shall apply in the event of a determination of responsibility for a municipal civil infraction under this article.
  - (1) First offense. A civil fine for a first offense violation shall be in an amount of one thousand dollars (\$1,000.00), plus costs and other sanctions, for each offense.
  - (2) Repeat offense. A civil fine shall be in an amount of two thousand dollars (\$2,000.00), plus costs and other sanctions, for a second or subsequent determination that a person is responsible for violation of this article within any three (3) year period.
- (c) In addition to ordering the person determined to be responsible for a municipal civil infraction to pay a civil fine, costs, damages, and expenses, the judge or magistrate shall be authorized to issue any judgment, writ or order necessary to enforce, or enjoin violation of, this article, and require restoration or other appropriate action under the circumstances.
- (d) Continuing offense. Each act of violation, and on each day upon which any such violation shall occur, shall constitute a separate offense.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

## Appendix Z

From West Bloomfield Municipal Code of Ordinances

Chapter 8– Buildings and Building Regulations

## CODE OF ORDINANCES Chapter 8 - BUILDINGS AND BUILDING REGULATIONS ARTICLE XIII. - GRADING AND DRAINAGE [25]

<sup>(25)</sup> Editor's note — Ord. No. C-435-B, §§ 1, 2, adopted Mar. 3, 2008, amended article XIII in its entirety to read as herein set out. Former article XIII, §§ 8-305—8-325, pertained to grading and soil erosion and sedimentation control and derived from Ord. No. C-435, § 1, adopted Aug. 15, 1994; and Ord. No. C-435-A, § 1, adopted Dec. 12, 1994.

Sec. 8-302. - Statement of purpose.

Sec. 8-303. - Definitions.

Sec. 8-304. - General provisions.

Sec. 8-305. - Exceptions; acts not requiring prior approval.

Sec. 8-306. - Right of entry.

Sec. 8-307. - Denial or revocation of permits.

Sec. 8-308. - Penalties.

Sec. 8-309. - Responsibilities of permittee.

Sec. 8-310. - Grading and drainage permit and plans required.

Sec. 8-311. - Grading and drainage.

Sec. 8-312. - Specifications of grading and drainage plans.

Sec. 8-313. - Foundation certificate.

Sec. 8-314. - Final grade approval.

Sec. 8-315. - Fees.

Sec. 8-316. - Notice of noncompliance.

Secs. 8-317 - 8-325. - Reserved.

Sec. 8-302. Statement of purpose.

The purpose of this article is to ensure that modifications of grades do not result in adverse impact upon properties in and around the township, including, without limitation; drainage problems, building elevation disparities and adverse impacts upon natural resources.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-303. Definitions.

Authorized public agency (APA) means a state, local, or county agency designated pursuant to section 11 of Act 347 of 1972, MCL 282.111, to enforce soil erosion and sedimentation control requirements with regard to land uses undertaken by it, which shall include the development services department.

*Berm* means any earthen structure which is created for the purpose of diverting overland water flow or runoff, is a component of a landscaping plan, or provides privacy by screening, or a combination of the above.

Building contractor means the person holding the general contract for the construction of a building or structure. In the event no such person is employed by an owner, then in such cases the owner of the property affected shall be the building contractor.

Building department means the building department of the Charter Township of West Bloomfield.

Development services department means the development services department of the Charter Township of West Bloomfield which shall include the engineering and environmental department of the Charter Township of West Bloomfield.

Development services director means the director of the development services department.

*Earth change* means a man-made change in the natural cover or topography of the land, including the movement or placement of soil from excavation, construction or land balancing, and cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the state.

*Erosion* means the process by which the ground surface, or soil moved or placed on the ground surface, is worn by action of wind, water, gravity or a combination thereof.

*Excavation* means any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced, or relocated, and also included shall be the conditions resulting therefrom.

*Floodplain* means the relatively flat area or lowlands adjoining the channel of a watercourse or a body of standing water which has been or may be covered by a 100-year floodwater.

Grading means any stripping, excavating, filling or stockpiling of soils or rock or any combination thereof.

Grading permit means a permit issued by the development services department to alter the topography of a lot or parcel of property.

*Grubbing* means to disturb the soil by removing the vegetative cover.

*Highly erodible soils* means those soils which are particularly susceptible to displacement by water or wind, due to either composition, disturbance, or slope.

Landscape contractor means a person, whether licensed or not, who performs any soil movement or placement, excavation, earth removal, planting, or landscape construction or maintenance work for hire.

Major development means any use or development of a parcel requiring a site plan, any land proposed for platting, and any development projects of federal, state, and/or local agencies.

*Minor development* means the development of a single-family residential lot or development on any parcel not subject to site plan approval under provisions of the township zoning ordinance.

Movement or placement means the depositing of any material, particularly soil, which is transported onto a parcel or relocated on a parcel.

Mulching means the application of plant or other suitable material to surface of the soil to conserve moisture, reduce soil runoff and erosion, and aid in establishing vegetation cover.

Natural ground surface means the existing surface contours and its vegetative cover or that established in previous uses.

Nonerosive velocity means the rate of flow of stormwater runoff which does not erode soils, measured in feet per second.

Owner means the fee title holder, land contract vendee, leasee, tenant of the property and the persons, individually and collectively, entitled to possession of a particular parcel.

Parcel means a tract, lot or plot of land, either platted or unplatted.

Permanent soil erosion control measures means those control measures which are installed or constructed to control soil erosion and which are maintained after completion of the project, including diversion berms or ditches, grasses waterways, or swales, vegetative cover, check dams, retaining walls, etc.

Permit means a permit issued to authorize work to be performed under the provisions of this article.

Person means any natural persons, firm, corporation, partnership, or association.

Runoff means that part of the precipitation which does not percolate into the ground or is not absorbed by vegetation and flows off the land including runoff from snow or ice melt.

Sediment means solid particulate matter, mineral, or organic, that has been deposited in or by water, is in suspension in water is being transported or has been removed from its parcel of origin by the process of soil erosion.

Sedimentation means the deposition of soil.

Service lines mean lines running from distribution or transmission lines or mains for the purpose of directly or indirectly servicing a single or multiple residences or a commercial or industrial building or plant.

Soil means topsoil, subsoil, gravel, rock, stone, earth, or any other mineral of a like nature.

Soil erosion control measures means a structure, facility, barrier, berm, vegetative cover, basin, or other installation designed to control accelerated soil erosion.

Soil erosion control plan means a map and written information for a development or earth change which describes the way in which stormwater runoff and soil erosion will be controlled.

Stabilization means the proper placement, grading, and covering of soil or rock to ensure the resistance to erosion, sliding, or other earth movement.

Staging means dividing a construction site on a parcel into sub-areas, in each which sub-area grading and stabilization are completed before proceeding to the next sub-area.

Stockpiling means the temporary storage of materials, particularly soils, on a parcel.

Stripping means any activity which removes or significantly disturbs the vegetative surface cover including clearing and grubbing operations.

Structure means anything constructed or erected, the use of which required location on the ground or attachment to something having location on the ground.

Swale means a low-lying area with gradual slopes which transports stormwater, either on-site or off-site.

Temporary soil erosion control measures means the interim control measures which are installed or constructed for the control of soil erosion and/or sedimentation until permanent soil erosion control is affected and shall include mulching, silt fencing, straw bales, filter berms, sediment basins or traps, etc.

Township means the Charter Township of West Bloomfield.

Vegetative cover means grasses, shrubs, trees, and other vegetation which hold and stabilize soil.

Watercourse means any natural or man-made waterway or other body of water having well defined banks, a bed, and evidence of the continued occurrence of water. Watercourses include ditches, storm drains, rivers, creeks, streams, lakes, and ponds.

Wetlands means land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh.

(Ord. No. C-435-B, § 1, 3-3-08)

#### Sec. 8-304. General provisions.

It shall be unlawful for any person, owner, or occupant to engage in any earth change activity unless and until the owner of the parcel has applied for and received a grading and drainage permit, where applicable.

- Approval shall be obtained through an application process for permits required by this article.
- (2) Applications for permits required by this article shall be submitted to the development services department on application forms available from the township at no charge.
- (3) This article shall apply and be in force with regard to all parcels, including public and private lands, within the township.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-305. Exceptions; acts not requiring prior approval.

- (a) No permit shall be required for the following activities:
  - (1) Plowing and tilling of land in an agricultural land use.
  - (2) Landscaping, gardening, or other minor activity which does not change the natural/existing drainage pattern of the land or parcel.
  - (3) Soil test borings to determine soil type and/or stability.
  - (4) Percolation test efforts.
  - (5) Normal maintenance procedures such as earth or gravel road leveling and minor repairs or alterations to right-of-ways not affecting a wetland or watercourse or natural/existing drainage pattern.
  - (6) Pole installation, service lines, and other earth changes of a minor nature, normal maintenance, and emergency repairs.
  - (7) Movement or placement of soil which involves less than one hundred (100) cubic yards of soil, provided such a movement or placement does not impede drainage, unreasonably alter the topography in comparison to adjacent properties, is being done on a parcel with an approved site plan, does not cause soil erosion or sedimentation to occur, and is not in violation of other provisions of the West Bloomfield Code of Ordinances.
  - (8) Building additions or the assembly of structures less than five hundred (500) total square feet in area.
  - (9) Stockpiling of soil and such similar materials for a retail or wholesale dealer of landscaping materials at the site of business where soil erosion or sedimentation does not result.

- (10) Stockpiling of topsoil or other landscaping materials on a parcel which is to be used on that parcel for the purpose of landscaping or otherwise improving soil conditions for the growth of vegetation on a parcel with an approved site plan, and which does not cause soil erosion or sedimentation to occur.
- (11) Logging and mining activities determined in advance by the development services department to be bona fide operations.
- (b) Exemption provided in this section shall not be constructed as exemption from enforcement procedures pursuant to this article for earth changes that produce significant erosion, hazard or sediment problem or which are otherwise regulated under this article. If a dispute arises as to whether an erosion, hazard, or sediment problem is significant, the development services director or his/her designee shall resolve the dispute, in his/her discretion, based upon the specific facts and circumstances.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-306. Right of entry.

Permits are issued on the condition that the township's inspector shall have the right of entry upon the site of an earth change activity at all reasonable times to inspect the activity for compliance with the approved plans and permits, and to investigate any complaints about the work.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-307. Denial or revocation of permits.

Grading and drainage permits shall not be issued where one (1) or more of the following exists:

- (1) The proposed work would cause hazards to public safety and welfare.
- (2) The work as proposed by the applicant will damage any public or private property, or interfere with any existing drainage course in such a manner as to cause damage to any adjacent property, or result in the deposition of soil, sediment, or debris on any public way or into any waterway, or create an unreasonable hazard to persons or property.
- (3) The grading and drainage permit application is not deemed complete.
- (4) The land area for which the soil movement or placement is proposed is within a 100-year floodplain, wetland, watercourse, natural feature, woodland, fringe area, or other regulated area which requires additional permits from other agencies or the township until such permits are issued by the respective regulatory agency(ies).

(Ord. No. C-435-B, § 1, 3-3-08)

#### Sec. 8-308. Penalties.

- (a) Except as otherwise provided, any person, firm, or corporation who shall violate any provision of this article shall be punished as provided in section 1-10 of this Code.
- (b) Upon discovery of violations of a valid permit or other conditions of this article, the permittee shall be notified, in writing of all violations, corrective actions necessary to come into compliance and the deadline for compliance.
- (c) In case of serious concern and/or consequence, a stop work order will be immediately placed on the property, prohibiting all activity on the site except work necessary to correct the violations of the permit and this article.
- (d) Inspections made to determine compliance with these written orders will be assessed the same reinspection fees outlined in the fee schedule adopted by the township board.
- (Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-309. Responsibilities of permittee.

During all development operations, the permittee shall be responsible for the following:

- (1) The prevention of damage to any public utility or service within the limits of movement or placement of soil along any routes of travel equipment.
- (2) The prevention of damage to adjacent property. No person shall cause an earth change activity or the movement or placement of soil so close to the property line of a parcel as to endanger any adjoining public street, sidewalk, alley, or any public or private property without protecting such property from soil erosion and sedimentation, flooding or other damage which might result.
- (3) Carrying out the proposed work in accordance with the approved plans and in compliance with all the requirements of the permits and this article.
- (4) The prompt removal of all soil, miscellaneous debris, and other materials spilled, applied, dumped or otherwise deposited on public streets, highways, sidewalks, or other public thoroughfare during transit to and from the construction site where such spillage constitutes a public nuisance or hazard.
- (5) Ensuring that any sediment caused by accelerated erosion shall be removed from runoff water before it leaves the site of the earth change activity.
- (6) Maintenance and clean out of all sediment basins, traps, or other soil collection facilities as needed to ensure their proper function.
- (7) Ensuring that a copy of the permit is posted and made available for inspection at the site of the earth change.

- (8) Installation of permanent soil erosion control and grade stabilization measures within five (5) days of final grade approval, unless such work is not possible due to seasonal weather conditions.
- (9) When seasonal weather conditions do not permit the installation of permanent soil erosion control and grade stabilization measures, a subsequent thirty-day notice to install the appropriate control measures will be mailed to the permittee when weather conditions become adequate enough to permit the installation.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-310. Grading and drainage permit and plans required.

- (a) Application for a grading and drainage permit and accompanying plans, as required by this article, shall be submitted to the development services department and approved by the development services department prior to any construction, earth change activity, or other movement or placement of soil for the following improvements:
  - (1) New single-family construction or modification of an existing structure of more than five hundred (500) total square feet on the grade floor.
  - (2) Multiple, commercial, industrial or condominium construction.
  - (3) Transportation facilities, including all public and private streets, highways, railroads, airports, common carrier pipelines and mass transit facilities.
  - (4) Mass grading, of more than five hundred (500) square feet.
  - (5) Earth change activity involving one hundred (100) cubic yards or more of material.
  - (6) Grubbing.
  - (7) Stripping of topsoil.
  - (8) Service facilities, including, but not limited to, shopping centers and schools.
  - (9) Recreational facilities, including but not limited to; parks, campgrounds or trails.
  - (10) Utilities, including but not limited to; underground pipelines or cables.
  - (11) Oil, gas and mineral wells which are not exempt by law from permit requirements.
  - (12) Water impoundments and waterway construction or improvements.
  - (13) Construction of inground swimming pools.

- (b) For all improvements listed in subsection (a) above, a building permit shall not be issued until a grading and drainage plan has been submitted to and approved by the development services department.
  - (c) Permits shall be approved, disapproved, or required modifications within thirty (30) calendar days of submission of a complete application and plan.
  - (d) In all new developments where public utilities and other underground improvements are proposed, a master grading and drainage plan (i.e. a grading and drainage plan for the project which includes the building site in question as well as other building sites and improvements) shall be submitted along with the engineering drawings for the project. These drawings must be reviewed and approved by the development services department prior to issuance of a grading and drainage permit on the site.
  - (e) All earth change activities and/or property disturbance regulated under this section shall be conformance with the approved grading and drainage plan, unless deviations have been expressly approved by the development services department.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-311. Grading and drainage.

The following general grading and drainage requirements shall be applied in the design of the site plan for any new developments:

- (1) Drainage shall be adequately discharged off-site with proper retention.
- (2) No upstream drainage is restricted.
- (3) The development portion of the site in general shall be drained without standing water unless specifically designed for retention and/or detention.
- (4) Elevations representing the brick ledge, finished grade, and all finish floor grade shall be indicated.
- (5) The slopes of any proposed soil movement or placement shall meet abutting property line elevations, provided that a deviation to this requirement may be granted by the development services director or his/her designee in cases of unique characteristics on the site which would require special treatment. Any approval of the deviation shall also provide special treatment to be applied.
- (6) All sump pumps that are not directly connected to an underground storm drainage system must be discharged a minimum of ten (10) feet away from the foundation to a township approved drainage swale, rain garden or other suitable drainage conveyance system.

- (7) Proposed slope and elevation of soil which is moved or placed adjacent to lot corners shall be equal to or lower than existing ground elevations. If the proposed surface elevations must be higher than existing ground surface elevations at adjacent lot corners, on-site grading to contain all surface water may be required, as determined by the development services director or his/her designee.
- (8) The proposed side yard swale elevation between all houses or structures must be a minimum of one and one-half (1<sup>1</sup>/<sub>2</sub>) feet below the lower adjacent building or structure grade.
- (9) Soil shall not be placed or moved on a lot so as to restrict or impede existing surface water drainage across such lots from adjacent properties. When lots have rear-to-front drainage, soil shall not be placed or moved so as to restrict or impede existing surface water drainage swales that should exist around each building or structure.
- (10) For attached side entry garages, the minimum width of driveways shall be twentytwo (22) feet, measured at the face of the garage. All driveways shall be a minimum of two (2) feet from the side property line to allow for a drainage swale. Requirement for a two-foot wide swale may be modified or waived by the development service director or his/her designee if a functional alternative of storm drainage is provided.
- (11) Driveway grade requirements are as follows:

Side entrance slab/pavement area: Minimum two (2) percent slope, maximum four (4) percent slope.

Slope down to road: Minimum two (2) percent slope, maximum ten (10) percent slope.

Reverse drive slope: Minimum two (2) percent slope, maximum seven (7) percent slope.

Minimum and maximum slopes may be modified or waived by the development services director or his/her designee if suitable runoff mitigation systems are designed and provided.

- (12) The following grading requirements shall apply to berms:
  - a. No berms shall be placed over any underground public watermain, sanitary sewer, or storm drain, or within designated easements for such facilities. No berm shall be constructed over such easements prior to, or subsequent to, final grade approval.
  - b. Violation of this section shall waive the township's responsibility for replacement of the existing grade during and after utility maintenance. In the event the township must service a utility where a berm has been constructed in violation of this ground elevation prior to construction of the berm.

Following removal of the berm during service, no substantial landscaping shall be placed over a water main, sanitary sewer or storm drain. Such shall be seeded and mulched.

- (13) A walkout basement not otherwise regulated by the building department under the Michigan Building Code, as amended, for ingress/egress windows or doors below grade shall be allowed if:
  - a. The proposed grade extending from the walkout basement is designed to drain to the rear or side yard swale and will not result in standing water conditions and indicates no adverse impact on adjacent properties. The grade located ten (10) feet from a building shall be no less than one-half (½) foot below the proposed finish ground elevation of the building. At no time shall the proposed grade extending from a walkout basement be lower than the surrounding grades within the lot such that it will result in a standing water condition.
  - For pre-existing buildings, where township consideration is given to allow a walkout basement to remain, where the conditions of subsection (12)a. cannot be met, approval will be subject to:
    - Construction of an enclosed storm sewer system meeting the minimum requirements of the section 24-180 to convey surface drainage away from the building and adjacent structures shall be required. The design of such system shall be detailed on a grading and drainage plan reviewed and approved by the development services department. At no time shall surface drainage be allowed into a building's footing drain collection system.
    - The grading and drainage plan indicates no adverse impact on adjacent properties.
    - Provide the township with a hold harmless agreement acceptable in form to the township attorney.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-312. Specifications of grading and drainage plans.

- (a) Grading and drainage plans shall be prepared by a licensed, registered civil engineer or licensed, registered surveyor, signed and sealed, and shall conform with the following minimum requirements, with the final sufficiency of such plan to be determined by the development services department. No hand drawn plans shall be accepted:
  - A scale of not less than one (1) inch equals thirty (30) feet. Scales of one (1) inch equals twenty (20) feet are preferred.
  - (2) Date, north arrow and scale.

- (3) The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties.
- (4) The location of all existing and proposed structures on the subject property and all existing structures within fifty (50) feet of the subject property.
- (5) The location of all existing and proposed drives, parking area and easements on the property.
- (6) The location and widths of right-of-way of all abutting streets and any driveway locations across abutting public streets.
- (7) The location of freestanding signs and lighting structures.
- (8) The proposed location and dimensions of any pedestrian sidewalk or bike path.
- (9) Existing ground elevations on a twenty-five-foot by twenty-five-foot grid or by contours at two-foot intervals or other such topographic information satisfactory to the development services department. Include existing ground elevations on adjacent land within fifty (50) feet of the property and existing building, drive, and parking lot elevations, and elevations of any adjacent unusual surface conditions.
- (10) The name, address and telephone number of the engineer responsible for the preparation of the grading and soil erosion control plans.
- (11) Bench mark description and location used for the development, based on United States Geological Survey datum(available at the development services department).
- (12) Proposed brick ledge and walkout grades to be stated in tenths of a foot.
- (13) All zoning setbacks shown and properly labeled.
- (14) All official township wetland, watercourses, 100-year floodplains, and woodlands as accurately depicted on the official township maps, including buffer zones, all which are subject to field inspection after permit application, and all other natural features on the property, including tree lines, etc.
- (15) The proposed method of rear yard drainage.
- (16) All existing and proposed ground grades in tenths of a foot.
- (17) General direction of the rear yard drainage and swales indicated with arrows.
- (18) Additional grades shown under special conditions required by the development services department.

- (19) The location of existing and/or proposed buildings or structures on the property clearly shown, including the dimensions to front, side, and rear property lines. The dimensions from each proposed building or structure to any adjoining building or structure on or within fifty (50) feet of any proposed buildings must be shown.
- (20) Such other information concerning the lot or adjoining lots as may be essential for determining whether the provisions of this article are being observed.
- (21) The location of all utility leads (water, sanitary, sump pump).
- (22) All proposed retaining walls shall be shown on the grading and soil erosion plan. Calculations by a registered civil engineer shall accompany all retaining walls of thirty (30) inches or greater in height.
- (23) Retaining walls that are forty-two (42) inches or greater in height and are adjacent to driveways, walkways, patios and other such structures shall include a safety railing that is at least thirty-six (36) inches in height with a four-inch maximum width between spindles per Michigan Building Code regulations. All other retaining walls that do not have the above mentioned conditions may not require a safety rail unless deemed appropriate.
- (24) The location of all temporary soil erosion control measures to be installed and maintained until installation of permanent soil erosion control measures at the street, and at all other property lines with an elevation below proposed or existing grades.
- (25) The location of a temporary gravel access drive onto the lot.
- (26) A description of the soils on the subject property.
- (27) Design of any rain garden or bio-swale proposed for the collection of surface drainage. Design should include a cross-section and landscape and planting details.
- (28) If a master grading plan exists for the site, then the proposed grades and drainage patterns must be consistent with the grades and drainage patterns shown on the master grading plan.
- (b) For all approved plats and site plans, the following additional requirements shall apply:
  - (1) A timing schedule indicating the anticipated starting and completion dates of the installation of roads and utilities, and the time of exposure of each area prior to completion of effective erosion and sediment control measures.
  - (2) A certified statement of the quantity of excavation and fill involved.

- (3) Plans of all drainage provisions, retaining walls, cribbing, planting, erosion control measures, or other temporary or permanent soil erosion control measures to be constructed in connection with, or as 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.
- (4) Areas of high erosion potential, due either to highly erodible soils or subsoils or steep slopes (greater than a thirty (30) percent slope), and the precautions to be undertaken to protect these areas.
- (5) A program proposal for the maintenance of all erosion and sediment control facilities both during and after construction. Those which are to remain after project completion must include a designation of the party responsible to carry out that maintenance.
- (6) Other information or data as may be required by the township which shall include, but not limited to; data regarding the nature, distribution and supporting ability of existing soils and rock on the site.
- (7) The grading and drainage patterns of the site parcel must be consistent with the stormwater management plans developed, and approved, pursuant to chapter 24, article 6, stormwater management.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-313. Foundation certificate.

After placement of the foundation and backfilling, a written certification from a licensed, registered surveyor or engineer shall be submitted to the development services department. This certification shall state that the proposed brick ledge elevations and horizontal placement of the foundation are properly set and conform to the approved grading plans. No rough framing shall be placed without receipt and approval of such certification by the development services department. In the event of a failure to comply with this provision, removal or modification of the structure may be required as determined by the development services department based upon a review of all applicable circumstances, including, without limitation; the cause and/or impact of the lack of conformance with the plans.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-314. Final grade approval.

(a) As-built plans shall be submitted to the development services department at least seventy-two (72) hours prior to request for a final grading inspection, indicating all brick ledge elevations, setbacks, lot corner elevations, drainage swales and berms, and marked "AS-BUILT". The as-built plans shall be inspected by the development services department before scheduling a final grade inspection.

- (b) Upon completion of the work in accordance with the approved grading and drainage plan, the owner or developer shall request a final grade approval of the site. Upon receipt of this request, the development services department shall schedule a final grading inspection. If all work has been completed in accordance with the approved plan, the development services department shall notify the building department. A certificate of occupancy shall not be issued without this approval, unless final grading cannot be done due to seasonal weather conditions. In such cases, a temporary certificate of occupancy may be issued for up to six (6) months, if determined appropriate by the building department. If all work has not been completed in accordance with the approved plan, the township shall provide notice of revisions or site modifications which must be made as a condition to approval and an escrow in an amount equal to all remaining work must be submitted to the township.
- (c) No significant change to the grade and drainage pattern shall be made after receiving final grade approval, unless specifically authorized by the development services department. Violation of this provision is subject to penalties described in section 1-10 of this Code.
- (d) No final grading will be approved if temporary soil erosion measures are not in place unless permanent stabilization is provided.
- (e) The township reserves the right to hire an independent surveyor to perform foundation certification and/or final grade as-built when deemed appropriate.

(Ord. No. C-435-B, § 1, 3-3-08)

#### Sec. 8-315. Fees.

- (a) For all residential construction, a nonrefundable grading and drainage permit fee shall be submitted with four (4) sets of grading and drainage plans when applying for a grading and drainage permit and for each substantial revision. Grading and drainage permit fees shall be adopted by resolution of the township board.
- (b) Soil erosion control and grading and drainage inspections will be done as needed at no cost to the applicant. However, failure to maintain, repair, install, or otherwise provide for adequate soil erosion protection measures to remain on the site or to grade the site as approved which results in additional inspections will result in an additional inspection fee for each additional inspection necessary to insure that adequate soil erosion, sedimentation and grade protection measures remain on the site.
- (c) All reinspection fees will be due and payable thirty (30) days after billing, or if a certificate of occupancy is to be issued, prior to the issuance of the certificate of occupancy.

(d) Permit fees for all residential construction, reinspection plats, site plans, commercial, industrial, and all other nonresidential construction projects shall be set by duly published resolution of the township board.

(Ord. No. C-435-B, § 1, 3-3-08)

Sec. 8-316. Notice of noncompliance.

If the township determines that a parcel of land in violation of this article, it may seek to enforce this article by notifying the person who owns the land, by certified mail, with return receipt requested, of its determination. The notice shall contain a description of specific grading and drainage measures which, if implemented by the landowner, would bring the landowner into compliance with this article.

(Ord. No. C-435-B, § 1, 3-3-08)

Secs. 8-317-8-325. Reserved.
West Bloomfield, Michigan, Code of Ordinances >> - CODE OF ORDINANCES >> Chapter 8 -BUILDINGS AND BUILDING REGULATIONS >> ARTICLE XV. - SOIL EROSION AND SEDIMENTATION CONTROL >> DIVISION 1. - GENERALLY >>

#### **DIVISION 1. - GENERALLY**

Sec. 8-360. - Authority. Sec. 8-361. - Statement of purpose and objective. Sec. 8-362. - Definitions. Sec. 8-364. - Adoption of control rules. Sec. 8-366. - Design. Sec. 8-366. - Design. Sec. 8-366. - Design. Sec. 8-366. - Plan requirements and control plan requirements generally. Sec. 8-368. - Plan requirements. Sec. 8-369. - Review of plans. Sec. 8-370. - Inspections. Sec. 8-371. - Performance guarantee. Sec. 8-372. - Preconstruction meetings. Sec. 8-374. - Construction as to nuisances.

## Sec. 8-360. - Authority.

This article is adopted under the authority granted by Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994, P.A. 451, as amended, MCL 324.9101, et seq., as amended, and by virtue of the power vested in the township under existing statutes including the Charter Township Act, P.A. 359 of 1947, MCL 42.1 et seq., as amended for the purpose of controlling erosion and to protect the waters of the township and state from sedimentation, along with penalties for the violation of such regulations. The provisions of this article shall be void to the extent that it makes lawful that which is unlawful under the aforementioned statutes in this section. In cases where this article is more restrictive than the aforementioned statutes in this section and the Rules promulgated pursuant to Part 91, the township shall notify a person receiving a permit under this article that the article is more restrictive. This article incorporates by reference the Rules promulgated pursuant to Part 91 to the extent that this article is not more restrictive. This section and any revisions to it are subject to approval by the appropriate agency.

## (Ord. No. C-721, § 1, 3-3-08)

# Sec. 8-361. - Statement of purpose and objective.

(a) The primary purpose of Part 91 of the Natural Resources and Environmental Protection Act, MCL 324.9101, et. seq., as amended, is to achieve effective and reasonable control of accelerated soil erosion by requiring persons who own or possess land on which an earth change has been made that may result in or contribute to soil erosion or sedimentation of the waters of the state and wetlands to implement and maintain soil erosion and sedimentation control measures that will effectively reduce soil erosion or sedimentation from the land on which the earth change has been made and require compliance with applicable best management practices, in particular those relating to sedimentation control structures.

(b) This is to be accomplished by using the best practical combination of procedures, techniques and people to prevent sediment, the product of accelerated soil erosion, from leaving the construction site and reaching the waters of the state and wetlands. This is to be accomplished by the enforcement of soil erosion and sediment control programs by the MEA. The primary objectives of the MEA programs and this article are as follows:

 To protect lakes, streams, rivers, wetlands and watercourses from unnecessary degradation due to soil erosion and sedimentation;

- (2) To preserve high quality water essential to the health of our natural environment;
- (3) To protect vital land resources from soil erosion and sedimentation; and
- (4) To protect the public health, safety and welfare of the people and land and to prevent flooding and damage to infrastructure and property as a result of movement of soils, soil erosion

(Ord. No. C-721, § 1, 3-3-08)

Sec. 8-362. - Definitions.

and sedimentation.

The terms defined in Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Protection Act, MCL 324.9101 et seq., as amended and the terms defined in the administrative rules promulgated thereunder, have the same meanings when used in this article unless the meanings ascribed to them in this section differ. 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 indicated a different meaning:

Accelerated soil erosion means the increased loss of the land surface that occurs as a result of human activities.

Acceptable operating erosion and sediment control program means the activities of a county or local enforcing agency or authorized public agency that are conducted in accordance with these rules and Part 91 regarding staff training, developing and reviewing plans, issuing permits, conducting inspections, and initiating compliance and enforcement actions to effectively minimize erosion and offsite sedimentation.

Agricultural practices means all land farming operations except the plowing or tilling of land for the purpose of crop production or the harvesting of crops.

Authorized public agency means a state agency or an agency of a local unit of government authorized under Part 91, section 9110, to implement soil erosion and sedimentation control procedures with regard to earth changes taken by it.

Berm means any earthen structure which is created for the purpose of diverting overland water flow or runoff, is a component of a landscaping plan or provided privacy by screening, or a combination of the above.

Best management practices (BMP) means any structural, vegetative or managerial practice used to treat, prevent or reduce water pollution approved by the development services department. Such practices include temporary seeding on exposed soils, detention and retention basins, for stormwater control, and scheduling the implementation of all BMP's to ensure their effectiveness.

Conservation district means a conservation district authorized under Part 91 of the Natural Resources and Environmental Protection Act.

Consultant means either of the following:

(1) An individual who has a current certificate of training under section 9123 of Part 91; or

(2) A person who employs one (1) or more individuals who have current certificates of training under section 9123 of Part 91.

Critical areas means any area difficult to stabilize with vegetation once the area is graded and the existing vegetation removed. Typical critical areas would be infertile subsoils, droughty soils, areas of concentrated flow, heavy traffic areas, and long or steep slopes.

Designated agent means a person who has written authorization from the landowner to sign the application and secure a permit in the landowner's name.

Department means the department of environmental quality.

Development services department means the development services department of West Bloomfield which shall include the engineering and environmental departments of the township.

Development services director means the director of the development services department.

Earth change means a human-made change in the natural cover to topography of land, including cut and fill activities which may result in or contribute to soil erosion or sedimentation of the waters of the state. Earth change does not include the practice of plowing and tilling soil for the purpose of crop production.

Excavation means any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced or relocated and the conditions resulting thereof.

Floodplain means the relatively flat area or lowlands adjoining the channel of a watercourse or a body of standing water which has been or may be covered by a 100-year floodwater.

Gardening means activities necessary to the growing of plants for personal use, consumption, or enjoyment.

Grading means any stripping, excavating, fill or stockpiling of soils or any combination thereof.

Grubbing means to disturb the soil by removing the vegetative cover.

Infrastructure means streets, sidewalks, sewers, stormwater retention facilities, or any other public utility or public good.

Lake means the Great Lakes and all natural and artificial inland lakes, ponds or impoundments that have definite banks, a bed, visible evidence of a continued occurrence of water, and a surface area of water that is equal to, or greater than, one (1) acre. "Lake" does not include sediment basins and basins constructed for the sole purpose of stormwater retention, cooling water, or treating polluted water.

Landowner means the person who owns the property and who provides proof of ownership, holds a recorded easement on the property and who provides proof of ownership of the easement, or who is engaged in construction in a public right-of-way in accordance with sections 13, 14, 15, and 16 of Act No. 368 of the Public Acts of 1925, as amended, being MCL 247.183 to 247.186.

Landscape contractor means a person, whether a licensed landscape contractor or not, who performs any soil movement or placement, excavation, earth removal, planting, or landscape construction or maintenance work for hire.

Local ordinance means this article of the township's ordinances enacted pursuant to Part 91 providing for soil erosion and sedimentation control.

Minor earth change means any earth change that will disturb less than two hundred twenty-five (225) square feet within five hundred (500) feet of the water's edge of a lake, stream or wetland.

Municipal enforcing agency or MEA means an agency designated by the township under section 9106 of Part 91 to enforce a local ordinance, which shall be the development services department.

Nonerosive velocity means a speed or water movement which is not conductive to the development of accelerated erosion.

Parcel means a lot, unit or plot of land, either platted or unplatted.

Part 91 means Part 91 of Act No. 451 of the Public Acts of 1994, as amended, being MCL 324.9101 to 324.9123.

Permanent soil erosion and sedimentation control measures means those control measures which are installed or constructed to control soil erosion and which are maintained after project completion.

Person means an individual, corporation, partnership or any other business entity.

Phasing means the completion or stabilization of one (1) phase of development before conducting construction or earth disturbance of another within the same development.

Proof of ownership means any document recorded with the Oakland County register of deeds showing the ownership interest claimed and title insurance which is current and has been issued within thirty (30) days of the date of the submission of the application for a permit under this article.

Rules means the Rules promulgated pursuant to the Administrative Procedures Act of 1969, 1960 Public Act 306, MCL 24.201 to 24.328.

Runoff means that part of precipitation, snow melt, or irrigation water that is not absorbed by vegetation and does not infiltrate or evaporate and runs off the land into streams or other surface water.

Seawall maintenance means an earth change activity landward of the seawall.

Sediment means solid particulate matter, including both mineral and organic matter that is in suspension in water, is being transported, or has been removed from its site of origin by the actions of wind, water, or gravity and has been deposited elsewhere.

Sediment basin means a naturally occurring or constructed depression used for the sole purpose of capturing sediment during or after an earth change activity.

SESC permit means soil erosion and sedimentation control permit.

Soil means topsoil, subsoil, gravel, rock, stone, earth or any other minerals of a like nature.

Soil erosion means the wearing away of land by the action of wind, water, gravity or a combination of wind, water, or gravity.

Soil erosion and sediment control plan means a map and written information for a development or earth change which describes the way in which stormwater runoff, soil erosion, and on-site sediment will be

## controlled.

Stabilization means the establishment of vegetation or the proper placement, grading and/or covering of soil to ensure its resistance to soil erosion, sliding or other earth movement.

State agency means a principal state department.

Stormwater detention means detention basins that are designed to receive and detain stormwater runoff for a prolonged period of time, typically up to forty-eight (48) hours. Detention is achieved by use of an outlet device regulating the flow from the basin at a rate which minimizes downstream erosion, reduces flooding, and provides for enhanced pollutant removal.

Stormwater retention means retention basin that is a water impoundment over permeable soils which receives stormwater runoff and contains it until it infiltrates the soils. Retention basins remove fine sediment and the pollutants associated with them. Course sediment must be removed from the stormwater by other methods prior to entering the basin. This BMP serves drainage areas up to fifty (50) acres in size.

Stream means a river, creek, or other surface watercourse which may or may not be serving as a drain as defined in Act No. 40 of the Public Acts of 1956, as amended, being MCL 280.1 et seq., and which has definite banks, a bed, and visible evidence of the continued flow or continued occurrence of water, including the connecting waters of the Great Lakes.

Stripping means any activity which removes or significantly disturbs the vegetative surface cover including clearing and grubbing operations.

Temporary soil erosion and sedimentation control measures means interim control measures which are installed or constructed for the control of soil erosion and sedimentation which are not maintained after project completion and removed.

Township means Charter Township of West Bloomfield.

Violation of this article or violates this article means a violation of Part 91, the Rules promulgated under Part 91, or this article.

Waters of the state means the Great Lakes and their connecting water, inland lakes and streams as defined in Rules promulgated under this part, and wetlands regulated under Part 303 of the Natural Resources and Environmental Protection Act.

Wetlands means land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh.

Written authorization means an original signed and notarized letter from the landowner which specifies the scope of the designated agent's authority.

(Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-363. - Jurisdiction.

Unless otherwise provided by law, the administration and enforcement of this article shall be as follows:

(1) The development services department shall be the municipal enforcing agency and shall have jurisdiction throughout the township in the administration and enforcement of this article, Part 91 and Rules, including all amendments adopted unless otherwise specifically stated, except with regard to earth changes by an authorized public agency who is approved under section 9110 of Part 91.

(2) Those authorized for administering this article, Part 91 and the Rules and who also have decision making authority shall have current certificates of training pursuant to MCL 324,9123.

(Ord. No. C-721, § 1, 3-3-08)

#### Sec. 8-364. - Adoption of control rules.

The development services department may from time to time adopt such soil erosion and sedimentation control rules, policies, programs, and best management practices as approved by the department of environmental quality and as necessary to ensure compliance with Part 91 and Rules. In no case shall the Rules be less restrictive than Part 91, or the administrative Rules promulgated thereunder by the department of

Liter //These states - - - ATTAI ATCATE THEORE CHAPTER IN F

environmental quality.

(Ord. No. C-721, § 1, 3-3-08)

Sec. 8-365. - Other laws and regulations.

The regulations of this article are minimum standards supplemental to Part 91 and the Rules promulgated thereunder. Where any provisions of any other state statutes, or other township ordinances or regulations apply, the more restrictive provisions of this article or any or all statutes, ordinances or regulations shall prevail.

If any provision of this part is declared by a court to be invalid, the invalid provision shall not affect the remaining provisions of the part that can be given effect without the invalid provision. The validity of the part as a whole or in part shall not be affected, other than the provision invalidated.

(Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-366. - Design.

(a) Principles. All earth changes shall be designed, constructed, implemented, and maintained in accordance with the requirements for earth changes as provided by Part 91, the Rules promulgated thereunder, and this article, and shall also comply with any structural, vegetative, or best management practices to effectively prevent or reduce soil erosion and sedimentation as determined and deemed necessary by the development services department. Further design principles are as follows:

(1) The development should be planned and designed to fit the topography of the site.

(2) The design shall limit the exposed area of any disturbed land for the shortest possible period of time as determined by the development services department, and may incorporate any phasing requirements set forth in an approved site plan.

(3) Soil erosion control practices should be applied as a first line of defense against onsite damage, thereby decreasing the amount of sediment that is generated.

(4) Sediment control practices should be applied as a second line of defense to prevent (any sediment that is generated during construction from leaving the site.)

(5) A thorough maintenance and follow-up operation should be implemented, as a site cannot be effectively controlled without thorough, periodic checks for erosion and sediment control practices and, without limitation; includes the following requirements:

- a. Maintenance schedule;
- b. Dewatering plan;
- c. Sequence of construction; and
- d. Enforcement.

(b) [Adequacy and effectiveness.] In determining the adequacy and effectiveness of the design, implementation, and maintenance of proposed soil erosion and sedimentation control measures, the development services department shall consider the following nonexclusive criteria:

(1) Size and location specific factors and information of the type required to be included in the soil erosion and sediment control plan for the property; and

(2) The specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the "Guidebook of Best Management Practices for Michigan Watersheds", published by the Surface Water Quality Division, Michigan Department of Environmental Quality ("BMP Guidebook" or subsequent revisions), the Natural Resources Conservation Services (NRCS) Standards and Specifications, and the Michigan Department of Transportation's "Soil Erosion and Sedimentation Control Manual" and any provided instructions or recommendations by manufacturers as approved by the township.

(Ord. No. C-721, § 1, 3-3-08)

Sec. 8-367. - Earth change requirements and control plan requirements generally.

(a) The erosion and sedimentation control measures prescribed in this section and the best management practices shall be incorporated into the soil erosion and sedimentation control plans, as described in section 8-368, unless the person preparing the plans demonstrates to the development services department that proposed alternatives to these procedures will be superior in the prevention of accelerated soil erosion and its resulting sedimentation.

(b) A person shall conduct an earth change in a manner that will effectively reduce accelerated soil erosion and resulting sedimentation.

(c) A person engaged in an earth change that disturbs one (1) or more acres of land or is within five hundred (500) feet of any waters of the state and any wetland shall:

(1) Obtain the permit(s) required by this article and Part 91, and the Rules promulgated

thereunder; said permit(s) shall be kept current and valid throughout all active earth change operations and until the site passes final inspection by the municipal enforcing agency.

(2) Plan, implement, and maintain acceptable soil erosion and sedimentation control measures in conformance with the requirements of this article and Part 91 and the Rules promulgated thereunder, which effectively reduce accelerated soil erosion and off-site sedimentation.

(3) Set forth soil erosion and sedimentation control measures in a plan as prescribed by this article. A person shall make the plan available for inspection at all times at the site of the earth change.

(4) Prepare a soil erosion and sediment control plan, signed and sealed by a registered professional engineer or professional surveyor designed to effectively reduce accelerated soil erosion and sedimentation that shall identify factors that may contribute to soil erosion or sedimentation, or both.

(d) A soil erosion and sediment control plan shall conform to the requirements of this article, Part 91, and the Rules promulgated pursuant to Part 91.

(e) A person shall remove sediment caused by accelerated soil erosion from runoff water before it leaves the site of the earth change.

(f) A person shall design, construct, and complete an earth change in a manner that limits the exposed area of any disturbed land for the shortest possible period of time as determined by the development services department. The development services department shall have the power to require additional soil erosion techniques as needed in order to effectively reduce soil erosion and sedimentation.

(g) A person shall design a temporary or permanent control measure that is designed and constructed for the conveyance of water around, through, or from the earth change area to limit the water flow to a nonerosive velocity.

(h) A person shall install temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity and shall maintain the measures on a daily basis. A person shall remove temporary soil erosion and sedimentation control measures after permanent soil erosion measures are in place and the area is permanently stabilized. A person shall stabilize the area with permanent soil erosion control measures under approved standards and specifications as prescribed below.

(i) A person shall complete permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area within five (5) calendar days after final grading or the final earth change has been completed. If it is not possible to permanently stabilize a disturbed area after an earth change has been completed or if significant earth change activity ceases, then a person shall maintain temporary soil erosion and sedimentation control measures until permanent soil erosion control measures are in place and the area is stabilized.

(j) A person shall complete all temporary and permanent erosion and sedimentation control measures according to the approved plan.

(1) A person shall install and maintain control measures in accordance with the standards and specifications of all of the following:

- a. The product manufacturer.
- b. The local conservation district.
- c. The department.
- d. The Michigan Department of Transportation.
- e. The development services department, if applicable and formally

## adopted,

(2) If a conflict exists between the standards and specifications, then the development services department shall determine which specifications are appropriate for the project.

(k) On construction sites during periods of low precipitation, low humidity, high temperature or high winds, apply dust suppressant to surfaces such as unpaved roadways, soil stockpile areas and general areas with unstabilized or fine soils.

(I) (A landowner of land on which an earth change has been made that may result in or contribute to soil erosion or sedimentation of any infrastructure or adjoining land or the waters of the state shall implement and maintain soil erosion and sedimentation control measures in conformance with the requirements of this article, Part 91 and Rules that will effectively reduce soil erosion or sedimentation from the land on which the earth change has been made.

(m) During all active earth change operations on land subject to the permit(s) required by this article, Part 91 and Rules, the permittee shall be responsible for;

(1) The prevention of soil erosion and sedimentation, or damage to any infrastructure, public utilities or services within the limits of movement or placement of soil and along any routes of travel of equipment.

(2) The prevention of sedimentation, erosion or damage to adjacent property. No person shall cause an earth change activity or the movement or placement of soil so close to the property line as to endanger any adjoining public street, sidewalk, or any public or private property without

(3) The prompt removal of all sediment, soil, miscellaneous debris or other materials
spilled, applied, dumped or otherwise deposited on public streets, highways, sidewalks or other
public thoroughfares or infrastructure resulting from any development related activity or operation.

(4) Maintenance and clean out of all sediment basins, ditches traps or other soil erosion measures as needed to ensure their proper function.

(5) Clearing, grubbing and any earth changes shall be limited to the phase of development under construction. If there is an earth change request or modification, an updated soil erosion and sedimentation control plan must be resubmitted for review and approval by the MEA.

# (Ord. No. C-721, § 1, 3-3-08)

### Sec. 8-368. - Plan requirements.

(a) Intent. It is the intent of this section to provide sufficient information upon which to judge the adequacy of the design relative to the goals of Part 91 and Rules, as described in section 8-361. The plan shall be designed to effectively reduce accelerated soil erosion and control sedimentation generated and shall identify factors which may contribute to soil erosion or sedimentation or both. Plan sheets shall be not less than eight and one-half (8½) inches by eleven (11) inches or greater than twenty-four (24) inches by thirty-six (36) inches.

(b) Additional information. Should the information specifically required by this section be inadequate to meet the intent because of unusual site or project conditions, the applicant will be required to submit additional information, as circumstances require or as determined by the development services department.

(c) Preparation. All plans and information shall be prepared by a person with a working knowledge of soil erosion and sedimentation control methods and techniques. In most instances, this person will be a professional engineer or professional surveyor registered in Michigan, as required under the provisions of Act No. 240 of the Public Acts of Michigan of 1937 (MCL 338.551 et seq., as amended). However, on small projects not covered by the Registration Act, well prepared plans not prepared by a registered engineer or surveyor may be allowed as determined by the development services department.

(d) Earth change. The magnitude and scope of the earth disrupting project and its potential for causing a soil erosion and/or sedimentation problem will have a direct bearing upon the scope and requirements of the plans required by this article, Part 91 and the Rules. The required plans must meet the minimum requirements of this article, Part 91 and the Rules shall include, but not be limited to the following:

(1) Location map:

the inch.

a. It shall be drawn to a scale not smaller than two hundred (200) feet to

b. It shall be extended six hundred (600) feet outside of the side

boundaries in all directions.

- c. It shall locate the following:
  - 1. The site;
  - 2. Adjacent properties;
  - 3. Public and private roads in the area;
  - 4. Lowing streams or ditches;
  - 5. Intermittent watercourses;
  - 6. Lakes;
  - 7. Wetland areas;
  - 8. One hundred-year floodplain and/or floodways;
  - 9. North direction;
  - 10. Predominant land features;
  - 11. Contour intervals or slope description.
- (2) Topographic plan:
  - a. It shall be drawn to a scale not smaller than thirty (30) feet to the inch.

 It shall show all existing ground elevations on U.S.G.S. datum with a contour interval not greater than two (2) feet.

c. It shall be extended one hundred (100) feet outside of the site boundaries in all directions.

- d. It shall locate the following:
  - 1. All existing building and structures;
- All natural features required to be shown on a site plan or a wetlands or woodlands removal plan;
  - All existing drainage systems, both natural and man-made.
  - e. It shall include a legal description of the site, with a statement as to the

amount of acreage within the site and a north indicator.

f. It shall provide information as to the type of soils on the site, as typically obtained from a soil boring or a soil analysis.

g. All existing and proposed utilities.

(3) Site development plan:

a. It shall be drawn to a scale not smaller than thirty (30) feet to the inch.

b. It shall show a plan metric presentation of all proposed construction on the site, including buildings, roads, parking lots, walks, drives, retaining walls, retention basins, sediment basins, retention areas, grassed areas, storm drainage facilities and all other construction of any nature including utilities.

c. It shall show a complete dimensioning of size and location of all features of the plan.

d. It shall show all existing buildings, construction and natural features surrounding the site on all sides to a distance of one hundred (100) feet.

e. The timing and sequence of each proposed earth change.

All existing and proposed utilities.

(4) Final grading and drainage plan:

It shall be drawn to a scale not smaller than thirty (30) feet to the inch.

b. It shall show the final grade elevations at high and low points, breaks in grade, swales and ridge lines, buildings and other structures, and in sufficient detail to indicate the surface flow, on U.S.G.S. datum.

c. It shall show the complete stormwater drainage system including enclosures, open drainage courses and swales, retention and sediment basins, and the point of discharge of stormwater. The following should be included:

calculations;

2. The amount of acreage contributing to each specific inlet:

Storm drain, retention basin and sediment basin design

- 3. Storm drain and road profiles.
- 4. All critical or sensitive areas.

 It shall show existing ground elevations surrounding the site on all sides to a distance of one hundred (100) feet.

e. All existing and proposed utilities.

1.

(5) Soil erosion and sediment control plan: A soil erosion and sediment control plan must include the minimum requirements of this article, Part 91 and the Rules, not be limited to all of the following:

a. A map or maps at a scale of not more than thirty (30) feet to the inch or as otherwise determined by the development services department. A map shall include a legal description and site location plan that includes the proximity of any proposed earth change to lakes, streams or wetlands; predominant land features; and contour intervals or slope description.

 A soils survey or a written description of the soil types of the exposed land area contemplated for the earth change.

c. Details for proposed earth changes, including all of the following:

 A description and the location of the physical limits of each proposed earth change.

 A description and the location of all existing and proposed on-site drainage and dewatering facilities including, but not limited to; structure details and rim elevations.

3. The timing and sequence of each proposed earth change.

 The location and description for installing and removing all proposed temporary soil erosion and sediment control measures.

 A description and the location of all proposed permanent soil erosion and sediment control measures.

 A program proposal for the continued maintenance of all permanent soil erosion and sediment control measures that remain after project completion including the designation of the person responsible for the requirements of section 8-378.

 A site specific topographic map, prepared by a professional surveyor as may be required by the development services department, depending on the size, scale or complexity of the project.

land surface features.

9. Show clearly all sensitive and critical areas.

A description of all existing vegetation and predominant

Liter // ikeen municade and /ITEMI /11607/ ---- 14/000B CHIADIBURT I BOTH COTTO

8.

As necessary, provide a separate dewatering plan

incorporating discharge points anticipated flow, velocities and proper BMP placement and maintenance.

(6) Combination of plans: The MEA may permit the consideration and combination of the plans in this section, provided clarity, completeness and compliance with the Rules can be retained.

(7) Waiver of requirements: On very small projects, the specific plan requirements described in this section may be modified and permits required by this division issued on less rigorous requirements but in no case shall the requirements be less restrictive than Part 91 or the Rules, or this article. However, such plan must meet the minimum requirements of this article, Part 91 to ensure that accelerated soil erosion and sedimentation will be controlled.

(e) Utility construction. Plans for utility construction that is not part of a developing site shall include, but not be limited to the following:

 All features of the soil erosion and sediment control plan as described in subsection (c)(5);

(2) Soil erosion and sediment control plan must include all earth changes occurring on the site.

(3) Drawn to a scale as required by the project;

(4) Information as to how excavated materials will be handled and stored to prevent erosion;

(5) Information on trench backfill stabilization and surface restoration including schedule of placement;

(6) Information upon the existing drainage system along and crossing the system, including maintenance provisions.

(f) Cost estimates. The plans shall include a separately stated estimate of the cost of all temporary and permanent soil erosion and sedimentation control measures, which shall be broken down into unit prices. (Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-369. - Review of plans.

(a) The soil erosion and sedimentation control plan as previously described in section 8-368, shall be reviewed and approved by the development services department, or its designated representative

who also has Part 91 certification, is current in training and has passed the examination. All plans identified in section 8-368 shall be required unless the development services department or development services director or his/her designee determines the scope of the proposed project requires only specified plans to be prepared. This review will not commence until such time that, all required fees have been paid as stated in section 8-373.

(b) The development services department or its designated representative shall approve, disapprove or require a revision to the plans within thirty (30) calendar days following the receipt of the plans and a complete application for an erosion control permit:

(1) Notification of approval shall be in the form of the actual permit issuance.

(2) If disapproved, the applicant shall be notified in writing by certified mail. Reasons for disapproval and the conditions necessary to obtain approval shall be stated.

(c) Any revisions or changes to the soil erosion and sediment control plan, must be submitted as required for review and approval by the MEA. However, to the extent such changes void or otherwise require duplication of engineering time expended in review of the original plan, a supplemental fee shall apply which shall be due and payable prior to issuance of the resultant permit.

(d) The soil erosion and sedimentation control permit, or a copy, along with a complete set of the approved soil erosion and sediment control plan, shall be available at the site of the earth change for inspection at all times.

(Ord. No. C-721, § 1, 3-3-08)

# Sec. 8-370. - Inspections.

(a) Right-of-way entry and inspection. The development services department or its designated representative shall inspect all soil erosion control measures. At any reasonable time, the development services department or its designated representative may enter upon public or private for the purpose of inspecting and investigating conditions or practices that may be in violation of this article, Part 91 or the Rules. However, an investigation or inspection under this subsection shall comply with the United States Constitution and the Michigan Constitution of 1963. No person shall interfere with an employee or its designated representative, of the development services department, nor shall any person molest or resist him or her in the discharge of this duty.

(b) Schedule. On-site inspections before, during and after any change activity for which a permit required by this article has been issued shall be performed as required by the extent and erosion potential of the activity.

Liter/// hereit material a service of the fillen in the service of the service of

(c) Notification of development services department. The permit holder shall notify the development services department at least twenty-four (24) hours before starting any earth change activity for which a permit has been issued.

(d) (Invalidation of permit. If upon inspection existing site conditions are found not to be as stated in the application on the approved plan and in accordance with soil erosion and sedimentation control specification rules, the permit will be invalidated. No earth disrupting work shall be undertaken, or continued by any person until revised plans have been submitted and a valid permit issued.

(e) Field changes. Minor field changes and/or additional measures may be required or maintenance work shall be performed to assure erosion and sedimentation control. When it is determined by the development services department or its designee that the revision(s) to the site is significant, revised plans must be submitted to (and approved by) the development services department.

(Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-371. - Performance guarantee.

(a) As a condition for the issuance of a permit, except earth changes on a residential lot, the development services department shall require the applicant to post a performance guarantee in an amount sufficient to assure the installation, completion and continuation of such protective or corrective measures as may be required by the development services department. The amount of the guarantee shall not exceed one and one-half (1½) times the total cost of all estimated soil erosion and sediment control measures and appurtenant activities provided, the township may claim any reasonable and necessary costs and expenditures that exceed the guarantee.

(b) In the event of failure of the permit holder to comply with this article, Part 91 and Rules, or the conditions set forth in the soil erosion and sediment control plan, the township shall implement the requirements, remedies and procedures available at law.

(c) Upon permanent restabilization of all disrupted earth areas, performance guarantee or residual balance will be returned to the permittee along with an accounting of any funds used.

#### (Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-372. - Preconstruction meetings.

Upon issuance of a soil erosion and sedimentation control permit, the landowner of record is required to attend a preconstruction meeting with the MEA and its authorized environmental consultants to review and discuss any and all procedures and requirements of this article, Part 91 and Rules, and approved soil erosion and sediment control plan. Included with the preconstruction practices methods and procedures are requirements for clearing, grubbing and initial BMP installations.

#### (Ord. No. C-721, § 1, 3-3-08)

#### Sec. 8-373. - Fees.

It is the intent of the township that administration of this article be self-sustaining from fees imposed and to distribute such charges as equitably and fairly as possible. Therefore, the township board shall from time to time adopt such resolutions setting forth a schedule of application, permit, plan review, and inspection fees to be paid as shall be necessary to administer this article. Plan review fees shall cover the initial plan review and review of up to two (2) revisions. The township board may periodically revise the fee schedule as needed.

#### (Ord. No. C-721, § 1, 3-3-08)

# Sec. 8-374. - Construction as to nuisances.

Nothing stated in this article shall be construed to limit the power of the development services department to order the immediate and complete abatement of a public nuisance or menace to the waters of the state, wetlands, public infrastructure or any adjacent properties of the township. Any violation of the article, Part 91 and Rules, or of the approved plans and/or soil erosion and sedimentation control permit shall be deemed a nuisance per se subject to abatement by a court of competent jurisdiction.

(Ord. No. C-721, § 1, 3-3-08)

A11 4 11

West Bloomfield, Michigan, Code of Ordinances >> - CODE OF ORDINANCES >> Chapter 8 -BUILDINGS AND BUILDING REGULATIONS >> ARTICLE XV. - SOIL EROSION AND SEDIMENTATION CONTROL >> DIVISION 2. - SOIL EROSION AND SEDIMENTATION CONTROL PERMIT, VIOLATIONS, MAINTENANCE REQUIREMENTS. >>

#### DIVISION 2. - SOIL EROSION AND SEDIMENTATION CONTROL PERMIT, VIOLATIONS, MAINTENANCE REQUIREMENTS.

Sec. 8-375. - Application,

Sec. 8-376. - Soil erosion and sedimentation control permit required.

Sec. 8-377. - Soil erosion sedimentation control permit exemptions.

Sec. 8-378. - Permit restrictions and obligations of permittee.

Sec. 8-379. - Issuance.

Sec. 8-380. - Prerequisite to issuance of building permit.

Sec. 8-381. - Maintenance requirements.

Sec. 8-382. - Violations.

Sec. 8-383. - Enforcement, expenses and liens for expenses.

Secs. 8-384-8-390, - Reserved.

## Sec. 8-375. - Application.

(a) Submission. A landowner or designated agent shall submit an application for a SESC permit. Proof of ownership and written statement from the landowner, authorizing him/her to secure a permit in the landowner's name (if the application is being submitted by a designated agent) are required at the time of submission of the application.

(b) Forms. All applications submitted for approval will be on the SESC permit application form. Such forms shall be available from the development services department upon request at no charge.

(c) Time of application. Application for a permit under these procedures shall be made prior to the start of any earth change including, but not limited to; construction of access roads, driveways, tree and shrub removal or grading. Any such unauthorized work will be considered a violation of this article regardless of any later actions taken toward compliance. Soil test borings, vegetative cutting for land surveys and percolation test efforts will not be considered a start of work under these procedures provided the activities do not constitute an earth change requiring a permit.

(d) Sequential applications. On those projects so large or so complex that a plan encompassing all phases of the project cannot reasonably be prepared prior to initial groundbreaking, as required by the township, application for SESC permit on successive major incremental earth change activities must be submitted. All SESC permits issued on this basis will be clearly defined as to nature and extent of work covered for that phase. Any earth change beyond or subsequent to that described on the SESC permit must be covered by a separate approved plan before it may be undertaken.

(e) Plan. The application shall be accompanied by three (3) complete sets of the proposed soil erosion and sedimentation control plan.

(Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-376. - Soil erosion and sedimentation control permit required.

(a) It shall be unlawful to permit, authorize or conduct an earth change without first obtaining a SESC permit with approved SESC plans from the development services department unless a permit and/or plans are not required under the provisions of this article, Part 91, or the Rules.

(b) SESC permit requirements. Unless otherwise exempt by this article, Part 91, or the Rules, a landowner or designated agent who contracts for, allows, or engages in, an earth change in this township shall obtain a SESC permit from the development services department which shall be kept current throughout all active earth change operations, before commencing an earth change which:

(1) Disturbs one (1) or more acres of land; or

(2) Is within five hundred (500) feet of any waters of the state and wetlands.

(Ord. No. C-721, § 1, 3-3-08)

# Sec. 8-377. - Soil erosion sedimentation control permit exemptions.

(a) A permit is not required for any of the following:

(1) A beach nourishment project permitted under Part 325 of Act No. 451 of the Public Acts of 1994, as amended, being MCL 324.32501 et seq.

(2) Normal road and driveway maintenance, such as grading or leveling, that does not

increase the width or length of the road or driveway and that will not contribute sediment to lakes or streams.

(3) An earth change of a minor nature that is stabilized within twenty-four (24) hours of the initial earth disturbance and that will not contribute sediment to lakes or streams.

(4) Installation of oil, gas, and mineral wells under permit from the supervisor of wells if the owner-operator is found by the supervisor of wells to be in compliance with the conditions of Part 91.

(5) Subject to subsection (6), a person engaged in the logging industry, the mining industry, or the plowing or tilling of land for the purpose of crop production or the harvesting of crops is not required to obtain a permit. However, all earth changes associated with the activities listed in this section shall conform to the same standards as if they required a permit under this part. The exemption from obtaining a permit under this subsection does not include either of the following:

Access roads to and from the site where active mining or logging is

taking place.

b. Ancillary activities associated with logging and mining.

(6) The exemption in subsection (5) does not apply to a metallic mineral mining activity that is regulated under a mining and reclamation plan that contains soil erosion and sedimentation control provisions and is approved by the department under Part 631 of the Natural Resources and Environmental Protection Act.

(7) Earth changes associated with well locations, surface facilities, flow lines, or access roads relating to oil or gas exploration and development activities regulated under Part 615 of the Natural Resources and Environmental Protection Act, if the application for a permit to drill and operate under Part 615 contains a soil erosion and sedimentation control plan that is approved by the department under Part 615. However, those earth changes shall conform to the same standards as required for a permit under this part. This subsection does not apply to a multi-source commercial hazardous waste disposal well as defined in section 625.06a of the Natural Resources and Environmental Protection Act.

(8) As used in subsections e, f and g, "mining" does not include the removal of clay, gravel, sand, peat, or topsoil.

(9) An authorized public agency is exempt from obtaining a permit from the development services department; however, such agency is still required to notify the development services department of each proposed earth change to be undertaken.

(10) A residential property owner who causes the following activities to be conducted on individual residential property owned and occupied by him or her is not required to obtain a permit if the earth change activities do not result in or contribute to soil erosion or sedimentation of the waters of the state or discharge of sediment off-site:

a. Gardening, if the natural elevation of the area is not raised.

 Post holes for decks, fencing, utility posts, mailboxes, or similar applications, if no additional grading or earth change occurs.

c. Removal of tree stumps, shrub stumps, or roots resulting in an earth change not to exceed one hundred (100) square feet.

d. All of the following activities, if soil erosion and sedimentation controls are implemented, the earth change is stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation to adjacent properties or the waters of the state has not or will not reasonably occur:

1. Planting of trees, shrubs, or other similar plants.

 Seeding or reseeding of lawns of less than one (1) acre if the seeded area is at least one hundred (100) feet from the waters of the state.

3. Seeding or reseeding of lawns closer than one hundred

(100) feet from the waters of the state if the area to be seeded or reseeded does not exceed one hundred (100) square feet.

The temporary stockpiling of soil, sand or gravel not

greater than a total of ten (10) cubic yards on the property if the stockpiling occurs at least one hundred (100) feet from the waters of the state or wetlands.

5. Seawall maintenance that does not exceed one hundred

(100) square feet.

(b) However, an earth change activity that does not require a permit under this section, or where a permit waiver has been granted, is not exempt from enforcement procedures under this article, Part 91 or the Rules promulgated there under if the exempted activity causes or results in a violation of this article, Part 91 or the Rules adopted thereunder.

(c) The development services department may grant a permit waiver for an earth change after receiving signed affidavit from the landowner stating that the earth change will disturb less than two hundred twenty-five (225) square feet and that the earth change will not contribute sediment to lakes or streams. (Ord. No. C-721, § 1, 3-3-08)

Sec. 8-378. - Permit restrictions and obligations of permittee.

## (a) An SESC permit shall not be issued where:

- The proposed work would cause uncontrolled soil erosion or sedimentation;
- The proposed work would cause hazards to the public safety and welfare;

(3) The work as proposed by the applicant, will damage any public or private property or interfere with any existing drainage course in such a manner as to cause damage to any adjacent property or result in the deposition of debris or sediment on any public way, infrastructure, or into any waters of the state or wetlands or create an unreasonable hazard to persons or property; or

(4) The land area for which work is subject to geological hazard to the extent that no reasonable amount of corrective work can eliminate or sufficiently reduce settlement, slope and stability or any other such hazard to persons or property; or the land area for which the work is proposed lies within the 100-year floodplain of any stream or watercourse (not specifically designated and delineated by the county as an area subject to flood hazard), unless a permit from the Michigan Department of Environmental Quality accompanies the application and a hydraulic report prepared by a licensed and professional engineer is submitted to certify that the proposed work will have, in the development services department opinion, no detrimental influence on the public welfare or upon the total development of the water shed.

(b) No SESC permit shall be issued until the applicant has paid all required fees, posted all required guarantees, and otherwise complied with all requirements under this article, Part 91 and Rules as a precondition to the issuance of a permit.

(c) The permit shall designate a one-year expiration date from the date of issuance; at which time additional reviews and/or fees may be required or assessed as determined under the fee schedule as adopted by the township board and amended from time to time. If the earth change for which a permit has been issued has not been commenced within one (1) year from the date of issuance of the permit, the permit shall lapse, provided that the development services department may extend the time for commencement of the earth change if the permittee requests an extension prior to the expiration of the initial period and no material change of circumstances has occurred.

(d) An SESC permit issued under this article shall not relieve the permittee from complying with any other federal, state or local permits and regulations.

(e) A permittee shall prepare and submit a program proposal that provides for continuation, maintenance, and fulfillment of all responsibilities imposed upon the permittee under this article, Part 91 and Rules in the event of any transfer of any interest in any property subject to the permit. The program proposal shall include permission for right of entry onto the site for periodic township inspections. The township shall maintain a file of such programs and shall from time to time, as it deems necessary, inspect the facilities. Continuation and fulfillment responsibilities and right of entry shall become a part of any sales or exchange agreement for the property subject to the permit.

(f) The failure to comply with any term or condition of an approved permit or to timely complete all work as set forth in an approved plan, constitutes a violation of this article, Part 91 and Rules.

(g) No final soil erosion and sedimentation control approval will be granted without permanent stabilization of the disturbed areas and a final grading and drainage approval, if applicable. When seasonal weather conditions do not permit permanent stabilization of the disturbed areas then a conditional soil erosion and sedimentation control approval may be granted by the development services director for up to six (6) months. A deposit of cash or a letter of credit in the amount of the remaining work needed to permanently stabilize the site must be submitted. Conditional soil erosion and sedimentation approval must be preceded by a final or conditional grading and drainage approval, if applicable. A final soil erosion and sedimentation control approval will always require a final grading and drainage inspection even if a final grading and drainage approval was previously granted.

(Ord. No. C-721, § 1, 3-3-08)

#### Sec. 8-379. - Issuance.

When the soil erosion and sediment control plans are approved by the development services department and it is determined that the requirements of this article are met, a soil erosion and sedimentation control permit, plus two (2) additional copies, will be issued to the landowner. The development services department shall impose such conditions on the manner and extent of the proposed activity or use to ensure that the intent of this article is carried out and that the activity or use will be conducted in such a manner as will prevent as best possible soil erosion and sedimentation. The soil erosion and sedimentation control permit shall provide a specified or agreed upon time limit for completion of all permanent soil erosion and sedimentation control measures. The permit holder may be granted a permit extension provided a site inspection is conducted by the development services department to insure compliance with all required temporary soil erosion and sedimentation control measures. The permit holder shall pay an inspection fee in an amount to be approved by the township board.

(Ord. No. C-721, § 1, 3-3-08)

Sec. 8-380. - Prerequisite to issuance of building permit.

The development services department shall not issue a building permit to a person engaged in an earth change which requires a soil erosion and sedimentation control permit under this article until after landowner has first obtained the required soil erosion and sedimentation control permit with approved soil erosion and sedimentation control plans.

(Ord. No. C-721, § 1, 3-3-08)

## Sec. 8-381. - Maintenance requirements.

(a) Persons, permittees, and landowners carrying out soil erosion and sedimentation control measures under this article, and all subsequent owners of property on which such measure has been installed, shall adequately maintain all permanent soil erosion and sedimentation control measures, devices and plantings in effective working condition. A program proposal shall be submitted by the permittee for continued maintenance of all such permanent control facilities which remain after project completion, including the identification of the person or entity responsible for maintenance. The proposal shall include permission for right of entry onto the site for periodic township inspections pursuant to the provisions of section 8-370. The township shall maintain a file of such programs and shall from time to time, as it deems necessary, inspect the facilities.

(b) The owner of property that is subject to a permit under this article is responsible for compliance with the terms of the permit that applies to that property.

(c) Except as provided in subsection (d), if property subject to a permit under this article is transferred, both of the following are transferred with the property:

The permit, including the permit obligations and conditions; and

(2) Responsibility for any violations of the permit that exist on the date the property is transferred.

(d) If property is subject to a permit under this article and a parcel of the property, but not the entire property, is transferred, both of the following are transferred with the parcel:

 The permit obligations and conditions with respect to that parcel, but not the permit itself; and

(2) Responsibility for any violations of the permit with respect to that parcel that exists on the date the parcel is transferred.

(e) If property subject to a permit under this article is proposed to be transferred, the transferor shall notify the transferee of the permit in writing on a form developed and provided by the development services department. The notice shall inform the transferee of the requirements of subsection (b) and, as applicable, subsections (c) or (d). The notice shall include a copy of the permit. The transferor and transferee shall sign the notice, and the transferor shall submit the signed notice to the development services department before the property is transferred or a certificate of occupancy is issued.

(f) The township may charge a fee for the transfer of a permit under subsections (c) or (d). The fee shall not exceed the administrative costs of transferring the permit. Fees collected under this subsection shall only be used for the enforcement and administration of this article by the township.

(Ord. No. C-721, § 1, 3-3-08)

#### Sec. 8-382, - Violations.

(a) A person shall not maintain or undertake an earth change governed by Part 91 or the Rules promulgated under Part 91, or this article, except in accordance with Part 91, the Rules promulgated under Part 91 or this article, and pursuant to any required soil erosion and sediment control plan or SESC permit approved by the development services department.

(b) Except in accordance with or otherwise allowed by the provisions of this article, Part 91, or the Rules promulgated under Part 91 and pursuant to any required plan or permit(s), a person shall not, by act or omission, maintain any condition, or cause, contribute or engage in any activity that results in accelerated soil erosion or sedimentation of adjacent properties, infrastructure, or the waters of the state and wetlands.

(c) Unless otherwise required or provided by this article, Part 91, the Rules promulgated thereunder, or pursuant to any approved plan or permit, a person shall not remove, destroy, alter, molest, damage, or tamper with any soil erosion or sediment control measure or devise nor shall any person knowingly impede, prevent, obstruct, or harass any person lawfully engaged in implementing any soil erosion or sediment control measures.

(d) A notice of erosion control deficiency will be sent for violations of Part 91, Rules or this article. Upon reinspection if it is found that noncompliance still exists, a "recommendation to show cause" will be issued and determination for the development services department may issue a cease and desist order, stop work order and/or revoke a permit upon its finding that there is a violation of Part 91, the Rules or this article, or a finding that there is a violation of a soil erosion and sedimentation control permit or an approved soil erosion and sedimentation control plan.

(e) If the development services department determines that soil erosion or sedimentation of adjacent properties, infrastructure, or to the waters of the state or wetlands has or will reasonably occur from land in violation of Part 91, the Rules or this article, the development services department may seek to enforce a violation by notifying any person who violates this article, Part 91 or the Rules, or the person who owns or possesses the land, by mail, with return receipt requested, of its determination. The notices shall contain a description of the violation and what must be done to remedy the violation with a compliance time of five (5) days.

(f) After a notice of violation has been issued under subsection (e), a landowner or any person who causes, contributes, maintains, or commits a violation of Part 91, the Rules or this article shall implement and maintain soil erosion and sedimentation control measures in conformance with Part 91, the Rules or this article.

(g) Except as otherwise provided in this subsection, not sooner than five (5) days after notice of violation of Part 91, the Rules, or this article has been mailed, if the condition of the land, in the opinion of the development services department may result in or contribute to accelerated soil erosion or sedimentation contributing to adjacent properties, infrastructures or to the waters of the state or wetlands, and if soil erosion and sedimentation control measures in conformance with Part 91, the Rules or this article are not in place, the development services department or its designated representative may enter upon the land and construct, implement, and maintain soil erosion and sedimentation control measures in conformance with Part 91, the Rules or this article. However, the development services department shall not expend more than ten thousand dollars (\$10,000.00) for the cost of the work, materials, labor, and administration without prior written notice in the notice provided in subsection (e) for the person who owns the land or commits any violation under this article that the expenditure of more than ten thousand dollars (\$10,000.00) is to be expended under this section, then the work shall not begin until at least ten (10) days after the notice of violation has been mailed.

(Ord. No. C-721, § 1, 3-3-08)

#### Sec. 8-383. - Enforcement, expenses and liens for expenses.

(a) All expenses including all administrative, attorney or other professional fees incurred by the MEA to construct, implement, and maintain soil erosion and sedimentation control measures to bring land into conformance with Part 91, the Rules or this article shall be reimbursed to the township by the person who owns the land.

(b) The township shall have a lien against nonconforming property for the expenses incurred for bringing the land into conformance with Part 91, the Rules or this article. Or, the township may draw on any guarantee to obtain reimbursement for any and all expenses. However, with respect to single-family or multifamily residential property, the lien for such expenses shall have priority over all liens and encumbrances filed or recorded after the date of such expenditure. With respect to all other property, the lien for such expenses shall be collected and treated in the same manner as provided for property tax liens under the General Property Tax Act, 1893 Public Act 206, MCL 211.1 to 211.157.

(c) A person who knowingly violates Part 91, the Rules or this article is subject to penalties described in section 1-10 of this Code in addition to any further remedies authorized by law including injunctive, equitable and declaratory relief including abatement of the conditions or activities giving rise to any violation.

(d) Any civil fines collected under this section shall be deposited with the township in the township's general fund. If necessary, the township reserves the right to review fines periodically and adopt a fine schedule by resolution.

(e) In addition to the penalty which may be assessed under this article, a person who violates Part 91 or the Rules 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 Part 91, the Rules or this article to restore the area or areas affected by the violation to their condition as existing immediately prior to the violation or otherwise order abatement of the conditions and activities giving rise to any violation.

(f) In addition to any sanctions or remedies expressly authorized under this article, any penalties, sanctions or remedies authorized by The Revised Judicature Act, as amended, Chapter 87, MCL 600.8701 et seq., may be imposed as well including injunctive, equitable and declaratory relief.

(Ord. No. C-721, § 1, 3-3-08)

Secs. 8-384-8-390. - Reserved.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix CC

From West Bloomfield Municipal Code of Ordinances

Chapter 14.5- Miscellaneous Provisions Including Manufactured Fertilizers Chapter 14.5 - MISCELLANEOUS PROVISIONS ARTICLE I. - IN GENERAL

Secs. 14.5-1-14.5-10. - Reserved.

ARTICLE II. - MANUFACTURED FERTILIZERS[1]

Editor's note—Ord. No. C-310, adopted April 15, 1991, specified that its provisions be included as an article to a new Ch. 27. In order to preserve the alphabetical sequence of the Code, and with the township's consent, the editor has redesignated these provisions as Art. II, §5 14.5-11—14.5-21, to a new Ch. 14.5.

Sec. 14.5-11. - Intent and purpose.

- (a) Based upon scientific studies and general knowledge, the township board has determined that certain compounds containing nitrogen and phosphorus which are contained in manufactured fertilizers, when used within the township, enter into the township's water resources, including wetlands and watercourses, resulting in excessive and accelerated growth of algae and aquatic plants (eutrophication) which is detrimental to such water resources. Therefore, the township board has determined it necessary and appropriate to regulate the rate and application of manufactured fertilizers.
- (b) It is the intent of this article to regulate the application of manufactured fertilizers on turf areas and not on or in areas such as gardens, farms or landscape amenities.
- (c) It is also the intent of this article to implicitly recognize that mature topsoil has sufficient compounds such as phosphorus which occur naturally to promote adequate turf root growth.
- (d) It is the further purpose and intent of this article to require licensure of commercial and institutional applicators of manufactured fertilizers within the township.
- (e) It is recognized that there is a probability that stormwater flowing through an over-fertilized area of turf is likely to pick-up and carry portions of the fertilizer with it. It is also recognized that if such stormwater, carrying all or some of the elements from the fertilizer, should ultimately drain into a water course, an adverse impact upon such water course is likely. Therefore, it is the further intent of this article to provide regulations that are reasonably calculated to reduce the extent of adverse impact from fertilizer application upon water courses.
- (f) Although the risk of water pollution from potassium may not be as great as from nitrogen or phosphorus content in manufactured fertilizers, potassium does increase turbidity and otherwise adversely impact water quality, and being water soluble, is particularly prone to runoff during certain times of the year due to ground saturation and/or when low soil temperatures limit absorption by plant roots.

(Ord. No. C-310, § 1(1), 4-15-91; Ord. No. C-310-B, § 1, 5-21-01; Ord. No. C-310-C, § 1, 9-24-01; Ord. No. C-310-E, § 1, 4-19-04)

Sec. 14.5-12. - Definitions.

In the interpretation of this article, the following definitions shall apply:

*Commercial applicator:* Any individual or entity who applies manufactured fertilizer in the township in exchange for money, goods, services or other valuable consideration.

Department: The Charter Township of West Bloomfield Department of Planning and Environment.

about:blank

Footnotes:

Director: The director of the department.

Institutional applicator: Any individual or entity who applies manufactured fertilizers for the purpose of maintaining turf areas of more than one (1) acre. Institutional applicators shall include, but shall not be limited to, owners, operators and caretakers of golf courses, public lands, schools, parks, religious institutions, utilities, industrial or business sites and any residential properties maintained in condominium and/or common ownership. Owners of individual parcels in single-family residential districts shall not be considered as institutional applicators.

Manufactured fertilizer: A commercially manufactured substance which enriches the soil containing elements essential for turf growth, being primarily nitrogen, phosphorus and/or potassium.

Turf: A covering of grass vegetation which has both aesthetic and functional benefits maintained at a given level of management.

(Ord. No. C-310, § 1(2), 4-15-91; Ord. No. C-310-E, § 1, 4-19-04)

Sec. 14.5-13. - Construction of article.

This article shall be liberally construed in favor of protecting the water resources of the township, including watercourses and wetlands.

(Ord. No. C-310, § 1(3), 4-15-91)

Sec. 14.5-14. - Rates and application schedule; prohibitions.

The following regulations shall apply for turf applications of manufactured fertilizers:

- (1) Manufactured fertilizers shall not be applied more than once every six (6) weeks or more than five (5) times during any one (1) calendar year to any turf area, provided, however, that such limitations shall not apply where more frequent application is undertaken in order to reduce below the maximum limits specified in this article the quantity of nitrogen included in each individual application.
- (2) Application of manufactured fertilizers shall not be permitted prior to May 1 nor after November 15 in any year (due to the inability of frozen soil to absorb nutrients, and due the lack of need or use of such nutrients by the turf, thus resulting in excess fertilizer remaining to be picked-up by stormwater and causing adverse impacts). In a year in which there has been unseasonably warm temperatures in the spring, any person may request the environmental department to authorize the application of manufactured fertilizer prior to May 1. In the consideration of such a request in a given year, the date set by environmental department for commencing the application of manufactured fertilizer shall be at least three (3) weeks after the commencement of the active lawn growing season generally experienced in the township (i.e., three (3) weeks after so called "green-up" in such year), as certified to the environmental department by a person selected by the department as having expertise in turf management.
- (3) Manufactured fertilizers shall not be applied to sidewalks, streets, driveways or other nonturf or nonlandscaped areas unless removed within a period of two (2) hours.
- (4) In view of the specialized needs of golf course turf areas, the application schedules set forth in subsection (1) above shall not apply to golf courses. Golf courses shall conform to the permissible rates specified in subsection (5). New greens and tees on golf courses shall be

allowed a greater amount of annual rate of fertilizer than permitted in subsection (5) for the first two (2) years of growth, provided written notice that the permissible rates will be exceeded is given to the department prior to or immediately following the initial application of manufactured fertilizer to the green or tee area, which notice shall contain the intended schedule and rates for the two-year exemption period. Written notice of any changes or deviations from the intended schedule and rates schedule and rates schedule and rates for the two-year exemption period.

- (5) Individuals who are not commercial or institutional applicators shall conform with the following rates and applications. Commercial applicators and institutional applicators shall apply manufactured fertilizer only at the lowest rate necessary and without exceeding the maximum weight per application. <u>Section 14.5-21</u>, of this article, is intended to assist all applicators in making the determinations necessary to comply with these maximum rates.
  - a. Nitrogen (N). Elemental nitrogen shall be applied at the maximum of three and one-half (3½) pounds per one thousand (1,000) square feet of turf area per year. Single applications of elemental nitrogen shall not exceed one (1) pound per one thousand (1,000) square feet of turf area.
  - b. Phosphorous (P). For commercial applicators, no elemental phosphorous whatsoever shall be applied to any turf area. Persons who are not commercial applicators shall use their best efforts to apply fertilizer with no elemental phosphorous; however, if a fertilizer with no elemental phosphorous is reasonably available for purchase by a noncommercial applicator, such person may apply an alternate fertilizer so long as the nitrogen to phosphorous ratio in such fertilizer is at least five-to-one (5 to I). In addition, for all applicators, in the event a soil test is conducted, and the test results demonstrate based upon well accepted standards in the industry that the turf area in question clearly requires an application of phosphorous, then, an application of the minimum quantity of phosphorous determined by the test to be required shall be permitted, and records of such testing and results shall be maintained, made available and filed as required in section 14.5-18, below; and, in all events, application of elemental phosphorous shall not exceed the following limits:
    - Elemental phosphorous shall not be applied in a quantity greater than seven tenths (0.7) pounds per one thousand (1,000) square feet of turf area per year; and
    - 2. Single applications of elemental phosphorous shall not exceed one quarter (0.25) pound per one thousand (1,000) square feet of turf area.
- (6) Because fertilizer on impervious surfaces does not achieve any benefit, and is likely to be picked-up by stormwater and carried to areas that may cause adverse impacts, the following requirements shall apply:
  - A commercial applicator shall not leave the site at which manufactured fertilizer has been applied without first taking affirmative actions to ensure that all manufactured fertilizer on impervious surfaces is broomed, washed or otherwise moved onto areas of turf.
  - b. All persons other than commercial applicators shall, within six (6) hours following the application of a manufactured fertilizer take affirmative actions to ensure that all fertilizer on impervious surfaces is broomed, washed or otherwise moved onto areas of turf.
- (7) An objective of this article is to prevent manufactured fertilizer from being washed away from a site before it is absorbed by the turf intended to be benefited. Therefore, applying manufactured fertilizer while it is raining shall be prohibited.

(8) The environmental department shall implement a plan to educate persons applying fertilizer to areas of turf in the township. Such education shall primarily involve the deliverance of information to those residents in assisting in the development of goals and strategies.

(Ord. No. C-310, § 1(4), 4-15-91; Ord. No. C-310-B, § 1, 5-21-01; Ord. No. C-310-C, § 1, 9-24-01)

Sec. 14.5-15. - Administrative relief.

- (a) All applicators desiring to apply manufactured fertilizers more frequently than permitted in subsection <u>14.5-14(1)</u> or in amounts exceeding the quantities prescribed in this article may seek administrative relief in accordance with this section.
- (b) An applicator desiring to seek administrative relief under this section shall file an application with the department on the form approved by the township board.
- (c) A soil sample or samples shall be taken from the site on which an applicator is proposing to apply manufactured fertilizers in amounts exceeding the quantities prescribed in this article. Such soil samples shall be taken by the director or his designee and forward to the Oakland County Extension Service for analysis. Following completion of the analysis, the results shall be reviewed by the director or the director's designee.
- (d) Approval or denial of the application shall be determined by the director as expeditiously as possible, but in no event later than five (5) days after receipt of the soil analysis, taking into consideration the following criteria:
  - (1) Anticipated environmental impact upon surrounding water resources.
  - (2) Permeability of soils and topographic conditions of the site.
  - (3) Conditions of stormwater management systems and ability of the system for nutrient uptake.
  - (4) Percentage of the site allocated to impervious surfaces.
  - (5) Necessity demonstrated by the application with regard to the turf management requirements of the site.

(Ord. No. C-310, § 1(5), 4-15-91)

# Sec. 14.5-16. - Special regulation for wetlands and watercourses.

Manufactured fertilizers shall not be permitted within any wetland or watercourse as defined in <u>chapter 12</u> of this Code, or within any environmental feature setback area as defined in <u>chapter 26</u> of this Code. The township through the wetland review board and/or township board may impose additional requirements or prohibitions with regard to the rate, area and applications of manufactured fertilizers for the purpose of protecting wetlands, watercourses and environmental feature setback areas.

(Ord. No. C-310, § 1(6), 4-15-91; Ord. No. C-310-B, § 1, 5-21-01; Ord. No. C-310-C, § 1, 9-24-01)

Sec. 14.5-17. - Licensure requirement and procedure.

- (a) All commercial and institutional applicators shall be licensed in good standing by the township prior to applying manufactured fertilizers on any lands in the township.
- (b) A license issued under this article shall be valid until expiration, suspension or revocation.
- (c) To secure a license, a commercial and/or institutional applicator shall complete and submit to the township clerk a license application. Previously licensed applicators shall submit their applications by January 31 of the year for which a license is requested. The license application shall include the following:

- (1) Legal and business name(s), address, telephone number and contact person of applicant.
- (2) Name (if applicable), address and description of institutional applicator property, including the use, area and dimensions of the property.
- (3) A copy of the applicant's material safety data sheet (MSDS) may also be required as part of the license application.
- (4) The product name of names of manufactured fertilizers to be used, including the percentage weight and ratios of elemental nitrogen and elemental phosphorus.
- (5) A description of the vehicles, including trailers, which will be used by the applicator during the license period to apply manufactured fertilizer to turf areas in the township, which shall include the make, model, year and weight of the vehicle; the size of any manufactured fertilizer tanks; the vehicle identification number; the license plate/registration number assigned by the Michigan Secretary of State and any other registration or identification numbers assigned by other state or federal governmental agencies.
- (d) Upon submission of an application to the clerk, the applicant shall pay the fee according to the schedule established by resolution of the township board, which fee schedule shall be calculated to cover the costs of the license review, issuance and periodic field inspection.
- (e) The clerk shall forward the completed application to the department for determination whether the manufactured fertilizers to be used comply with the provisions of this article.
- (f) The application shall be approved or denied within thirty (30) days by the department and, if approved:
  - (1) A numbered license shall be issued, to expire on the immediately following November 15.
  - (2) A sticker or decal for each vehicle disclosed in the application under subsection (c)(5) shall be issued, which shall immediately be permanently affixed and displayed by the licensee on the driver's side front bumper on each licensed vehicle.
- (g) The township clerk shall maintain a current list of all licensed commercial and institutional applicators.
- (h) A licensee shall notify the department in writing of any changes in the information disclosed in the license application. Additional vehicles shall not be used to apply manufactured fertilizer to turf areas in the township until a sticker or decal for that vehicle has been issued and permanently affixed to the vehicle windshield as provided in subsection (f)(2).

(Ord. No. C-310, § 1(7), 4-15-91; Ord. No. C-310-D, § 1, 5-5-03)

Sec. 14.5-18. - Regulation of licensed applicator.

- (a) The business name of a commercial applicator shall be prominently displayed on all company vehicles in order to assist in monitoring and enforcement of this article.
- (b) The director, or the director's designate, shall be authorized to periodically inspect the property on which manufactured fertilizer has been applied by a licensed applicator.
- (c) If a commercial applicator is authorized under section 14.5-14(5)(b), of this article, to apply a manufactured fertilizer containing phosphorous onto a turf area, the commercial applicator shall test such area for the purpose of determining the amount of phosphorous, if any, is needed by such particular turf area, and shall secure the results of such test. The application of phosphorus to such turf area shall not be any greater than demonstrated by such test results. For the duration of time in which there is reliance upon such test, records of such testing shall be maintained by the licensed applicator in the vehicle used to make applications of manufactured fertilizer containing

phosphorous to the turf areas in question, and shall be subject to review by township officials upon request. In addition, a copy of such records shall be filed with the township clerk on July 1 and December 1 each year, including the following for each property:

- (1) The address.
- (2) The date of testing(s) during the reporting period.
- (3) The entity performing the test, and the test results.
- (4) The dates and quantities of phosphorous applied during the reporting period.

(Ord. No. C-310, § 1(8), 4-15-91; Ord. No. C-310-A, § 1, 5-17-99; Ord. No. C-310-B, § 1, 5-21-01; Ord. No. C-310-C, § 1, 9-24-01)

Sec. 14.5-19. - Inspection and license revocation.

- (a) Should a commercial or institutional applicator be found to be in violation of this article, the township board, following notice and an opportunity of the licensee to be heard, shall have the right to revoke a license for a period of up to one (1) year. If a commercial or institutional applicator is found to be in violation of this article on more than one (1) occasion in any one (1) calendar year, the township board shall revoke the license of such applicator for a period of not less than one (1) calendar year but not more than five (5) calendar years.
- (b) Should a commercial or institutional applicator be found to be in violation of this article, the township board, following notice and an opportunity of the licensee to be heard, shall have the right to revoke a license for a period of up to one (1) year. If a commercial or institutional applicator is found to be in violation of this article on more than one (1) occasion in any one (1) calendar year, the township board shall revoke the license of such applicator for a period of not less than one (1) calendar year but not more than five (5) calendar years.

(Ord. No. C-310, § 1(9), 4-15-91; Ord. No. C-310-A, § 2, 5-17-99)

# Sec. 14.5-20. - Appeal.

Any applicator aggrieved by a determination made by the department or director under this article shall have a right to appeal such determination to the township supervisor, provided a written request for such appeal must be submitted to the supervisor within fourteen (14) days following the determination from which an appeal is intended. Upon the submission of the written request for appeal, the township supervisor shall provide the aggrieved person an opportunity to be heard and shall consider any other relevant evidence and make an expeditious determination on the appeal.

(Ord. No. C-310, § 1(10), 4-15-91)

Sec. 14.5-21. - Calculations for proper application.

In order to determine permitted rates under this article, the following calculations reference the proper application levels per one thousand (1,000) square feet of lawn area:

- Methodology for determining the greatest amount (in pounds per one thousand (1,000) square feet) of manufactured fertilizer allowable in accordance with this article:
  - a. The three-number ratio given on the manufactured fertilizer bag represents the percent ratio for nitrogen, phosphorus and potassium for any given manufactured fertilizer weight.

Example: 29-3-4 means 29% nitrogen, 3% phosphorus, and 4% potassium. NOTE: The third number may be disregarded, since potassium is not regulated by the section.

b. To determine the maximum amount (in pounds per one thousand (1,000) square feet) of applied manufactured fertilizer allowed annually, divide 3.5 (the maximum amount of nitrogen allowed) by the first number in the ratio (percent nitrogen) and then multiply by 100.

Example: 3.5 divided by 29 = 0.121 0.121 multiplied by 100 = 12.1 pounds

Next divide 0.7 (the maximum amount of phosphorus allowed) by the second number in the ratio (percent phosphorus) and multiply by 100.

Example: 0.7 divided by 3 = 0.23 0.23 multiplied by 100 = 23 pounds

c. Compare the number of pounds as determined from the percent nitrogen with the number of pounds as determined by the percent phosphorus. The smaller weight represents the maximum amount of manufactured fertilizer that shall be used.

Example: The sample problem above gave 12.1 pounds and 23 pounds as the maximum quantities of manufactured fertilizer. Using 12.1 pounds of manufactured fertilizer ensures that neither phosphorus nor nitrogen will exceed the allowable annual application rates as described in this article. If 23 pounds were used, the amount of nitrogen would exceed its limit of 3.5 pounds per one thousand (1,000) square feet of turf area.

d. To convert the maximum allowable pounds per one thousand (1,000) square feet per year into the maximum allowable pounds per one thousand (1,000) square feet per application, divide the pounds per year by the number of applications per year. Example: 12.1 pounds per year divided by 5 applications = 2.4 pounds per 1,000 square fee per application.

Examples of Manufactured Fertilizers Selections:

Annual Application (lbs. per 1000 sq. ft.)		Possible Fertilizer Analysis	Maximum Amount of Fertilizer Allowed*
N (Nitrogen)	P (Phosphorus)		(lbs. per 1000 sq. ft.)
3.5	0.7	35-7-X	10
3.5	0.3	35-3-X	10
3.4	0.3	35-3-X	10
3.3	0.4	30-4-X	11
3.5	0.4	29-3-X	12

West Bloomfield, MI Code of Ordinances

Page 8 of 9

3.4	0.5	28-4-X	12
3.4	0.4	28-3-X	12

\*Numbers are rounded to the highest whole numbers permissible by this article.

X-Does not apply to this section.

- (2) Methodology for determining how many square feet of turf can be covered by a given bag of manufactured fertilizer:
  - a. To determine the total pounds of nitrogen in a given bag of manufactured fertilizer, multiply the percent ratio of nitrogen (the first number) by the total bag weight. Then divide by 100.

Example: If you have a 12-pound bag of manufactured fertilizer with a 28-4-x ratio, the equation would be as follows:

28 multiplied by 12 = 336 336 divided by 100 = 3.36 or rounded 3.4 total pounds of nitrogen

b. To determine the total number of square feet that can be treated by the nitrogen in the given bag of manufactured fertilizer, divide the total pounds of nitrogen by 3.5 (the maximum amount of nitrogen allowed). Then multiply by 1000.

Example: 3.4 divided by 3.5 = 0.97 0.97 multiplied by 1000 = 970 square feet can be treated by nitrogen

c. To determine the total pounds of phosphorus in a given bag of manufactured fertilizer, multiply the percent ratio of phosphorus (the second number) by the total bag weight. Then divide by 100.

Example: 4 multiplied by 12 = 48 48 divided by 100 = 0.48 or rounded 0.5 total pounds of phosphorus

d. To determine the total number of square feet which can be treated by the phosphorus in the given bag of manufactured fertilizer, divide the total pounds of phosphorus by 0.7 (the maximum amount of nitrogen allowed). Then multiply by 1000.

Example: 0.5 divided by 0.7 = 0.71 0.71 multiplied by 1000 = 710 square feet can be treated by phosphorus

e. Compare the total square feet that can be treated by the nitrogen and the total square feet that can be treated by the phosphorus. The larger number of square feet represents the amount of square feet to be covered by the bag of manufactured fertilizer. This ensures that neither the phosphorus nor the nitrogen will exceed the limits outlined in this article. Example: If you apply the manufactured fertilizer to 970 square feet, both the nitrogen and phosphorus fall within their minimum limits of application. However, if you apply manufactured fertilizer to only 710 square feet, then the nitrogen is not being applied to a large enough area (970 square feet). Therefore, the nitrogen exceeds the limits specified in this article.

(Ord. No. C-310, § 1(Appendix A), 4-15-91; Ord. No. C-310-E, § 1, 4-19-04)

Sec. 14.5-22. - Penalties for violation.

- (a) A person or business found to have violated a provision of this article II, of this <u>chapter 14.5</u>, shall be responsible for a municipal civil infraction.
- (b) Each provision violated, and each day on which a violation is found to have occurred, shall constitute a separate offense.
- (c) The penalty for a first violation, of this article II, shall be the payment of one hundred dollars (\$100.00), and the penalty for a second and each subsequent violation within any two (2) year period shall be the payment of two hundred dollars (\$200.00).
- (d) Nothing in this section shall preclude the township from seeking any other and further relief in law or equity in any court.

(Ord. No. C-310-B, § 1, 5-21-01; Ord. No. C-310-C, § 1, 9-24-01)

# West Bloomfield Township Ordinances Summary

# Illicit Discharge and Elimination Program

20. Reference prohibiting non-storm water discharges into the applicant's MS4:

- Building & Building Regulations Ordinance, Section 8-309 (5) Ensuring sediment shall be removed from runoff (Page 7 of 16)
- Building & Building Regulations Ordinance, Section 8-311 (9) Soil shall not be placed or impede existing drainage (Page 10 of 16)
- Building & Building Regulations Ordinance, Section 8-366 SESC Design (Page 5 of 10)
- Floodplain Ordinance, Section 12-37 (6) No direct discharge of wastewater/sump water is permitted to wetlands, watercourses (Page 22 of 37)
- Floodplain Ordinance, Section 12-38 (e-g) No materials shall be stored in wetland/No direct discharge to wetlands or watercourses/No fill in wetland/floodplain (Page 23 of 37)
- Floodplain Ordinance, Section 12-38 (2) a No fill shall be placed within a designated floodway (Page 24 of 37)
- Floodplain Ordinance, Section 12-72 Obstruction of floodway (Page 31 of 37)
- Solid Waste Management Ordinance, Section 13-2 Prohibition of discharges to ditches/drains (Page 1)
- Solid Waste Management Ordinance, Section 13-106 (11-12) No placement of compost bins/piles in wetlands/watercourses (Page 18)
- Fertilizer Ordinance, Section 14.5 Article II Manufactured Fertilizers (Page 1)
- Fertilizer Ordinance, Section 14.5-16 Prohibition of discharge of fertilizers in wetlands/watercourses (Page 4)
- Fertilizer Ordinance, Section 14.5-19 Fertilizer Applications/Applicators (Page 6)
- Water Supply Ordinance, Section 25-23 Pollution of water (Page 7)

21. Reference that excludes prohibiting the discharges from firefighting activities into the applicant's MS4:

• Non-Stormwater Discharges SOP

22. Provide the reference that excludes prohibiting the following categories: water line flushing, landscape irrigation, rising groundwaters, etc.:

• Non-Stormwater Discharges SOP

23. Provide the reference that regulates the contribution of pollutants to the applicant's MS4:

- Building & Building Regulations Ordinance, Section 8-309 (5) Ensuring sediment shall be removed from runoff (Page 7 of 16)
- Building & Building Regulations Ordinance, Section 8-311 (9) Soil shall not be placed or impede existing drainage (Page 10 of 16)
- Building & Building Regulations Ordinance, Section 8-366 SESC Design (Page 5 of 10)
- Floodplain Ordinance, Section 12-37 (6) No direct discharge of wastewater/sump water is permitted to wetlands, watercourses (Page 22 of 37)

- Floodplain Ordinance, Section 12-38 (e-g) No materials shall be stored in wetland/No direct discharge to wetlands or watercourses/No fill in wetland/floodplain (Page 23 of 37)
- Floodplain Ordinance, Section 12-38 (2) a No fill shall be placed within a designated floodway (Page 24 of 37)
- Solid Waste Management Ordinance, Floodplain Ordinance, Section 12-72 Obstruction of floodway (Page 31 of 37)
- Solid Waste Management Ordinance, Section 13-2 Prohibition of discharges to ditches/drains (Page 1)
- Solid Waste Management Ordinance, Section 13-106 (11-12) No placement of compost bins/piles in wetlands/watercourses (Page 18)
- Fertilizer Ordinance, Section 14.5 Article II Manufactured Fertilizers (Page 1)
- Fertilizer Ordinance, Section 14.5-16 Prohibition of discharge of fertilizers in wetlands/watercourses (Page 4)
- Fertilizer Ordinance, Section 14.5-19 Fertilizer Applications/Applicators (Page 6)
- Water Supply Ordinance, Section 25-23 Pollution of water (Page 7)

24. Provide the reference that prohibits illicit discharges, including illicit connections and direct or disposal of materials into the applicant's MS4:

- Building & Building Regulations Ordinance, Section 8-309 (5) Ensuring sediment shall be removed from runoff (Page 7 of 16)
- Floodplain Ordinance, Section 12-37 (6) No direct discharge of wastewater/sump water is permitted to wetlands, watercourses (Page 22 of 37)
- Floodplain Ordinance, Floodplain Ordinance, Section 12-38 (2) a No fill shall be placed within a designated floodway (Page 24 of 37)
- Solid Waste Management Ordinance, Section 13-2 Prohibition of discharges to ditches/drains (Page 1)
- Solid Waste Management Ordinance, Section 13-106 (11-12) No placement of compost bins/piles in wetlands/watercourses (Page 18)
- Fertilizer Ordinance, Section 14.5 Article II Manufactured Fertilizers (Page 1)
- Fertilizer Ordinance, Section 14.5-16 Prohibition of discharge of fertilizers in wetlands/watercourses (Page 4)
- Fertilizer Ordinance, Section 14.5-19 Fertilizer Applications/Applicators (Page 6)
- Water Supply Ordinance, Section 25-23 Pollution of water (Page 7)

25. Provide the reference with the authority established to inspect, investigate, and monitor suspected illicit discharges into the applicant's MS4:

- Building & Building Regulations Ordinance, Section 8-370 Inspections (Page 9 and 10 of 10)
- Floodplain Ordinance, Section 12-11 Property inspections (Page 11 of 37)

26. Provide the reference that requires or enforces elimination of illicit discharges into the applicant's MS4, including providing the applicant the authority to eliminate the illicit discharge:

• Floodplain Ordinance, Section 12-2 (4) (Page 1-2)

- Solid Waste Management Ordinance, Section 137-78 (Page 15)
- Fertilizer Ordinance, Section 14.5-22 (Page 4)
- Water Supply Ordinance, Section 24-227 (Page 16)
- Enforcement Response Procedure

# Soil Erosion/Construction Site Runoff Control

28. Provide the reference for notifying the Part 91 Agency when soil or sediment is discharged to the applicant's MS4 from a construction activity:

- The Township is an MEA/Part 91 Agency. All earth changes of one acre or more and/or within 500 lineal feet of a waterbody require a SESC permit. Please refer to the Building & Building Regulations Ordinance, Section 8-366 and 8-367 (Page 5 of 10) for earth change requirements and plan requirements.
- Appendix A

29. Provide the reference with the requirement to notify the MDEQ when soil, sediment, or other pollutants are discharged to the applicant's MS4 from a construction activity:

• See the attached Construction Storm Water Runoff Control SOP

30. Provide the reference to the procedure 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:

- The Township is an MEA/Part 91 Agency. All earth changes of one acre or more and/or within 500 lineal feet of a waterbody require a SESC permit. Please refer to Building & Building Regulations Ordinance, Section 8-366 and 8-367 (Page 5 of 10) for earth change requirements and plan requirements.
- Appendix A

31. Provide the reference 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:

• See the attached Construction Storm Water Runoff Control SOP

# Post-Construction Controls

33. Provide the reference that applies to projects that disturb at least one or more acres and discharge into the applicant's MS4:

- SW Permit Application Packet (Page 5)
- Appendix A

36. Does the ordinance require treating of the first one inch of runoff?

- Water Supply Ordinance, Part 2, I.A. (Page 39); II.A. (Page 39-40); II.A.1.e. (Page 41-42, 46-47)
- Water Supply Ordinance, Part 2, II.D.2. (Page 52-53)

38. Provide the reference to reduce TSS loadings by 80% or not to exceed 80 mg/L:

• Water Supply Ordinance, Part 2, II.D.2. (Page 52-53)

39. Provide the reference with the requirement that the PC runoff rate and volume of discharges not exceed the pre-development rate and volume for all storms up to the 2-year, 24-hour storm at the project site:

- Water Supply Ordinance, Part 2, I.A. (Page 39); II.A. (Page 39-40); I.a., d. (Page 40); II.A.1.e. (Page 41-42, 46-47)
- Water Supply Ordinance, Part 2, D.2. (Page 52-53)

40. Provide the reference that excludes any waterbodies from the channel protection performance standard:

• Not Applicable

41. Provide the reference for reviewing the use of infiltration BMPs to meet the water quality treatment and channel protection standards for new/redevelopment projects:

- Waterways Ordinance, Part 1, C. (Page 35-38)
- Waterways Ordinance, Part 2, 6.B. (Page 45)
- Waterways Ordinance, Part 2, D.3. (Page 53)

42. Provide the reference that requires BMPs in potential hot spot areas:

- Waterways Ordinance, Part 2, 6. (Page 45)
- Waterways Ordinance, Part 2, V.B. (Page 55)

# 43-51.

• Waterways Ordinance, Section 24-214 – Off-site stormwater management is allowable

# Site Plan Review

53. Provide the reference that includes a requirement to submit a site plan for review and approval of post-construction SW runoff BMPs:

- Water Supply Ordinance, Section 24-211 (a) (Page 11)
- Water Supply Ordinance, Section 24-215 (Page 13)
- SW Mgt Ordinance, Part 1 (Appendix) (Page 33-38)
- Zoning Ordinance, Chapter 26, Section 6.1 (Page 18-22)

54. Provide the reference submitted for site plan review and approval:

- Water Supply Ordinance, Section 24-211 (a) (Page 11)
- Water Supply Ordinance, Section 24-215 (Page 13); 24-217
- SW Mgt Ordinance, Part 1 (Appendix) (Page 33-38)
- Zoning Ordinance, Chapter 26, Section 6.1 (Page 18-22)

55-58. Provide the reference to the site plan review and approval procedure describing the process for determining how the developer meets the performance standards and ensures long-term O&M/allow for applicant inspections:

- Water Supply Ordinance, Section 24-221 (Page 14); Section 24-222 (Page 15)
- SW Mgt Ordinance, Part 2, Division 3 (Page 53)
- SW Mgt Ordinance, Part 2, Section X (Page 57-58)
- The Township requires performance guarantees and maintenance agreements per the Stormwater Management Ordinance.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix BB

From West Bloomfield Municipal Code of Ordinances

Chapter 13-Solid Waste Management

# Chapter 13 - SOLID WASTE MANAGEMENT<sup>[1]</sup>

Footnotes:

Cross reference— Loose trash, rubbish and debris in shopping centers, § 8-220; disposal of garbage and other obnoxious materials in community parks, § 16-19; water supply and sewage disposal systems, Ch. 24.

State Law reference— Authority to provide for collection and disposal of garbage and rubbish, MCL 41.411 et seq., 123.241 et seq., 123.361 et seq.

# ARTICLE I. - IN GENERAL

Sec. 13-1. - Deposit of offensive substances.

All solid waste generated on all public and private property shall be disposed of in an appropriate receptacle and delivered for proper disposition, as provided in this chapter. It shall be unlawful for any person in the township, directly or indirectly, to throw, place or leave in any public highway, street or alley or in any private or public place any solid waste, decaying or waste vegetable substance, dead animal, fish, slops, unclean or nauseous liquids or gaseous fluids, garbage, putrid meat or any other substance which may cause an unwholesome or offensive odor or otherwise cause a public nuisance. It shall also be unlawful for any person to throw, place or leave in any highway, alley or other public place any ashes, cinders, leaves, paper, lawn clippings, debris or rubbish. Solid waste, including, without limitation, the items particularly identified above, shall be placed in suitable containers for the purpose of rubbish collection or curbside recycling or composting as outlined in this chapter.

(Ord. No. 21, § 1, 1-19-54; Ord. No. C-408, § 2, 9-20-93)

# Sec. 13-2. - Deposit of refuse; obstruction of drains.

No person shall discharge or cause to be discharged into any lake, highway, street or public place in the township any hazardous waste, sewage or foul, inflammable or nauseous liquids or any refuse, drippings, oil, gasoline, or cleaning fluids, nor place or throw in any drains or ditches any dirt, sand, gravel, ashes, straw, hay, boughs, garbage or rubbish or any other materials or substances which might tend to obstruct or clog the drains or ditches.

(Ord. No. 21, § 2, 1-19-54; Ord. No. C-408, § 2, 9-20-93)

Secs. 13-3-13-15. - Reserved.

ARTICLE II. - RESIDENTIAL SOLID WASTE<sup>[2]</sup>

Footnotes: --- (2) ---

Editor's note—Ord. No. C-790, § 1, adopted Mar. 24, 2014, amended art. II in its entirety to read as herein set out. Former art. II, §§ 13-16—13-29 was entitled "Disposal of Garbage", and derived from Ord. No. 19, §§ 1—4, 6—15, adopted Aug. 1, 1952; and Ord. No. C-408, § 3, adopted Sept. 20, 1993.

# **DIVISION 1. - PURPOSE AND DEFINITIONS**

Sec. 13-16. - Purpose.

(a) Removal required. The Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11501 et seq., provides that a municipality shall ensure that all solid waste is removed from sites of generation frequently enough to protect the public health, and that it shall be disposed of at a licensed solid waste disposal area.

(b)

Collection and disposal by a single solid waste hauler. Because solid waste collection directly affects public health, safety and welfare, the township has determined that the curbside collection and disposal of solid waste from residential properties shall be undertaken by the township through a contract with a single licensed designated solid waste hauler.

- (c) Recycling and composting. The reuse of materials is a principal objective of the state's solid waste management plan; therefore, the township has determined that its solid waste program shall include recycling and composting consistent with the county solid waste plan.
- (d) Household hazardous waste collection. Residents may not place household hazardous waste at curbside for collection, transport, and disposal, therefore the township shall arrange for household hazardous waste recycling, recovery, and disposal for residents to minimize the placement of untreated hazardous waste in disposal facilities.

(Ord. No. C-790, § 1, 3-24-14)

# Sec. 13-17. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section:

*Bulk item* means large pieces of furniture, bed springs, mattresses, large appliances, washers, dryers, air conditioners, microwave ovens, humidifiers, de-humidifiers, stoves, refrigerators, hot water heaters, water closets, toilets, bathtubs, sinks, carpet and pad, storm doors, storm windows, lawn furniture, railroad ties, fence parts or sections no larger than three (3) feet by eight (8) feet, fence posts no larger than four (4) inches by four (4) inches by eight (8) feet and other similar large household items.

Curbside means a location as near as possible to the main-traveled portion of the roadway for the placement of residential solid waste, recyclable materials, or yard clippings for collection.

Designated solid waste hauler means the licensed solid waste hauler awarded a contract by the township to collect, transport, and dispose of the residential solid waste, recyclable materials, and yard clippings generated from residential premises within the township.

Hazardous waste as defined by the Natural Resources and Environmental Protection Act, Part 111 of Public Act No. 451 of 1994, MCL 324.11101 et seq., as amended.

Person means any individual, firm, public or private corporation, partnership, trust, public or private agency, or any other entity, or any group of such persons.

*Recyclable materials* means materials that are separated from solid waste prior to the collection from the site of generation, including high grade paper, glass, metal, plastic, aluminum, newspaper, corrugated paper, yard clippings, and other materials that may be recycled or composted. Recyclable materials shall not include hazardous waste.

Residential premises refers to a parcel or lot that contains a single-family residential dwelling or multiple-family residential dwelling unit.

Site of generation means any premises in the municipality in or on which solid waste, recyclable materials, or yard clippings are generated.

Solid waste means garbage, rubbish, ashes and animal waste as defined by the Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11501 et seq., as amended, also commonly referred to as trash or refuse.

Solid waste management plan means the Oakland County Solid Waste Management Plan and any amendments thereto.

Waste hauler means any person engaged in the business of collecting solid waste, recyclable materials, and yard clippings for transportation and disposal at a licensed disposal area.

Yard clippings means leaves, grass clippings, lake weeds, vegetable or other garden debris, shrubbery, or brush, tree, plant and/or vegetation trimmings, less than four (4) feet in length and two (2) inches in diameter, that can be converted to compost humus, also commonly referred to as compostable(s) and yard waste. Yard clippings shall not include stumps, agricultural wastes, animal waste, roots, sewage sludge or garbage.

(Ord. No. C-790, § 1, 3-24-14)

DIVISION 2. - RESIDENTIAL STORAGE OF SOLID WASTE

Sec. 13-18. - Prohibited storage and disposal.

It shall be unlawful for any person to store or dispose of waste, including recyclable material and yard clippings, except as expressly authorized by this chapter.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-19. - Prohibited placement of waste upon premises of another.

It shall be unlawful for any person to place or cause to be placed waste for disposal upon the premises of another.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-20. - Regulations for storage of waste.

- (a) Solid waste. All solid waste shall be stored on the site of generation in the following manner:
  - (1) Stored in a closed container or containers sufficient in number and size to store such waste.
  - (2) Shielded from public view.
  - (3) Shall not be commingled with yard clippings.
- (b) Recyclable materials. All recyclable materials not commingled with solid waste shall be stored in the following manner:
  - (1) Metal, glass or plastic materials shall be rinsed and cleaned before storage.
  - (2) Recyclables shall be site-separated from other waste, and stored in a recycling collection container.
  - (3) Newspapers or other recyclable paper products shall be stored and placed in recycling collection containers, paper bags, or tied into bundles weighing not more than fifty (50) pounds.
- (c) Yard clippings. Residential yard clippings shall not be comingled with solid waste and shall be stored in accordance with the Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11521, as amended.

about:blank

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-21. - Open burning of solid waste prohibited.

Open burning of any kind of solid waste, trash, refuse or other materials, including but not limited to, paper products, cardboard, painted or treated wood, plastic, styrofoam, leaves or yard clippings is prohibited.

(Ord. No. C-790, § 1, 3-24-14)

Secs. 13-22-13-27. - Reserved.

DIVISION 3. - RESIDENTIAL CURBSIDE COLLECTION

Sec. 13-28. - Curbside collection of waste, recyclable materials and yard clippings.

- (a) Weekly curbside collection. Because solid waste collection directly affects public health, safety and welfare, all residential solid waste, recyclable materials, and yard clippings shall be collected curbside from single-family residential dwellings and multiple-family residential dwellings with curbside collection on a weekly basis for transport and disposal at a licensed disposal site by a single designated waste hauler awarded a contract with the township.
- (b) Single designated waste hauler required. Except as provided in subsection (c) of this section, no person shall dispose of any solid waste, recyclable materials, or yard clippings from a residential site of generation, unless excluded from the application of this article, other than by means of the designated waste hauler awarded a contract by the township for the curbside collection and disposal of residential solid waste, recyclable materials, and yard clippings.
- (c) Suspension of weekly curbside service. A resident may temporarily suspend the residential curbside collection program no more than two (2) times each calendar year by providing written notice directly to the designated solid waste hauler. The temporary suspension period shall not exceed a period of three (3) months. At the end of the temporary suspension period, the service shall be automatically reactivated by the designated solid waste hauler. Residents who request reactivation prior to the end of the three (3) month suspension period shall notify the designated solid waste hauler directly to reactivate their service. In the event solid waste, recyclable materials or yard clippings are placed for collection at curbside prior to the end of the suspension period, the service shall be reactivated and the designated waste hauler may resume billing for the service.
- (d) Exclusions. The following are excluded from the application of this article:
  - (1) Landscaping services. A person in the business of providing landscaping services may remove the yard clippings from its residential customers' premises for disposal by the landscaper in accordance with all regulations of the Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11501, as amended.
  - (2) Dumpster collection. Multiple-family residential units that have dumpster, roll-out, or other type of non-curbside solid waste collection.
  - (3) Apartments. Multiple-family commercial uses such as apartments and hotels.
  - (4) Undeveloped residential property. Residential property that is undeveloped.
  - (5) Registered vacant property. Vacant property registered pursuant to chapter 8, article XVI of the Code of Ordinances.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-29. - Curbside collection regulations. (a) *Time.* No solid waste, recyclable material or yard clippings shall be placed at curbside for collection prior to 6:00 p.m. on the day immediately preceding a scheduled collection day. All storage containers and any waste not removed by the designated waste hauler shall be removed from curbside by 7:00 p.m. on the scheduled collection day.

- (b) Presumption. It shall be presumed that the owner, lessee, or occupant in physical possession of a site of generation abutting a curbside where solid waste, recyclable materials or yard clippings are placed is the person who placed such materials curbside for collection.
- (c) Preparation of yard clippings. Twigs, brush and branches not exceeding two (2) inches in diameter shall be tied in bundles not more than four (4) feet in length and eighteen (18) inches in diameter. All other yard clippings shall be placed in either containers or paper bags clearly marked as yard clippings.
- (d) Hazardous waste. No person shall knowingly place hazardous waste at the curbside or other designated location for collection and the designated waste hauler shall not knowingly collect or deliver hazardous waste to a processing or disposal site.
- (e) Adoption of rules and regulations. The township board shall adopt by resolution rules and regulations governing the procedures for collection of solid waste, recyclable materials and yard clippings. The rules and procedures shall include the pickup schedule, the list of recyclable materials, the list of approved containers, and the manner and location of container storage. The rules and regulations shall be consistent with this article, consistent with the contract entered into with the designated waste hauler, and shall comply with applicable provisions of the Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11501 et seq.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-30. - Prohibited removal of solid waste from curb.

All solid waste, recyclable materials and yard waste shall become the property of the designated waste hauler at the time the material is placed at curbside for collection by the designated waste hauler. It shall be unlawful for any person other than the designated waste hauler or generator of solid waste to collect or cause to be collected any waste after it has been placed at the curb for collection.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-31. - Prohibited collection, transport or disposal.

No person, except the designated waste hauler, shall engage in the collection, transport, or disposal of solid waste, recyclable materials, or yard clippings from a residential site of generation, unless excluded from the application of this article.

(Ord. No. C-790, § 1, 3-24-14)

Secs. 13-32, 13-33. - Reserved. DIVISION 4. - DESIGNATED SOLID WASTE HAULER FOR RESIDENTIAL CURBSIDE COLLECTION Sec. 13-34. - Selection by competitive bid.
The township shall use a sealed competitive bid procedure for the award of a contract for the single designated solid waste hauler for residential curbside collection. The bid procedure shall require the demonstration of the solid waste hauler's capability to provide a high level of service to residential sites of generation and ability to comply with this article. The township board shall approve the award of contract for the single designated solid waste hauler for residential curbside collection.

#### (Ord. No. C-790, § 1, 3-24-14)

Sec. 13-35. - Bid specifications for curbside collection, transport, and disposal of residential solid waste, recyclable materials and yard clippings.

The bid specifications may include requirements, conditions and specifications reasonably related to the following:

- (1) The collection and disposal of solid waste, recyclable material, bulk items, and yard clippings from all single-family and multiple-family sites with curbside collection in compliance with this article and the Natural Resources and Environmental Protection Act, Part 115 of Public Act No. 451 of 1994, MCL 324.11501 et seq.
- (2) Proof that all licenses and permits required by federal and state law, local ordinance, and related rules and regulations related to the collection, transport, and disposal of solid waste, recyclable materials, and yard clippings have been secured and shall be maintained in good standing.
- (3) Provide all requested information related to disposal, recycling, and composting sites including copies of licenses and contracts.
- (4) Provide operational specifications for collection trucks and equipment, number of employees, maintenance facilities, container handling, schedules and routes.
- (5) Demonstrate ability to provide quality service to residential sites of generation within the township.
- (6) Provide a letter of credit as a performance guarantee in an amount specified in the bid specifications.
- (7) Provide procedures to address citizen complaints.
- (8) Describe resources to promote the general understanding of and need for resource recovery, recycling and composting.
- (9) Implementation of a household hazardous waste collection and disposal program.
- (10) To provide a multimedia informational program with respect to resource recovery, recycling and composting.
- (11) The submission of reports describing the volume of solid waste, recyclable materials, and yard clippings generated, and such other reports as requested by the township to determine the efficiency and effectiveness of the designated single waste hauler collection and disposal program.
- (12) The right of the township to inspect records and operations of the designated waste hauler.
- (13) Rates and charges for the services of the designated waste hauler.
- (14) Procedures for the collection of rates and charges for services rendered or to be rendered to each site of generation by the designated waste hauler.

(15)

Other miscellaneous requirements and provisions may be specified including, but not limited, to dumpster service at municipal buildings and facilities, a recyclable materials drop-off center, and seasonal cleanup assistance program.

- (16) Provisions for the termination by the township in the event of the failure of performance of the designated waste hauler.
- (17) The rights of the township in the event of a breach of contract by the designated waste hauler.
- (18) Business practices that promote and protect the public health, safety and welfare.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-36. - Transportation and disposal; disposal fees.

The designated solid waste hauler shall transport and deliver the solid waste to a licensed disposal facility, and the designated solid waste hauler shall pay all disposal fees charged by the facility. The obligation of the waste hauler to pay the disposal fee pursuant to this article shall be absolute and unconditional. The designated solid waste hauler shall comply with all applicable federal, state and county laws, statutes, local ordinances, and rules and regulations in the collection, transportation, and delivery of solid waste, recyclable materials and yard clippings.

(Ord. No. C-790, § 1, 3-24-14)

Secs. 13-37, 13-38. - Reserved.

DIVISION 5. - RATES, BILLING AND PAYMENT

Sec. 13-39. - Rates to be established by township.

The township board shall adopt a resolution that specifies the rates that may be charged for the collection, recycling, and disposal services for residential premises pursuant to this article. The rates to be charged shall be proportionate to the necessary costs of the service and therefore, shall be determined based upon the competitive bids received. Upon adoption, the approved rate resolution shall be published in order to provide notice to the public of the rates approved. The designated solid waste hauler shall not charge a rate in excess of the rates approved by resolution of the township board.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-40. - Environmental service fee remitted to township.

The township board shall adopt an environmental service fee by resolution for the costs to the township for providing for household hazardous waste collection, environmental education products and services, customer services, and administration of the residential solid waste program. The environmental service fee shall be included on each invoice issued by the designated solid waste hauler as a separate charge to be remitted to the township. The designated solid waste hauler shall collect the environmental service fee and upon receipt shall remit the fee to the township.

(Ord. No. C-790, § 1, 3-24-14) Sec. 13-41. - Invoice for services. (a) *Invoice period*. The designated solid waste hauler shall send an invoice in advance directly to each residential premises for which services are provided. The resident shall elect to be billed either annually or quarterly. The invoice shall be prepared in accordance with the resident's billing election and shall be for pre-payment of services to be rendered.

- (b) Residential associations. A residential association for a condominium or subdivision may assume the responsibility to pay for the collection, recycling, and disposal services provided to the residential premises within its association by contacting the designated solid waste hauler and making arrangements for the solid waste hauler to invoice the association for all the residential premises within the association. In the event a residential association assumes the responsibility to pay for the services, the designated solid waste hauler shall not bill the individual residential premises comprising the association, and the provisions for collection of delinquent invoices as set forth in sections <u>13-42</u> and <u>13-43</u> shall not apply to the residential premises within that association.
- (c) Regular mail. The invoice shall be transmitted by regular mail at least thirty (30) days prior to the beginning of the billing period for which the charges are imposed.
- (d) Due date. The due date for payment shall be the last business day prior to the beginning of the billing period for which the charges are imposed. If the last business day falls on a Saturday, Sunday, or holiday, the due date shall be the next business day.
- (e) Delinquent. If the invoice is not paid within seven (7) days after the due date, it shall be considered delinquent and the designated solid waste hauler shall send a notice of delinquency. The designated solid waste hauler shall maintain its invoice and delinquency notice records for the duration of the contract period. The notice of delinquency shall include the following statement: "Delinquent charges shall be included on the following tax bill pursuant to the procedures set forth in <u>Chapter 2</u>, Article VI, Division 3, Sections <u>2-241</u> to <u>2-243</u> of the Code of Ordinance for the Charter Township of West Bloomfield. If you dispute this notice please contact the designated solid waste hauler at the phone number listed on this notice."

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-42. - Delinquent charges inclusion on tax bill.

- (a) List of delinquencies. The designated solid waste hauler shall maintain a list of delinquent invoices. Delinquent charges shall be included on the following tax bill pursuant to the procedures set forth in <u>chapter 2</u>, article VI, division 3, sections <u>2-241</u> to <u>2-243</u>.
- (b) Procedure. Before any delinquent charge will be included on the tax bill pursuant to <u>chapter 2</u>, article VI, division 3, sections <u>2-241</u> to <u>2-243</u>, the designated solid waste hauler shall submit an affidavit, signed by its authorized representative, that the charges on the delinquent list are accurate, shall include the due date for payment of the delinquent invoice, shall state that the amount is delinquent, and that the resident was given written notice of the collection, recycling, and disposal charges, and of the delinquency as required by this article. The designated solid waste hauler shall also provide a text file in a format prescribed by the township assessor that includes the parcel identification number and address of the premises serviced, the amount of delinquency, and the date payment was due. For inclusion on the summer bill, the information required must be submitted to the township assessor by May 1, and for inclusion on the winter bill, the information must be submitted by October 1.

(c)

*Excluded.* In the event a residential association assumes the responsibility to pay for the solid waste collection, transport, and disposal services, the provisions for collection of delinquent invoices as set forth herein shall not apply to the residential premises within that association.

(Ord. No. C-790, § 1, 3-24-14)

#### Sec. 13-43. - Lien.

The collection, recycling and disposal charges for solid waste, recyclable materials and yard clippings as authorized by this article, shall constitute a lien on the property. Charges remaining delinquent after inclusion on the tax bill as set forth in <u>section 13-42</u>, shall be certified annually to the township assessor to be entered upon the next tax roll and the charges, penalties and interest shall be collected in the same manner as provided for delinquent real property taxes in the township.

(Ord. No. C-790, § 1, 3-24-14)

Sec. 13-44. - Remittance.

The collection, recycling, and disposal charges collected by the township pursuant to procedures set forth in <u>section 13-42</u> or <u>section 13-43</u>, shall be remitted to the designated solid waste hauler as provided by contract, except any penalty and interest charged shall be retained by the township as provided by law.

(Ord. No. C-790, § 1, 3-24-14)

Secs. 13-45, 13-46. - Reserved. ARTICLE III. - BUSINESS OF COLLECTION DIVISION 1. - GENERALLY Sec. 13-47. - Statement of necessity.

The township board finds that the business of solid waste, garbage, rubbish and recyclables collections affects the public health and general welfare of the township and that in order to protect the public health and general welfare and to prevent nuisances, sources of filth and causes of sickness within the township it is necessary that the business of solid waste, garbage, rubbish and recyclables collection by private individuals be regulated by ordinance of the township.

(Ord. No. 62, § 2, 9-4-68; Ord. No. C-334, § 1, 8-5-91; Ord. No. C-382, § 1, 1-18-93; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-48. - Regulation of vehicles.

- (a) Equipment. Any vehicle used in the business of solid waste, garbage, rubbish and recyclables collection shall be watertight and equipped with airtight covers for such portions as are used for the transportation of solid waste, garbage, rubbish or recyclables.
- (b) Operation on Sundays, holidays. It shall be unlawful for any vehicle to be driven over or through any street in the township on a Sunday, or after 10:00 a.m. on Christmas Day, New Year's Day, Thanksgiving Day, Memorial Day, the Fourth of July and Labor Day.
- (c) Display of identification/assigned township identification license. Each vehicle licensed under this article shall display the licensee's full name or name of business, address and telephone number (to include area code) on each side of the vehicle. This information shall be at a height of no less than four (4) inches per letter or number and be printed using the commonly recognized English alphabet and must be of a color contrasting the background color to which it is affixed. The

assigned township identification license shall be displayed on the front of the vehicle. It shall be permanently mounted utilizing either threaded bolts and nuts or screws. The location for mounting must be on the front bumper of the vehicle at any location from the center point of same, or right of center (driver's side) of the vehicle and can not be obstructed or disfigured in any manner as to cause same to be unreadable.

- (d) Drivers. Vehicles used in a licensed business shall not be operated by a driver:
  - (1) Who does not have in their possession a current, valid and unrestricted Michigan driver license with all required endorsements.
  - (2) Who has been convicted of operating a motor vehicle: (i) under the influence of liquor or controlled substances; (ii) with an unlawful blood alcohol content; or (iii) while visibly impaired, or convicted for any other criminal driving offense involving alcohol or controlled substances.
- (e) Vehicle specifications. Vehicles and equipment used to make collections of solid waste, yard waste and recyclables shall be modern, sanitary, mechanically safe and sound and shall not exceed applicable Oakland County weight requirements.
- (f) Operations. Vehicles and equipment used to make collections of solid waste, yard waste and recyclables shall transport same without spillage to the disposal location and/or MRF. Any spilled, loose or dislodged waste, materials or containers deposited upon any street, sidewalk or other public way in the course of collection or transportation within the township shall be promptly cleaned up and removed.

(Ord. No. 62, § 7, 9-4-68; Ord. No. 62-A, 7-22-69; Ord. No. C-408, § 4, 9-20-93; Ord. No. C-408-A, § 1, 5-17-99; Ord. No. C-408-C, § 1, 6-3-02; Ord. No. C-408-D, § 1, 6-15-09)

Cross reference— Traffic and motor vehicles generally, Ch. 22.

Sec. 13-49. - Discriminatory service, agreements between licensees prohibited.

Service shall be offered by any licensee under this article to all residential and business premises within the township without discrimination as to price or service. The licensee shall operate throughout the entire township unless a smaller territory is approved by the township board. No licensee shall make any agreement with any other licensee whereby the licensees would voluntarily restrict their territories so as to avoid competing with one another or in such a manner as to lessen competition in connection with this business within the township.

(Ord. No. 62, § 8, 9-4-68)

Sec. 13-50. - Fees and charges.

Each licensee under this article shall file with the township a complete schedule of fees and charges to be made to customers for service. No licensee shall depart from its filed fees and charges in the operation of its business. No change shall be made in the schedule of fees and charges without thirty (30) days' prior notice to the township and to each customer of the licensee.

```
(Ord. No. 62, § 9, 9-4-68)
Sec. 13-51. - Pickup schedules.
(a)
```

Each licensee under this article shall file with the township a complete schedule of days and areas that pickup to customers is to be made. No licensee shall depart from its filed schedule of days and areas in the operation of its business. No change shall be made in the schedule of days and areas without thirty (30) days' prior notice to the township and to each customer of the licensee.

- (b) Exceptions to the requirements in subsection (a) will be allowed only in the case of an emergency situation. An emergency situation shall be defined as a situation that constitutes a potential health hazard because of happenings not directly within the control of the licensee, such as weather conditions, vehicle breakdown and the like. Such exceptions shall be granted by the township police department in conformance with the rules as established by the township for the granting of such exceptions.
- (c) Each customer of a licensed solid waste, garbage, rubbish and recyclables collector in the township shall retain all substances to be collected between collections in a suitable covered, watertight receptacle kept in an inconspicuous place on the premises so as not to constitute a nuisance until such time as the refuse will be picked up the collector. Not earlier than 6:00 p.m. the night before the scheduled pickup, the receptacles containing the refuse to be collected may be placed at the edge of the roadway for collection. After collection, all empty receptacles shall be removed from the street promptly, and in no event later than 8:00 p.m. of the day of the pickup.
- (d) Handicapped customers. If there are no members of a customer's household that are physically able to place solid waste and recyclables at the edge of the road for collection due to a documented handicap or disability that is on file with the township clerk's office and the licensee, without any additional charges or fees, the licensee shall be required to collect solid waste and recyclables from, and return empty receptacles to, a location that is outside of and between the customer's home and roadway.
- (e) Collection days and hours. Collection of solid waste, recyclables and yard waste shall only be performed in the township between the hours of 7:00 a.m. and 5:00 p.m., Monday through Thursday, provided collection services may be provided on Friday when a holiday occurs in that week, or due to strikes, work stoppages and/or inclement weather. Collection shall not be scheduled on the following holidays: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.
- (f) Customer lists. Each licensee shall maintain a current list of the names, addresses and collection day of its customers and a current customer count, which shall be filed electronically monthly with the township for inspection, but not copying and in connection with an application for a license or license renewal.

(Ord. No. 62, § 10.3, 9-4-68; Ord. No. 62-A, 7-23-69; Ord. No. 62-C, 3-5-73; Ord. No. C-408, § 4, 9-20-93; Ord. No. C-408-D, § 1, 6-15-09)

#### Sec. 13-52. - Reserved.

Editor's note— Ord. No. C-790, § 2, adopted Mar. 24, 2014, repealed <u>§ 13-52</u>, entitled "Collection contracts", which derived from Ord. No. C-334, § 2, adopted Aug. 5, 1991; Ord. No. C-366, § 1, adopted July 20, 1992; Ord. No. C-366A, § 1, adopted Sept. 21, 1992; and Ord. No. C-366-B, § 1, adopted Dec. 7, 2009.

Sec. 13-53. - Obligation to offer recyclable collection and appropriately dispose of recyclables. (a) Commencing July 1, 1993, all persons engaged in the business of collecting garbage, rubbish and/or solid waste from residential property in the township shall offer in good faith to each and every residential customer the service of collection of recyclables. For purposes of this section, "residential customer" shall include single-family attached and detached residences and shall also include individual residents of multiple dwellings.

- (b) Commending August 1, 1993, all persons engaged in the business of collecting garbage, rubbish and/or solid waste from sites of generation not included within the requirements of subsection (a) of this section shall offer in good faith to each and every customer occupying such a site of generation the service of collection of recyclables.
- (c) With respect to all customers who have contracted for the collection of recyclables separate from other solid waste, no person engaged in the business of collecting garbage, rubbish and/or solid waste from any site of generation in the township shall dispose of recyclables collected from such customers at a landfill or other disposal site other than a MRF or other market location duly recognized and licensed by all applicable federal and state laws as a center which processes and markets recyclable materials.

(Ord. No. C-382, § 2, 1-18-93; Ord. No. C-383, § 1, 2-1-93; Ord. No. C-408, § 4, 9-20-93)

Secs. 13-54—13-65. - Reserved. DIVISION 2. - LICENSE Sec. 13-66. - Required.

No person shall engage in or carry on the business of the collection of solid waste, garbage, rubbish and/or recyclables from premises, private or commercial, within the township without first having obtained a license therefor from the township as provided in this division.

(Ord. No. 62, § 3.1, 9-4-68; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-67. - Application—Submittal; required notification.

Applications for licenses to engage in the business of collecting solid waste, garbage, rubbish and/or recyclables within the township shall be made to the township clerk and shall contain the applicant's full name, address, phone (and fax) numbers, a description of the type of intended customers (business, residential, etc.) and form of business organization. Each individual doing business under the applicant's name, or general partner, or managing member, or individual that is a majority or controlling shareholder or owner of the applicant, and the person that will be primarily responsible for business operations in the township, shall provide their date of birth and driver license number. The application shall also include a description of the trucks and other equipment to be used in the business, certificates confirming the applicant's motor vehicle and liability insurance, an acknowledgement and agreement to comply with the provisions of article III, <u>chapter 13</u> of the West Bloomfield Charter Township Code, and such other information as may be required by the police chief for purposes of the investigation and recommendation under <u>section 13-68</u>, or the township clerk in order to reasonably apprise the township board of the character of the applicant and of the nature of the business desired to be carried on.

(Ord. No. 62, § 3.2, 9-4-68; Ord. No. C-408, § 4, 9-20-93; Ord. No. C-408-C, § 1, 6-3-02)

Sec. 13-68. - Same—Investigation, consideration procedure.

about:blank

3/29/2016

Applications for licenses to engage in the business of collecting solid waste, garbage, rubbish and/or recyclables shall be referred to the police chief for investigation and recommendation, which investigation and recommendation shall be completed within one (1) week thereafter. The application shall then be submitted to the township board at its next regular meeting. The applicant shall have the right to appear before the board to furnish such additional information as may be required to enable the board to determine whether or not the application should be granted. The board may continue the consideration of the application from time to time for the purpose of securing additional information or to afford any citizen of the township an opportunity to be heard in connection therewith.

(Ord. No. 62, § 3.3, 9-4-68; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-69. - Refusals for just cause.

The township board shall have the authority to refuse to grant any application for a license to engage in the business of collecting solid waste, garbage, rubbish and/or recyclables for any just cause, or when in its judgment the public health, interest or general welfare of the inhabitants of the township so require.

(Ord. No. 62, § 3.4, 9-4-68; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-70. - Form; expiration; display.

Licenses issued under this division shall be in such form as shall be prescribed by the township board and shall expire on December 31st, following the issuance thereof. The township shall furnish the licensee with an appropriate plate or sticker which shall be displayed as required in subsection <u>13-48</u>(c) upon each and every vehicle operated by the licensee within the township in connection with the solid waste, garbage, rubbish and/or recyclables collection business.

(Ord. No. 62, § 3.5, 9-4-68; Ord. No. C-408, § 4, 9-20-93; Ord. No. C-408-A, § 2, 5-17-99)

Sec. 13-71. - Transfer.

Licenses issued under this division may be temporarily transferred to another vehicle in emergency situations provided as follows:

- (1) The original licensed vehicle cannot practically be used for either solid waste, garbage, rubbish and/or recyclables collection because of a mechanical failure or because of some other malfunction.
- (2) The licensee shall apply to the township clerk for a temporary transfer of the license stating the reason(s) for the transfer and the length of time required for the transfer of the license.
- (3) The vehicle to which the license is to be temporarily transferred shall meet all the requirements of this article including, but not limited to, insurance provisions and inspection provisions by the police department.
- (4) The township clerk may temporarily transfer the license upon the applicant meeting the above requirements. The temporary transfer may be in a letter form indicating the name, address and telephone number of the licensee, the Michigan license plate number of the vehicle to which the temporary transfer is applicable and the termination date of the temporary transfer. The temporary license transfer letter is to be carried in the vehicle at all times and shall be presented when requested by any authorized person. No temporary transfers shall be longer than three (3) weeks.

(Ord. No. 62, § 3.6, 9-4-68; Ord. No. 62-B, 11-1-71; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-72. - Proof of insurance.

Licenses under this division will be issued or renewed upon the applicant or licensee filing certificates confirming the applicant's or licensee's general liability and motor vehicle liability insurance, in the minimum amounts required by resolution of the township board.

(Ord. No. 62, § 4, 9-4-68; Ord. No. 62-D, 9-15-80; Ord. No. C-408-C, § 1, 6-3-02)

Sec. 13-73. - Fees.

A fee in an amount as prescribed by resolution of the township board for each vehicle to be used by the licensee within the township in connection with the solid waste, garbage, rubbish and/or recyclables collection business shall be paid to the township clerk at the time application is made for any license or renewal thereof. Such fee shall be refunded should the license or renewal be refused.

(Ord. No. 62, § 5, 9-4-68; Ord. No. 62-E, § 1, 12-16-85; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-74. - Renewal.

- (a) Licenses issued under this division shall be renewed by the township clerk on an annual basis subject to the following requirements:
  - (1) The licensee shall pay to the township clerk the required fees on or before January 15 in each year the licensee seeks a license renewal.
  - (2) The licensee shall file with the township clerk a certificate of insurance, as required in <u>section</u> <u>13-72</u>, on or before January 15 in each year the licensee seeks a license renewal.
  - (3) The licensee shall have each vehicle inspected by an officer of the township code enforcement department. The code enforcement officer(s) shall conduct the inspection of each vehicle presented to them for inspection on or before the fifteenth day of January. The code enforcement department shall inspect the vehicle(s) at the maintenance garage of each company requesting a license, and shall make a determination as to the requirements in <u>section 13-48</u> and also as to those items relating to safe and proper driving equipment; these shall include, but not be limited to, lights, brakes, tires, exhaust, etc.

A fee of twenty dollars (\$20.00) for the inspection or reinspection shall be paid to the township for each vehicle the licensee presents for inspection. These inspection fees must be paid in full prior to the issuance of a license for the vehicle inspected.

(b) Nothing in this section to the contrary notwithstanding, if the township notifies the licensee on or before December 1 in any year of its intention not to renew the license for the following year, then the licensee shall be entitled to a hearing before the township board on the question of the renewal of his license upon written request therefor delivered to the township clerk. If any licensee fails to pay the fee for a renewal license on or before January 15 in any year, any request for the license thereafter shall be considered to be a new license requiring a new application and hearing before the township board.

(Ord. No. 62, § 6, 9-4-68; Ord. No. C-408-B, 10-2-00)

Sec. 13-75. - Revocation.

Any license issued under this division may be revoked by the township board for any false statement made in the application, failure to comply with the provisions of this article, failure to comply with the terms of the license, failure to comply with the laws of the state or for other just cause. Before any license shall be revoked, written notice shall be given by the township board to the licensee to appear before it, at a time and place for hearing, and an opportunity shall be given the licensee to be heard and to produce witnesses in his behalf. In the event of revocation of any licenses, the township board shall make its order with respect thereto and cause a copy thereof to be served upon the licensee, whereupon the licensee shall have no further right to engage in the solid waste, garbage, rubbish and/or recyclables collection business within the township.

(Ord. No. 62, § 11, 9-4-68; Ord. No. C-408, § 4, 9-20-93)

Sec. 13-76. - Hazardous waste fees.

In addition to any other fees required in this article, prior to issuance or renewal of a license, the licensee shall pay a hazardous waste fee in an amount established by resolution of the township board, which is to be used by the township to provide household hazardous waste collection days, with the amount to be paid by each licensee to be in proportion to the number of residential customers they are serving when compared to the total number of residential customers being served in the township by all licensees.

(Ord. No. C-408-D, § 2, 6-15-09)

Sec. 13-77. - Bond.

Each licensee shall provide and maintain a performance bond with the township in an amount and form to be established by resolution of the township board, which shall be to ensure compliance with the provisions of this chapter and the license, and the performance of paid for services to customers with the amount of the bond to be in proportion to the number of residential customers they are serving when compared to the total number of residential customers being served in the township by all licensees, which shall be payable to the Charter Township of West Bloomfield, for its benefit and in trust for those customers.

(Ord. No. C-408-D, § 2, 6-15-09)

#### Sec. 13-78. - Penalties for violations.

Violations of this article III shall be punishable as municipal civil infractions, with each provision violated and each day on which a violation occurs constituting a separate offense. The penalty for each violation of this article shall be a civil fine of five hundred dollars (\$500.00) with the violator also subject to costs, damages, expenses, collection and prosecution as provided in subsection <u>1-10(b)</u> of this Code.

(Ord. No. C-408-D, § 2, 6-15-09)

Secs. 13-79—13-90. - Reserved.

ARTICLE IV. - RECYCLING AND COMPOSTING

**DIVISION 1. - GENERALLY** 

Sec. 13-91. - Statement of purpose and necessity.

(a) The township board finds that the promotion of recycling and composting is necessary to reduce the generation of solid waste. The separation, collection and proper utilization of recyclables and compostables in the township will:

- Minimize the adverse environmental impacts of landfilling by reducing the need for landfills and conserving existing landfill space.
- (2) Will facilitate the implementation and operation of other forms of resource recovery.
- (3) Will conserve natural resources and will reduce solid waste costs in general.
- (b) The promotion and use of recyclable materials, goods produced from recyclable materials and goods which facilitate recycling will further serve the same purposes by encouraging and facilitating recycling and composting.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-92. - Curbside program established.

There is hereby established within the township a program for the separate collection of compostables, commingled recyclable materials and refuse from all residential properties by all refuse haulers which are operating within the township boundaries. Such collection shall occur in a manner and on the schedule provided to the township by each hauler.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-93. - Definitions.

The following definitions shall apply to this article:

Aerobic conditions: Conditions in which oxygen is found in supply adequate to support organisms which require oxygen to survive.

Anaerobic conditions: Conditions in which oxygen is either absent or in such short supply that organisms which require oxygen to survive are no longer able to survive.

Commingled: Source-separated recyclable materials that have been mixed at the site of generation and placed in the same approved container for curbside pickup.

*Compost:* The humus-like by-product of the composting process which may be used as a soil conditioner.

Compost bin: A freestanding structure into which compostables are placed.

Compost pile: An area in which composting takes place.

Compostables: Yard waste and household compostables which are allowed to be placed in a compost pile.

*Composting:* The biological treatment process by which microorganisms decompose the organic fraction of yard waste and other compostables.

Curbside: The designated physical location for placement of solid waste for collection which is as near as possible to the traveled street to minimize walking or reaching requirements of haulers.

Household compostables: Organic fruit and vegetable material which is produced incidental to the preparation of food for human consumption, not to include any animal, fish or fowl waste, fat or meat.

Leaves: Deciduous and coniferous, nonwoody seasonal depositions from trees, vines and shrubs.

Newspaper: All newsprint and materials which are part of a newspaper only, not including inserts.

*Plastic:* Any number of synthetically produced compounds used as containers for various goods and various other uses.

Recycle: The act of removing recyclable materials from refuse.

Site of generation: Any premises within the township in or on which solid waste, garbage, refuse, recyclable materials or compostable materials is generated by any person or business.

Yard waste collection season: The period each year as specified by duly published resolution of the township board.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-94. - Preparation of recyclables and compostables for curbside collection.

- (a) All compostables and recyclables placed at the curbside for collection shall be prepared for collection in accordance with the requirements of this article together with the special requirements as may be set by published resolution of the township board.
- (b) The recyclables metal, glass and plastics shall be rinsed and cleaned as required to allow for placement in approved containers at the curbside for collection. All newspapers and other acceptable paper products will be placed in paper bags or tied in bundles weighing not more than fifty (50) pounds.
- (c) All compostables shall also be properly prepared for collection. Twigs and shrub clippings shall be tied in bundles of no more than four (4) feet in length, nor more than fifty (50) pounds in weight. All other yard waste shall be placed in clear or otherwise transparent or semitransparent bags, or other container clearly marked or stickered with the words "YARD WASTE", which allows for obvious identification of the contents as compostable materials.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-95. - Failure to separate or properly prepare recyclables or compostables.

The authorized refuse hauler of the township may refuse to collect recyclables or compostables from any premises which has failed to source-separate refuse from recyclables or compostables and/or has failed to place them in approved containers for recycling or composting and/or has failed to prepare recyclables or compostables as specified in this chapter.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-96. - Unlawful activities; scavenging.

Designated recyclable materials placed at the curbside in accordance with this article shall become the exclusive property of the licensed hauler contracted to collect recyclable materials. There shall be a presumption that the occupier or owner of the premises intended to recycle or compost the material under this article if the material is placed at the curbside. It shall be unlawful for any person, not duly authorized by the township, to collect, remove, pick up, or cause to be collected, removed or picked up, any such material.

(Ord. No. C-409, § 1, 9-20-93)

Secs. 13-97-13-105. - Reserved.

#### DIVISION 2. - COMPOSTING ON RESIDENTIAL PROPERTIES

Sec. 13-106. - Standards and conditions.

All composting done on residential properties within the township shall be done in accordance with the following standards and conditions:

- (1) Each compost bin shall be no larger in volume than one hundred sixty (160) cubic feet and shall be no taller than five (5) feet in height unless a larger bin is approved by the director of planning and environment based upon demonstration that the size and location will not be objectionable to area residents.
- (2) No more than two (2) compost bins may be located on any lot.
- (3) No compost bins may be located on any vacant lot or lot not containing a principal structure unless the property is owned in common with an immediately adjacent lot which is improved with a principal structure.
- (4) All compost piles/bins shall be maintained so as to prevent the attraction or harborage of rodents.
- (5) All compost piles/bins shall be maintained so as to prevent anaerobic conditions which lead to unpleasant odors.
- (6) Compost/piles shall have only yard waste and household compostables placed within, and it shall be violation of this article to deposit garbage or refuse in compost piles/bins.
- (7) All composting shall be done in accordance with any process that has been determined in writing to be an acceptable composting process by either the Oakland County Cooperative Extension Service or the Michigan Department of Natural Resources.
- (8) Compost piles/bins shall be set back from any public street or thoroughfare (but excluding alleys) a distance not less than the setback of the existing principal structure from such street or thoroughfare subject to applicable zoning regulations.
- (9) Compost piles/bins may be located in any rear yard (front yard for lakefront properties); provided, that it shall be located not less than three (3) feet from any lot line and provided, further, that it shall be located not less than ten (10) feet from a rear lot line where such line abuts the side yard of an adjacent lot, subject to applicable zoning regulations.
  - (10) Compost piles/bins may be located in any interior side yard; provided, however, that it shall be located not less than ten (10) feet from any abutting side yard of any adjacent property, subject to applicable zoning regulations.
  - (11) Notwithstanding any other provision of this article, no compost pile/bin shall be located within any natural water feature, including, but not limited to, wetlands, floodplains, watercourses or waterbodies, nor within twenty-five (25) feet of such natural water feature unless it is the determination of the supervisor or his/her designee that no alternative location exists and that the proposed location would not be detrimental to the quality or function of such natural water feature.
  - (12) Notwithstanding any other provision of this article, no compost pile/bin shall be located on any recorded drainage easement or swale, nor shall any compost pile/bin be placed or located in such a manner as to interfere with or impede the natural flow of drainage off of or across any existing lot or property.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-107. - Nonconforming compost bins.

Any compost pile/bin existing on the date this article is adopted that does not comply with either the size limitations, the minimum setback requirements set herein, or with the prohibition against placement of a compost pile/bin in a recorded drainage easement, swale or natural water feature or any combination thereof shall be a nonconforming pile/bin. Such nonconforming pile/bin shall be permitted to exist until December 1, 1993; provided, however, that the pile/bin is not altered or changed in any way to increase any nonconformity. On or before December 1, 1993, all such nonconforming piles/bins shall be relocated and/or modified as necessary so that such pile/bin is in total compliance with this article. As to such nonconforming pile/bin, all other provisions of this article shall be complied with as of the effective date of this article.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-108. - Dumping on the land of another.

It shall be unlawful to dump or place any landscape waste on any premises or property in the township without the written consent of the owner of such premises or property and then only in accordance with the provisions of this article. It shall be unlawful to dump or place any yard waste on any parkway, street, alley or property owned by the township except for the purpose of being picked up by a licensed hauler and then only in accordance with established ordinances of the township.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-109. - Responsibility of compliance.

It shall be the duty of both the owner(s) and occupant(s) of any property on which composting is taking place or on which a compost pile/bin is located to ensure that such composting is being done and the compost pile/bin is being maintained in full compliance with all provisions of this article.

(Ord. No. C-409, § 1, 9-20-93)

Sec. 13-110. - Nuisance declared.

It is hereby declared a nuisance to engage in composting or to maintain a compost pile/bin other than in full compliance with the provisions of this article.

(Ord. No. C-409, § 1, 9-20-93)

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix EE

From West Bloomfield Municipal Code of Ordinances

Chapter 24-Water Supply and Sewage Disposal Systems Articles I-III Chapter 24 - WATER SUPPLY AND SEWAGE DISPOSAL SYSTEMS[1]

Footnotes:

**Cross reference**— Any ordinance acquiring a specific water and sewer system saved from repeal, § 1-5(3); buildings and building regulations, Ch. 8; plumbing code, § 8-131 et seq.; garbage and rubbish, Ch. 13; streets, sidewalks and other public places, Ch. 20; subdivision and land division, Ch. 21.

State Law reference— Authority to provide for water and sewer system, MCL 41.411.

#### ARTICLE I. - IN GENERAL

Sec. 24-1. - Township water supply and sewage disposal system; definition.

- (a) The water supply and sewage disposal system of the Township are established as a single public improvement and system of the Township.
- (b) For purposes of this chapter, the term "system" shall mean and refer to the combined water supply and sewage disposal system.

(Ord. No. C-512, § 1, 9-8-97)

Sec. 24-2. - General requirements prior to the commencement of construction.

As a precondition to the commencement of construction of any underground utility or other public improvement regulated under this chapter, the property owner and/or his or her agent shall:

- Acquire and file with the office of the township engineer all required township permits and all required permits from any and all other governmental entities.
- (2) Provide notice to and obtain authorization to commence construction from the township engineer.

(Ord. No. C-281, § 1, 8-20-90)

Secs. 24-3—24-15. - Reserved. ARTICLE II. - WATER SUPPLY SYSTEMS DIVISION 1. - GENERALLY Secs. 24-16—24-25. - Reserved. DIVISION 2. - CROSS CONNECTIONS Sec. 24-26. - Definition.

For the purposes of this article, a "water supply cross connection" is defined as a connection or arrangement of piping or appurtenances through which water of questionable quality, wastes or other contaminants can enter the public water supply system.

(Ord. No. 103, § 1.00, 5-21-79)

Cross reference— Definitions and rules of construction generally, § 1-2.

Sec. 24-27. - Adoption of state department of health rules.

The township hereby adopts by reference the water supply cross connection rules of the state department of public health, being R 325.431 to R 325.440 of the Michigan Administrative Code.

(Ord. No. 103, § 2.00, 5-21-79)

The county shall enforce regulations concerning septic tanks and licensing for installing septic tanks.

Sec. 24-47. - Discharge of sump water.

- (a) Definitions. For purposes of this section:
  - (1) Highway or street means the entire right-of-way of every public way open to travel.
  - (2) Sump means a pit or reservoir serving as a drain or receptacle for groundwater.
  - (3) *Sump pump* means any pump or other device, including any and all piping, tubing, channels and any other drainage devices, employed for the removal of deposits of ground or drainage water away from the building.
- (b) Discharge of sump water upon a highway or street or into storm sewers. It shall be unlawful for any person to drain, empty or otherwise discharge groundwater from a sump by use of a sump pump upon any highway or street or within twenty (20) feet of the curb of any highway or street constructed with curb and gutter or within twenty (20) feet of the travel portion of any highway or street unless connected into a storm drain in such highway or street under valid permit from the authority having jurisdiction of such highway or street, or unless the flow is into an open roadside ditch along a highway or street validly permitted by the authority having jurisdiction of such highway or street.
- (c) New construction discharge systems:
  - (1) All sump pumps installed in newly constructed dwellings or other buildings must discharge into a dedicated public storm drain, a natural watercourse or a ditch, swale or other approved facility which has been constructed for the purpose of receiving such discharge. Prior to its installation, the proposed sump pump discharge system, including the location at which the sump pump is intended to discharge, must receive the approval of the township engineer. If the grade between houses and street exceeds three (3) percent, the building inspector may require connection to underground drain or suitable on-site disposal before issuing certificate of occupancy.
  - (2) Storm sewers shall be provided to accommodate direct underground connections for all sump pumps for the purpose of stormwater drainage. The connection between storm sewers and sump pumps shall be approved by the township engineer.
- (d) Existing structure discharge systems:
  - (1) Except as approved by the township engineer, and subject to applicable law applicable as between private property owners, the sump pump discharge from existing dwellings and buildings may not flow or drain onto or in any way affect the property of adjacent property owners, nor interfere with the quiet enjoyment of land by adjacent property owners.
  - (2) In the event that the discharge from an existing dwelling or building violates subsection (d)(1) above, the township may serve written notice upon the owner of the property setting forth such violation. The notice shall also set forth a demand that the violation be cured within a stated reasonable time period. A violation may be cured by causing the sump pump to discharge into a dedicated public storm drain, a natural watercourse, or a ditch or swale or other approved facility which has been constructed for the purpose of receiving such discharge.
  - (3) Prior to its installation, the proposed new location and manner of sump pump discharge must be approved by the township engineer.

and watertight until such time as the plumbing is carried on to the first floor, the basement backfilled and roof is on the building, thereby providing that no water from the excavated basement will enter the sanitary sewer.

(Ord. No. 86, § 4, 12-21-74; Ord. No. C-244, § 1, 11-20-89; Ord. No. C-262, § 1, 3-19-90)

Sec. 24-65. - Septic tank abandonment and waste disposal.

- (a) Prior to connecting an individual building sewer to the sewers of the county or the township, either directly or indirectly, all existing wastewater treatment facilities, including septic tanks, tile fields and sump pumps, shall be physically and permanently disconnected from the building sewer.
- (b) Septic tank sludge shall be discharged into the sewers of the county or the township, directly or indirectly, only at locations specified by the township or the county department of public works, and only after obtaining proper septic tank dumping tickets.
- (c) The liquid and solids from an abandoned septic tank shall not be drained, dewatered, pumped or in any other manner discharged to the sewers of the township or the county, except as provided for above.

(Ord. No. 86, § 5, 12-21-74)

Sec. 24-66. - Ownership, operation and maintenance responsibility.

All new sanitary sewer systems, except individual building sewers, connected directly or indirectly into the intercepting sewer or sewers of the county shall be owned, operated and maintained by the township. This includes but is not necessarily limited to on-site sewer systems serving condominiums, apartment projects, shopping centers and mobile home parks.

(Ord. No. 86, § 6, 12-21-74)

Sec. 24-67. - Preservation of other rules and regulations.

Nothing in this division shall be construed to relieve the property owner of complying with all rules and regulations, including licensing requirements and other rules and regulations adopted by the township.

(Ord. No. 86, § 7, 12-21-74)

Sec. 24-68. - User charges for sewer service.

- (a) Establishment. Rates and charges for the use of the sanitary sewer system of the township are hereby established and made against each lot, parcel of land or premises which may have direct or indirect connections to the system or which may otherwise discharge wastewater either directly or indirectly into the system.
- (b) Basis, sufficiency, and review and revision. The rates and charges hereby established shall be based upon a methodology which complies with applicable federal and state statutes and regulations. The amount of the rates and charges shall be sufficient to provide for debt service and for the expenses of operation, maintenance and replacement of the system as necessary to preserve the system in good repair and working order. The amount of the rates and charges shall be reviewed annually and revised when necessary to ensure that system expenses are met and that all users pay their proportionate share of operation, maintenance and equipment replacement expenses.

(c)

of the cost of the township public sewer, and/or to the extent of and in proportion to other private finance of all or a portion of the cost of the public sewer, such property shall be relieved from payment of the township public sewer benefit fee.

(Ord. No. 69A, § 2, 10-16-72; Ord. No. 69A-F, 8-2-82; Ord. No. C-341, § 1, 1-13-92; Ord. No. C-512, § 2, 9-8-97)

Sec. 24-83. - Increase in use fee.

If any user of the Clinton-Oakland Sewage Disposal System increases the use of the system or increases the discharge from his premises by changing the use of the premises as previously connected to the sewer system, the user or property owner shall pay to the township an increase in use fee equal to the use fee for the use as established by the township board minus any connection fee previously paid. The fee shall be paid to the township prior to the use of the sewer system by the new increased use. If the fee is not paid by the user or property owner, the township may disconnect the user or property owner from the sewer system or may bring an appropriate action in a court of competent jurisdiction to collect the amount.

(Ord. No. 69A, § 2A, 10-16-72; Ord. No. 69A-D, 5-1-78)

Sec. 24-84. - Payment of direct connection charge and township public sewer benefit charge for new and existing buildings.

Except as otherwise provided, the direct connection charge and the township public sewer benefit charge for connection to the Clinton-Oakland Sewage Disposal System shall be paid at the time of application for building permit, or, in the case of existing buildings, at the time of application for a sewer connection permit.

## (Ord. No. 69A, § 3, 10-16-72; Ord. No. C-341, § 2, 1-13-92)

Sec. 24-85. - Payment of direct connection charge for properties with septic tank facilities.

Owners of property lying within the Clinton-Oakland Sewage Disposal System service area, which properties have been improved with buildings and uses having septic tank facilities at the time public sewer service is available to serve the property, may pay the connection privilege fee and the direct connection privilege fee and the direct connection fee as required by sections <u>24-81</u> and <u>24-82</u> above in accordance with <u>section 24-84</u> or in the following manner:

- (1) The connection charge of one thousand four hundred dollars (\$1,400.00), or the equivalent unit multiple thereof, required by section 24-81 may be paid one hundred thirty dollars (\$130.00), or the equivalent unit multiple thereof, at the time of application for sewer connection permit and the balance in annual installments of not less than one hundred thirty dollars (\$130.00), or the equivalent unit multiple thereof, including interest at the rate of eight (8) percent per annum.
- (2) The connection charge of two thousand six hundred dollars (\$2,600.00), or the equivalent unit multiple thereof, required by section 24-82 may be paid two hundred forty dollars (\$240.00), or the equivalent unit multiple thereof, at the time of application for sewer connection permit and the balance in annual installments of not less than two hundred forty dollars (\$240.00), or the equivalent unit multiple thereof, including interest at the rate of eight (8) percent per annum.

(3)

residence building, the sum of two thousand six hundred dollars (\$2,600.00);

- (2) For all other parcels or uses of property, a sum to be established by the township board, which sum shall be a multiple of the charge in subsection (a) after first taking into consideration the amount of sanitary sewage which will be discharged from such property or use as compared with that from the average single-family residence building;
- (3) Where a property or use for which a direct connection charge has been paid pursuant to subsections (1) and (2) is subsequently included within a special assessment district for the construction of lateral sewers to serve the property or use, which lateral sewers drain directly or indirectly into the Walnut Lake Arm, the 13 Mile Road Arm or the Sylvan Manor Arm, the property or use shall be entitled to a refund of the direct connection charge upon demand; provided, however, that if at the time of such demand for refund any installment of the special assessment is delinquent, the refund shall be applied against the delinquent installments owing on the special assessment and [the] balance, if any, of the refund shall be returned to the property owner.
- (b) Township public sewer benefit charge. In addition to the other charges provided for in this division, every property which is permitted to connect to a township public sewer which is part of the Farmington Interceptor Sewer System, where such installations have been financed in whole or part with public monies, shall be subject to a township public sewer benefit charge in the amount of eight thousand dollars (\$8,000.00) for each residential unit connected, and a multiple of such amount for nonresidential properties based upon the same unit factors fixed for rates paid for the use of the system. To the extent and in proportion the property permitted to connect to the township public sewer has participated in a special assessment for the payment of all or a portion of the cost of the township public sewer, and/or to the extent of and in proportion to other private finance of all or a portion of the cost of the public sewer benefit fee.

(Ord. No. 95, § 2, 3-21-77; Ord. No. 95-B, 11-2-81; Ord. No. C-341, § 3, 1-13-92; Ord. No. C-512, § 2, 9-8-97)

Sec. 24-98. - Increase in use fee.

If any user of the Farmington Interceptor sewer system increases the use of the system or increases the discharge from his premises by changing the use of the premises as previously connected to the sewer system, the user or property owner shall pay to the township an increase in use fee equal to the use fee for the use as established by the township board minus any connection fee previously paid. The fee shall be paid to the township prior to the use of the sewer system by the new increased use. If the fee is not paid by the user or property owner, the township may disconnect the user or property from the sewer system or may bring an appropriate action in a court of competent jurisdiction to collect the amount.

(Ord. No. 95, § 2A, 3-21-77; Ord. No. 95-A, 4-3-78)

Sec. 24-99. - Time of payment.

Except as otherwise provided, fees and charges for connection to the Farmington Interceptor sewer system shall be paid at the time of application for building permit or, in the case of existing buildings, at the time of application for a sewer connection permit.

(Ord. No. 95, § 3, 3-21-77)

applicant for connection permit, of any special assessment made against a larger tract of property of which the property to be connected to a public sewer or drain is a part. The proceeds of the charges shall be deposited in the appropriate special assessment fund.

(Ord. No. 95, § 6, 3-21-77)

Secs. 24-103-24-115. - Reserved.

DIVISION 5. - REGULATION OF PRIVATE AND PUBLIC SEWAGE DISPOSAL SYSTEMS<sup>[2]</sup>

Footnotes: --- (2) ---Editor's note—Ordinance No. C-233, §§ 1—7, adopted Oct. 16, 1989, was not enacted as a specific amendment or addition to the Code, but is included herein as a new Div. 5, §§ 24-115.1—24-115.7, to Ch. 24, Art. III at the editor's discretion.

Cross reference— Construction, connection, ownership and use of sanitary sewers, § 24-61 et seq.

Sec. 24-115.1. - Purpose.

- (a) The purpose of this division is the protection of the environment, and of public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of wastes admitted to or discharged into the wastewater collection and treatment system under the jurisdiction of the township and enabling the township to comply with all applicable state and federal laws required by the Federal Water Pollution Control Act, being 33 U.S.C. 1251, et seq), and the General Pretreatment Regulations, being 40 C.F.R. part 403.
- (b) The objectives of this division are:
  - (1) To prevent the introduction of pollutants into the wastewater system which will interfere with the operation of the system or contaminate the resulting sludge, or will pose a hazard to the health or welfare of the people or of employees of the City of Detroit Water and Sewerage Department;
  - (2) To prevent the introduction of pollutants into the wastewater system which will pass inadequately treated through the system into receiving waters, the atmosphere or the environment, or otherwise be incompatible with the system;
  - (3) To improve the opportunity to recycle or reclaim wastewater or sludge from the system in an economical and advantageous manner; and
  - (4) To provide for the recovery of the costs from users of the wastewater collection and treatment system sufficient to administer regulatory activities and meet the costs of the operation, maintenance, improvement or replacement of the system.
- (c) This division provides for the regulation of contributors to the [City of] Detroit and township wastewater collection and treatment system through the issuance of wastewater discharge permits to certain users and through the enforcement of general requirements for all users, authorizes monitoring and enforcement, and authorizes fees and penalties.

(Ord. No. C-233, § 1, 10-16-89; Ord. No. C-233-A-2001, § 1, 11-19-01)

Sec. 24-115.2. - Authority.

By virtue of the obligations and authority placed upon the township by the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, being (33 U.S.C. 1251, et seq; the 1963 Constitution of the State of Michigan; Public Act 245 of 1929, as amended, being M.C.L. 323.1, et seq; the 1997 City Charter; the National Pollutant Discharge Elimination System (NPDES) permit for the City of Detroit Publicly Owned Treatment Works (POTW); the Consent Judgment in *U.S. EPA v. City of Detroit, et al*, Federal District Court for the Eastern District of Michigan Case No. 77-1100, as amended; and

*Biochemical oxygen demand (BOD)* means the quality of dissolved oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure five (5) days at twenty (20) degrees centigrade expressed in terms of mass and concentration (milligrams per liter (mg/l)) as measured by standard methods.

Board means the Board of Water Commissioners of the City of Detroit.

*Building drain* means that part of the lowest horizontal piping of a drainage system which receives discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building's sewer (house sewer). The latter begins five (5) feet outside the inner face of the building wall.

*Bypass* means the intentional diversion of a waste stream from any portion of an industrial user's treatment facility. [See 40 C.F.R. 403.17.]

*Centralized waste treatment (CWT) facility* means any facility that treats any hazardous or nonhazardous industrial waste received from off-site by tanker truck, trailer/roll-off bins, drums, barges, or any other forms of shipment, including (i) a facility that treats industrial waste received exclusively from off-site, and (ii) a facility that treats industrial waste generated on-site as well as industrial waste received from off-site.

*Compatible industrial wastewater* means wastewater that is produced by an industrial user which has a pollutant strength or characteristics similar to those found in domestic wastewater, and which can be efficiently and effectively transported and treated with domestic wastewater.

*Compatible pollutant* means pollutants which can be effectively removed by the POTW treatment system to within the acceptable levels for the POTW residuals and the receiving stream.

*Composite sample* means a collection of individual samples which are obtained at regular intervals and collected on a time-proportional or flow-proportional basis over a specified period and which provides a representative sample of the average stream during the sampling period. A minimum of four (4) aliquot per twenty-four (24) hours shall be used where the sample is manually collected. [See 40 C.F.R. 403, Appendix E.]

*Confidential information* means the information which would divulge information, processes or methods of production entitled to protection as trade secrets of the industrial user.

Consent judgment means the judgment issued by Federal District Court on September 14, 1977, U.S. EPA v City of Detroit, et al., C.A. No. 77-1100, as amended.

*Control authority* means the [City of] Detroit Water and Sewerage Department which has been officially designated as such by the State of Michigan under the provisions of 40 C.F.R. 403.12. [See 40 C.F.R. 403.12(a).]

*Cooling water* means the non-contact water discharged from any use such as air conditioning, cooling or refrigeration, and whose only function is the exchange of heat.

*County* means the County of Oakland, State of Michigan or the Oakland County Drain Commissioner.

about:blank

3/31/2016

*Holding tank waste* means any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum-pump tank trucks.

*Indirect discharge* or *discharge* means the discharge or the introduction of pollutants into the POTW from any non-domestic source regulated under 33 U.S.C. 1317(b), (c) or (d).

*Industrial user* means a person who contributes, causes or permits wastewater to be discharged into the POTW, including, but not limited to, a place of business, endeavor, arts, trade or commerce, whether public or private, commercial or charitable but excludes single-family and multi-family residential dwellings with discharges consistent with domestic waste characteristics.

*Industrial waste* means any liquid, solid or gaseous waste or form of energy, or combination thereof, resulting from any processes of industry, manufacturing, business, trade or research, including the development, recovery or processing of natural resources.

*Infiltration* means any waters entering the system from the ground, through such means as, but not limited to, defective pipes, pipe joints, connections or manhole walls. Infiltration does not include and is distinguished from inflow.

Infiltration/inflow means the total quantity of water from both infiltration and inflow.

*Inflow* means any waters entering the system through such sources as, but not limited to, building downspouts, footing or yard drains, cooling water discharges, seepage lines from springs and swampy areas, and storm drain cross connections.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, as amended, being 33 U.S.C. 1345, the Solid Waste Disposal Act (SWDA), as amended, (including the Resource Conservation and Recovery Act (RCRA), and state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local means a prefix denoting jurisdiction by the Charter Township of West Bloomfield.

May means permissive.

Municipality means the Charter Township of West Bloomfield.

*National categorical pretreatment standard* means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with 33 U.S.C. 1317 (b) and (c) which applies to a specific class or category of industrial users.

*Pass through* means discharge which exits the POTW into waters of the United States in quantities or concentrations, which alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit, including an increase in the magnitude or duration of a violation.

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

*pH* means the intensity of the acid or base condition of a solution, calculated by taking the negative base-ten logarithm of the hydrogen ion activity. Activity is deemed to be equal to concentration in moles per liter.

*Pollutant* means any dredged spoil, solid waste, incinerator residue, sewage garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, or industrial, municipal and agricultural waste which is discharged into water.

*Pollution* means the introduction of any pollutant that, alone or in combination with any other substance, can or does result in the degradation or impairment of the chemical, physical, biological or radiological integrity of water.

*Pretreatment* means the reduction of the amount of pollutants, the removal of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into the POTW. The reduction, removal or alteration may be attained by physical, chemical or biological processes, or process changes by other means, except as prohibited by federal, state or local law, rules and regulations.

*Pretreatment requirements* means any substantive or procedural requirements related to pretreatment, other than a national pretreatment standard imposed on an industrial user. [See 40 C.F.R. 403.3(r).].

*Pretreatment standards* means all National Categorical Pretreatment Standards, the general prohibitions specified in 40 C.F.R. 403.5(a), the specific prohibitions delineated in 40 C.F.R. 403.5(b), and the local or specific limits developed pursuant to 40 C.F.R. 403.5(c), including the discharge prohibitions specified in <u>Section 24-115.7(B)</u>.

Public sewer means a sewer of any type controlled by a governmental entity.

Private means a prefix denoting jurisdiction by a non-governmental entity.

Public means a prefix denoting jurisdiction by any governmental subdivision or agency.

*Publicly owned treatment works (POTW)* means a treatment works as defined by 33 U.S.C. 1292(2)(A) which is owned by a state or municipality, as defined in 33 U.S.C. 1362, including:

- (1) Any devices and systems used in the storage, treatment, recycling, or reclamation of municipal sewage or industrial waste of a liquid nature;
- (2) Sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment

Sanitary sewer—A sewer that carries liquid and water-carried waste from residences, commercial buildings, industrial plants, and institutions, together with minor quantities of groundwater, stormwater, surface water and drainage water and are not admitted intentionally.

- (10) Storm sewer—A sewer that carries stormwater and surface water, street wash and other wash waters, or drainage, but excludes domestic wastewater and industrial wastewater. Also called a "storm drain."
- (11) Trunk sewer or trunk line—A sewer which connects the lateral sewer to the intercepting sewer and to which building sewers may be connected.

Sewer service charge means the sum of the applicable user charge, surcharges and debt service charges.

Shall means mandatory.

Significant industrial users means any user of the POTW who:

- (1) Has an average discharge flow of twenty-five thousand (25,000) gallons per day or more of process wastewater excluding sanitary, boiler blowdown, and noncontact cooling water; or
- (2) Has discharges subject to the national categorical pretreatment standards; or
- (3) Requires pretreatment to comply with the specific pollutant limitations of this division; or
- (4) Has in its discharge toxic pollutants as defined pursuant to 33 U.S.C. 1317, or other applicable federal and state laws or regulations that are in concentrations and volumes which are subject to regulation under this division as determined by the department; or
- (5) Is required to obtain a permit for the treatment, storage or disposal of hazardous waste pursuant to regulations adopted by this state or adopted under the Federal Solid Waste Disposal Act, as amended by the Federal Resource Conservation and Recovery Act, as amended, and may or does contribute or allow waste or wastewater into the POTW including, but not limited to, leachate or runoff; or
- (6) Is found by the City of Detroit or township to have a reasonable potential for adverse effect, either singly or in combination with other contributing industries, on the POTW operation, the quality of sludge, the POTW's effluent quality, or air emissions generated by the POTW.

Significant noncompliance means any violation which meets one or more of the following criteria:

- (1) Chronic violations of wastewater discharge limits, defined as those in which sixty-six (66) percent or more of all of the measurements taken during a six-month period exceed by any magnitude the daily maximum limit or the average limit for the same parameter;
- (2) Technical review criteria (TRC) violations, defined as those in which thirty-three (33) percent or more of all of the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, Fats, Oil and Grease, and 1.2 for all other pollutants except pH);

(3)

(b) Water appearing on the surface in a diffused state, with no permanent source of supply or regular course for any considerable time, as distinguished from water appearing in watercourses, lakes, or ponds.

*Suspended solids (total)* mean the total suspended matter which floats on the surface of, or is suspended in, water, wastewater or other liquids, and is removable by laboratory filtration or as measured by standard methods.

Total equivalent master metered water consumption means the equivalent to the total amount of potable water used by a municipality as recorded by a master water meter for sewered premises, and shall include, but not be limited to, fire protection water, gardening and lawn water.

*Total PCB* means the sum of the individual analytical results for each of the PCB aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 during any single sampling event with any aroclor result less than the quantification level being treated as zero.

*Total Phenolic Compounds* means the sum of the individual analytical results for each of the phenolic compounds of 2-chlorophenol, 4-chlorophenol, 4-chloro-3-methylphenol, 2,4-dichlorophenol, 2,4-dinitrophenol, 4-methylphenol, 4-nitrophenol, and phenol during any single sampling event expressed in mg/l.

Township means the Charter Township of West Bloomfield.

*Toxic pollutant* means any pollutant or combination of pollutants designated as toxic in regulations promulgated by the Administrator of the U.S. Environmental Protection Agency under the provisions of the Clean Water Act, being 33 U.S.C. 1317, or included in the Critical Materials Register promulgated by the Michigan Department of Environmental Quality, or by other federal or state laws, rules or regulations.

*Trade secret* means the whole, or any portion or phase, of any proprietary manufacturing process or method, not patented, which is secret, is useful in compounding an article of trade having a commercial value, and whose secrecy the owner has taken reasonable measures to prevent from becoming available to persons other than those selected by the owner to have access for limited purposes but excludes any information regarding the quantum or character of waste products or their constituents discharged or sought to be discharged into the Detroit wastewater treatment plant, or into the wastewater system tributary thereto.

*Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with limits imposed under this division or with national categorical pretreatment standards due to factors beyond the reasonable control of the industrial user but excludes noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

*User* means any person who, directly or indirectly, contributes, causes or permits the discharge of wastewater into the POTW as defined herein.

*Compliance required.* All sanitary sewer systems connected directly or indirectly into the intercepting sewer or sewers of the Oakland County Department of Public Works shall meet the requirements set forth in this section.

- (b) Plans, permits and bonds:
  - (1) Prior to connection and prior to start of construction, all sanitary sewer systems shall have engineering plans and specifications prepared by a professional engineer and shall be approved by the Oakland County Department of Public Works.
  - (2) A connection permit shall be obtained by the owner or contractor from the Oakland County Department of Public Works. Said connection permit shall show the location of the work, the extent of the work, information regarding the contractor, the owner and the engineer, and any other pertinent information as shall be determined necessary by the department of public works. A fee shall be charged for said permit to cover the cost of inspection of each connection, and to verify the result of the acceptance test. The permit fee shall be one hundred fifty dollars (\$150.00) for each connection plus fifteen dollars (\$15.00) for each new manhole constructed. Inspections requested during other than normal working hours shall be performed only if deemed necessary by the Oakland County Department of Public Works. The fee for such inspections shall be two hundred fifty dollars (\$250.00) per day minimum, in addition to the normal connection permit fee.
  - (3) Individual building sewers which are directly connected into the county sanitary sewer system shall conform to all applicable requirements of this division. A connection permit, for which a charge of fifty dollars (\$50.00) will be made by the Oakland County Department of Public Works, shall be obtained from the department of public works before such connection is made. Prior to the issuance of such connection permit, the person obtaining such permit shall have obtained the written approval of the local unit of government. Connection shall be made in a workmanlike manner and in accordance with methods and procedures established by the department of public works.

The party to whom such a permit is issued shall be responsible for notifying the department of public works twenty-four (24) hours in advance of the date and time when such a connection is made so that proper inspection of same can be made by the department.

- (4) Prior to the adjustment, reconstruction, relocation or any other altering of the sewers of the County of Oakland, including manhole structures, the contractor or the person responsible for the work shall first obtain a permit to do such work from the Oakland County Department of Public Works. Said permit fee shall be determined by the department of public works.
- (5) Prior to construction and during the life of permits obtained in accordance with subsections (b)(2), (3) and (4) of this section, all owners or contractors shall: (1) yearly furnish to the Oakland County Department of Public Works a satisfactory surety bond in the amount of five thousand dollars (\$5,000.00) as security for the faithful performance of the work in accordance with the plans and specifications and departmental standards, and (2) yearly furnish to the Oakland County Department of Public Works a cash deposit in the amount of five hundred dollars (\$500.00). Such deposit shall provide funds for emergency work and/or such other work as may be deemed necessary by the Oakland County Department of Public Works, arising as a result of construction by the owner or contractor. Such bonds shall not be cancelled by the owner, the contractor or the surety without first having given ten (10) days' written notice to the Oakland County Department of Public Works. Cash deposits may be

have a minimum diameter of three and one-half (3½) inches and a range of zero (0) to ten (10) PSIG. The gauge shall have minimum divisions of 0.10 PSIG and an accuracy of 0.04 PSIG.

- b. The sewer shall be pressurized to four (4) PSIG greater than the greatest back pressure caused by groundwater over the top of the sewer pipe. At least two (2) minutes shall be allowed for the air pressure to stabilize between three and five-tenths (3.5) and four (4) PSIG. If necessary, air shall be added to the sewer to maintain a pressure of three and five-tenths (3.5) PSIG or greater.
- c. After the stabilization period, the air supply control valve shall be closed so that no more air will enter the sewer. The sewer air pressure shall be noted and timing for the test begun. The test shall not begin if the air pressure is less than three and five-tenths (3.5) PSIG or such other pressure as is necessary to compensate for ground water level.
- d. The time required for the air pressure to decrease one (1) PSIG during the test shall not be less than the time shown in the "Oakland County Department of Public Works Air Test Tables."
- e. Manholes on sewers to be subjected to air tests shall be equipped with a one-half-inch diameter galvanized capped pipe nipple extending through the manhole three (3) inches into the manhole wall and at an elevation equal to the top of the sewer pipe. Prior to the air test, the groundwater elevation shall be determined by blowing air through the pipe nipple to clear it and then connecting a clear plastic tube to the pipe nipple. The tube shall be suspended vertically in the manhole and the groundwater elevation determined by observing the water level in the tube. The air test pressure shall be adjusted to compensate for the maximum groundwater level above the top of the sewer pipe to be tested. After all tests are performed and the sewer is ready for final acceptance, the pipe nipple shall be plugged in an acceptable manner.
- f. If a sewer fails to pass any of the previously described tests, the contractor shall determine the location of the leaks, repair them and retest the sewer. The tests shall be repeated until satisfactory results are obtained.
- g. All visible leaks and cracks shall be repaired regardless of test results.
- (e) Storm and groundwater control:
  - (1) Yard drains, patio drains, catchbasins, downspouts, weep tile, perimeter and footing drains or any other structure used for the collection and conveyance of stormwater and/or groundwater shall not be permitted to discharge into any sanitary sewer connected directly or indirectly to the county system, except as provided under subsection (e)(2) below.
  - (2) Perimeter and footing drains from buildings existing before December 16, 1968, shall not be required to disconnect from the sanitary sewer system; provided, that federal, state or local law or regulation does not require, or may not require subsequent to the adoption of these standards and regulations, the disconnection of such perimeter and footing drains.
  - (3) The crock to iron joint shall be sealed by approved flexible adaptor fittings such as those manufactured by Fernco Joint Sealer Company, or as approved by the Oakland County Department of Public Works. The iron pipe inside the building shall be plugged and leaded

All manholes constructed on sanitary sewer systems shall be provided with lid frames bolted to the cone section of the manhole with rubber O-ring gaskets compressed between the frame and the top of the cone in accordance with the current "Standard Manhole Detail" of the Oakland County Department of Public Works.

Adjustments to manhole tops shall be accomplished by using precast concrete adjustment rings bolted to the cone section of the manhole with rubber O-ring gaskets compressed between each adjacent ring.

Mortar and brickwork adjustment at the top of manholes will not be allowed. All manhole riser and cone sections shall have modified groove-tongue joint with rubber gasket.

The bolted frame, bolts, adjustment rings and O-ring gaskets shall be in accordance with the standards of the Oakland County Department of Public Works.

- (2) All manholes shall be provided with bolted waterproof covers in accordance with the current "Standard Manhole Detail" of the Oakland County Department of Public Works. Although not recommended, and only under certain circumstances, consideration will be given to the burying of manholes in lieu of providing bolted covers and only upon written request of the Oakland County Department of Public Works.
- (j) As-built plans. Prior to the acceptance of any sewer system and prior to the removal of the bulkhead as required in paragraph (c) (except under extenuating circumstances as may be approved by the director), as-built plans shall be provided to the Oakland County Department of Public Works. Said as-built plans shall show a statement by a registered engineer or surveyor certifying this to be "as-built plans" and shall include, but not be limited to, length of sewer, invert elevation, locations with respect to property lines, wye and riser locations and depths, and sewer material and joints used.
- (k) All combined sewer systems connected directly or indirectly to the intercepting sewer or sewers of the County of Oakland shall meet the following requirements:
  - (1) Paragraphs (b), (c), (f), (g), (h), (i) and (j) of this section are required for sanitary sewer system connecting to interceptor sewers of the County of Oakland as hereinbefore mentioned.
  - (2) Prior to acceptance of the system and prior to removal of the bulkhead as required under paragraph (c) of this section, all combined sewer systems shall be subjected to an infiltration test in accordance with the infiltration requirements of the Oakland County Department of Public Works as outlined in paragraph (d) of this section. Said test shall be witnessed by the Oakland County Department of Public Works.
  - (3) Downspouts and footing drain tile may be connected to a combined sewer if permitted by the local unit of government.
  - (4) No requirements of the Oakland County Department of Public Works, or permits issued hereunder by said department, shall relieve the property owner of complying with all the rules and regulations of the local unit of government wherein such property is located when such rules and regulations are not in conflict with the requirements of the department of public works.
  - (5) All sewer construction shall comply with the "General Specifications" of the Oakland County Department of Public Works. Copies of said specifications may be obtained from the office of the department of public works.

### county combined drains tributary thereto):

- (1) A connection permit must be obtained prior to connection from the Oakland County Drain Commissioner's Office, One Public Works Drive, Pontiac, Michigan 48054 (858-0958). A legal description of the property to be served by the connection is required.
- (2) The fee as determined by the drain commissioner for connection permits shall be one hundred fifty dollars (\$150.00), which is to cover the cost of the inspection of the tap.
- (3) The connection to the county drain will be made under the supervision of an inspector from the drain commissioner's office in accordance with approved plans of said connection.
- (4) A minimum of twenty-four (24) hours' notice (excluding Saturday, Sunday, and holidays) must be given prior to tap to enable this office to arrange for inspection.
- (5) Requests for inspection shall be directed to the technician charged with the responsibility of permit issuance (858-0978).
- (6) All lines connected to county drains shall be clean (free from silt, dirt, debris, etc.).
- (7) Yard drains, catchbasins, downspouts, weep tile, perimeter drains or other structures used for the collection and conveyance of stormwater will be permitted to outlet into the county combined drains, provided said properties lie within said combined drainage district.
- (8) The contractor, during the construction of a lateral, shall install a suitable bulkhead to prevent sand, silt, dirt or other debris from entering the county drain. Upon work completion and removal of any debris that may have collected, the contractor shall contact the inspection office for permission to remove the bulkhead.
- (9) A connection from any industrial plant or facility using chemical processes shall be provided with a readily available sampling point (manhole or equivalent).
- (10) All wastes discharged into county drains shall meet the standards as specified in the current Detroit ordinance governing domestic and industrial wastes.
- (d) Regulations to prevent the discharge of storm and ground water into the southeastern system from those areas lying outside the designated combined sewer area:
  - (1) General Requirements: All sanitary sewer systems <sup>[2]</sup> lying in these areas of the S.O.C.S.D.S. district, designated as separated, to be connected directly or indirectly into the intercepting sewer or sewers of the S.O.C.S.D.S. prior to connection, shall meet the following requirements:
    - a. A connection permit shall be obtained by the owner or contractor from the Oakland County Drain Commissioner's Office. Said connection permit shall show the location of the work, the extent of the work, information regarding the contractor, the owner and the engineer, the scheduled date of infiltration test and any other pertinent information as shall be determined necessary by the Oakland County Drain Commissioner. A fee shall be charged for said permit to cover the cost of inspection of the connection and system connected.
    - b. All sewer systems shall be subjected to infiltration, air or exfiltration tests or a combination thereof in accordance with the following requirements prior to acceptance of the system by the Oakland County Drain Commissioner's Office.
      - 1. Infiltration test. All sewers over twenty-four-inch diameter shall be subjected to infiltration tests. All sewers of twenty-four-inch diameter or smaller where the groundwater level above the top of the sewer is over seven (7) feet shall be subjected to an infiltration test.

above the top of the sewer pipe to be tested. After all tests are performed and the sewer is ready for final acceptance, the pipe nipple shall be plugged in an acceptable manner.

If a sewer fails to pass any of the previously described tests, the contractor shall determine the location of the leaks, repair them and retest the sewer. The tests shall be repeated until satisfactory results are obtained.

All visible leaks and cracks shall be repaired regardless of test results.

- (2) Storm and Groundwater Control:
  - a. Yard drains, patio drains, catchbasins, downspouts, weep tile, perimeter and footing drains or any other structure used for the collection and conveyance of stormwater and/or groundwater shall not be permitted to discharge into any sanitary sewer connected directly or indirectly to the county system, except as provided below.
  - b. Perimeter and footing drains from buildings existing before July 23, 1981, shall not be required to disconnect from the sanitary sewer system; provided, that federal, state or local law or regulation does not require, or may not require subsequent to the adoption of these standards and regulations, the disconnection of such perimeter and footing drains.
  - c. The crock-to-iron joint shall be sealed by approved flexible adaptor fittings, such as those manufactured by Fernco Joint Sealer Company, or as approved by the Oakland County Drain Commissioner's Office. The iron pipe inside the building shall be plugged and leaded and remain plugged and watertight until such time as the plumbing is carried on to the first floor, the basement backfilled and the roof is on the building, thereby providing that no water from the excavated basement will enter the sanitary sewer.
- (3) Building Sewers: House connection sewer from lateral sewer in the street or easement five (5) feet from house shall be:
  - Six-inch diameter extra strength vitrified sewer pipe, manufactured in accordance with current NCPI Designation ER 4-67 Standards, or equal, with drain commissioner-approved premium joint; or
  - b. Six-inch diameter ABS Plastic Solid Wall Sewer Pipe conforming to ASTM designation D-2751 SDR 35 or 23.5; or
  - c. Six-inch diameter PVC Plastic Solid Wall Sewer Pipe conforming to ASTM designation ASTM D-3034 SDR 35 or ASTM D-2665 Schedule 40.

d. Other pipes and joints as may be approved by the Oakland County Drain Commissioner. House connection sewers should be six-inch minimum diameter; however, four-inch pipe of comparable strength and joint material may be used if permitted by the local unit of government. All joints shall be tight and when tested for infiltration shall not exceed five hundred (500) U.S. gallons per inch of diameter per mile per twenty-four (24) hours.

The crock-to-iron joint shall be sealed by an approved bituminous filler, enclosed in concrete to provide a watertight seal. The iron pipe inside the building shall be plugged and leaded and remain plugged and watertight until such time as the plumbing is carried on to the first floor, there providing that no water from the excavated basement will enter the sanitary sewer.

- (a) Any liquid, solid or gas, which by reason of its nature or quantity, is sufficient either alone or by interaction with other substances to create a fire or explosion hazard or to be injurious in any other way to persons, to the POTW, or to the operations of the POTW. Pollutants, which create a fire or explosion hazard in a POTW, include, but are not limited to, wastestreams with a closed cup flash point of less than 140F or 60C using the test methods specified in 40 C.F.R. 261.21; or
- (b) Any solid or viscous substance in concentrations or quantities, which are sufficient to cause obstruction to the flow in a sewer or other encumbrances to the operation of the POTW, including, but not limited to, grease, animal guts or tissues, bones, hair, hides or fleshlings, entrails, whole blood, feathers, ashes, cinders, sand, cement, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, strings, fibers, spent grains, spent hops, wastepaper, wood, plastic, tar, asphalt residues, residues from refining or processing of fuel or lubrication oil, mud or glass grinding or polishing wastes, or tumbling and deburring stones; or
- (c) Any wastewater having a pH of less than 5.0 units or greater than 11.5 units; or
- (d) Any wastewater containing petroleum oil, nonbiodegradable cutting oil, products of mineral oil origin, or toxic pollutants in sufficient concentration or quantity either singly or by interaction with other pollutants to cause interference, or pass through, or constitute a hazard to humans or animals; or
- (e) Any liquid, gas, solid or form of energy, which either singly or by interaction with other waste is sufficient to create toxic gas, vapor, or fume within the POTW in quantities that may cause acute worker health and safety problems, or may cause a public nuisance or hazard to life, or are sufficient to prevent entry into the sewers for their maintenance and repair; or
- (f) Any substance which is sufficient to cause the POTW's effluent or any other product of the POTW, such as residue, sludge, or scum to be unsuitable for reclamation processing where the POTW is pursuing a reuse and reclamation program. In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria guidelines or regulations developed under 33 U.S.C. 1345, with any criteria, guidelines, or developed and promulgated regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Federal Clean Air Act, the Federal Toxic Substances Control Act, or with state criteria applicable to the sludge management method being used; or
- (g) Any substance which will cause the POTW to violate either the Consent Judgment in U.S. EPA v. City of Detroit et al., Federal District Court for the Eastern District of Michigan Case No. 77-1100, or the City of Detroit's National Pollutant Discharge Elimination System permit; or
- (h) Any discharge having a color uncharacteristic of the wastewater being discharged; or
- (i) Any wastewater having a temperature which will inhibit biological activity in the POTW treatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into a public sewer which exceeds 150F or which will cause the influent at the wastewater treatment plant to rise above 104 F (40 C); or
- (j) Any pollutant discharge which constitutes a slug; or
- (k)

All limitations are based on samples collected over an operating period representative of an industrial user's discharge, and in accordance with 40 C.F.R. part 136.

- 1. The limitation for Total PCB is non-detect. Total PCB shall not be discharged at detectable levels, based upon U.S. EPA Method 608, and the quantification level shall not exceed 0.2 ugm/l, unless a higher level is appropriate because of demonstrated sample matrix interference. Where one (1) or more samples indicate detectable levels of Total PCB, the user shall be required to demonstrate compliance. For purposes of this section, this demonstration may be made using analytical data showing that the Total PCB concentration is below the detection level, or submission of a BMP in accordance with section 115.7I(3)(c)4.
- 2. The limitation of Mercury (Hg) is non-detect. Mercury (Hg) shall not be discharged at detectable levels, based upon U.S. EPA Method 245.1, and the quantification level shall not exceed 0.2 ugm/l, unless a higher level is appropriate because of demonstrated sample matrix interference. Where one (1) or more samples indicate detectable levels of Mercury, the user shall be required to demonstrate compliance. For the purposes of this section, this demonstration may be made using analytical data showing that the mercury concentration is below the detection level, or submission of a BMP in accordance with section 115.7I(3)(c)4. All limitations are based on samples collected over an operating period representative of an industrial user's discharge, and in accordance with 40 CFR Part 136.
- (c) Compliance period. Within thirty (30) days of the effective date of Ordinance No. C-233-B (January 19, 2006), the department shall notify all industrial user's operating under an effective wastewater discharge permit of the requirement to submit a compliance report within one hundred eighty (180) days after the effective date of Ordinance No. C-233-B. The compliance report shall demonstrate the user's compliance or noncompliance with these limitations, and, in the event of noncompliance, include the submission of a plan and schedule for achieving compliance with the stated limitation. In no event shall a compliance schedule exceed eighteen (18) months from the effective date of Ordinance No. C-233-B. An industrial user who does not demonstrate compliance may petition the department for a second extension as part of an administrative consent order. The department shall include appropriate monitoring, reporting, and penalties into an administrative consent order that relates to a second extension, and shall enter into such an agreement only upon a good-faith showing by the industrial user of the actions taken to achieve compliance with this provision.
- (3) National Categorical Pretreatment Standards. All users shall comply with the applicable National Categorical Pretreatment Standards and requirements promulgated pursuant to the act as set forth in 40 C.F.R. Subchapter N, Effluent Guidelines and Standards, which are hereby incorporated by reference and with all other applicable standards and requirements, provided, however, that where a more stringent standard or requirement is applicable pursuant to state law or regulation, or to this division, then the more stringent standard or requirement shall be controlling. Affected dischargers shall comply with applicable reporting requirements under 40 C.F.R. part 403 and as established by the department. The National Categorical Pretreatment Standards which have been promulgated as of the effective date of this section are delineated in Appendix A.

been submitted to the director or regional administrator in compliance with the requirement of 40 C.F.R. 128.140(b), the industrial user will not be required to resubmit this information. At least ninety (90) days before commencement of any discharge, each new source and any existing sources that become industrial users after the promulgation of an applicable categorical pretreatment standard shall submit to the department a report which contains the information listed in 40 C.F.R. 403.12(b)(1-5). In such report, new sources shall include information concerning the method of pretreatment the source intends to use to meet applicable pretreatment standards. New sources shall provide estimates of the information requested in 40 C.F.R. 403.12(b)(4) and (5).

- (4) Dilution prohibited. Except where expressly authorized to do so by an applicable pretreatment standard or requirement, no user shall increase the use of process water, or in any way dilute or attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the National Categorical Pretreatment Standards, or in any other pollutant specific limitation or requirement imposed by the township, the City of Detroit or by the State of Michigan.
- (5) Hauled in wastewater. Any waste material or wastewater which is hauled into or within the service region for discharge to the POTW is subject to the requirements of this division including, but not limited to, permits, inspection, monitoring and enforcement. Unloading liquid or solid waste from hauling vehicles, directly or indirectly, into the POTW, with or without the benefit of pretreatment, is prohibited unless the person proposing to unload such waste has applied for and received a permit from the department for unloading such waste in accordance with the board's rules pertaining thereto. The discharger shall be subject to applicable terms and conditions, surcharges, fees or rates as established by the board. Hauled in wastewater shall only be discharged at points designated by the POTW after authorization or approval issued pursuant to the general permit requirements specified in section 24-115.7 (D) of this Code. The department may establish specific limitations for sludge from municipally owned or operated POTW treatment plants which are different than the specific limitations in this division.
- (6) Centralized waste treatment. It is unlawful for a centralized waste treatment (CWT) facility to discharge any industrial waste or wastewater into the POTW without a wastewater discharge permit from the department. Any authorization granted, or permit issued, by the department to a centralized waste treatment (CWT) facility shall specify the type of wastewater for which treatment is provided, and discharge approval is sought, from the POTW. Unless such industrial waste or wastewater is determined by the department to require further authorization, a centralized waste treatment (CWT) facility that has submitted an application to, and received previous approval from, the department to discharge wastewater is not required to obtain further authorization from the department before discharging such wastewater.

An industrial user, that provides centralized waste treatment services and files an application for the treatment and discharge of such types of wastewater to the POTW, shall provide the following minimum information in support thereof:

(a) The general nature, source and process(es) generating the type of wastewater. Any wastewater, which is generated from those processes and is subject to National Categorical Pretreatment Standards as delineated in Appendix A, shall be so designated; (a) Each industrial user, which does not currently have an approved spill prevention plan or slug control plan, shall provide protection from accidental discharge of prohibited materials or other substances regulated by this division, and all significant industrial users shall submit to the department detailed plans which show facilities and operating procedures to be implemented to provide protection against such accidental discharges. Facilities and measures to prevent and abate accidental discharges shall be implemented, provided, and maintained at the owner's or industrial user's cost or expense. Unless the significant industrial user has an approved spill prevention or slug control plan, all existing significant industrial users shall complete and submit such a plan within sixty (60) days of the effective date of this division. New significant industrial users shall submit such a plan prior to the time they commence discharging.

For purposes of this section, the information provided shall include the approximate average and maximum quantities of such prohibited materials or substances kept on the premises in the form of raw materials, chemicals and/or waste therefrom and the containment capacity for each. Only substances that are in a form which could readily be carried into the POTW and constitute a concentration of five percent (5%) or greater in the raw material, chemical solution or waste material, are required to be reported. Volumes of less than fifty-five (55) gallons, or the equivalent thereof, need not be reported unless lesser quantities could cause pass through or cause interference with the POTW.

The industrial user shall promptly notify the department of any significant changes or modifications to the plan including, but not limited to, a change in the contact person, or substance inventory.

- (b) At least once every two (2) years, the department shall evaluate whether a significant industrial user needs a plan to control slug discharges, as defined by 40 C.F.R. 403.8(f)(2)
   (v). Unless otherwise provided, all significant users shall complete, implement, and submit such a plan within thirty (30) days of notification by the department.
- (10) Notification requirements. Unless a different notice is provided by this division or applicable law, within one (1) hour of becoming aware of a discharge into the POTW which exceeds or does not conform with federal, state or township laws, rules, regulations or permit requirements, or which could cause problems to the POTW, or which has the potential to cause the industrial user to implement its plan prepared in accordance with subsection (9)(a) of this section, the industrial user shall telephone the department at its control center and notify the department of the discharge. The notification shall include the name of the caller, the location and time of discharge, the type of wastewater, the estimated concentration of excessive or prohibited pollutants and estimated volume, and the measures taken, or being taken, to abate the discharge into the POTW. Within five (5) calendar days after the discharge, the industrial user shall submit a detailed written report describing the cause of the discharge and the measures to be taken by the user to prevent similar future occurrences and when required by the department, the industrial user's wastewater discharge permit may be modified to include additional measures to prevent such future occurrences. Such notification shall not relieve the industrial user of any expense, cost of treatment, loss, damages or other liability which may be incurred as a result of damage to the POTW, fish kills, or any other environmental impairment or any other damage to person or property.

(11)

- (b) User fees based upon volume of waste and concentration or quantity of specific pollutants in the discharge, and treatment costs including sludge handling and disposal; and
- (c) Reasonable fees for reimbursement of costs for hearings including, but not limited to, expenses regarding hearings officers, court reporters, and transcriptions; and
- (d) Other fees, which the board may deem necessary, to carry out the requirements contained herein, or as may be required by law.
- (D) Wastewater discharge permits.
  - (1) Required. It shall be unlawful for users to discharge into the POTW any wastewater which will cause interference or pass through, or otherwise not comply with the discharge prohibitions of subsection 24-1157(B) of this Code. It shall be unlawful for a significant industrial user to discharge into the POTW without a wastewater discharge permit from the [City of] Detroit Water and Sewerage Department. Unless otherwise expressly authorized by the department through permit, order, rule or regulation, any discharge must be in accordance with the provisions of this division.
    - (a) All significant industrial users, which are in existence on the effective date of this division, shall apply for a wastewater discharge permit within thirty (30) days of the effective date of this division. Significant industrial users who are currently operating with a valid wastewater discharge permit are not subject to this provision. These applications are to include all information specified in subsection <u>24-115.7</u>(D)(3) of this Code and, where applicable, any additional information which may be needed to satisfy the federal baseline monitoring report requirements of 40 C.F.R. 403.12(b).
    - (b) All new significant users shall apply for a wastewater discharge permit at least ninety (90) days prior to commencement of discharge. The application must include all information specified in <u>section 24-115.7(D)(3)</u> of this Code and, where applicable, any additional information that may be needed to satisfy the federal BMR requirements of 40 C.F.R. 403.12(b). Until a permit is issued and finalized by the department, no discharge shall be made into the POTW.
    - (c) Any user, who proposes to discharge any wastewater other than sanitary or noncontact cooling water into the POTW, shall request approval from the department for the discharge(s) at least thirty (30) days prior to the commencement of the discharge.
  - (2) Permit application or reapplication. The department may require any user to complete a questionnaire and/or a permit application and to submit the same to the department for determining whether the industrial user is a significant user, or to determine changes in the wastewater discharges from a user's facility. Within thirty (30) days of being so notified, a user shall comply with the department's request in the manner and form prescribed by the department. Failure of the department to so notify a user shall not relieve the user of the duty to obtain a permit as required by this division.
    - (a) A user, which becomes subject to a new or revised National Categorical Pretreatment Standard, shall apply for a wastewater discharge permit within ninety (90) days after the promulgation of the applicable National Categorical Pretreatment Standard, unless an earlier date is specified or required by 40 C.F.R. 403.12(b). The existing user shall provide a permit application which includes all the information specified in <u>section 24-115.7(D)(3)</u> and (7) of this Code.
Denote: (i) The average and maximum twenty-four (24) hour wastewater flow rates including, if any, daily, monthly and seasonal variations; (ii) each national categorical process wastestream flow rate and the cooling water, sanitary water and stormwater flow rates separately for each connection to the POTW; and (iii) each combined wastestream;

- (i) A drawing showing all sewer connections and sampling manholes by the size, location, elevation and points or places of discharges into the POTW; also a flow schematic showing which connections receive each national categorical process wastestream and which connections receive stormwater, sanitary water or cooling water; also show which lines handle each combined wastestream. This schematic shall be cross-referenced to the information furnished in subsection (3)(h), of this subsection (D);
- (j) Each product produced by type, amount, process or processes and rate of production as pertains to processes subject to production based limits under the National Categorical Pretreatment Standards or requirements only;
- (k) A statement regarding whether or not the requirements of this division and of the National Categorical Pretreatment Standards and requirements are being met on a consistent basis and, if not, what additional operation and maintenance work and/or additional construction is required for the industrial user to meet the applicable standards and requirements. This statement shall be reviewed and signed by the authorized representative and, as appropriate, certified by a qualified professional;
- Basic information on the program for the prevention of accidental discharges in accordance with the requirements of <u>section 24-115.7(B)(9)</u> of this Code;
- Proposed or actual hours of operation of each pretreatment system for each production process;
- A schematic and description of each pretreatment facility which identifies whether each pretreatment facility is of the batch type or continuous process type;
- (o) If other than [City of] Detroit Water and Sewerage Department potable water, the industrial user's source of intake water together with the types of usage and disposal method of each water source, and the estimated wastewater volumes from each source;
- (p) If additional construction and/or operation and maintenance procedures will be required to meet the requirements of this division and the National Categorical Pretreatment Standards, the shortest schedule by which the user will provide such additional construction and/or implement the required operation and maintenance procedures;
- (q) Identify whether the user has conducted a waste minimization assessment or audit of its operations in order to identify all feasible source reduction and recycling practices that may be employed to reduce or eliminate the generation of pollutants and other waste at the facility; and
- (r) Any other information as may reasonably be required to prepare and process a wastewater discharge permit.
- (4) *Permit issuance*. Upon receipt of an application, the department shall review the application, determine, and so notify the industrial user in writing regarding any of the following:
  - (a) The industrial user does not meet the definition of a significant industrial user and is not required to have a wastewater discharge permit;
  - (b)

slug discharges;

- (g) Restrictions based on the information furnished in the application;
- (h) Additional reporting requirements:
  - 1. All permittees shall submit a report on the form prescribed by the department, or on an alternative form approved by the department, indicating the status of compliance with all conditions enumerated or referred to in the wastewater discharge permit, or made applicable to the permit by this division. Unless required more frequently, the reports shall be submitted at six (6) month intervals on a schedule to be established by the department. Analytical data generated by the department may not be submitted in lieu of the facility's own monitoring data as required by the wastewater discharge permit.
  - Permittees not subject to National Categorical Pretreatment Standards or requirements shall submit a report in accordance with the requirements of <u>section</u> <u>24-115.7(D)(5)(h)(4)</u> and (5) of this Code. The report shall show the concentration of each substance for which there is a specific limitation in the permit, or which may be identified by the department in accordance with <u>section 24-115.7(D)(5)(i)</u> and (k) of this Code.
  - Permittees subject to National Categorical Pretreatment Standards or requirements 3. shall submit compliance reports at the times and intervals specified by federal regulations and by the department. A compliance report shall be submitted to the department no later than ninety (90) days following the final compliance date for a standard, or in the case of a new source, no later than ninety (90) days, following commencement of the introduction of wastewater into the POTW, and in accordance with 40 C.F.R. 403.12(d). A report on continued compliance shall be submitted at six (6) month intervals thereafter on the schedule established by the department and incorporated into the industrial users discharge permit and in accordance with section 16.5-54(e)(8)(d) and (e) of this Code. The reports shall be either on a form prescribed by the department or on an alternate form approved by the department, and shall indicate the nature and concentration of all pollutants in the discharge from each regulated process which are limited by National Categorical Pretreatment Standards, or which there is a specific limitation in the permit, or which may be identified by the department in accordance with section 24-115.7(D)(5)(i) and (k) of this Code. The report shall include a record of measured or estimated average and maximum daily flows for the reporting period for the discharges regulated by the permit. The combined wastestream formula may be used for reporting purposes after the initial information has been furnished to the department, provided there have been no changes to the elements composing the combined wastestream.
  - 4. Reports shall contain the results of representative sampling performed during the period covered by the report and of the discharge and analysis of pollutants contained therein, and, for significant industrial users subject to production based standards, shall be cross-referenced to the related flow or production and mass as required to determine compliance with the applicable pretreatment standards. The frequency of monitoring shall be as prescribed in the applicable general pretreatment regulations, being 40 C.F.R. Part 403, or by the department, but no less than is

- (j) Requirement for pollution prevention initiatives; and
- (k) Other requirements reasonably necessary to ensure compliance with this division.
- (6) Permit duration. Permits shall be issued for a specified time period. Except as deemed necessary by the department, or as otherwise provided for under this division, permits shall be issued for a specified period of not more than five (5) years nor less than one (1) year. The existing permit for significant industrial users, who timely submit an application for permit reissuance to the department, shall be automatically extended until a permit is issued as final.
- (7) Permit modification. The terms and conditions of the permit may be subject to modification by the department during the term of the permit as limitations or pretreatment standards and requirements identified in section 24-115.7(B) of this Code are amended, or other just cause exists. Just cause for a permit modification includes, but shall not be limited to, the following:
  - (a) Material or substantial changes to an industrial user's facility or operation, or changes in the characteristics of the industrial user's effluent. It shall be the industrial user's duty to request an application form and apply for a modification of the permit within thirty (30) calendar days of the change;
  - (b) Change(s) in the department's NPDES permit;
  - (c) Embodiment of the provisions of a legal settlement or of a court order;
  - (d) Any changes necessary to fulfill the department's role as control authority;
  - (e) An industrial user's noncompliance with portions of an existing permit;
  - (f) A change of conditions within the POTW;
  - (g) A finding of interference or pass through attributable to the industrial user;
  - (h) Amendments to, or promulgation of, National Categorical Pretreatment Standards or requirements including 40 C.F.R. Part 403 and those delineated in Appendix A of this division. Permittees shall request an application form and apply to the department for a modified permit within ninety (90) days after the promulgation of a new or revised National Categorical Pretreatment Standard to which the industrial user shall be subject. Information submitted pursuant to this subsection shall be confined to that information related to the newly promulgated or amended National Categorical Pretreatment Standard or requirement. However, information previously submitted need not be duplicated, insofar as the previously submitted information continues to be current and applicable. In addition, the department may initiate this action;
  - (i) Changes in the monitoring location. (See section 24-115.7(E) of this Code);
  - (j) Typographical errors or omissions in permits;
  - (k) The department may modify the permit on its own initiative based on its findings or reasonable belief of the above; or
  - (I) The user may request a modification of the permit.

When initiated by the department, the industrial user shall be informed of any proposed change in its permit. The department will issue a draft permit and an industrial user has thirty (30) days to file a response to the draft modified permit. Thereafter, the department will issue a final permit and, unless appealed in accordance with the procedures contained in <u>section 24-115.7(J)</u> of this Code, the permit will become effective twenty (20) days after issuance.

(8)

user to obtain any necessary approvals which may be required from other government agencies for the location and construction of monitoring facilities. There shall be ample room in or near such sampling or monitoring manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility and any permanently installed sampling and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the industrial user. Whether constructed upon public or private property, the sampling and monitoring facilities shall be provided in accordance with the department's requirements and all applicable local construction standards and specifications. (See <u>section 24-115.7(D)(7)</u>)

- (F) Inspection, sampling and record-keeping.
  - (1) For purposes of administering and enforcing this division, any other applicable provisions of this Code or applicable state or federal laws and regulations, the department may inspect the establishment, facility or other premises of the industrial user. The department's employees or authorized representative shall have access to the industrial user's premises for purposes of inspection, sampling, compliance monitoring and/or metering activities.
  - (2) Each such inspection or sampling activity shall be commenced and completed at reasonable times, and in a reasonable manner. Upon arrival at the industrial user's premises, the department shall inform the industrial user, or the industrial user's employees, that sampling and/or inspection is commencing, and that the facility's authorized representative has the right to observe the inspection and/or sampling. The department shall neither refrain from, nor be prevented or delayed from, carrying-out its inspection or sampling duties due to the unavailability of the authorized representative of the facility to observe or participate in the inspection or sampling activity.
  - (3) While performing work on private property, employees or authorized representatives of the department shall observe all reasonable safety, security and other reasonable rules applicable to the premises as established by the industrial user. Duly authorized employees or representatives of the department shall bear proper credentials and identification, and at the industrial user's option may be accompanied by a duly authorized representative of the industrial user. Duly authorized department representatives shall not be restricted from viewing any of the facility site. Department employees or representatives may take photographs of facilities subject to this division which shall be maintained by the department as confidential in accordance with section 24-115.7(G) of this Code.
  - (4) Where an industrial user has security measures in force, the industrial user shall make prompt and necessary arrangements with the security personnel so that, upon presentation of appropriate credentials, personnel from the department will be permitted to enter for the purposes of performing their specific responsibilities.
  - (5) Significant industrial users shall sample and analyze their discharge in accordance with the provisions of their permit. The department may require such samples to be split with the department for the department's independent analysis.
  - (6) Industrial users shall maintain records of all information from monitoring activities required by this division, or by 40 C.F.R. 403.12(n). Industrial users shall maintain the records for no less than three (3) years. This period of record retention shall be extended during the course

confidential information, and assumes no responsibility for the disposition of the information released to the governmental agency. The department will use sufficient care to inform the other governmental agency of the existence of the industrial user's confidentiality claim.

The department shall determine whether the information requested to be treated as confidential, in fact, satisfies the requirements of confidential information as defined herein. The decision of the department shall be made in writing.

Wastewater constituents and characteristics will not be recognized as confidential information.

- (2) Except as otherwise determined by the department or provided for by applicable law, all information with respect to an industrial user on file with the city shall be made available upon request by such user or the user's authorized representative during normal business hours.
- (H) Statutes, laws and regulations. The National Categorical Pretreatment Standards defined in 40 C.F.R. Chapter I, Subchapter N, Parts 405-471, shall be and are incorporated by reference herein and made a part hereof. Unless otherwise provided, any reference in this division to a code, standard, rule, regulation, or law enacted, adopted, established, or promulgated by any private organization, or by any element or organization of government other than the township shall be construed to apply to such code, standard, rule, regulation, or law in effect or as amended or promulgated, from the date of enactment of this division.
- (I) Enforcement.
  - (1) Violations. It shall be a violation of this division for any user to:
    - (a) Fail to completely and/or accurately report the wastewater constituents and/or characteristics of the industrial user's discharge;
    - (b) Fail to report significant changes in the industrial user's operations or wastewater constituents and/or characteristics within the time frames provided in subsection <u>24-</u><u>115.7(D)(7)(a)</u> of this Code;
    - (c) Refuse reasonable access to the industrial user's premises, waste discharge, or sample location for the purpose of inspection or monitoring;
    - (d) Restrict, lockout or prevent, directly or indirectly, access to any monitoring facilities constructed on public or private property. The locking or securing of the monitoring facility shall not constitute a violation pursuant to this subsection, provided, that upon request reasonable access to the facility is promptly provided to the department;
    - (e) Restrict, interfere, tamper with, or render inaccurate any of the department's monitoring devices including, but not limited to, samplers;
    - (f) Fail to comply with any condition or requirement of the industrial user's wastewater discharge permit;
    - (g) Fail to comply with any limitation, prohibition, or requirement of this division including any rule, regulation, or order issued hereunder. Industrial users acting in full compliance with wastewater discharge permits issued prior to the effective date of this division shall be deemed to be in compliance with the requirements of this division, and such permits shall remain in effect and be enforceable under this division until a superseding permit is

enforcement action against a user for a bypass, unless:

- 1. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
- 3. The industrial user properly notified the department as described in subsection (3)(b) of this section.
- (d) *Bypass approval.* Where it meets all conditions in subsection (3)(c) of this section, the department may approve an anticipated bypass.
- (4) Where one (1) or more of the measurements taken for any pollutant defined in subsection <u>24-115.7(B)(2)</u> of this Code during a six-month period exceed by any magnitude the daily maximum non-detect limit for the same parameter, the industrial user may develop and implement pollution prevention initiatives, or a BMP, as part of its response. The department may, as part of an administrative order, also require development of a BMP as a part of the department's enforcement response. Upon approval of the Department, these pollution prevention initiative, or BMPs shall be made an enforceable part of the wastewater discharge permit. Industrial users shall provide, at six-month intervals, analytical results and certifications in support of its implementation of an approved pollution prevention initiative or BMPs. Upon demonstration of compliance, the industrial user may request to be relieved of this implementation requirement.
- (5) Emergency suspensions and orders. The department may order suspension of the sewer or wastewater treatment service and/or a wastewater discharge permit where, in the opinion of the department, such suspension is necessary to stop any actual or threatened discharge which presents or may present an imminent or significant hazard to the health or welfare of persons or to the environment, interferes or may interfere with the POTW, or causes or may cause the City of Detroit to violate any condition of its NPDES permit. Any person notified of a suspension of the sewer or wastewater treatment service and/or the wastewater discharge permit shall immediately stop or eliminate the contribution. In the event the department provides informal notification under this section, written confirmation and an order shall be provided within twenty-four (24) hours. In the event of a failure of the person to comply voluntarily with any suspension or revocation order, the department shall take such steps as deemed necessary, including immediate severance of the sewer connection or services, to prevent or minimize damage to the POTW system or danger to any individual or the environment. In the event such steps are taken, the director shall notify the industrial user within twenty-four (24) hours in writing of such action and order, and the specific recourse available. In any event, the department shall provide the industrial user with an opportunity for a hearing before the director, or his designated representative, within ten (10) days of such action. The industrial user shall submit a detailed written statement to the department within fifteen (15) days of the occurrence describing the causes of the harmful contribution and the

Not later than fourteen (14) days following each date in the schedule and the final date for compliance, the industrial user shall submit a progress report to the department including, at a minimum, whether it complied with the increment of progress to be met on such date and, if not, the date which it expects to comply with this increment of progress, the reason(s) for delay, and the steps being taken by the industrial user to return to the established schedule; and

- d. Any deviations from the compliance schedule may result in the industrial user being found in violation of this division.
- (c) Administrative orders. The department may order any industrial user, who violates or continues to violate this division or a duly issued permit, to install and to properly operate devices, treatment facilities, or other related appurtenances. In addition, orders may contain such other requirements as might reasonably be necessary and appropriate to address the violation including the installation of pretreatment technology, additional self-monitoring and management practices, implementation of a waste minimization assessment to identify and implement feasible source reduction, and recycling practices to reduce the generation or release of pollutants at the facility. An order may be either an administrative consent order, which is the result of an agreement, or a unilateral administrative order.
- (d) Show cause hearing. The department may order any industrial user, who violates this division or allows such violation to occur, to show cause before the department why a proposed enforcement action should not be taken. A notice shall be served upon the industrial user specifying the time and place of a hearing before the department regarding the violation, the reason(s) why the action is to be taken, the proposed enforcement action, and directing the industrial user to show cause before the department why any proposed enforcement action should not be taken. The notice of the hearing shall be served personally, or by registered or certified mail with return receipt requested, at least ten (10) days before the hearing. Service may be made upon any agent or officer of a corporation, or its authorized representative.
  - 1. Hearing Proceeding. The hearing shall be conducted in accordance with the procedures adopted by the board. A hearings officer shall conduct the show cause hearing and take the evidence, and may:
    - a. In the name of the board, issue notices of hearing requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearing;
    - b. Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the director for action thereon.
  - 2. Transcript. At any show cause hearing held pursuant to this division, testimony shall be recorded by a court reporter.
- (e) Actions. After a show cause hearing has been conducted, the hearings officer shall issue an order to the industrial user directing any of the following actions:
  - 1. Immediate compliance with the industrial user's wastewater discharge permit or with any applicable limitation, condition, restriction or requirement of this division, or applicable local, state or federal law or regulation;
  - 2. Pretreatment of waste by installation of adequate treatment equipment or proper operation and maintenance of existing treatment equipment be accomplished within a specified time period;

Detroit's NPDES permit, or other applicable laws or requirements. In addition, the City of Detroit and/or the township may recover the reasonable attorney fees, court costs, court reporters' fees, and other unusual expenses related to enforcement activities or litigation against the person found to have violated this division, or the orders, rules, regulations and permits issued hereunder.

- (c) All fines, costs, and penalties which are imposed by any court of competent jurisdiction shall be payable to the City of Detroit Water and Sewerage Department and the township where applicable.
- (J) Reconsideration and appeal. Through the procedures of reconsideration and appeal, a user may contest actions, determinations, or decisions of the department which result from its construction, application and enforcement of this division. The procedures contained within this section govern reconsideration and appeal with respect to construction, application, and enforcement of this division.
  - (1) Selection of reconsideration or of appeal.
    - (a) Except for those actions, determinations, or decisions which are expressly identified as subject only to appeal, reconsideration may be requested by any permit applicant, permittee, authorized industrial wastewater discharger or other discharger, who is adversely affected by any action, determination, or decision that is made by, or on behalf of, the department by the director, or an authorized representative, and that interprets, implements or enforces the provisions of this division.
    - (b) An appeal may be requested by any permit applicant, permittee, authorized industrial wastewater discharger or other discharger, who is adversely affected (i) by a permit issued as final by the department, or (ii) by an administrative order entered after a show cause order and hearing, or after a hearing for reconsideration.
    - (c) Unless otherwise expressly provided for by this division, a request for reconsideration or appeal must be signed by an authorized representative, and received at the department's general offices within twenty (20) days from the date of the occurrence of the action, determination, or decision in dispute. A request for reconsideration shall contain the requester's name and address, a brief statement of the reason(s), and the factual basis underlying the request.
    - (d) A request for reconsideration shall be filed in triplicate either by hand delivery or by certified mail to the general offices of the department. Where a request for reconsideration or appeal either is not filed within the time period provided for in this subsection or is improperly made, the action, determination or decision of the director, or the department's authorized representative, is final and any right to reconsideration or appeal may be deemed waived.
  - (2) *Reconsideration.* Within fifteen (15) days after receipt of a timely and proper request for reconsideration, the department shall notify the applicant of the time and place for a hearing.
    - (a) A hearing for reconsideration shall be conducted by a hearings officer who is designated by the director and may be an employee of the department. The decision of the hearings officer shall be in the form of a recommendation to the director and embodied in an administrative order. Except for an administrative consent order that was negotiated and agreed to by both parties, an administrative order is appealable in accordance with subsection (c) of this section.

Unless such action is necessary to prevent pass through, interference, or other harm to the POTW, to the public or to the waters of this state, the filing of a request for appeal in accordance with this section shall stay the action by the department that is the subject of the appeal.

(Ord. No. C-233, § 7, 10-16-89; Ord. No. C-233-A-2001, § 2, 11-19-01; Ord. No. C-233-B, §§ 2-5, 1-9-06)

# Appendix A

1

Aluminum Forming	40 C.F.R. Part 467
Asbestos Manufacturing	40 C.F.R. Part 427
Battery Manufacturing	40 C.F.R. Part 461
Builder's Paper and Board Mills	40 C.F.R. Part 431
Canned and Preserved Fruits and/Vegetables	40 C.F.R. Part 407
Canned and Preserved Seafood Processing	40 C.F.R. Part 408
Carbon Black Manufacturing	40 C.F.R. Part 458
Cement Manufacturing	40 C.F.R. Part 411
Centralized Waste Treatment	40 C.F.R. Part 437
Coal Mining	40 C.F.R. Part 434
Coil Coating	40 C.F.R. Part 465
Copper Forming	40 C.F.R. Part 465
Dairy Products Processing	40 C.F.R. Part 405
Electrical and Electronic Components I & II	40 C.F.R. Part 469
Electroplating	40 C.F.R. Part 413
Explosives Manufacturing	40 C.F.R. Part 457
Feed Lots	40 C.F.R. Part 412

Paving and Roofing Materials	40 C.F.R. Part 443
Pesticide Chemicals	40 C.F.R. Part 455
Petroleum Refining	40 C.F.R. Part 419
Pharmaceutical	40 C.F.R. Part 439
Phosphate Manufacturing	40 C.F.R. Part 422
Photographic	40 C.F.R. Part 459
Plastics Molding and Forming	40 C.F.R. Part 463
Porcelain Enameling	40 C.F.R. Part 466
Pulp, Paper, and Paperboard	40 C.F.R. Parts 430 and 431
Rubber Manufacturing	40 C.F.R. Part 428
Soap and Detergent Manufacturing	40 C.F.R. Part 417
Steam Electric	40 C.F.R. Part 423
Sugar Processing	40 C.F.R. Part 409
Textile Mills	40 C.F.R. Part 410
Timber Products	40 C.F.R. Part 429
Transportation Equipment Cleaning	40 C.F.R. Part 442
Waste Combustors	40 C.F.R. Part 444

1

(Ord. No. C-233-A-2001, § 2, 11-19-01; Ord. No. C-233-B, § 6, 1-9-06)

# **Appendix B**

An industrial user may elect, in lieu of the total phenols limitation specified in section 56-3-59.1(b) (2), to substitute specific limitations for each of the eight (8) individual phenolic compounds identified under the total phenols limitation. The following specific limitations, expressed in mg/l, shall be applied in lieu of the total phenols limitation, upon election:

# PART ONE PROCEDURES FOR SUBMISSION AND REVIEW OF DEVELOPMENT PLANS

The following procedures and standards shall apply in the administration of the Stormwater Management Ordinance, of which this appendix is a part. However, if and to the extent there are procedures, requirements and/or standards that are more rigorous or strict which are specified elsewhere in the Township's Ordinance Code, or in other applicable law, rule or regulation, the more rigorous or strict standards shall apply. In the event there is an ambiguity with regard to the particular standard that is applicable, such ambiguity shall be resolved by the Township Board.

- I. PURPOSE AND APPLICATION
  - A. PURPOSE
    - 1. To ensure that drainage or stormwater management systems are adequate to address stormwater management needs within a proposed development, and for protecting downstream landowners from flooding and degradation of water quality. The procedures, standards and recommendations set forth in these procedures and standards are designed for these purposes.
    - 2. To ensure that all stormwater facilities necessary for a proposed development will have an appropriate governmental unit responsible in perpetuity for performing maintenance or for overseeing the performance of maintenance by a private entity, such as a property owner's association.
  - B. APPLICATION
    - 1. These procedures and standards provide minimum standards to be complied with by developers, and in no way limit the authority of the Township to adopt or publish and/or enforce higher standards as a condition of approval of developments.
    - 2. Stormwater management technologies are rapidly developing and improving; these procedures and standards will be revised as necessary by the Township Board after recommendation by the Planning Commission and Wetland Board, with the most recently dated sheets being applicable.
- II. SUBMISSION OF PRELIMINARY PLAN
  - A. SUBMISSION AND GENERAL INFORMATION REQUIREMENTS FOR APPROVAL OF STORMWATER MANAGEMENT PLANS
    - 1. A preliminary plan showing the layout of the area intended to be developed will be submitted by the developer. This plan will be prepared under the direction of, and sealed by, a registered professional engineer or a registered land surveyor, and shall fit on a sheet of paper that does not exceed 24" by 36", drawn to a standard engineering scale.
    - 2. Three prints prepared in accordance with the procedures and standards set forth in this section, will be submitted together with a letter of transmittal requesting that the plan be reviewed and, if found satisfactory, approved. The names of the owner and engineering or surveying firm, with mailing addresses, fax and telephone numbers for each, will be included with the transmittal.
    - 3. The plan will include:
      - a. The location by means of a small location map;
      - b. The township, city or village in which the parcel is situated;
      - c. The section and part of section in which the parcel is situated;

- d. The proposed drainage system for the development;
- e. The proposed street, alley and lot layouts and approximate dimensions;
- f. The location and description of all on-site features and all adjacent off-site features within 50 feet, and all other off-site features that may be impacted in determining the overall requirements for the development. For example:
  - (1) Adjoining roads and developments;
  - (2) Railroads;
  - (3) High tension power lines or underground transmission lines;
  - (4) Cemeteries;
  - (5) Parks;
  - (6) Natural and artificial watercourses, wetlands and wetland boundaries, environmental feature boundaries, floodplains, lakes, bays, existing stormwater storage facilities, conveyance swales (natural or artificial), approximate location of woodlands, natural beauty roads, lagoons, and trees with a caliper at breast height of greater than eighteen (18) inches (and Arborvitae (white cedar), Crabapple, Flowering Dogwood, Hawthorn, Hophornbeam, Hornbeam, Juniper, Magnolia, Maple, amur, Redbud and Witch Hazel trees with a caliper at breast height greater than twelve (12) inches);
  - (7) Designated natural areas;
  - (8) Any proposed environmental mitigation features;
  - (9) Drains, sewers and water mains;
  - (10) Existing and proposed easements;
- g. The number of acres.
- h. Contours, at two-foot intervals or less, with U.S.G.S. datum.
- i. A map, at the U.S.G.S. scale, showing the drainage boundary of the proposed development and its relationship with existing drainage patterns.
- j. Any water course passing through the development, along with the following:
  - (1) Area of upstream watershed and current zoning.
  - (2) Preliminary calculations of runoff from the upstream area for both the 100-year and 1.5-year 24-hour design storms, for fully-developed conditions according to the current land use plan for the area.
- k. Soil borings may be required at various locations including the sites of proposed retention/detention facilities, and as needed in areas where high ground water tables exist.
- 4. All calculations used in designing all components of stormwater management systems must be submitted along with plans.
- 5. Easement information will be shown, consistent with Part Two, Section XIII of these procedures and standards.
- 6. A description of the mechanism to be established to provide for long-term maintenance of the development's stormwater management system, and the government agency responsible for maintenance oversight if maintenance is to be performed by a private entity. A County drainage district may be required to be established for future maintenance.
- 7. Should the applicant propose to begin with only a portion of the total area, the original plan will include the proposed master stormwater management layout for the entire area based

upon preliminary engineering. The first phase will be clearly superimposed upon the overall plan in order to illustrate clearly the method of development that the applicant intends to follow. Each subsequent plan will follow the same procedure until the entire area controlled by the applicant is developing.

Final approval of only one portion or phase does not ensure final acceptance of any subsequent phases or the master stormwater management layout for the entire area. Deviations or modifications, if any, shall be reviewed for approval by the township.

#### B. DRAINAGE INFORMATION REQUIREMENTS FOR STORMWATER MANAGEMENT PLANS AND ENGINEERED GRADING PLANS

### 1. REQUIRED STORMWATER MANAGEMENT INFORMATION

The plan will include:

- a. The general stormwater management scheme for the proposed developmentindicating how stormwater management will be provided and where drainage will outlet.
- b. A description of the offsite outlet and evidence of its adequacy. If no adequate watercourse exists to effectively handle a concentrated flow of water from the proposed development, discharge will be reduced to sheet flow prior to exiting the site, and cannot exceed 0.15 cfs/acre. Additional volume controls may be required in such cases and/or acquisition of rights-of-way from downstream property owners receiving the stormwater flow.
- c. Any on-site and/or off-site stormwater management facilities and appropriate easements, dedicated to the entity that will be responsible for future maintenance.
- d. Any drainage originating outside of the development limits that flows onto or across the development. (In general, drainage from off-site shall not be passed through on-site stormwater storage facilities.)
- e. Any natural watercourses and County Drains that traverse or abut the property.
- 2. Proposed drainage for the development will conform to any established County drainage districts.
- 3. The proposed drainage plan will, in every way feasible, respect and conform to the natural drainage patterns within the site and the watershed in which it is located.
- 4. Proposed drainage shall complement any local stormwater management plans that may exist and/or comply with any article in effect.
- 5. The increased volume of water discharged from a development shall not create adverse impacts to downstream property owners, wetlands and water courses (e.g. flooding; excessive soil saturation; crop damage; erosion; degradation in water quality or habitat destruction).

# C. DEVELOPMENT APPROVAL

- 1. The Township Planning Commission, Wetland Board (or Township Board on Appeal), Township Engineer and Township Environmental Director, as applicable, shall review a proposed plan. If the proposed plan is not approved as originally submitted, the Township Engineer will notify the applicant in writing, setting forth the reasons for withholding approval, and will state the changes necessary to obtain approval. If the proposed plan as submitted meets all requirements, one approved copy of the plan will be returned to the applicant. Approval of the plan is required before the Township will proceed with review of final construction plans.
- 2. Payment of all fees is prerequisite to approval.

### III. FINAL STORMWATER MANAGEMENT APPROVAL

- A. Final plan review will be completed by the Township within a reasonable time following submission by the applicant. If the plan is not acceptable, written notice of rejection and the reasons therefor by way of minutes of the reviewing body and/or statement of the revision will be given to the applicant. If the Township approves the plan, it will affix a signature to it and the plan will be executed.
- B. As a condition of final plan approval, the Township will require the following:
  - 1. Before approval of the final plan, copies of all necessary Wetland, Floodplain, Inland Lakes and Streams, Erosion Control or other needed state, federal or local permits relating to stormwater management have been provided by the applicant for the Township file.
  - 2. A satisfactory agreement that assures long-term maintenance of all drainage improvements will be in place before submission of the final plan. Documentation of maintenance agreement will be supplied to the Township and approved by the Township Board.
  - 3. The applicant will post cash or a letter of credit in an amount not less than 10% of the cost of the stormwater facilities for projects of less than \$100,000 or 5% of the cost for projects over \$100,000 (See Sections C and D below). This deposit will be held for one year after the date of completion of construction and final inspection of the stormwater facilities, or until construction on all phases in the development are completed, whichever time period is longer.

This deposit will be returned to the applicant (in the case of cash) or allowed to expire (in the case of a letter of credit), as provided above, provided all stormwater facilities are clean, unobstructed and in good working order, as determined by the Township Engineer.

- 4. Reproducible mylars of the as-built stormwater management system(s) will be submitted by the applicant or his/her engineer to the commissioner along with the final plan, or upon completion of system construction. The mylars are to be of quality material and 3 mils in thickness.
- 5. Complete development agreements (including deed restrictions) must be submitted for the Township's review and approval prior to recording.

### IV. FINAL CONSTRUCTION APPROVAL

A. The applicant will submit final stormwater management facility construction plans with a letter of transmittal. Plans will be prepared under the direction of, and sealed by, a registered professional engineer and will be in accordance with Part Two of this Appendix.

The Township Engineer and Environmental Management Director will review final construction plans to assure that the construction plan conforms with the approved Final Stormwater Management Plan, and that adequate storm drainage will be provided and that the proposed stormwater management system provides adequately for water quantity and quality management to ensure protection of property owners and watercourses both within the proposed development and downstream. Submission requirements shall include, but will not be limited to the following:

 Two complete sets of construction plans are required, or more as required by the Township Engineer, drawn to a scale no smaller than 1" = 50', and on sheets no larger than 24" × 36". The scales used shall be standard engineering scales and shall be consistent throughout the plans. When plans have been completed with computer aided design technology, a copy of the electronic file shall also be provided. Construction plans shall include the following:

a. Development layout of lots, roads and utility and drainage easements.

- b. Plans, profiles and details of all roads and storm sewers. The storm sewer details will include type and class of pipe, length of run, percent of slope, invert elevations, rim elevations, and profile of the hydraulic gradient, as specified in Part Two of these procedures and standards.
- c. A storm sewer computation sheet indicating the number of acres, calculated to the nearest tenth of an acre, contributing to each specific inlet/outlet, the calculated hydraulic gradient elevation, maximum flow in cfs and the flow velocities for enclosed systems.
- d. Plans, profiles and details of all open ditch drains, drainage swales and drainage structures.
- e. Plans and details of the proposed soil erosion and sedimentation control measures, both temporary (during construction) and permanent.
- f. Plans and details of retention detention facilities.
- g. A drainage area map, overlaid onto a copy of the site grading plan, which clearly shows the areas tributary to each inlet an/or storage basin.
- h. Topographic maps, at two foot contour intervals or less on U.S.G.S. datum, showing existing and proposed grades of the entire area to be subdivided, as well as off-site topography over at least 100' of the adjoining property. Maps will also show all existing water courses, lakes and wetlands, and the extent of all off-site drainage areas contributing flow to the development.
- i. The number of acres proposed to be developed and, for phased developments, the number of acres in each phase.
- j. Locations of all drain fields as approved by the Oakland County Environmental Services Division and of all expansion areas. Drain fields shall not be located within drainage easements.
- 2. Specifications governing construction of stormwater management facilities.
- 3. Design data and criteria used for sizing all drainage structures, channels and retention basins, including weighted runoff coefficient calculations.
- 4. A stormwater facility maintenance plan, schedule, and budget estimating the costs that will be associated with system maintenance (See Part Two, Section X. D.)
- 5. In addition to the foregoing, a single sheet including the entire site plan along with all proposed storm drainage facilities and drainage easements shall be submitted.
- A soil erosion permit under "The Michigan Soil Erosion and Sedimentation Control Act", P.A. 451, Part 91 Public Acts of 1994 as amended, will be obtained from the appropriate agency prior to any construction.
- C. The applicant will make arrangements acceptable to the Township for inspection during construction and for final verification of the construction by a registered professional engineer prior to the approval of the final construction plans.
- D. Review of construction plans by the Township will not proceed until plan approval has been granted. The Land Division Act of 1996 gives no time limit in which final construction plans must be reviewed.
- E. Approval of construction plans by the Township is valid for one calendar year. If an extension beyond this period is needed, the applicant will submit a written request to the Township for an extension. The Township may grant one year extensions of the approval, and may require updated or additional information if needed. Township action under this provision may be taken administratively provided that no changes to the plans and/or standards have occurred. In the event one or more such changes have occurred, Township action under this provision shall be taken by the final reviewing body.

F. For site condominiums, complete Master Deed documents (including "Exhibits" drawings) must be submitted for the Township's review and approval prior to recording.

- V. DRAINS UNDER THE JURISDICTION OF THE DRAIN COMMISSIONER
  - A. Drainage districts will not be altered when designing development drainage, except as provided under Section 433 of Act 40, Public Act 1956 as amended.
  - B. Existing county or Township drain easements will be indicated on the plans as well as the final plan and will be designated as "Oakland County Drain" or "Township of West Bloomfield Drain", as applicable. County drain easements prior to 1956 were not required by statute to be recorded immediately; therefore, it may be necessary to check the permanent records of the Drain Office to see if a drain easement is in existence on the subject property.
  - C. A permit will be obtained from the Drain Commissioner's Office prior to tapping or crossing any county drain. The permit must be obtained prior to final plan approval.
  - D. Proposed relocations of county drains will be processed through the office of the Drain Commissioner.
  - E. If a development is being developed in an area where special drainage problems are anticipated at the site, on adjacent properties or downstream, more stringent design requirements than are contained within Part Two of these procedures and standards may be required.

#### PART TWO - DESIGN CRITERIA FOR STORMWATER MANAGEMENT SYSTEMS

This Part II sets forth specific design and construction standards that will be used by the Township in review of proposed stormwater management systems in accordance with the objectives of managing both the quantity and quality of stormwater runoff.

It is difficult or impossible to develop one set of uniform standards that is capable of accommodating all variables and unique site circumstances. In particular, it is recognized that these standards may be difficult to realize on small sites. Waivers or variances from specific provisions of these standards may be requested, and alternatives consistent with the overall intent of stormwater quantity and quality management may be proposed, subject to the approval of the appropriate Township body responsible for final decision making on the application in accordance with the procedure and standards in the Stormwater Management Article.

I. DEVELOPMENT DRAINAGE — GENERAL REQUIREMENTS

# A. STORMWATER DISCHARGE

- 1. In no event will the maximum design rate or volume of discharge exceed the maximum capacity of the downstream land, channel, pipe or watercourse to accommodate the flow. It is the applicant's obligation to meet this standard. Should a stormwater system, as built, fail to comply, it is the applicant's responsibility to design and construct, or to have constructed at his/her expense, any necessary additional and/or alternative stormwater management facilities. Such additional facilities will be subject to the Township's review and approval.
- 2. If no adequate watercourse exists to effectively handle a concentrated flow of water from the proposed development, discharge will be reduced to the equivalent of the pre-existing sheet flow prior to exiting the site, and cannot exceed 0.15 cfs/acre. Additional volume controls may be required in such cases and/or acquisition of rights-of-way from downstream property owners receiving the stormwater flow.
- 3. Discharge shall outlet within the watershed where flows originate, and shall not be diverted to another watershed without approval of the appropriate Township body administering the application.

### B. DETERMINATION OF SURFACE RUNOFF

- 1. The "rational method" of calculating stormwater runoff is generally acceptable for sites less than 150 acres in size; however, it may not be considered an adequate design tool for sizing large drainage systems. More precise methodologies for predicting runoff such as runoff hydrographs are widely available, and may be required by the Township for sizing the drainage systems on large sites and/or smaller sites that are deemed potentially problematic. Acceptable alternative methods will include (See Appendices I and J for more information):
  - a. Corps of Engineers HEC-1.
  - b. Soil Conservation Service UD-21, TR-20 and TR-55.
  - c. U.S. EPA's SWMM.
  - d. Continuous simulation (e.g. HSPF).
- 2. Unless a continuous simulation approach to drainage system hydrology is used, all design rainfall events will be based on the SCS Type II distribution.
- 3. Computations of runoff hydrographs that do not rely on a continuous accounting of antecedent moisture conditions will assume a conservative wet antecedent moisture condition.
- II. DESIGN STANDARDS FOR CONSTRUCTED STORMWATER MANAGEMENT FACILITIES
  - A. RETENTION AND DETENTION SYSTEMS

# 1. Background.

- a. Whereas basin design for flood control is concerned with capturing and detaining/retaining relatively infrequent, severe runoff events, such as the 10-, 25-, or 100-year Storm, designs for water quality control require that the more frequent storm events (e.g. 2-year storm or less) must be addressed as well. The need for managing smaller storms is directly related to urbanization within Oakland County and the accompanying increase in impervious area, which affects surface water quality in two important ways.
- b. Eroded soil and other pollutants that accumulate on impervious surfaces, such as metals, fertilizers, pesticides, oils and grease, are flushed off by the early stages of runoff, which then carries a shock loading of these pollutants into receiving waterways. By capturing and treating the first 0.5 inch of runoff, a high percentage of pollutants that are washed off of the land can be removed from stormwater before it enters into the drainage system.
- c. As recent studies by the MDEQ have shown, development has caused stream flow fluctuations to rise dramatically. As impervious surface area increases and opportunities for infiltration are reduced, the frequency and duration of bankfull flow conditions, typically represented by the 1.5-year storm event, have intensified. As a result, streams adjust their capacities to convey the increased flows, which can then lead to channel and bank erosion and the destruction of aquatic habitat.
- d. To manage both water quantity and quality, basins must be designed to capture and treat three different storm events:
  - (1) The 100-year storm event.
  - (2) The bankfull flood: The 1.5-year/24 hour storm event.
  - (3) The "first flush": The first 0.5 inch of runoff from the entire contributing watershed.
- e. Controlling both extremely large events, to prevent flooding, and more frequent events, to mitigate water quality impacts and channel erosion, can be achieved through the proper design of detention/retention basins. Among alternatives, wet ponds and constructed marsh systems are the most effective for achieving control of both stormwater volume and quality. Extended detention ponds providing two-stage pond designs (containing an upper, dry stage and a lower stage with a permanent pool) are also acceptable.
- If all of the property in the proposed development is five (5) acres or less, including all f. past, present and future phases, an applicant may apply for authority to design a basin system for less than the 100 year storm standard. The application for such authority shall specify the standard proposed, and shall include all calculations and other supporting information demonstrating the legitimate reasons why such authority should be granted. In reviewing the application, the reviewing personnel and bodies shall determine whether the grant of authority for the standard proposed, or some other standard less than the 100 year storm standard, would be in the public interest, which would require meeting all of the following standards: natural resource and feature preservation; safety; potential problems that may result; engineering advantages and disadvantages, and any other relevant factor. If authority to design a basin system for less than the 100 year storm standard is granted under this paragraph f, an open space as large as, and contiguous to, the area to be utilized for the approved basin shall be set aside and preserved by a conservation easement or other mechanism approved by the Township Attorney as adequate, with the view of ensuring the availability of an area to construct a system meeting the 100 year storm standard in the event that smaller storage facility fails to fully function as intended.
- 1. GENERAL REQUIREMENTS

The following criteria will apply to the design of all stormwater retention and detention facilities.

- a. In general, wet ponds and stormwater marsh systems will be preferred to dry ponds. Dry ponds providing extended storage will be accepted when the development site's physical characteristics or other local circumstances make the use of a wet pond infeasible.
- b. When discharge is within a watershed where thermal impacts are a primary concern, dry ponds will be preferred to wet ponds, and extended detention (first flush and bankfull) requirements may be reduced to twelve (12) hours. Shade plantings on the west and south sides of facilities are encouraged unless such plantings would not thrive or are not otherwise in the public interest.
- c. Public safety will be a paramount consideration in stormwater system and pond design. Providing safe retention is the applicant's responsibility. Pond designs will incorporate gradual side slopes, vegetative and barrier plantings, and safety shelves. Where further safety measures are required, the applicant is expected to include them within the proposed development plans.
- d. Stormwater management systems incorporating pumps are not permitted, absent a variance under Article VIII of the Stormwater Management Article, which shall require a showing that there is no feasible and prudent alternative, and that it is in the public interest.
- e. Storage volumes and release rates.

On-site management of storm drainage will be designed for control of flooding, downstream erosion and water quality. Submission of flow calculations, cross sections and other pertinent data will be required.

(1) The volume of storage provided for flood control will be equal to or in excess of that required for a 100-year frequency storm.

The allowable release rate from the flood control storage volume will normally be between 0.1 and 0.15 cfs per acre of the property being drained, or as determined by the Township body responsible for final decision making on the application after recommendation by the Township Engineer and/or other applicable Township Engineer. If discharge does not outlet to a clearly defined downstream channel, the allowable release rate shall not exceed 0.10 cfs per acre.

(2) The volume and storage provided for controlling the "bankfull" flood, will be equal to or in excess of the total rain from a 1.5-year storm, which can be determined by:

5160 × acreage × the relative imperviousness factor C

The release rate from the "bankfull" storage volume will be such that this volume will be stored not less than 24 nor more than 40 hours.

(3) The "first flush" of runoff will be captured and detained for at least 24 hours or within a permanent pool. The first flush is defined as the first 0.5 inch of runoff over the entire site, which can be determined by:

1815 × acreage × the relative imperviousness factor C

f. A sediment forebay will be provided at the inlet of all stormwater management facilities, to provide energy dissipation and to trap and localize incoming sediments.

- (1) The forebay will be a separate cell, which can be formed by gabions or an earthen berm.
- (2) Capacity of the forebay shall account for 15 years of sediment accumulation, and will not be included in calculating overall basin stormwater storage capacity.
- (3) Direct maintenance access to the forebay for heavy equipment will be provided.
- (4) An adequate disposal area shall be provided for accumulated sediment.
- g. Basin inlet/outlet design.
  - (1) Velocity dissipation measures will be incorporated into basin designs to minimize erosion at inlets and outlets, and to minimize the resuspension of pollutants.
  - (2) To the extent feasible, the distance between inlets and outlets will be maximized. The length and depth of the flow path across basins and marsh systems can be maximized by:
    - [i. Reserved.]
    - ii. Increasing the length to width ratio of the entire design.
    - iii. Increasing the dry weather flow path within the system to attain maximum sinuosity.

If possible, inlets and outlets shall be offset at opposite longitudinal ends of the basin.

- (3) The use of V-notched wiers, dual outlets, or other designs to assure an appropriate detention time for all storm events is required.
- (4) The outlet will be well protected from clogging. A reverse-slope submerged orifice or a hooded, broad crested wier are recommended options. If a reverse-slope pipe is used, an adjustable valve may be necessary to regulate flows.
- (5) Where a pipe outlet or orifice plate is to be used to control discharge, it will have a minimum diameter of 3 inches. If this minimum orifice size permits release rates greater than those specified in these procedures and standards, alternative outlet designs will be utilized that incorporate self-cleaning flow restrictors, such as perforated risers and "V" notch orifice plates that provide the required release rate. Calculations verifying this rate are to be submitted to the Township for approval.
- (6) Backwater on the outlet structure from the downstream drainage system will be evaluated when designing the outlet.
- (7) Riser design.
  - (i) Orifices used to maintain a permanent pool level shall be designed to withdraw water at least one foot below the surface of the water.
  - (ii) Hoods or trash racks shall be installed on the riser to prevent clogging.
  - (iii) The riser shall be placed near or within the embankment, to provide for ready maintenance access.
  - (iv) Inlet and outlet barrels and risers will be constructed of materials that will reduce future maintenance requirements. The riser pipe shall be a minimum of four feet in diameter.
  - (v) Where feasible, a drain for completely de-watering the pond shall be installed for maintenance purposes.

- (8) All outlets will be designed to be easily accessible for heavy equipment required for maintenance purposes.
- h. Vegetative plantings associated with retention/detention facilities.
  - (1) Basin designs will be accompanied by a landscaping plan that uses native plant species.
  - (2) A permanent buffer strip of natural vegetation at least 25 feet in width will be maintained or restored around the perimeter of all wet basins and ponds. No lawn care chemical applications shall be applied to the buffer area.
  - (3) Viability of plantings will be monitored by the Township for two years after plantings are installed by the applicant, and reinforcement and replacement plantings provided by the applicant as needed.
- i. For safety purposes and to minimize erosion, basin side slopes will generally not be flatter than 20:1 nor steeper than 6:1. Steeper slopes may be allowed if fencing at least 5 feet in height is provided.
- j. Anti-seep collars shall be installed on any piping passing through the sides or bottom of the basin to prevent leakage through the embankment.
- k. A minimum of one foot of freeboard will be required above the 100-year stormwater elevation on all detention/retention facilities.
- I. All basins will have provisions for a defined emergency spillway, routed such that it can be picked up by the main outflow channel.
- m. Adequate maintenance access from public or private right-of-way to the basin will be reserved. The access will be on a slope of 5:1 or less, stabilized to withstand the passage of heavy equipment, and will provide direct access to both the forebay and the riser/outlet.
- n. For sites where chemicals may be stored and used (e.g. certain commercial and industrial developments) a spill response plan will be developed that clearly defines the emergency steps to be taken in the event of an accidental release of harmful substances that may migrate to the stormwater system. As a result of this plan, design elements such as shut-off valves or gates may be needed.
- o. The placement of retention/detention basins within a floodplain is discouraged. Where retention/detention basins are proposed within a floodplain, information will be provided to verify that the facility will operate as designed during flood events.

### 2. PERMANENT RETENTION PONDS

a. Storage volume.

Retention basins will be capable of storing two consecutive 100-year storms, which can be determined by:

33.000 × acreage × the relative imperviousness factor C

- (1) An overflow assessment will be required. The assessment shall include descriptions of the surrounding areas that would be impacted in the event of an overflow.
- (2) The applicant must submit a soil boring log, taken within the basin bottom area to a depth of 25 feet below existing ground or 20 feet below proposed basin bottom elevation.
- (3) The volume required may be modified based upon the percolation rate of the soil, groundwater table elevation and a recommendation from a licensed hydrogeological consulting engineer.

### 3. WET DETENTION BASINS

a. Storage volume.

Storage volume on a gravity outflow wet basin is defined as "the volume of detention provided above the invert of the outflow device". Any volume provided below the invert of the outflow device will not be considered as detention.

At a minimum, the volume of the permanent pool shall be at least:

 $2.5 \times 0.5$  inch  $\frac{15}{5} \times$  runoff coefficient × site drainage area.

- b. Wet detention pond configuration will be as follows:
  - (1) Surface area to volume ratio shall be maximized to the extent feasible;
  - (2) In general, depths of the permanent pool shall be varied and average between 3 and 6 feet;
  - (3) A minimum length to width ratio of 3:1 shall be used unless structural measures are used to extend the flow path;
  - (4) Ponds shall be wedge-shaped, narrower at the inlet and wider at the outlet;
  - (5) Irregular shorelines are preferred.
- c. A marsh fringe shall be established near the inlet or forebay within the basin and around at least 50% of the pond's perimeter.
- d. A shelf, a minimum of 4 feet wide at a depth of one foot, will surround the interior of the perimeter to provide suitable conditions for the establishment of aquatic vegetation, and to reduce the potential safety hazard to the public.
- e. To avoid drawdowns, a reliable supply of baseflow and/or groundwater will be required.
- f. If underlying soils are highly permeable (e.g. in the "A" or "B" hydrologic groupings), the bottom of the basin shall be lined with an impermeable geotextile or a 6 inch clay liner.
- g. In-line detention basins are strongly discouraged in all circumstances; and are prohibited on water courses greater than 2 square miles upstream or on a county drain. In-line basins are also prohibited if the waterway to be impounded traverses any area outside of the proposed development.

### 4. EXTENDED DETENTION BASINS

- a. A two-stage design is required, with separate outlet controls to detain both the 1.5year and larger rain events.
  - (1) Lower stage.
  - (2) The lower stage shall contain a shallow, permanent pool designed to store and treat the "first flush", or 0.5 inch of runoff over the entire site. This pool shall be managed as a shallow marsh or wetland, and average 6-12 inches in depth.
  - (3) At a minimum, the volume of runoff detained in the entire lower stage shall be equivalent to the runoff volume produced by a 1.5-year storm.
  - (4) Upper stage.

The upper stage shall be sized for the 100-year, 24-hour storm, as provided in Part 2 Section 11.A.1.d.i. of these procedures and standards, and shall be graded to remain dry except during large storms.

A low flow channel, stabilized against erosion, will be provided through the dry portion of the basin. This channel shall have a minimum grade of 0.5%, and the remainder of the basin shall drain toward this channel at a grade of at least 1%. The low flow channel shall end at the lip of the lower stage, where riprap or gabion baffles will be placed to prevent scour and resuspension.

### 5. STORMWATER WETLAND SYSTEMS

- a. Background.
  - (1) Stormwater wetlands are defined as constructed systems explicitly designed to mitigate the stormwater quality and quantity impacts associated with development. They do so by temporarily storing stormwater runoff in shallow pools that create growing conditions suitable for emergent and riparian wetland plants. The runoff storage, complex microtopography and emergent plants in the stormwater wetland together form an ideal system for the removal of urban pollutants. Because of their water quality benefits, the use of stormwater wetlands is encouraged.
  - (2) As a general rule, stormwater wetlands shall not be located within delineated natural wetland areas, nor be confused with created wetlands that are used to mitigate the loss of natural wetlands.
  - (3) The design of an effective and diverse stormwater wetland requires a sophisticated understanding of hydrology and wetland plant ecology. Therefore, wetland construction, reconstruction or modification must be overseen by a qualified professional with specific wetland expertise. An excellent reference for the design of stormwater wetlands is by Thomas R. Scheuler, "Design of Stormwater Wetland Systems" (published by the Metropolitan Washington Board of Governments).
- b. Standards.
  - (1) Stormwater wetland systems must be designed to perform in conformance with all standards for storage volume and discharge rate established in these procedures and standards.
  - (2) The developer will provide for the monitoring of wetland plantings and replacement as needed for a two-year period after construction.

### 6. UNDERGROUND STORAGE FACILITIES

If all of the property in the proposed development is five (5) acres or less, including all past, present and future phases, or if the proposed development constitutes a redevelopment of a use previously approved by the Township and constructed and used by the property owner for at least ten years prior to applying for approval of the proposed development under consideration, then underground storage facilities shall be permitted, in whole or part, in lieu of surface stormwater basins; provided, that, with the exception of a redevelopment project qualifying under this section which does not have an existing stormwater storage basin, approval under this section shall be conditioned upon it being demonstrated by the applicant that it would be in the public interest not to disturb the area that would otherwise be used to construct the basin.

An applicant seeking approval for an underground storage facility shall specify the total system proposed, including any surface basins as well as proposed underground facilities, and shall include all calculations and other supporting information demonstrating the legitimate reasons why the proposed system should be approved. The applicant shall demonstrate all of the following in order to secure approval of an underground storage facility:

a. Natural resource and feature preservation shall be enhanced;

- b. Public safety shall be preserved or enhanced;
- c. The absence of potential problems that may result;
- d. Engineering advantages;
- e. The storage facility shall function as well or better than the surface stormwater basin in terms of water quality and quantity considerations; and
- f. Both of the following standards shall be met:
  - (1) An open space as large as, and in the location of, the area that would have been required for the surface basin shall be set aside and preserved by a conservation easement or other mechanism approved by the Township Attorney as adequate, with the view of ensuring the availability of an area to construct a back-up system if the underground storage facility fails to fully function as intended; and
  - (2) The intensity of development would be equal to or less than that which would be permitted with the surface stormwater basin proposed to be eliminated.
- g. The proposed system shall meet the following standards:
  - (1) It shall be a groundwater recharge or infiltration type system.
  - (2) In calculating the storage volume in order to meet the 100 year storm standard, the void space in the bedding material under and around the facility shall not be counted or included.
  - (3) The emergency overflow elevation for the discharge from the underground storage system on the property shall be at least six (6") inches higher than the lowest rim elevation of the catch basin on the site, including all parking lot curbs and similar structures restraining water leaving the site.
- B. STORMWATER CONVEYANCE

All stormwater conveyance structures will be constructed in accordance with governing specifications. (Michigan Department of Transportation, Oakland County Road Commission, or Township). In the event of no other governing specifications, the latest edition of the Michigan Department of Transportation standards will be observed.

Stormwater conveyance systems incorporating pumps are not permitted, absent a variance, which shall require a showing that there is no feasible and prudent alternative, and that it is in the public interest.

### 1. NATURAL STREAMS AND CHANNELS

- a. Natural streams are to be preserved. Natural swales and channels shall be preserved, whenever possible.
- b. If channel modification must occur, the physical characteristics of the modified channel will meet the existing channel in length, cross-section, slope, sinuosity, vegetation and carrying capacity.
- c. Streams and channels will be expected to withstand all events up to the 100-year storm without increased erosion. Armoring banks with riprap and other manufactured materials will be accepted only where erosion cannot be prevented in any other way, such as by the use of vegetation.
- 2. VEGETATED SWALES/OPEN DITCHES
  - a. Open swale/ditch drainage Systems will be preferred to enclosed storm sewers where applicable governmental standards and site conditions permit, provided, that appropriate safety measures shall be observed.
  - b. Swales shall:

- (1) Follow natural, pre-development drainage paths insofar as possible be well vegetated, wide and shallow.
- c. Open ditch flow velocities will be neither siltative nor erosive. In general, the minimum acceptable velocity will be 2.0 ft./sec., and the maximum acceptable velocity will be 6.0 ft./sec.
- d. Open ditch slopes will depend on existing soils and vegetation and, whenever possible, will be greater than 1.5%. For slopes less than 1.5%, additional inspection will be necessary to ensure proper, positive drainage. In no case shall slopes be less than 1.0%, unless other techniques such as infiltration devices are implemented. Maintenance for such devices must be detailed in the overall Maintenance Plan.
- e. Side slopes of ditches shall be no steeper than 3:1. Soil conditions, vegetative cover and maintenance ability will be the governing factors for determining slope requirements.
- f. Slopes and bottoms of open ditches and swales will be stabilized to prevent erosion.
- g. Swale length shall be a minimum of 200 feet whenever possible, to increase the contact time of stormwater.
- h. In general, a 5-foot clearance will be provided between open swale/ditch inverts and underground utilities unless special provisions are employed. Special provisions, for example, could be the encasement of utility lines in concrete when crossing under the channel, in no case will less than 2 feet of clearance be allowed.
- i. Permanent metal or plastic markers will be placed on each side of the drain to show the location of underground utilities.
- j. All bridges will be designed to provide a two foot minimum flood stage freeboard to the underside of the bridge. Footings will be at least one foot below the invert grade of the channel. Depending on soils, additional footing depth may be required.
- k. A series of check dams or drop structures across swales shall be provided to enhance water quality performance and reduce velocities.
- I. Designers shall consider integrating additional redundant pollutant removal enhancement features such as stilling basins and stone infiltration trenches.
- 3. ENCLOSED DRAINAGE STRUCTURES (ALSO SEE ORDINANCE CODE SECTION 24-180)
  - a. Enclosed storm drain systems will be sized to accommodate the 10-year storm, with the hydraulic gradient generally kept below the top of the pipe.
  - b. Restricted conveyance systems designed to create backflow into stormwater storage facilities are not permitted.
  - c. Drainage structures will be located as follows:
    - (1) To assure complete positive drainage of all areas of the development.
    - (2) At all low points of streets and rear yards.
    - (3) Such that there is no flow across a street intersection.
    - (4) For smaller enclosed pipes (12-30 inches), manholes will not be spaced more than 350 feet apart. Longer runs may be allowed for larger sized pipe but in all cases maintenance access must be deemed adequate by the Township.
    - (5) In conformance with any more stringent local requirements.
  - d. The catch basin or inlet covers shall be designed to accept the 10-year design storm. No ponding of water shall occur during this storm event.

- e. Discharge from enclosures will be as follows:
  - (1) All outlets will be designed so that velocities will be appropriate to, and will not damage, receiving waterways.
  - (2) Outlet protection using riprap or other approved materials will be provided as necessary to prevent erosion.
  - (3) The soils above and around the outlet will be compacted and stabilized to prevent piping around the structure. Riprap extending 3 feet above the ordinary high water mark is recommended for all outlets.
  - (4) When the outlet empties into a detention/retention facility, channel or other watercourse, it will be designed such that there is no overfall from the end of the apron to the receiving waterway.
- f. Pipe will conform to the following criteria:
  - (1) In order to avoid accumulation of sediment in the drain, pipe will be designed to have minimum velocity flowing full of 3 ft/sec., with the exception of sediment chambers. In isolated circumstances, 2 ft/sec. will be allowed. The allowable maximum velocity flowing full will be 10 ft/sec. Special cases where topography is steep may be granted exception.
  - (2) Pipe joints will be such as to prevent excessive infiltration or exfiltration.
  - (3) All materials will be of such quality as to guarantee a maintenance-free expectancy of at least 50 years and will meet all appropriate A.S.T.M. standards.
- g. If sump pump leads are required to be connected into an enclosed system, these taps shall be made directly into storm sewer structures.

### 4. DETERMINATION OF CHANNEL SIZE

a. The "Mannings" formula will be used to size the open channel or pipe.

"Mannings Formula"

n

Q		=	flow,	in	cubic	;	feet	ре	er	second
А		=	cross	secti	ional a	area,	in	S	quare	feet
n	=	Mannings	coefficient	of	roughness	(See	Appendix	Е	for	reference)
R		=	hydraulic		radius	=	A/P,		in	feet
Ρ			=			wetted				perimeter
S	= slo	ope of the b	pottom of the	drair	า					

If the "Mannings" formula is not used, the alternative method used will be approved by the Township Engineer.

- b. A minimum "n" of 0.035 will be used for the roughness coefficient unless special treatment is given to the bottom and side slopes, such as sodding, riprap or paving.
- 5. DETERMINATION OF CULVERT SIZE
  - a. Under Michigan State Law (Act 451, PA. Part 301 of 1994), crossroad culverts draining two square miles or more must be reviewed and approved by the Michigan Department of Natural Resources.
  - b. Crossroad culverts draining less than 2 square miles of upstream watershed will be sized by the applicants engineer and approved by the MDOT, Oakland County Road Commission and Oakland County Drain Commissioner's office.

- c. In general, culverts will pass the 100-year storm flow with the velocity not exceeding 8 feet per second, and with no increase in adverse water conditions occurring off of the development property or flooding of structures within the development. A minimum of one foot of freeboard is required.
- d. Acceptable methods of determining the quantity of water needed to pass through the culvert are listed below. The applicant's engineer may use any of the methods listed or another if approved by the Township Engineer:
  - (1) Rational method.
  - (2) U.S.D.A. soil conservation service method.
  - (3) The Michigan Department of Natural Resources Method.
  - (4) Continuous flow modeling.
- e. The discharge velocity from culverts shall consider the effect of high velocities, eddies, or other turbulence on the natural channel, downstream property and roadway embankment. The culvert exit velocity shall not cause downstream channel erosion or scour.
- f. Sizing of culvert crossings will consider entrance and exit losses as well as tailwater conditions on the culvert. Once the design flow is determined, the required size of the culvert will be determined by one of the following methods:
  - (1) The "Mannings" formula.
  - (2) The inlet headwater control/outlet tailwater control nomographs.
  - (3) Other methods approved by the Township.
- g. Wing walls, headwalls and all other culvert extremities will be designed to assure the stability of the surrounding soil. It is recommended that Michigan Department of Transportation standard designs be observed unless special exemption is given by the entity having jurisdiction.
- C. ADDITIONAL STORMWATER MANAGEMENT BMPS: INFILTRATION TRENCHES AND SAND FILTERS

A variety of best management practices, other than those detailed within these procedures and standards, provide effective water quality and quantity control. The following section provides design standards for only two of many approaches that may be acceptable to the Township.

- 1. INFILTRATION TRENCHES
  - a. Background.
    - (1) Infiltration devices are designed to capture and treat stormwater runoff from smaller rain events, that are managed for water quality purposes. They function to reduce runoff at its source, since the diverted "first flush" is not discharged to surface water but is stored until it is gradually removed by infiltration and evaporation. Through these mechanisms, infiltration can remove pollutants, provide groundwater recharge and help reduce the volume of runoff leaving a site. Infiltration devices are generally incorporated as one component of an overall stormwater system that utilizes other management approaches as well.
    - (2) While the concept of infiltration best conforms to the stormwater management goals of water quantity and quality control stated within these procedures and standards, in practice, infiltration approaches to stormwater management have limited application. Although many infiltration devices are very effective for removing fine sediment particles and the pollutants associated with them, coarse sediments and oil will clog infiltration systems, and must be removed prior to entering them. Clogging of infiltration devices is a primary reason for failure,

causing many to fail during the first few years of operation. The use of erosion control measures, sedimentation basins and grass filter strips to pre-treat runoff is essential, as well as a very aggressive maintenance program. In addition, studies have shown that many infiltration facilities fail or do not work as designed due to poor initial site selection. Therefore, soil suitability and the contributing drainage area must be carefully assessed. The potential for groundwater contamination must also be seriously considered prior to implementation.

(3) Infiltration approaches to stormwater management are particularly attractive for small catchment areas of less than 10 acres in size, where the employment of more traditional BMP's such as wet ponds, artificial marshes, and/or extended detention dry ponds is often neither feasible nor desirable.

NOTE: Infiltration basins will not be permitted due to universally high failure rates.

- b. Design criteria for infiltration trenches.
  - (1) Infiltration trenches are limited to small tributary areas of approximately 5 acres.
  - (2) Infiltration trenches are not feasible where the slope of the site is greater than 20%, unless proper energy dissipation devices are installed. Trenches are also not recommended where the slope of the contributing watershed is greater than 5%. The slope of the trench bottom shall be close to zero to evenly distribute exfiltration.
  - (3) Minimum design volume will be based on infiltration of 0.5 inch runoff over the entire drainage basin.
  - (4) All trenches will be designed to hold water for a minimum of 6 hours and a maximum of 72 hours.
  - (5) Filter fabric will be used to line the sides of the trench, and either filter fabric or 6 inches of sand will be used on the trench bottom. (Filter fabric placed 6 to 12 feet below the surface of an open trench can prevent the need for major rehabilitation).
  - (6) Cleaned, washed stone aggregate, 1.5 to 3 inches in diameter, will be used within the stone reservoir.
  - (7) The trench bottom will be a minimum of 4 feet above seasonally high groundwater and bedrock.
  - (8) To remain operative in freezing weather, the bottom of the trench will be placed 3 feet below the frost line.
  - (9) Stormwater pretreatment.
    - [i. Reserved.]
    - ii. A sediment settling basin, or other stormwater management practice, will be provided to remove coarse sediment from stormwater flows before they reach infiltration trenches.
    - iii. The use of pretreatment systems that provide some degree of storage (e.g. sump pits, swales with check dams or plunge pools) is encouraged.
    - iv. For surface trenches, a minimum 25 foot wide grass buffer is required as a filter.
    - v. Underground trenches will receive water directed through an oil/grit separator or other form of pretreatment that will remove both coarse solids and oils where applicable.

- (10) Where an overflow pipe is provided for flows in excess of design, the pipe will be placed near the surface of the trench and outlet to an acceptable point of discharge.
- (11) Underground trenches will be readily accessible for maintenance purposes.
- (12) An observation well, consisting of a perforated vertical pipe within the trench, will be installed in every trench to monitor performance.
- c. Infiltration trenches will not be built downslope of new construction until the entire development area has been permanently stabilized.
- d. Infiltration trenches shall be located on soils in hydrologic groups "A" or "B" as designated by the U.S. Soil Conservation Service. Where infiltration trenches are proposed, a sufficient number of soil borings will be provided in each location to allow evaluation of site suitability.

(For SCS Soil Hydrologic Groupings, see Appendix J)

- e. The bottom of the trench will be roto-tilled after construction, to reduce the possibility of initial soil compaction (caused by excavation with heavy equipment).
- f. A legally enforceable and binding maintenance agreement will be included in the property deed for each trench. All trenches will require annual inspection and maintenance.
- 2. SAND FILTERS
  - a. Background.
    - (1) Sand filters are a technique for treating stormwater, whereby the first flush of runoff is diverted into an off-line, self-contained bed of sand. The runoff is then strained through the sand, collected in underground pipes and returned back to the stream or channel. Enhanced sand filters utilize layers of peat, limestone, and/or topsoil, and may also have a grass cover crop. In general, sand filters have a limited ability to reduce peak discharges and are usually designed solely to improve water quality.
    - (2) Because sand filters are a self-contained, artificially constructed soil system, they have few constraining factors and can be applied to most development sites, including those too small to be effectively served by ponds (i.e. small in fill developments). Sand filters are also useful in areas with concerns over groundwater contamination and poor soil infiltration rates, and as end-of-pipe retro fits. The upper limit on sand filters appears to be about 50 acres; however, most have a contributing watershed between 0.5 and 10 acres.
    - (3) While the technology is still developing, a number of standard sand filter designs are available and may be acceptable to the Township.
    - (4) In general, all designs incorporate three basic components:
      - 1. A pretreatment wet pool or sedimentation basin;
      - 2. An on-line diversion weir for isolating the stormwater to be treated; and
      - 3. An oft-line sand filter bed area. A good reference for the design of sand filters is by Warren Bell, P. E., "A Catalogue of Stormwater Quality Best Management Practices for Ultra-Urban Watersheds". A copy of this paper is available through the Townships office.
  - b. General standards for the design of sand filter systems are as follows:
    - (1) The system shall be designed to capture and treat the first 0.5 inch of runoff from the impervious portion of the contributing watershed.

- (2) Pretreatment of stormwater will be required before discharge into the sand filter. The following pretreatment mechanisms may be acceptable to the Township:
  - (i) Wet pool.
  - (ii) Sedimentation basins.
  - (iii) Oil-grit separators.
  - (iv) Grass filter strips.
- (3) Sufficient sediment storage volume will be provided within pre-treatment devices, so that clean-out intervals are reduced to once every 2 to 3 years.
- (4) Design stormflows will be conveyed to the sand filter bed basin at a nonerosive velocity. Generally, this velocity will be less than one foot per second.
- (5) An over-sized perforated hood/trash guard will be incorporated into weir designs to minimize clogging of the baseflow pipe.
- (6) Excess runoff volumes will be returned to the receiving conveyance channel via a rip-rapped baseflow/overflow channel.
- (7) Sand filter bed.
  - (i) A variety of formulas for sizing sand filter beds are available, and may be acceptable to the Township.
  - (ii) The maximum surface ponding time for the design runoff volume will be limited to 24 hours.
  - (iii) An impermeable liner may be required to eliminate potential groundwater infiltration/exfiltration problems.
- (8) Because of the potential for system failure due to bed clogging, sand filter system use is restricted to stabilized drainage areas.
- (9) Regular inspection and timely periodic removal of sediment and trash will be required. Grass cover crops, when provided, will be mowed whenever they exceed 10 cm. height (approx. once per week) and all grass cuttings removed.
- (10) The filter bed area will be clearly marked, and an appropriate drainage easement provided.

#### D. MANUFACTURED TREATMENT SYSTEMS

1. DESCRIPTION

Underground swirl concentrators, "treatment system", are devices used to remove sediment and other particulate matter from stormwater runoff. These systems provide a mechanism for pretreatment of stormwater runoff and may be used upstream of detention facilities or upstream of wetlands that have been approved to manage stormwater runoff. The Township Engineer must approve use of these treatment systems as part of the overall site stormwater management system to ensure maximum ecological benefits.

## 2. GENERAL PERFORMANCE AND DESIGN SPECIFICATIONS

- a. The system may be used in lieu of a sediment forebay as approved by the Township Engineer.
- b. The treatment system must include a "swirl chamber" with a tangential inlet that facilitates a swirling flow pattern to allow settlement of solids and prevent resuspension of settled particulates.
- c. Systems that have demonstrated 80% removal of the annual total suspended solids load based on third party independent testing are required.

- d. The system must treat 100% of the runoff from the 2-year/24-hour storm event and remove a minimum of 80% of the total suspended solids (TSS) load based on a 110-micron particle size.
- e. Rain events larger than the 2-year/24-hour event shall bypass the system without causing any resuspension of trapped sediments and without causing reentrainment of floatable contaminants.
- f. The system shall not create any backwater in the upstream pipe network during any dry weather conditions.
- g. The treatment system must prevent oil and floatable contaminants from entering downstream piping during routine maintenance and during rain events.
- h. Direct access must be provided to the sediment and floatable chambers to facilitate maintenance. There must be no appurtenances or restrictions within these chambers.
- i. Systems that require confined space entry for inspections or maintenance are not approved for use as a treatment system.
- j. If the system is proposed in traffic areas, then it must be designed to handle H20 loadings.

## 3. MAINTENANCE GUIDELINES

- a. Treatment systems shall be maintained according to the manufacturer's recommendations. An inspection and maintenance manual must be provided for review specific to the model.
- b. At a minimum, the system must be inspected and cleaned every 6 months, or more frequently if recommended by the manufacturer or directed in the reasonable exercise of discretion by the Township Engineer.
- c. All treatment systems shall be cleaned of accumulated sediment and other materials prior to turnover to the long-term property owner(s).
- d. Maintenance requirements for these treatment systems shall also be provided as described in *Section X. Stormwater Management System Maintenance Plans* of the ordinance to which this Appendix applies [of this Appendix].
- 4. PLAN SUBMITTALS

Calculations associated with the sizing and selection of the appropriate model for the selected type of treatment system shall be included in all plan submissions as outlined in *Part One Procedures for Submission and Review of Development Plans* of this Appendix.

### III. NATURAL WETLANDS (ALSO SEE ORDINANCE CODE, CHAPTER 12)

This section governs natural wetlands (as distinct from stormwater wetland systems that are constructed expressly for stormwater management purposes), when a natural wetland is incorporated in an overall stormwater management scheme.

- A. Wetlands will be protected from damaging modification and adverse changes in runoff quality and quantity associated with land developments. Before approval of the final development plan, all necessary wetland permits from the Michigan Department of Environmental Quality (MDEQ) and the Township will be in place.
- B. Direct discharge of untreated stormwater to a natural wetland is prohibited. All runoff from the development will be pretreated to remove sediment and other pollutants prior to discharge to a wetland. Such treatment facilities will be constructed before property grading begins.
- C. Site drainage patterns will not be altered in any way that will modify existing water levels in protected wetlands without proof that all applicable permits from the MDEQ and the Township have been obtained.

- D. Wetland construction, reconstruction, or modification will be overseen by a qualified professional with specific wetland expertise working in conjunction with the Township Engineer and Township Environmental Director.
- E. Whenever possible, a permanent buffer strip, preferably vegetated with native plant species, will be maintained or restored around the periphery of wetlands. (*Also see* environmental feature setback provisions of Ordinance Code, Article 26, the Zoning Ordinance).
- F. Wetlands will be protected during construction by appropriate soil erosion and sediment control measures.
- IV. LOT GRADING (ALSO SEE ORDINANCE CODE, CHAPTER 8)

Final lot grading shall be in accordance with all Township Code provisions, and in accordance with all plans approved by the Township and County.

- A. The grading of lots will be such that surface runoff is away from homes and toward swales, ditches or drainage structures. Provision for drainage through properly graded stormwater conveyance systems will be made for all areas within the proposed development.
- B. Where finished grades indicate a substantial amount of drainage across adjoining lots a drainage swale of sufficient width, depth and slope will be provided on the lot line to intercept this drainage. To ensure that property owners do not alter or fill drainage swales, easements will be required over areas deemed necessary by the Township, as stipulated below in this Part Two.

#### V. SOIL EROSION, SEDIMENTATION AND POLLUTION CONTROL

Discharge of sediment or other polluting materials to a waterway shall be prohibited.

A. SOIL EROSION/SEDIMENTATION CONTROL

All erosion control measures will be regularly inspected and maintained.

- 1. DURING CONSTRUCTION
  - a. The development plan shall be fitted to the topography and soil so as to create the least erosion potential.
  - b. An approved soil erosion permit from the local enforcing agent, as well as a National Pollution Discharge Elimination System (NPDES) permit where applicable, will be required.
  - c. Sediment shall not be permitted to leave the site. Recommended procedures to achieve this goal are as follows:
    - (1) Wherever feasible, natural vegetation shall be retained and protected.
    - (2) The smallest practical area of raw land shall be exposed at any one time (i.e. only areas under active construction).
    - (3) The entire site shall be planted with temporary vegetation immediately after mass grading operations.
    - (4) Temporary vegetation and/or mulching shall be used to protect critical areas exposed during development.
    - (5) Sediment basins where needed shall be installed and maintained by the applicant.
    - (6) The permanent, final vegetation and structures shall be installed as soon as practicable in the development.
  - d. Areas within open drain rights-of-way that have been cleaned, reshaped or disturbed in any manner will be stabilized with seed and mulch or sod as quickly as possible.

- e. All storm sewer facilities that are or will be functioning during construction will be protected, filtered, or otherwise treated to prevent sediment from entering the system. Construction activities will be complete before the construction of any stormwater management facilities susceptible to clogging (e.g. infiltration trenches).
- 2. PERMANENT EROSION CONTROL MEASURES
  - a. Before entering any natural water course, protected wetland, county drain or other body of water, best management practices will be utilized to remove pollutants, including sediment, from stormwater runoff. Pollutant removal methods will include capture and treatment of the "first flush" and "bankfull" (1.5-year) storm events, as previously described in this Part II, above.
  - b. Headwalls, grounted riprap or other stabilization measures will be provided where necessary to prevent erosion. Permanent erosion protection will be placed at bends, drain inlets and outlets, and other locations as needed in all open ditches. Outlets to ditches will be placed at the average low water elevation of the water course.
  - c. Ditches with steep grades or unstable soils will be protected by sod, vegetative erosion control, geotextile fabric, rip rap or other means to prevent scour. Every effort shall be made to reduce the velocity of flow as much as possible at all storm drain outlets. Outlet velocities will be nonerosive.
  - d. All detention/retention basins will be permanently stabilized to prevent erosion.

# B. OTHER POLLUTION CONTROL

- 1. Discharge of runoff that may contain oil, grease, toxic chemicals, or other polluting materials is prohibited. Measures will be employed to reduce and trap pollutants and meet any prevailing federal, state, or local water quality requirements.
- 2. In commercial and industrial developments where large amounts of oil and grease may accumulate, appropriate methods for separating pollutants will be required. When used, a separator approved by the Township Engineer will be installed off-line or in locations where flow velocities have been determined to be lower than scouring velocity in a ten year storm. Where off-line facilities are proposed, a maintenance program, including an identified method and site for waste disposal, is required.
- 3. For sites where chemicals may be stored and used (e.g. certain commercial and industrial developments) a spill response plan must be developed that clearly defines the emergency steps to be taken in the event of an accidental release of harmful substances to the stormwater system.
- 4. Structures designed to remove trash and other debris from stormwater will be installed as required on stormwater management facilities prior to their outlet.
- 5. Additional water quality protection measures may be required depending on the nature and location of the development and the receiving waters.

### VI. BUFFER STRIPS

Buffer strips shall be established adjacent to all surface waters through deed restrictions or provisions of master condominium agreements. Buffer strips are defined as zones where construction, paving, and chemical application is prohibited. Plantings capable of filtering stormwater shall be established or preserved. Widths shall be determined on a case by case basis, based on such considerations as slope, soils, and size of drainage area.

#### VII. FLOODPLAINS

It is the responsibility of the developer to demonstrate that any activity proposed within a 100-year floodplain will not diminish flood storage capacity. In certain instances an analysis to determine the 100-year floodplain may be required. Compensatory storage will be required for all lost floodplain storage.

VIII. EASEMENTS

A. Wording relative to easement information shown on the final development plan will be as specifically required by the Township. If a Township Drain is to be established, or if a county drain is to be established under the Michigan Drain Code, related easement language will be depicted on final mylar plans and exhibit B condominium drawings as follows:

"\_\_\_\_\_ private easement to Township of West Bloomfield or Oakland County Drain Commissioner for drainage" — as applicable.

In addition, language will be included in the deed restrictions for the development and/or condominium master deed as shown in Appendix L.

B. The location and purpose of drainage easements shall be clearly described in development deed restrictions or condominium master deeds.

Language shall be included within the development deed restriction or condominium master deed that clearly notifies property owners of the presence stormwater management facilities and accompanying easements, as well as restrictions on use or modification of these areas.

- C. If a utility is to be located within the right-of-way of any county drain or drainage easement, it will be located such that it will not significantly increase the expense of maintaining the drainage facility.
- D. Retention/detention basins or other stormwater management facilities will have sufficient easements for maintenance purposes. Easements will be sized and located to accommodate access and operation of equipment, spoils deposition, and other activities identified in the development's stormwater system maintenance plan.
- E. Easement widths will be sized by the Township and be situated in such a way as to allow maximum maintenance access (for example, by offsetting them from the centerline). In general, easement widths will conform to the following:
  - 1. Open channels and water courses: A minimum of 50 feet total width. Additional width may be required in some cases, including but not limited to: water courses with floodplains delineated by FEMA; sandy soils, steep slopes, at access points from road crossings.
  - 2. Back lot drainage (open swales): minimum of 30 feet total width.
  - 3. Enclosed storm drains: A minimum of 20 feet will be required, situated in such a way as to allow maximum maintenance access. Additional width will be required in some cases, including but not limited to pipe depth exceeding 4 feet from the top of pipe, sandy soils and steep slopes.
- F. Drain fields (septic areas) shall not be located within drainage easements.

### IX. SAFETY CONSIDERATIONS

- A. Drainage system components, especially all ponds, will be designed to protect the safety of all persons coming in contact with the system. The following criteria will apply:
  - 1. The side slopes of all detention basins shall not exceed 6:1 (horizontal to vertical), and will be as gradual as practicable to prevent accidental falls into the basin and for stability and ease of maintenance. If steeper slopes are proposed, continuous fencing at least 5 feet in height shall be provided. Fencing materials shall meet with the approval of the Township. Side slopes of open channels will not be steeper than 3:1.
  - 2. Velocities throughout the surface drainage system will be controlled to safe levels taking into consideration rates and depths of flow.
  - 3. All wet detention basins will have a level safety ledge at least 4 feet in width and one foot below the normal water depth, and other design and landscaping features as may be needed to provide for protection of the public.

- 4. Signs may be required, to alert residents to use limitations of any stormwater basin if the Township will have permanent maintenance jurisdiction.
- B. For sites where chemicals may be stored and used (e.g., certain commercial and industrial developments), a spill response plan will be developed which clearly defines the emergency steps to be taken in the event of an accidental release of large quantities of harmful substances into the drainage system.

## X. STORMWATER MANAGEMENT SYSTEM MAINTENANCE PLANS

- A. Property deed restrictions (or condominium master deed documents) will specify the following timeframe for action to address needed maintenance of stormwater management facilities. Deed restrictions (or condominium documents) will also specify that, should the private entity fail to act within this timeframe, the responsible governmental entity may, but shall not be obligated to, perform the needed maintenance and assess the costs against the property owners within the development or condominium association by allowing such costs, together with a reasonable administrative fee be recovered (or collected prior to undertaking work), with the particular language and means to be approved by the Township Attorney.
  - 1. Routine maintenance of stormwater management facilities will be completed within 30 days of receipt of written notification that action is required, unless other acceptable arrangements are made with the supervising governmental entity.
  - 2. Emergency maintenance will be completed within 36 hours of written notification.
- B. The applicant may fulfill his or her obligation to ensure that a governmental entity will be responsible for drainage system maintenance by establishing a county drainage district, or any other similar mechanism approved by the Township, to provide for the permanent maintenance of stormwater management facilities and necessary funding.

If a County Drain is not established, the applicant will submit evidence of a legally binding agreement with another governmental agency responsible for maintenance oversight.

- C. A legally binding private maintenance agreement will be executed before final project approval is granted. The agreement shall be referenced on the property deed (or condominium master deed document) so that it is binding on all subsequent property owners.
- D. Maintenance plans will be submitted with all construction plans and included in the bylaws of all developments and site condominiums and will include the following information:
  - 1. The maintenance plan shall include the components of an estimated annual maintenance budget itemized in detail by task. The financing mechanism shall also be described.
  - 2. A copy of the final approved drainage plan for the development that delineates the facilities and all easements, maintenance access, and buffer areas.
  - 3. A listing of appropriate tasks defined for each component of the system described, and a schedule for their implementation. The following areas will be covered:
    - a. Maintenance of facilities such as pipes, channels, outflow control structures and pumps.
    - b. Debris removal from catch basins, channels and dry and wet basins.
    - c. Dredging operations for both channels and basins to remove sediment accumulation.
  - 4. The party responsible for performing each of the various maintenance activities described, which will be recorded with final approved plans and plans.
  - 5. A detailed description of the procedure for both preventative and corrective maintenance activities. The preventative maintenance component will include:
    - a. Periodic inspections, adjustments and replacements;
    - b. Record-keeping of operations and expenditures.

	<mark>6.</mark>	Provision for the routine and nonroutine inspection of all components within the system described:			
		a. Wet weather inspections of structural elements, (including inspection for sediment accumulation in detention basins) shall be conducted annually, with as-built plans in hand. These shall be carried out by a professional engineer reporting to the responsible agency or owner.			
		b. Housekeeping inspections, such as checking for trash removal, shall take place at least annually.			
		c. Emergency inspections on an as-needed basis, upon identification of severe problems, shall be carried out by a professional engineer.			
	7.	A description of ongoing landscape maintenance needs. Landscaping shall consist of low maintenance and/or native plant species. The viability of plantings will be monitored by the applicant for at least one year after establishment and plantings will be replaced as needed. The Township is not responsible for landscape maintenance.			
	<mark>8.</mark>	Provision for the maintenance of vegetative buffers by homeowner's associations, conservation groups or a public agency. Buffers will be inspected annually for evidence of erosion or concentrated flows through or around the buffer.			
<mark>E.</mark>	The	stormwater drainage system will be designed to minimize and facilitate maintenance.			
	<mark>1.</mark>	Riser pipes placed near or within pond embankments.			
	<mark>2.</mark>	Easily accessible trash racks.			
	<mark>3.</mark>	Alternate outflows for wet detention basins that can be used to completely drain the pool for sediment removal (pumping may be considered if drainage by gravity is not feasible).			
	<mark>4.</mark>	Sediment forebays for localizing sediment deposition and removal.			
	<mark>5.</mark>	Access for heavy equipment.			
	<mark>6.</mark>	On-site area for spoil deposition, wherever possible.			
F.	Infil fron clog requ	tration systems, including porous pavement, must be aggressively maintained and protected clogging by sediment (including the maintenance of grass buffer strips). In the event of ging by accumulated sediments, partial or total reconstruction of infiltration facilities may be uired.			
-					

Porous pavement shall be vacuum swept and jet hosed at least four times per year to remove any grit or sediment trapped in the pores of the open-graded asphalt. Evidence of a regular service contract for performing this activity will be required.

## Footnotes:

# --- (5) ---

0.5" represents the mean storm event. This was determined by adding the total precipitation rainfall recorded at Detroit Metro Airport from 1977 to 1987 and dividing by the total number of storm events. Storms below 0.2" of total precipitation, snowfall, and snowmelt were omitted.
#### Chapter 25 - WATERWAYS<sup>11</sup>

#### Footnotes:

---- (1) ----

**Cross reference**— Floodplain, floodway, watercourse and wetland protection, Ch. 12; parks and recreation, Ch. 16; streets, sidewalks and other public places, Ch. 20.

ARTICLE I. - IN GENERAL

Secs. 25-1-25-15. - Reserved.

ARTICLE II. - BOATING REGULATIONS<sup>[2]</sup>

Footnotes:

--- (2) ----

Cross reference— Boating in community parks, § 16-17.

State Law reference— Marine Safety Act, MCL 281.1001 et seq.

**DIVISION 1. - GENERALLY** 

Sec. 25-16. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings respectively ascribed to them in this section:

*Boats* means all watercraft with or without self-propulsion machinery, including seaplanes when not airborne. The word "boat" shall include water skis, water sleds, surf boards or similar contrivances while being towed by any boat.

*Navigable waters* means all lakes, ponds, streams, lagoons, canals or other waters capable of navigation within the territorial limits of the township.

(Ord. No. 47A, § 1, 5-16-62)

**Cross reference**— Definitions and rules of construction generally, § 1-2.

State Law reference— Definitions, MCL 281.1002 et seq.

Sec. 25-17. - Effect of state, federal laws.

It shall be unlawful for any person to operate any boat upon any navigable waters unless the boat is properly licensed as required by state and federal laws and regulations.

(Ord. No. 47A, § 2, 5-16-62)

**State Law reference**— Numbering of motorboats, MCL 281.1031 et seq.; watercraft transfers and certificates of title, MCL 281.1201 et seq.

- Sec. 25-18. Operating a vessel under the influence of liquor.
- (a) *Definitions.* As used in this act:

*Conviction* means a final conviction, the payment of a fine, a plea of guilty or nolo contendere if accepted by the court, a finding of guilt, or a probate court disposition of a violation of this act, regardless of whether the penalty is rebated or suspended.

Law of another state means a law or ordinance enacted by another state or by a local unit of government in another state.

*Long-term incapacitating injury* means an injury that causes a person to be in a comatose, quadriplegic, hemiplegic or paraplegic state, which state is likely to continue for one year or more.

*Operate* means to be in control of a vessel that is underway and is not secured in some manner such as being docked or anchored.

*Probate court disposition* means the entry of a probate court order of disposition for a child found to be within the provisions of chapter XIIA of Act No. 288 of the Public Acts of 1939, being MCL 712A.1 to 712A.28.

*Prosecuting attorney,* except as the context otherwise requires, means the attorney general, the prosecuting attorney of a county or the attorney representing a local unit of government.

- (b) Duty of operators to submit to reasonable inspections by peace officers; authority to arrest. The operator or person in charge of a vessel being used or operated on the waters of this township, upon being hailed by any peace officer empowered to enforce the provisions of this act or rules established under this act, shall immediately bring the vessel to a stop or maneuver it in a manner that permits the officer to come alongside. The operator or person in charge of the vessel and any other person on board shall give his or her correct name and address, exhibit the certificate of number awarded for the vessel, and submit to a reasonable inspection of the vessel and to a reasonable inspection and test of the equipment of the vessel. A person who is detained for a violation of this act and who furnishes a peace officer false, forged, fictitious, or misleading verbal or written information identifying the person as another person is guilty of a misdemeanor. A peace officer who observes a violation by a person of this act or a rule established under this act may arrest the person without a warrant.
- (c) Operating vessel under the influence of liquor or drugs; prohibition:
  - (1) A person shall not operate a vessel on the waters of this township if either of the following applies:
    - a. The person is under the influence of intoxicating liquor or a controlled substance, or both.
    - b. The person has a blood alcohol content of one-tenth of one percent (0.10%) or more by weight of alcohol.
  - (2) The owner of a vessel or a person in charge or in control of a vessel shall not authorize or knowingly permit the vessel to be operated on the waters of this township by a person who is under the influence of intoxicating liquor or a controlled substance, or both, or who has a blood alcohol content of one-tenth of one percent (0.10%) or more by weight of alcohol.
  - (3) A person shall not operate a vessel on the waters of this township when, due to the consumption of an intoxicating liquor or a controlled substance, or both, the person's ability to operate the vessel is visibly impaired. If a person is charged with violating subsection (1), a finding of guilty under this subsection may be rendered.
  - (4) A person who operates a vessel on the waters of this township under the influence of intoxicating liquor or a controlled substance, or both, or with a blood alcohol content of one-tenth of one percent (0.10%) or more by weight of alcohol, and by the operation of that vessel

causes the death of another person is guilty of a felony punishable by imprisonment for not more than fifteen (15) years, or a fine of not less than two thousand five hundred dollars (\$2,500.00) or more than ten thousand dollars (\$10,000.00), or both.

- (5) A person who operates a vessel on the waters of this township under the influence of intoxicating liquor or a controlled substance, or both, or with a blood alcohol content of one-tenth of one percent (0.10%) or more by weight of alcohol, and by the operation of that vessel causes a long-term incapacitating injury to another person is guilty of a felony punishable by imprisonment for not more than five (5) years, or a fine of not less than one thousand dollars (\$1,000.00) or more than five thousand dollars (\$5,000.00), or both.
- (d) Operating vessel under the influence of liquor or drugs; penalties:
  - (1) If a person is convicted of violating subsection (c)(1) above, the following apply:
    - a. Except as otherwise provided in subsections b. and c. below, the person is guilty of a misdemeanor and shall be punished by one or more of the following:
      - 1. Community service for not more than forty-five (45) days.
      - 2. Imprisonment for not more than ninety (90) days.
      - 3. A fine of not less than one hundred dollars (\$100.00) or more than five hundred dollars (\$500.00).
    - b. If the violation occurs within seven (7) years of a prior conviction, the person shall be sentenced to both a fine of not less than two hundred dollars (\$200.00) or more than one thousand dollars (\$1,000.00) and either of the following:
      - 1. Community service for not less than ten (10) days or more than ninety (90) days and may be imprisoned for not more than one year.
      - 2. Imprisonment for not less than forty-eight (48) consecutive hours or more than one year and may be sentenced to community service for not more than ninety (90) days.
    - c. If the violation occurs within ten (10) years of two (2) or more prior convictions, the person is guilty of a felony and shall be sentenced to imprisonment for not less than one year or more than five (5) years or a fine of not less than five hundred dollars (\$500.00) or more than five thousand dollars (\$5,000.00), or both.
  - (2) A term of imprisonment imposed under subsection b.2. above shall not be suspended. A person sentenced to perform service to the community under this section shall not receive compensation and shall reimburse the township for the cost of supervision incurred by the township as a result of the person's activities in that service.
  - (3) In addition to the sanctions prescribed under subsection (d)(1) and subsections (c)(4) and (5), the court may, pursuant to the code of criminal procedure, Act No. 175 of the Public Acts of 1927, being sections 760.1 to 776.21 of the Michigan Compiled Laws, order the person to pay the costs of prosecution. The court shall also impose sanctions under MCL 281.1181 and 1182.
  - (4) A person who is convicted of violating subsection (c)(2) is guilty of a misdemeanor punishable by imprisonment for not more than ninety (90) days, or a fine of not less than one hundred dollars (\$100.00) or more than five hundred dollars (\$500.00), or both.
  - (5) As used in this section, "prior conviction" means a conviction for a violation of subsections (c)(1), (4) or (5), former MCL 281.1073, a local ordinance substantially corresponding to MCL 281.1171(1) or former MCL 281.1073, or a law of another state substantially corresponding to MCL 281.1171(1), (4) or (5) or former MCL 281.1073.
- (e) Operating vessel while visibly impaired by liquor or drugs:
  - (1) If a person is convicted of violating subsection (c)(3) above, the following apply:

- a. Except as otherwise provided in subsections b. and c. below, the person is guilty of a misdemeanor punishable by one or more of the following:
  - 1. Community service for not more than forty-five (45) days.
  - 2. Imprisonment for not more than ninety (90) days.
  - 3. A fine of not more than three hundred dollars (\$300.00).
- b. If the violation occurs within seven (7) years of one prior conviction, the person shall be sentenced to both a fine of not less than two hundred dollars (\$200.00) or more than one thousand dollars (\$1,000.00) and either of the following:
  - 1. Community service for not less than ten (10) days or more than ninety (90) days and may be sentenced to imprisonment for not more than one year.
  - 2. Imprisonment for not more than one year and may be sentenced to community service for not more than ninety (90) days.
- c. If the violation occurs within ten (10) years of two (2) or more prior convictions, the person shall be sentenced to both a fine of not less than two hundred dollars (\$200.00) or more than one thousand dollars (\$1,000.00) and either of the following:
  - 1. Community service for a period of not less than ten (10) days or more than ninety (90) days and may be sentenced to imprisonment for not more than one year.
  - 2. Imprisonment for not more than one year and may be sentenced to community service for not more than ninety (90) days.
- (2) In addition to the sanctions prescribed in subsection (1) above, the court may, pursuant to the code of criminal procedure, Act No. 175 of the Public Acts of 1927, being sections 760.1 to 776.21 of the Michigan Compiled Laws, order the person to pay the costs of the prosecution. The court shall also impose sanctions under MCL 281.1181 and 1182.
- (3) A person sentenced to perform service to the community under this section shall not receive compensation and shall reimburse the state or appropriate local unit of government for the cost of supervision incurred by the state or local unit of government as a result of the person's activities in that service.
- (4) As used in this section, "prior conviction" means a conviction for a violation of subsections (c)(1), (3), (4) or (5), former MCL 281.1073, former MCL 281.1073b, a local ordinance substantially corresponding to subsection (c)(1), former MCL 281.1073, or former MCL 281.1073b, or a law of another state substantially corresponding to subsections (c)(1), (3), (4) or (5), former MCL 281.1073 or former section MCL 281.1073b.
- (f) Presumptions of blood chemical analysis; admissibility of results. Except in a prosecution relating solely to a violation of subsection (c)(1)b. above, the amount of alcohol in the operator's blood at the time alleged as shown by chemical analysis of the person's blood, urine, or breath gives rise to the following presumptions:
  - (1) If there was at the time seven-hundredths of one percent (0.07%) or less by weight of alcohol in the defendant's blood, it shall be presumed that the defendant's ability to operate a vessel was not impaired due to the consumption of intoxicating liquor and that the defendant was not under the influence of intoxicating liquor.
  - (2) If there was at the time in excess of seven-hundredths of one percent (0.07%) but less than one-tenth of one percent (0.10%) by weight of alcohol in the defendant's blood, it shall be presumed that the defendant's ability to operate a vessel was impaired within the provisions of subsection (c)(3) above due to the consumption of intoxicating liquor.
  - (3) If there was at the time one-tenth of one percent (0.10%) or more by weight of alcohol in the defendant's blood, it shall be presumed that the defendant was under the influence of intoxicating liquor.

A person's refusal to submit to a chemical test is admissible in a criminal prosecution for a crime described in subsection (c) only for the purpose of showing that a test was offered to the defendant, but not as evidence in determining innocence or guilt of the defendant. The jury shall be instructed accordingly.

- (g) Consideration of prior convictions; sanctions. Immediately upon acceptance by the court of a plea of guilty or nolo contendere or upon entry of a verdict of guilty for a violation of subsections (c)(1), (3), (4) or (5), whether or not the person is eligible to be sentenced as a multiple offender, the court shall consider all prior convictions currently entered upon the boating record of the person, except those convictions that, upon motion by the defendant, are determined by the court to be constitutionally invalid, and shall impose the following sanctions:
  - (1) For a conviction under subsections (c)(4) or (5), the court shall order with no expiration date that the person not operate a vessel on the waters of this state.
  - (2) For a conviction under subsection (c)(1) or a local ordinance substantially corresponding to subsection (c)(1), if the court finds that the person has no prior convictions within seven (7) years for a violation of subsections (c)(1), (3), (4) or (5) or another boating substance abuse offense or that the person has one prior conviction within seven (7) years for a violation of subsection (c)(3), former MCL 281.1073b, a local ordinance substantially corresponding to subsection (c)(3) or former MCL 281.1073b, or a law of another state substantially corresponding to subsection (c)(3) or former MCL 281.1073b, the court may order that the person not operate a vessel on the waters of this state for not less than one year or more than two (2) years.
- (h) Operating vessel on waters of township by persons prohibited from operating vessels on waters of the state:
  - (1) A person who is ordered not to operate a vessel on the waters of this state and who has been notified of the order by personal service or first-class mail shall not operate a vessel on the waters of this township. A person shall not knowingly permit a vessel owned by the person to be operated on the waters of this township by a person who is subject to such an order. A person who violates this subsection is guilty of a misdemeanor punishable as follows:
    - a. By imprisonment for not more than ninety (90) days or by a fine of not more than five hundred dollars (\$500.00), or both.
    - b. For a second or subsequent violation punishable under this subsection, by imprisonment for not more than one year or a fine of not more than one thousand dollars (\$1,000.00), or both.
  - (2) Upon receiving a record of the conviction of a person upon a charge of unlawful operation of a vessel while the person is subject to an order not to operate a vessel on the waters of this state, the Secretary of State shall immediately extend the length of the order for an additional like period. If the Secretary of State receives records of more than one conviction resulting from the same incident, all of the convictions shall be treated as a single violation for purposes of extending the length of an order under this subsection.
  - (3) Before a person is arraigned before a judge or district court magistrate on a charge of violating this section, the arresting officer shall obtain the boating record of the person from the Secretary of State and shall furnish the record to the court. The boating record of the person may be obtained from the Secretary of State's computer information network.
  - (4) This section does not apply to a person who operates a vessel solely for the purpose of protecting human life or property if the life or property is endangered and the summoning or giving of prompt aid is essential.
  - (5) If a person is convicted of violating subsection (h)(1) above, the court shall order confiscation of the vessel's certificate of number and cancellation of the vessel's registration numbers, unless the vessel was stolen or permission to use the vessel was not knowingly given. The Secretary of State shall not assign a registration number to or issue a certificate of number for a vessel

whose number is canceled and certificate confiscated until after the expiration of ninety (90) days after the cancellation or confiscation, whichever is later.

- (i) Impoundment and subsequent disposition:
  - (1) When a person is convicted under subsection (h) above, the vessel, if it is owned in whole or in part by that person, shall be ordered impounded for not less than thirty (30) or more than one hundred twenty (120) days from the date of judgment. An order of impoundment issued pursuant to this subsection is valid throughout the state. Any peace officer may execute the impoundment order. The order shall include the implied consent of the owner of the vessel to the storage for insurance coverage purposes.
  - (2) The owner of a vessel impounded pursuant to this subsection is liable for expenses incurred in the removal and storage of the vessel whether or not the vessel is returned to him or her. The vessel shall be returned to the owner only if the owner pays the expenses for removal and storage. If redemption is not made or the vessel is not returned as provided in this subsection within thirty (30) days after the time set in the impoundment order for return of the vessel, the vessel shall be considered abandoned.
  - (3) Nothing in this subsection affects the rights of a conditional vendor, chattel mortgagee or lessor of a vessel registered in the name of another person as owner who becomes subject to this act.
- (j) *Treatment of nolo contendere conviction.* A conviction based on a plea of nolo contendere shall be treated in the same manner as a conviction based on a plea of guilty or a finding of guilt for all purposes under this act.

(Ord. No. 47A, § 3, 5-16-62; Ord. No. C-401, §§ 1—10, 8-2-93)

Cross reference— Alcoholic beverages generally, Ch. 5.

State Law reference— Similar provisions, MCL 281.1073, MSA 18.1287(73)(1).

Sec. 25-19. - Speed; assured clear distance rule; interference with others.

A person operating or propelling a boat upon any navigable waters shall operate it in a careful and prudent manner and at such a rate of speed so as not to endanger unreasonably the life or property of any person. A person shall not operate any boat at a rate of speed greater than will permit him, in the exercise of reasonable care, to bring the boat to a stop within the assured clear distance ahead. A person shall not operate a boat in a manner so as to interfere unreasonably with the lawful use by others of any navigable waters.

(Ord. No. 47A, § 4, 5-16-62)

# State Law reference— Similar provisions, MCL 281.1072, MSA 18.1287(72).

Sec. 25-20. - Reckless operation of boat; persons on water skis, sleds or surfboards.

A person who operates any boat, upon any navigable waters, carelessly and needlessly in disregard of the rights or safety of others, or without due caution and circumspection and at a speed or in a manner so as to endanger or be likely to endanger any person or property, is guilty of reckless operation of a boat. A person who navigates, steers or controls himself while being towed on water skis, water sled, surfboard or similar contrivances, upon any navigable waters, carelessly and needlessly in disregard of the rights or safety of others, or without due caution and circumspection and in a manner so as to endanger or be likely to endanger any person or property, is guilty of reckless operation of water skis, water sleds, surfboards or similar contrivances. (Ord. No. 47A, § 4, 5-16-62)

# State Law reference— Similar provisions, MCL 281.1074, MSA 18.1287(74).

Sec. 25-21. - Direction of course; distance from hazards; exceptions.

Persons operating a motorboat on navigable waters in areas not marked by well-defined channels, canals, rivers or stream courses shall operate in a counterclockwise fashion insofar as it is reasonably possible. These persons and persons being towed on water skis, water sled, kite, surfboard or similar contrivance shall maintain a distance of one hundred (100) feet from any dock, raft, buoyed or occupied bathing area, or boat moored or at anchor, except when the boat is proceeding at a slow—no wake speed or when water skiers are being picked up or dropped off, if such operation is otherwise conducted with due regard to the safety of persons and property and in accordance with the laws of this township and state.

(Ord. No. 47A, § 5, 5-16-62)

#### State Law reference— Similar provisions, MCL 281.1075.

Sec. 25-22. - Operation of motorboats by children under sixteen; possession of safety certificates; exemptions.

- (a) Except as otherwise provided in subsection (d), a person less than twelve (12) years of age shall not operate a motorboat on the waters of this township unless each of the following conditions are met:
  - (1) He or she is under the direct supervision of a person sixteen (16) years of age or older.
  - (2) The motorboat he or she operates is powered by a motor or motors totaling no more than thirty-five (35) horse power.
- (b) Except as otherwise provided in subsection (d), a person twelve (12) through fifteen (15) years of age may operate a motorboat on the waters of this township only if that person complies with either of the following:
  - (1) He or she is accompanied by at least one person sixteen (16) years of age or older.
  - (2) He or she is in possession of a boating safety certificate issued after he or she has satisfactorily completed a Michigan Department of Natural Resources approved course in boating safety.
- (c) A person twelve (12) through fifteen (15) years of age operating a motorboat without the supervision of a person sixteen (16) years of age or older shall present the boating safety certificate issued to that person upon demand of any peace officer.
- (d) This section does not apply to the operation of a motorboat that is powered by a motor or motors totaling no more than six (6) horse power.

(Ord. No. 47A, § 6, 5-16-62; Ord. No. C-385, § 1, 2-1-93)

State Law reference— Similar provisions, MCL 281.1062.

Sec. 25-23. - Pollution of water.

No person shall throw, place or otherwise discard any bottle, box, paper, garbage, rubbish or similar objects or any type of unsanitary matter, material or fluid into or upon any navigable waters.

(Ord. No. 47A, § 7, 5-16-62)

State Law reference— Unlawful discharge into waters, MCL 323.6.

Sec. 25-24. - Reserved.

**Editor's note**—Section 1 of Ord. No. C-694, adopted April 10, 2006, repealed § 25-24, which pertained to time period when water skiing, etc., allowed, and derived from Ord. No. 47A, adopted May 16, 1962; and Ord. No. 47A-A, adopted June 6, 1977.

Sec. 25-25. - Pulling water skier or aquaplaner; number of persons in boat.

- (a) A person shall not operate on navigable waters a boat having in tow or otherwise assisting a person on water skis, water sled, aquaplane, surfboard or other similar contrivance, unless there is in the boat, in addition to the operator, at least one (1) competent person in a position to observe the progress of the person being towed. An observer shall be considered competent if he can, in fact, render assistance if necessary.
- (b) All motorboats engaged in the propulsion of a person on water skis, water sled, aquaplane, surfboard or similar contrivance, shall be equipped with a one hundred seventy degree wide angle rear view mirror affixed in a manner as will permit the operator to observe the progress of the person being towed.
- (c) The provisions of this section shall not apply to boats used by duly constituted ski schools in the giving of instructions, or to boats used in sanctioned ski tournaments, competitions, expositions or trials therefor, or to motorboats less than sixteen (16) feet in length actually operated by the person being towed and so constructed as to be incapable of carrying the operator in or on the motorboat.

(Ord. No. 47A, § 9, 5-16-62)

State Law reference— Similar provisions, MCL 281.1078.

Sec. 25-26. - Noise.

It shall be unlawful for any person to operate any boat unless equipped with a proper muffler as required by state law, or to use any siren or noise-producing or noise-amplifying instrument on any boat on any navigable waters in such manner that the peace and good order of the neighborhood is disturbed; provided, however, that nothing in this section shall be construed to prohibit the use of whistles, bells or horns as signals required by the United States Motor Boat Act or other federal law for the safe navigation of motorboats or vessels.

(Ord. No. 47A, § 10, 5-16-62)

**State Law reference**— Muffler, underwater exhaust or noise reduction device on motorboat, MCL 281.1114.

Sec. 25-27. - Racing.

The provisions of this article shall not be construed to prohibit the running of racing or exhibition boats muffled or unmuffled during any race or regatta operating under the provisions of Section 151 of Act 303 of the Public Acts of Michigan of 1967 (MCL 281.1151), as amended.

(Ord. No. 47A, § 11, 5-16-62)

Sec. 25-28. - Posting of article.

Every operator of any boat livery or boat launching site open to the public shall post a copy of this article in a conspicuous place.

(Ord. No. 47A, § 13, 5-16-62)

DIVISION 1A. - REIMBURSEMENT OF INCURRED EXPENSES

Sec. 25-29. - Purpose.

Public Act 1999, No. 345, MCL 769.1f(8), authorizes a local unit of government to enact a local ordinance to permit a court to order a person convicted of a local ordinance substantially corresponding to section 80176(1) or (3) of the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.80176 (sections 25-18(c)(1) or (c)(3) of the West Bloomfield Charter Township Code of Ordinances) to reimburse the local unit of government for certain expenses. Such expenses include salaries and/or wages of law enforcement, fire department, and emergency medical service personnel, and costs of medical supplies. The township has determined that such expenses are significant. As a result, the township faces a greater operational and/or financial burden caused by persons who violate such sections. The purpose of this division is to authorize the court to order the defendant, upon conviction of one of the enumerated crimes, to reimburse the township for such expenses.

(Ord. No. C-171-B, § 1, 12-4-00)

Sec. 25-30. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings respectively ascribed to them in this section:

- (a) *Reimbursement expenses* mean:
  - (1) The salaries or wages, including overtime pay, of law enforcement personnel for time spent responding to the incident from which the conviction arose, arresting the person convicted, processing the person after the arrest, preparing reports on the incident, investigating the incident, and collecting and analyzing evidence, including, but not limited to, determining bodily alcohol content and determining the presence of and identifying controlled substances in the blood, breath, or urine.
  - (2) The salaries, wages, or other compensation, including overtime pay, of fire department and emergency medical service personnel, including volunteer fire fighters or volunteer emergency medical service personnel, for time spent in responding to and providing firefighting, rescue, and emergency medical services in relation to the incident from which the conviction arose.
  - (3) The cost of medical supplies lost or expended by fire department and emergency medical service personnel, including volunteer firefighters or volunteer emergency medical service personnel, in providing services in relation to the incident from which the conviction arose.
- (b) *Enumerated offense* means a violation of subsection 25-18(c)(1) or (c)(3) of the West Bloomfield Charter Township Code of Ordinances.

(Ord. No. C-171-B, § 1, 12-4-00)

Sec. 25-31. - Reimbursement of expenses.

The court may order any person who is convicted of an enumerated offense to pay to the township such reimbursement expenses.

(Ord. No. C-171-B, § 1, 12-4-00)

Sec. 25-32. - Enforcement.

- (a) An order for reimbursement under this division may be enforced by the township prosecuting attorney in the same manner as a judgment in a civil action.
- (b) A person shall not be imprisoned, jailed, or incarcerated for a violation of probation, or otherwise, for failure to make a reimbursement as ordered under this division unless the court determines that the person has the resources to pay the ordered reimbursement and has not made a good faith effort to do so.

(Ord. No. C-171-B, § 1, 12-4-00)

Secs. 25-33-25-40. - Reserved.

**DIVISION 2. - REGULATIONS FOR SPECIFIC LAKES** 

Sec. 25-41. - Definitions.

All words and phrases used in this division shall be construed and have the same meaning as those words and phrases defined in Act. No. 303 of the Public Acts of Michigan of 1967 (MCL 281.1001 et seq.) as amended.

(Ord. No. 66A, § 1, 6-7-71; Ord. No. 72, § 1, 1-2-73; Ord. No. 75, § 1, 5-7-73; Ord. No. 76, § 1, 5-7-73; Ord. No. 77, § 1, 5-7-73; Ord. No. 80, § 1, 7-16-73; Ord. No. 88, § 1, 4-21-75; Ord. No. 73B, § 1, 2-2-76; Ord. No. 66A-A, § 1, 6-6-77; Ord. No. 99, § 1, 12-18-78; Ord. No. 106, § 1, 1-21-80; Ord. No. 114, § 1, 9-7-82)

Cross reference— Definitions and rules of construction generally, § 1-2.

Sec. 25-42. - Operations of motorboats prohibited on certain waters.

It shall be unlawful for any person to operate a motorboat upon the following waters:

- (1) Morris Lake, Section 22, Town 2 North, Range 9 East, West Bloomfield Township;
- (2) Brookfield Pond, Section 13, Town 2 North, Range 9 East, West Bloomfield Township;
- (3) Moon Lake, Sections 13 and 14, Town 2 North, Range 9 East, West Bloomfield Township;
- (4) Simpson Lake, Section 23, Town 2 North, Range 9 East, West Bloomfield Township;
- (5) Woodpecker Lake, Sections 20 and 21, Town 2 North, Range 9 East, West Bloomfield Township.

(Ord. No. 72, § 2, 1-2-73; Ord. No. 75, § 2, 5-7-73; Ord. No. 76, § 2, 5-7-73; Ord. No. 77, § 2, 5-7-73; Ord. No. 80, § 2, 7-16-73)

Sec. 25-43. - Operation of vessels powered by a motor other than electric motor prohibited on certain waters.

It shall be unlawful for any person to operate a vessel powered by a motor, except an electric motor, on the following waters:

- (1) Cross Lake, Section 5, Town 2 North, Range 9 East, West Bloomfield Township;
- (2) Darb Lake, Sections 4, 5, 8 and 9, Town 2 North, Range 9 East, West Bloomfield Township;
- (3) Green Lake, Sections 7 and 8, Town 2 North Range 9 East, West Bloomfield Township.

(Ord. No. 99, § 2, 12-18-78; Ord. No. 106, § 2, 1-21-80; Ord. No. 114, § 2, 9-7-82)

Sec. 25-44. - Middle Straits Lake.

- (a) On that part of the waters of Middle Straits Lake located in Section 7, Town 2 North, Range 9 East, West Bloomfield Township, it is unlawful for the operator of a vessel to exceed a slow no-wake speed.
- (b) On that part of the waters of Middle Straits Lake located in Sections 17 and 18, Town 2 North, Range 9 East, West Bloomfield Township, it is unlawful on Sundays, Memorial Day, Independence Day and Labor Day, except between the hours of 10:00 a.m. and 6:30 p.m. (11:00 a.m. and 7:30 p.m. when and where Eastern Daylight Savings Time is effect), to:
  - (1) Operate a vessel at high speed;
  - (2) Have in tow, or otherwise assist in the propulsion of a person on water skis, water sled, kite, surfboard, or other similar contrivance.
- (c) On that part of Middle Straits Lake lying directly in the center of Section 16, T2N, R9E, West Bloomfield Township, Oakland County, State of Michigan, it is unlawful for the operator of a vessel to exceed a slow-no wake speed in that area directly adjacent to Bloomer Park, in a straight line from the tip of the natural shoreline from the north on a diagonal line to the first residence to the southeast of the park boundary line.

(Ord. No. 88, § 2, 4-21-75; Ord. No. 88-A, 7-21-75; Ord. No. 88-B, 6-6-77; Ord. No. C-88-C, § 1, 9-21-99)

Sec. 25-45. - Gerundecut Bay, Cass Lake and connected canals and channels.

On the waters of Gerundecut Bay, Cass Lake and connected artificial and natural canals and channels, Sections 3 and 4, Town 2 North, Range 9 East, West Bloomfield Township, it shall be unlawful to operate a vessel in excess of a slow no-wake speed in the waters of Gerundecut Bay and connected artificial and natural canals and channels, Section 3, Town 2 North, Range 9 East, West Bloomfield Township.

(Ord. No. 73B, § 2, 2-2-76; Ord. No. 73B-A, 6-6-77; Ord. No. C-337, § 1, 10-7-91; Ord. No. C-694, § 2, 4-10-06)

Sec. 25-46. - Walnut Lake—Sections 24 and 25.

On the waters of Walnut Lake, Sections 24 and 25, Town 2 North, Range 9 East, West Bloomfield Township, no operator of any motor boat, during the period from 6:30 p.m. to 10:00 a.m. of the following day (7:30 p.m. to 11:00 a.m. of the following day when and where Eastern Daylight Savings Time is in effect) shall:

- (1) Operate such motor boat at high speed, which means a speed at or above which a motor boat reaches a planing condition; or
- (2) Have in tow or otherwise assist in the propulsion of a person on water skis, water sled, surfboard or other similar contrivance.

(Ord. No. 66A, § 2, 6-7-71; Ord. No. 66A-A, 6-6-77; Ord. No. C-66A-B, § 1, 6-19-95; Ord. No. C-66A-C, § 1, 8-10-95)

Sec. 25-46.1. - Walnut Lake—North part of section 25.

- (a) On the waters of Walnut Lake, the north part of Section 25, from the southeast corner of Walnut Lake entering into the southeast bay area, Town 2 North, Range 9 East, West Bloomfield Township, Oakland County, State of Michigan, it is unlawful for the operator of a vessel to exceed a slow-nowake speed.
- (b) The boundaries of the area described immediately above shall be marked with signs and with buoys. All buoys must be placed as provided in a permit issued by the department of natural resources and be in conformance with the State Uniform Waterway Marking System.

(Ord. No. C-66A-D, § 1, 8-10-95)

Sec. 25-47. - Pleasant Lake.

On the waters of Pleasant Lake, Sections 20, 29, T2N, R9E, West Bloomfield Township, it is unlawful for the operator of a vessel to exceed a slow no-wake speed.

(Ord. No. 121, § 1, 10-6-86)

Sec. 25-48. - Green Lake.

On the waters of Green Lake, Sections 7 and 8, T2N, R9E, West Bloomfield Township, Oakland County, it is unlawful to operate a vessel powered by a motor, except an electric motor, which shall not exceed a speed limit of ten (10) miles per hour. Speed and motor restrictions shall not apply to law enforcement or emergency response vessels.

(Ord. No. C-771, § 1, 2-11-13)

Secs. 25-49-25-70. - Reserved.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

Excerpts from the Municipal Code of Ordinances

Chapter 12–Floodplain, Floodway, Watercourse and Wetland Protection

Article I General -Section 12.1-12.5

Appendix AA

# Chapter 12 - FLOODPLAIN, FLOODWAY, WATERCOURSE AND WETLAND PROTECTION[1]

# Footnotes:

*Editor's note*—Ord. No. C-229, adopted Sept. 18, 1989, amended Ch. 12 in its entirety to read as herein set out. The substantive provisions of former Ch. 12, §§ 12-1—12-15, 12-31—12-36, 12-51—12-54, 12-71—12-74, and 12-91, 12-92, were derived fram Ord. No. 97A-A, §§ 2, 1—2.3, 3.1—3.5, 3.7—3.9, 4.1—4.6, 5.1—5.4, 6.1—6.4, 7.1, 7.2, 8.1, 8.2, and 9.1—9.3, adopted Mar. 7, 1983; Ord. No. 97A-B, §§ 2, 3, adopted May 19, 1986; and Ord. No. 97A-C, § 1, adopted Dec. 15, 1986.

Cross reference— Buildings and building regulations, Ch. 8; parks and recreation, Ch. 16; subdivision and land division, Ch. 21; stormwater management, § 24-201 et seq.; waterways, Ch. 25; zoning, Ch. 26.

State Law reference— Water resources commission, MCL 323.1 et seq.; inland lakes and streams act, MCL 281.951 et seq.; soil conservation districts law, 282.1 et seq.; coastal beach erosion investigation and study, MCL 281.601; environmental protection act, MCL 691.1201 et seq.

#### ARTICLE I. - IN GENERAL

# Sec. 12-1. - Findings of fact.

The township board finds the rapid growth, the spread of development and increasing demands upon natural resources have increased the potential for the flooding, the filling or the drainage of lowlands and wetlands and have had the effect of encroaching upon, despoiling, polluting or eliminating many of the watercourses and wetlands within the township and have otherwise adversely affected desirable natural resources and processes.

(Ord. No. C-229, 9-18-89)

### Sec. 12-2, - Purposes

The purposes of this chapter are to provide for:

- (1) The protection, preservation, proper maintenance and use of township watercourses and wetlands in order to minimize or eliminate disturbance to them and to prevent damage from erosion, turbidity or siltation and to prevent a loss of fish or other beneficial aquaticorganisms, a loss of wildlife and vegetation or the destruction of the natural habitat thereof;
- (2) The protection of the township's potable fresh water supplies from the dangers of drought, overdraft, contamination or mismanagement;
- (3) The use of controls and regulations to secure safety from floods; to prevent loss of life, property damage and other losses and risks associated with flood conditions; to reduce the financial burdens imposed upon the community through rescue and relief efforts occasioned by the occupancy or use of areas subject to periodic flooding; to protect individual and community riparian rights; and to preserve the location, character and extend to natural drainage courses;
- (4) The enforcement of this chapter and coordination of the enforcement of appropriate local, county and state ordinances and statutes with the corresponding county or state agency, including, but not limited to:
  - Soil Erosion and Sedimentation Control Act (Act No. 347 of the Public Acts of Michigan of 1972 (MCL 282.101 et seq., as amended) enforced by the county drain commission;
  - Inland lakes and Streams Act (Act No. 346 of the Public Acts of Michigan of 1972 (MCL 281.951 et seq., as amended) enforced by the state department of natural resources;
  - c. Goemaere-Anderson Wetland Protection Act (Act No. 203 of the Public Acts of Michigan of

1979, (MCL 281.701 et seq., as amended);

- d. The National Flood Insurance Act of 1968, as amended;
- e. The Flood Disaster Protection Act of 1973, as amended.
- (5) The granting of use permits;
- (6) A procedure for the appealing of decisions;
- (7) Penalties for the violation of this chapter.

(Ord. No. C-229, 9-18-89; Ord. No. C-360-E, § 1, 8-28-06)

# Sec. 12-3. - Validity.

The township board declares that this chapter is essential to the health, safety, economic and general welfare of the people of the township and is based upon reasonable standards.

(Ord. No. C-229, 9-18-89)

Sec. 12-4. - Lands to which chapter applies.

This chapter shall apply to all lands within the jurisdiction of the township upon which any of the following conditions exist:

- (1) "Flood hazard area" or "flood hazard prone areas," as defined in the state construction code, and as identified on the Federal Emergency Management Agency (FEMA) flood insurance study (FIS) entitled "Flood Insurance Study, Oakland County, Michigan, and Incorporated Areas" and dated September 29, 2006, the flood insurance rate maps (FIRMS) panel numbers of 26125C0477F, 26125C0479F, 26125C0481F, 26125C0482F, 26125C0483F, 26125C0484F, 26125C0487F, 26125C0489F, 26125C0491F, 26125C0492F, 26125C0493F, 26125C0494F, 26125C0501F, 26125C0502F, 26125C0503F, 26125C0504F, 26125C0511F, 26125C0512F, 26125C0513F, 26125C0514F and dated September 29, 2006.
- (2) "Watercourses" as defined in this chapter or as identified on the official watercourse and wetland map of the township.
- (3) "Wetlands" as defined in this chapter.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 1, 5-23-94; Ord. No. C-360-E, § 2, 8-28-06)

### Sec. 12-5. - Definitions.

Terms not specifically defined in this chapter shall have the meaning customarily assigned to them. The following terms, phrases, words, diagrams and their derivatives shall have the meaning respectively given in this section:

Administrative permit means a use permit that may be applied for and approved as provided in sections <u>12-32</u> and <u>12-33</u> for a minor project, as defined in this section, that complies with all of the environmental design criteria and standards in <u>section 12-37</u> and includes all terms and conditions in <u>section 12-38</u>.

Applicant means the owner of record of affected property and/or his agents, designees or assigns applying for a permit pursuant to this chapter.

*Bottomland* means the land area of a lake, stream or watercourse which lies below the ordinary high water mark, and which may or may not be covered by water.

Canal means an artificial watercourse for navigation or for draining or irrigating lands.

Channel means the geographical area within the natural or artificial banks of a watercourse required to convey continuously or intermittently flowing water under normal or average flow conditions.

Contaminant means any material that exceeds the water quality criteria as described in this chapter.

Contiguous shall mean any of the following:

- A permanent surface water connection or other direct physical contact with an inland lake, pond, river or stream.
- (2) A seasonal or intermittent direct surface water connection to an inland lake, pond, river or stream.
- (3) A wetland which is determined by the township to be located within the same watershed with, and functionally related to, an inland lake, pond, river or stream; a wetland which is located within one thousand (1,000) feet of the ordinary high water mark of an inland lake, pond, river or stream shall be deemed to be contiguous unless it is demonstrated by the property owner by clear and convincing evidence that there is no relation whatever between the wetland and the inland lake, pond, river or stream taking into consideration the purposes of this chapter, as set forth in section 12-2.
- (4) Two (2) or more areas of wetland separated only by barriers, such as dikes, roads, berms or other similar features, but with any of the wetland areas contiguous under the criteria described in paragraphs (1), (2) or (3) of this definition.

Cross section of a lake, stream or watercourse. See diagram below.



### CROSS SECTION: Lake, Stream or Watercourse

Deposit means to fill, place or dump.

Development means any 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.

*Director* means the director of the township environmental department and/or such other persons as designated by the township board to perform the duties of the director under this chapter.

Discontinuance means cessation of present use.

Drainage course means a natural or an artificial waterway existing or constructed to control runoff so as to prevent flooding of or creation of floodlands.

# Flood or flooding means:

- (a) A general and temporary condition of partial or complete inundation of normally dry land from:
  - (1) The overflow of inland tidal waters;
  - (2) The unusual and rapid accumulation or runoff of surface waters from any source; or
  - (3) Mudflows; and
- (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water,

about:blank

accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

Flood hazard area means the greater of the following areas:

- The area within a floodplain subject to a one (1) percent or greater chance of flooding in any year;
- (2) The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

Floodplain means any land area susceptible to being inundated by water from any source.

*Floodplain (100-year)* means the relatively flat area or lowlands adjoining the channel of a watercourse or a body of standing water which has been or may be covered by 100-year floodwater.

*Floodway* means the channel of a river, creek, or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

*Floodway (100-year)* means the calculated channel and area adjacent to the channel necessary to carry and discharge the 100-year flood.

*Floor area* means the sum of the horizontal areas of each story of the building, measured from the exterior faces of the exterior walls. The floor area measurement is exclusive of areas of basements, unfinished attics, attached garages, breezeways, and enclosed and unenclosed porches.

*Free of contaminants* means, in addition to any material prohibited by any federal, state or township legislation, that fill material or existing soils shall not exceed water quality criteria:

### WATER QUALITY CRITERIA

	(milligrams/liter)
Total dissolved solids	180
Sulfate	24
Total Kjeldahl nitrogen (as N)	1.0
Total phosphorus (as P)	0.05
Ammonia nitrogen (as N)	0.02
Oil and grease	0.01
рН	6.5 - 9.0

Total lead	0.1	
Total mercury	0.0005	
Total zinc	1.0	
Total manganese	1.0	
Total nickel	1.0	
Total hexavalent chromium	0.3	
Total copper	1.0	
Total iron	5.0	
Total arsenic	1.0	
Total cyanide	0.025	
РСВ	0.001	
Percentage passing #200 U.S. sieve	10%	

Inland lake or pond, a river or stream means any of the following:

- A river or stream which has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water.
- (2) A natural or permanent artificial inland lake or impoundment that has definite banks, a bed, a visible evidence of a continued occurrence of water, and a surface area of water that is more than five (5) acres. This does not include lakes constructed by excavating or diking dry land and maintained for the sole purpose of cooling or storing water and does not include lagoons used for treating polluted water.
- (3) A natural or permanent artificial pond that has permanent open water with a surface area that is less than five (5) acres. This does not include ponds constructed by excavating or diking dry land and maintained for the sole purpose of cooling or storing water and does not include lagoons used for treating polluted water.

Lagoon means the shallow sound, channel or pond near or linked to a larger body of water.

Material mean soil, sand, gravel, clay, peat, debris and refuse, or any other material, organic or inorganic.

Michigan Department of Natural Resources means the Michigan Department of Environmental Quality or such other State of Michigan department or agency that administers the State's Wetland Protection Act, Act No. 203 of the Public Acts of 1979, as amended.

Minor project means a proposed operation that is on or in connection with the lawful use of a single-family residential property that has received and is or will be in compliance with the conditions of all other required township permits or approvals and that does not involve, include or propose any of the following as determined by the director upon reviewing a use permit application:

- Operations by or on behalf of a public agency or utility for purposes other than maintenance or repair of existing structures.
- (2) Operations that require site plan approval under the zoning ordinance.
- (3) Operations that involve filling, dredging or activities that would alter the shape, condition or function of a wetland or watercourse.
- (4) New home construction in a wetland or the environmental features setback.
- (5) Placement of new structures in a wetland.
- (6) Wetland impacts that are not for enhancement, improvement or the removal of invasive species.
- (7) More than twenty-five (25) percent impact on the existing environmental features setback area.
- (8) A net loss of the function or value of a resource protected by this chapter.
- (9) Operations that have already been commenced, meaning that after the fact permits may not be approved administratively.
- (10) Property that exists in violation of township or state laws or ordinances or upon or for which there are unsatisfied township permit or approval conditions.
- (11) Operations allowed but not commenced and/or completed under a prior use permit approval that has expired in the last six (6) months.

*Mitigation* means actions designed to compensate for or offset impacts from operations to or in the area for which a use permit is requested.

Nonconforming location means location of an operation, obstruction or structure which lawfully existed upon the waters, bottomlands, floodlands or 100-year floodplain at the time of adoption of the ordinance from which this chapter was derived or amendments thereto, and which does not conform to the requirements of this chapter.

Nonconforming operation means an operation or use which lawfully occupied an obstruction, structure or land at the time of adoption of the ordinance from which this chapter was derived or amendments thereto, and which does not conform to the requirements of this chapter.

Noncontiguous wetland means a wetland which is other than "contiguous," as defined in this chapter.

*Notification*— Where notice is required pursuant to this ordinance, written notice sent by first-class mail shall be sufficient notice for all purposes hereunder.

Obstruction means any object, natural or otherwise, which impedes the flow of water, changes the direction of the flow of water, or increases the flood height either in itself or by catching or collecting debris.

*Official maps* means the official watercourse and wetland map and official flood and drainage map of the township, as amended or updated from time to time, and the flood boundary map and the Federal Emergency Management Agency (FEMA) flood insurance study (FIS) entitled "Flood Insurance Study, Oakland County, Michigan, and Incorporated Areas" and dated September 29, 2006, and the flood insurance rate maps (FIRMS) panel numbers of 26125C0477F, 26125C0479F, 26125C0481F, 26125C0482F, 26125C0483F, 26125C0484F, 26125C0487F, 26125C0489F, 26125C0491F, 26125C0492F, 26125C0493F, 26125C0494F, 26125C0501F, 26125C0502F, 26125C0503F, 26125C0504F, 26125C0511F, 26125C0512F, 26125C0513F, 26125C0514F and dated September 29, 2006.

100-year flood means a flood having an average frequency of occurrence in the order of once in one hundred (100) years, although the flood may occur in any year.

Operation means depositing or engaging in any construction, use or activity, or a combination thereof, which in any way modifies the conditions of watercourses or lands subject to this chapter as they exist on the effective date hereof.

Ordinary high water mark means the line between upland and bottomland which persists through successive changes in water levels, below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation. On an inland lake which has a level established by law, it means the high established level. Where water returns to its natural level as the result of the permanent removal of or abandonment of a dam, it means the natural ordinary high water mark. (Diagram on file in the offices of the township planning department.)

Owner means any person or agency who has dominion over, control of or title to an obstruction, natural obstruction or to wetland properties.

Permit means a use permit as required pursuant to article II hereunder. Permits shall be issued by the township planning and environment department upon compliance with the requirements and standards of article II and must be posted on the site in clear view prior to the commencement of work on the site and continued throughout the duration of the project.

Person means any owner of land or anyone acting on behalf of owner, agent of the owner, individual, firm, partnership, association, corporation, company, contractor, organization or legal entity of any kind, including governmental agencies conducting operations within the township.

Planning department, department of planning and environment and planning and environment department means the township environmental department.

Pollution means damage or injury from discharge or organic and/or inorganic substances in excess of water quality criteria as herein before described.

Precipitation means the deposit on a property of rain, snow, sleet, hail or mist.

West Bloomfield, MI Code of Ordinances

*Previously permitted* for purposes of fast track permits means an operation for which a use permit was approved by the wetland review board after a public hearing and issued no more than five (5) years before a fast track permit application.

Remove includes to dig, dredge, suck, pump, bulldoze, dragline or blast.

*Runoff* means surface discharge of precipitation to a watercourse or low area. Delayed runoff can occur from sudden warming winter precipitation accumulated as snow and ice.

Seasonal means any intermittent or temporary operation which occurs annually and is subject to interruption from changes in weather, water level or time of year, and may involve annual removal and replacement of an operation, obstruction or structure.

*Soil erosion protection* means physical means of preventing soil erosion in accordance with the Soil Erosion and Sedimentation Control Act of 1972, 347 of the Public Acts of 1972, as amended. Temporary and permanent erosion and sedimentation control measures include, but are not limited to:

- (1) Geotextile silt fence on exposed, bare or unstabilized areas to prevent erosion of steep banks;
- (2) Coffer dams of sand bags, straw bales or sheet pilings; and
- (3) Stabilizing vegetation, including seeding and/or sodding with mulch as necessary for longterm erosion prevention of unstabilized surfaces.

For the above techniques to be effective, soil erosion protection must be installed pursuant to the most current "Michigan Guidebook for Soil Erosion and Sedimentation Control" available from the land and water management division of the department of natural resources.

Soil/material certification means that soil or materials brought to a site for use in the wetlands on the upland fringe of a wetlands or within a watercourse or within a floodplain shall be certified to be free of contamination and not cause pollution. Such certification shall be provided by the applicant to whom a permit has been issued to the satisfaction of the township wetland consultant or township environmental staff.

Structure means any assembly of materials, permanent or temporary, above or below the surface of the land or water, including, but not limited to, houses, buildings, plants, bulkheads, piers, docks, rafts, landings, dams or waterway obstructions.

Temporary means a time period as specified in the use permit, or, if unspecified, means an uninterruptable time period of less than one (1) year's duration.

Upland means the land area adjoining a lake, stream or watercourse above the ordinary high water mark, uses for which are essentially nonaquatic.

Water table means the top level of an aquifer defined as the locus of points where the water pressure is equal to the atmospheric pressure.

## West Bloomfield, MI Code of Ordinances

Page 10 of 37

Watercourse means any waterway or other body of water having well-defined banks, including rivers, streams, creeks, and brooks, whether continually or intermittently flowing, and lakes and ponds, and/or as shown on the official township watercourse and wetland map, and the flood boundary-floodway map and flood insurance map which accompanies the flood insurance study for the township, dated September, 2, 1982.

Watershed means a region or area bounded peripherally by a water divide and draining ultimately to a particular watercourse or body of water.

Wetland means land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh. Consistent with the definition of "wetland" under Act 203 of the Public Acts of 1979, as amended, and the administration of such definition by the Michigan Department of Natural Resources, where a wetland is less than two (2) acres in size, but is contiguous, the wetland shall be subject to regulation without regard to its size.

Wetland/environmental mitigation manual means a written document that is maintained and available to the public at the environmental department containing definitions of terms and detailed or technical lists, descriptions, characteristics, methods and other information referred to in this chapter that have been recommended by the director and approved by resolution of the township board for use and reference in the administration and enforcement of this chapter.

Wetland permit and wetland application as used in sections <u>12-33</u> and <u>12-35</u> means a use permit and use permit application.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 2, 5-23-94; Ord. No. C-360-C, § 1, 6-20-05; Ord. No. C-360-E, § 3, 8-28-06; Ord. No. C-360-F, §§ 1, 2, 6-18-07)

Cross reference— Definitions and rules of construction generally, § 1-2.

Sec. 12-6. - Incorporated maps.

The township maps which designate wetlands, watercourses, natural and artificial floodplains and other drainage courses in the township, including amendments that may be made from time to time, and which are on file with the township, are incorporated into this chapter and made a part of this chapter by reference.

(Ord. No. C-229, 9-18-89)

Sec. 12-7. - Compliance mandatory.

No operation, structure or land shall be used and no structure shall be located, extended, converted, or structurally altered without full compliance with the terms of this chapter and other applicable regulations which apply to uses within the jurisdiction of this chapter.

(Ord. No. C-229, 9-18-89)

Sec. 12-8. - Rules of construction.

The following rules of construction apply to the text of this chapter.

(1) In case of a difference of meaning or implication between the text of this chapter and any

about:blank

3/29/2016

caption or illustration the text shall control.

- (2) Particulars provided by way of illustration or enumeration shall not control general language.
- (3) This chapter shall be construed liberally in favor of protecting the natural resources of the township.

(Ord. No. C-229, 9-18-89)

Sec. 12-9. - Disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on engineering and scientific methods of determination.

Larger floods may occur on rare occasions. Flood heights may be increased by manmade or natural causes, such as ice jams and bridge openings restricted by debris. This chapter does not imply that areas outside the floodplain districts will be free from flooding or flood damages. This chapter shall not create liability on the part of the township or any officer or employee thereof for any flood damage that results from reliance on this chapter or any administrative decision lawfully made under this chapter.

(Ord. No. C-229, 9-18-89)

Sec. 12-10. - Abrogation and conflict authority.

Nothing in this chapter shall be interpreted to conflict with present or future state statutes in the same subject matter; conflicting provisions of this chapter shall be abrogated to, but only to, the extent of the conflict. Moreover, the provisions of this chapter shall be construed, if possible, to be consistent with and in addition to relevant state regulations and statutes. The provisions of this chapter shall be held to be minimum requirements and shall be liberally construed in favor of the township and shall not be deemed a limitation or repeal of any other powers granted by state statutes. This chapter shall not repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail. All other township ordinances inconsistent with this chapter are hereby repealed or amended to the extent of the inconsistency only.

(Ord. No. C-229, 9-18-89)

### Sec. 12-11, - Property inspections.

The township board, its agents, surveyors or other employees of the township, may make reasonable entry upon lands and waters within the township for the purpose of making any investigation, survey or study contemplated by this chapter.

(Ord. No. C-229, 9-18-89)

Sec. 12-12. - Ordinance and map amendments.

The township board from time to time may amend this chapter in both map and text, subject to the following:

(1) Map amendments. The township board shall direct the wetlands review board to hold a public hearing and make a recommendation on proposed map changes. Notices of such a public hearing shall be given by the township clerk by publishing in a newspaper of general

about:blank

circulation in the township at least fifteen (15) days prior to the hearing. Copies of the proposed map changes shall be available for public inspection at the office of the township clerk. In lieu of sending and/or publishing copies of the proposed map, reference may be made to the material on file with the clerk. The wetland review board shall respond in writing to any written comments that are received by the clerk prior to the public hearing regarding the contents of the proposed map. Upon adoption of the wetlands map or any subsequent amendments by the township board, the township notify each record owner of property on the property tax roll of the township that the watercourse and wetlands map exists or has been amended. The notification shall include the location where the map may reviewed and state the following:

- a. That the owner's property may be designated as a wetland on the inventory map.
- b. That the township has an ordinance regulating wetlands.
- c. That the inventory map does not necessarily include all of the wetlands within the township that may be regulated under this chapter.
- (2) Text amendments. The township board may request the wetlands review board to make recommendation on proposed text amendments which shall not require a public hearing.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 3, 5-23-94)

Sec. 12-13. - Wetlands review board.

- (a) The township board shall, by resolution, establish and appoint members to a wetland review board.
- (b) The wetlands review board will make decisions as provided in sections <u>12-33</u> and utilizing the standards outline in articles IV and V of this chapter.
- (c) The wetlands review board shall establish its own rules of procedure.

(Ord. No. C-229, 9-18-89)

Cross reference— Administration, Ch. 2; boards and commissions generally, § 2-126 et seq.

Sec. 12-14. - Continuance of lawful nonconforming uses.

- (a) A lawful nonconforming operation shall be permitted to continue subject to the requirements of article II of this chapter. The burden of proof of establishing the existence of a nonconforming use shall be upon the petitioner.
- (b) A lawful nonconforming operation may not be:
  - (1) Changed to another nonconforming location or operation;
  - (2) Re-established after having been discontinued for one (1) year;
  - (3) Expanded, except in conformity with this chapter; nor
  - (4) Rebuilt or repaired after complete or partial destruction, when the destruction exceeds fifty (50) percent of the fair market immediately prior to damage or exceeds fifty (50) percent of the area or operation in question.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 4, 5-23-94)

Sec. 12-15. - Penalties and enforcement.

(a)

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

Excerpts from the Municipal Code of Ordinances

Chapter 12–Floodplain, Floodway, Watercourse and Wetland Protection

Article II Use Permits-Section 12.31-12.39

Appendix AA

Any person found guilty of violating any of the provisions of this chapter shall be punished as provided in <u>section 1-10</u>, and may be cited for each day of violation. The township, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation.

- (b) The grant or denial of a permit shall not have any affect on any remedy of any person at law or in equity; provided, that where it is shown that there is a wrongful failure to comply with this chapter, there shall be a rebuttable presumption that the obstruction was the proximate cause of the flooding of the land of any person bringing suit.
- (c) Any person violating the provisions of this chapter shall become liable to the township for any expense or loss or damage occasioned by the township by reason of such violation.
- (d) In addition to the provisions contained here and above, the wetlands board at a formal board meeting, shall have the authority to direct the environmental staff and/or planning staff to notify the supervisor that a stop work order shall be issued upon any project for development, with concurrence of the supervisor, when it is determined that a violation has occurred. And if it is not issued, the supervisor shall notify the wetland board in writing within forty-eight (48) hours of the reason for nonissuance.

(Ord. No. C-229, 9-18-89)

Secs. 12-16—12-30. - Reserved. ARTICLE II. - USE PERMITS Sec. 12-31. - Required.

Pursuant to the terms of this chapter, all operations affecting floodplains and floodways, watercourses and wetlands shall require the filing and approval of a use permit application and the issuance of a use permit.

(Ord. No. C-229, 9-18-89)

Sec. 12-32. - Application—Submittal; fee, required information.

For each lot, outlot or parcel for which a use permit is sought, a fee shall be submitted to the township planning and environment department along with a permit application to be completed in full which shall contain all information requested on the application form provided by the Michigan Department of Natural Resources, and include, without limitation, the following:

- (1) A detailed description and purpose of the proposed operation or development;
- (2) Amount and type of material to be removed or deposited;
- (3) A dimensioned site plan showing the legal description, zoning classification (including zoning on adjacent parcels), existing features and the size and location of all parts of the proposed operation or development;
- (4) Where removal, depositing or grading is proposed, an accurate topographical map of these disturbed areas should be drawn to scale not less than 1:360 (1 inch = 30 feet) and shall be prepared and certified by a registered landscape architect, land surveyor or civil engineer. Preparation of plans by a licensed professional may not be required for permits reviewed by the planning department. The topographical map shall contain:

а.

Name and address of the owner of record of the affected property and of applicant, if other than owner; location and dimensions of all boundary lines; names of the owners of record of adjoining properties and of properties directly across any road; graphic scale, north arrow and date;

- b. Existing contour data for the entire property with a vertical contour interval of no more than five (5) feet, and vertical contour data at an interval of no more than two (2) feet for all areas to be disturbed by the proposed operation, extending for a distance of at least fifty (50) feet beyond the limits of such areas. Indicated elevations shall be based on United States Geological Survey datum.
- c. Specification of the extent of all areas to be disturbed, the depth to which removal or deposition operations are proposed, and the angle of repose of all slopes of deposited materials and sides of channels or excavations resulting from removal operations;
- d. An area map at a scale of not less than 1:2400 (1 inch = 200 feet), showing property lines, the ordinary high water mark and elevation, proposed changes in location and extent of existing watercourses, the 100-year floodplain and drainage courses.
- (5) Administrative permit applications.
  - a. For minor projects an applicant may request an administrative permit by including the following in or with an application that also satisfies the requirements in subsections (1) –(4):
    - 1. Agreement to all of the permit terms and conditions in section 12-38.
    - All plans, documents, agreements and information necessary to establish compliance with all of the environmental design criteria and standards in <u>section 12-37</u>.
    - Agreement to the standards and procedures in <u>section 12-33</u>, including the director's discretion to deny an administrative permit and refer the application to the wetland review board as a new use permit application for purposes of the time period for decisions under subsection <u>12-33</u>(1)f.
    - A copy of any contract for the work that identifies the cost and contractor and if there is no contract, an accurate cost estimate for the work and identification of the contractor who will be performing it.
    - An acknowledgment and agreement by the owners of the property to the recording with the register of deeds of a preservation notice for the areas of the property subject to regulation under this chapter.
    - 6. An acknowledgement and agreement by the owners of the property that prior to issuance of the administrative permit, the property must be posted as being the subject of a pending permit request, that the proposed work and mitigation areas must be accurately staked and marked and that photographs of the property will be taken and available for public inspection at the environmental department.
  - A complete application for an administrative permit shall be reviewed and acted upon as provided in subsections <u>12-33(1)</u>f and <u>12-33(5)</u>.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 5, 5-23-94; Ord. No. C-360-C, § 1, 6-20-05; Ord. No. C-360-F, § 1, 6-18-07)

Sec. 12-33. - Same-Method of review.

The method of review of the use permit application shall be determined by the extent of the proposed operation or development as follows:

- (1) Receipt and initial processing of application:
  - a. An application for a township wetland permit shall be made on the form supplied by the Michigan Department of Natural Resources.
  - b. Each person applying for a township wetland permit shall make application directly with the township, through the department of planning and environment.
  - c. Upon receipt, the township department of planning and environment shall forward a copy of each application to the Michigan Department of Natural Resources.
  - d. The failure to supply complete information with a permit application shall be reason for denial of a permit.
  - e. The department of planning and environment shall initially review the application in accordance with the wetland application checklist approved by resolution of the township board and shall have authority to reject an incomplete application. If an applicant, in writing, disagrees with the department's determination that the application is incomplete, the department shall forward the application as submitted to the wetlands review board or planning commission, whichever body is undertaking review in accordance with the provisions set forth below. The wetlands review board or planning commission, as the case may be, shall initially determine whether the application is complete. If the application is complete, review shall proceed and be completed in accordance with this section. If the application is determined to be incomplete, the application shall be denied. In addition, during the course of an application review, the wetland review board or planning commission, as the case may be, may require the submission of additional information found to be necessary or appropriate as part of the deliberations leading to a decision on the application.
  - f. A complete application shall be modified, approved or denied within ninety (90) days after receipt, subject to the provisions of subsection g. of this section. For purposes of this time period, an application for an administrative permit that is not approved is a denial, with the referral of such application to the wetland review board to be treated as a new use permit application.
  - g. The applicant for an approval in cases where the planning commission or township board is the final approval authority shall, at the time of submission, elect to in writing to have the application processed under either subsection 1. or subsection 2. below:
    - The wetland application shall be reviewed immediately, either prior to or concurrent with the review of the site plan, plat or other proposed land use submitted by the applicant, with the understanding that the land use review may not be completed at the time the decision is rendered on the wetland application. Election of this alternative may require a reopening of the wetland application if the land use approval is inconsistent with the wetland approval; or
    - The wetland application shall be reviewed and acted upon concurrent with the review of the site plan, plat or other proposed land use submitted by the applicant, and the ninety-day review period limitation specified in section 6(6) of Act 203 of the Public Acts of 1979, as amended, shall thereby be extended accordingly.

- h. The denial of a permit shall be accompanied by a written reason for denial.
- (2) Wetlands review board as final approval authority:
  - a. Whenever a permit is required for a use or operation that would not otherwise require the review and approval by the planning commission or township board, the planning and environment director shall refer to the wetlands review board the wetlands permit application. After reference by the planning and environment director, the wetlands review board shall hold a public hearing as expeditiously as possible and shall modify, approve or deny the application. The denial of a permit shall be accompanied by a written reason for denial.
  - b. Before forwarding the use permit application to the wetlands review board, the planning and environment director shall verify that all required supporting material is available. After reviewing the documentation, the wetlands review board may request additional data or expert opinions, provided all such additional submission and follow-up review shall occur within the required ninety-day period.
  - c. Prior to making a determination on the use permit application for a use or operation that would not otherwise require review and approval by the planning commission or township board, the wetlands review board shall hold a public hearing. Notice of such hearing shall be sent by first class mail to the property owners and occupants according to the current tax rolls of the four (4) occupied parcels, lots or outlots which are on either side of or within three hundred (300) feet of the property on which the requested construction and/or operation is to take place, whichever is greater. Such notice shall also be sent to all subdivision associations and lake associations registered with the township that are immediately adjacent to the property and/or floodplain, wetland or watercourse affected. The notice shall be sent not less than fifteen (15) nor more than thirty (30) days prior to the hearing, and shall include a copy of the permit application form and the time, date and location of the public hearing. Further, a synopsis of the notice shall be published in a legally approved newspaper of general circulation in the township.
- (3) Planning commission or township board as final approval authority:
  - a. For those developments and operations where the planning commission or township board is the final approval authority as defined in <u>chapter 21</u> (Subdivision and Land Division) or <u>chapter 26</u> (Zoning), the planning and environment director shall refer the wetland permit application to the planning commission, which, in accordance with the procedure specified in subparagraph (4) of this section, shall recommend action to the township board where the township board is the final approval authority or where the planning commission is the final approval authority, the planning commission shall modify, approve or deny the application. In the absence of a reversal or modification by the township board, a recommendation or determination of the planning commission shall be final.
  - b. Prior to making a recommendation or determination on the use permit application, the planning commission shall hold a public hearing. Notice of such hearing shall follow the same procedure as outlined in subsection (2)c. above. A copy of the notice shall also be provided to the members of the wetlands review board. In addition, for any project or operation involving a use permit request to develop a site plan or subdivision, the

property under consideration shall be posted with a sign in a conspicuous place along the abutting roadway not less than fourteen (14) nor more than thirty (30) days before the hearing and shall contain adequate information regarding the hearing.

- c. For those plats, developments and operations where the township board is the final approval authority, the recommendation of the planning commission, made following public hearing, shall be referred to the township board. The township board may authorize the issuance of a wetlands/floodplain use permit by the planning and environment director with or without specific conditions attached or deny the issuance of the use permit.
- (4) In connection with the public hearing to be conducted by the planning commission under subsection (3) of this section above, the wetlands review board shall receive notice of the hearing. The members of the wetlands review board shall appear and be entitled to participate fully in the deliberations of the planning commission. While the planning commission shall be the decision-making body at and for all purposes of the hearing, the wetlands review board shall, prior to planning commission action, separately vote to provide its recommendation to the planning commission. The vote of the wetlands review board shall be recorded in the planning commission minutes. The planning commission shall follow the recommendation of the wetlands review board unless there is clear and convincing information presented at the hearing that the recommendation of the wetlands review board is clearly erroneous based upon the application of the review criteria provided in articles IV and V of this chapter, as applicable. If the planning commission does not follow the recommendation of the wetlands review board, the planning commission shall include in its minutes the reasons why the wetlands review board recommendation was not followed.
- (5) Administrative permit review and approval.
  - a. The director shall review an application for an administrative permit to determine if it is complete, and if it is not, shall provide written notice to the applicant of the additional requirements. If upon receiving and confirming an application to be complete, the director determines that an administrative permit should be issued, he shall proceed as provided in subsection (5)b. If upon receiving and confirming an application to be complete, the director determines that the proposed operations warrant a broader review or believes that feasible and prudent alternatives exist, he shall provide written notice to the applicant that the administrative permit is denied and refer the application to the wetland review board as a new use permit application for review and decision as provided in subsection (2).
  - b. Upon determining that an administrative permit should be issued, the director shall provide written notice of that determination by first class mail to all persons and associations entitled to notice of a public hearing under subsection (2), and to the members of the wetland review board in the manner they designate. The notice shall also be given to the public by posting on the township's cable television station and web site and the director shall cause the property to be posted with a notice that it is the subject of a pending administrative permit request. In addition to the applicant's name, property address and description of the proposed operation, the notice shall also indicate:
    - That the application is available for inspection at the environmental department during hours the township offices are open.

- The date on or after which director may issue the administrative permit which shall be at least twenty-one (21) days after the date the notice is given.
- 3. Explain the right of persons, associations and wetland review board members entitled to the notice, to file written objections or challenges to the administrative permit on or before the date of intended permit issuance and that such objections or challenges must be based on and include some substantiation for claims that the director has not properly interpreted and/or applied this chapter in determining that the permit should be issued, that the proposed operations warrant a broader review by the wetland review board for specified reasons, or that specified feasible and prudent alternatives exist.
- c. If no objections or challenges described in subsection b.(iii) are filed within the time allowed, the director shall approve the administrative permit for issuance subject to the appeal period under subsections <u>12-34</u> and <u>12-35(j)</u>.
- d. If objections or challenges described in subsection b.(iii) are filed within the time allowed, the director shall provide copies to the applicant and may:
  - Approve the administrative permit for issuance subject to the appeal period under subsections <u>12-34</u> and <u>12-35(j</u>), and shall provide written notice to all persons or associations that filed objections or challenges of the decision and their appeal rights; or
  - Upon determining that the challenges or objections may have merit, provide written notice to the applicant that the administrative permit is denied and refer the application to the wetland review board as a new use permit application for review and decision as provided in subsection (2).
- e. An administrative permit shall include a deadline for performance of the operations and mitigation established by the director and shall not be issued until the applicant has provided a cash bond, irrevocable letter of credit, secured promissory note or other form of performance guarantee approved by the township board, for one hundred twenty-five (125) percent of the cost of the work to assure the satisfactory and timely completion of the operations and mitigation and which shall be available to and enforceable by the township for that purpose upon the applicant's default.
- f. The appeal and stay provisions in subsections <u>12-34</u> and <u>12-35(j</u>) shall apply to approval and issuance of administrative permits.

(Ord. No. C-229, 9-18-89; Ord. No. C-360, § 1, 7-1-92; Ord. No. C-229/C-360, § 6, 5-23-94; Ord. No. C-360-C, § 1, 6-20-05; Ord. No. C-360-D, § 1, 2-21-06; Ord. No. C-360-F, § 1, 6-18-07)

Sec. 12-34. - Appeal of approval or denial.

- (a) A recommendation and/or determination of the planning commission or wetlands review board regarding any residential or nonresidential use permit application reviewed under section 12-33 may be appealed only to the township board and provided such appeal is received in writing by the township clerk within twenty-one (21) days of such recommendation and/or determination.
- (b) Notice that a timely appeal has been made shall be sent by first-class mail by the township clerk to property owners and occupants within three hundred (300) feet of the property on which the requested construction and/or operation is to take place. Such notice shall also be sent to all subdivision associations and lake associations registered with the township that are contiguous to

the property and/or floodplain, wetland or watercourse affected and members of the wetlands review board. The notice shall indicate that an appeal hearing has been requested, use permit being appealed, the appellant's name and address, and the time, date and location of the hearing. A synopsis of the notice shall also be published in a legally approved newspaper of general circulation in the township.

(c) Approval of an administrative permit may be appealed to the township board in the same time and manner and subject to the same process as provided in subsections (a) and (b) by a property owner or occupant or subdivision or lake association that would be entitled to receive notice under subsection (b).

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 7, 5-23-94; Ord. No. C-360-D, § 1, 2-21-06; Ord. No. C-360-F, § 1, 6-18-07)

Sec. 12-35. - Conditions of issuance.

- (a) All operations permitted or approved by use permits shall be conducted in such a manner as will cause the least possible damage and encroachment or interference with natural resources and natural processes within the watercourses and wetland areas in the township, as defined in this chapter.
- (b) Except as provided in subsection (j) of this section below, following the approval of the wetland application by the wetlands review board, the planning commission or the township board, as the case may be, a wetland permit shall be issued upon determination that all other requirements of ordinance and law have been met, including site plan, plat or land use approval, as applicable, and including issuance of a permit by the Michigan Department of Natural Resources if required under Act 203 of the Public Acts of 1979, as amended, and/or issuance of a permit by the county. In cases where a Michigan Department of Natural Resources or county permit allows activities not permitted by the wetland approval granted under this chapter, the restrictions of the approval granted under this chapter shall govern. At no time shall the township issue a use permit which allows a more extensive alteration than permitted by the state and/or county.
- (c) Unless the final permit approval by the wetland review board, planning commission or township board specifically decides otherwise, all of the standards, terms and conditions contained in sections <u>12-38</u> and <u>12-39</u>, if applicable, shall apply and be considered a part of every use permit approved and issued under this chapter. In addition, a use permit approval by the township may:
  - Impose such conditions on the manner and extent of the proposed operation/development use or structure or use activity as are necessary to ensure that the intent of this chapter is carried out;
  - (2) Fix a reasonable time for the undertaking and completion of all operations; and
  - (3) Require a cash bond or irrevocable letter of credit in such form and amount as determined necessary by the township to ensure compliance with the use permit.
- (d) The review and approval of a use permit application may be done concurrently with the review and approval of site plans or subdivision plats. Use permits approved under <u>section 12-33</u> shall expire within twenty-four (24) months of approval of such permit by the planning and environment director, the wetlands review board or the township board, whichever shall have final authority, the date of issuance of such permit notwithstanding.

(e)

Prior to commencement of work on the site and continuing throughout the duration of the project, a copy of the approved use permit which contains the conditions of issuance shall be posted on the site in a conspicuous manner such that the wording of the permit will be available for public inspection.

- (f) Use permits for seasonal operations need not be renewed annually unless otherwise stated in the permit.
- (g) Any change which increases size, scope, use or hours of operation must be examined as a new operation and shall require the filing of a new use permit application.
- (h) Any temporary, seasonal or permanent operation which is discontinued for one (1) year or one (1) season shall be considered terminated and the use permit automatically voided.
- (i) A use permit shall be obtained prior to the issuance of building permits necessary for construction.
- (j) Where a timely appeal is made under <u>section 12-34</u>, the department of planning and environment shall not issue a permit until and unless the township board completes its review and authorizes the issuance of the permit.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 8, 5-23-94; Ord. No. C-360-F, § 1, 6-18-07)

# Sec. 12-36. - Fees.

Fees for permits and appeals required by this chapter shall be established by and may be changed from time to time by resolution of the township board. All fees shall be paid at the time of application to the township treasurer or in such manner as the board shall direct.

# (Ord. No. C-229, 9-18-89)

Sec. 12-37. - Environmental design criteria and standards.

Compliance with the design criteria and standards in this section, as determined by the director, shall be required for a minor project to be considered for approval by an administrative permit and may be required for other use permits by the entity with final approval authority in the absence of a demonstration by the applicant that compliance with a particular design criteria or standard is not feasible and prudent or is not necessary to assure that the operation will cause the least possible damage and encroachment or interference with natural resources and natural processes within the watercourse and wetland areas in the township.

- (1) The mitigation area is 0.5 acres or less in size and is to be on the same site as the proposed operation for which a permit is required. Off-site mitigation may not be approved by an administrative permit.
- (2) The minimum area or volume and location requirements for mitigation are as follows:
  - a. In an environmental features setback area, the mitigation area shall be at least as large as the area of disturbance (1:1 mitigation ratio).
  - b. The mitigation volume of material to be removed from the floodplain shall be at least a large as the volume of fill (1:1 mitigation ratio) and the mitigation area shall be directly connected to the floodplain impacted.
  - c. For operations in a wetland, the mitigation area shall be at least twice as large as the area of disturbance.

d.

If providing the wetland mitigation area required by subsection(c) is not feasible, the largest feasible mitigation area that is at least as large as the area of disturbance may be approved if there is an enhancement that increases the number of plant species in the wetland by thirty (30), with the new plant species to be planted required to be native/indigenous plants in accordance with the wetland/environmental mitigation manual.

- (3) In addition to information required in subsection <u>12-32(1)</u>—(4), plans for mitigation are required and shall include all of the following:
  - a. A description of the topography, soils, hydrology, and vegetation. Soil boring information and groundwater monitoring data should supplement this description.
  - b. The acreage to be restored, created, or preserved by ecological type.
  - c. Cut and fill volumes.
  - A description of the ecological types, hydrology, soils, and vegetation of the wetlands to be impacted.
  - A description of the functions provided by the wetlands to be impacted and the proposed mitigation wetlands.
  - f. Water budget of inputs and outputs to the proposed mitigation wetland (e.g., precipitation, groundwater, runoff, evapotranspiration).
  - g. Existing conditions plan that includes topographic information (one- or two-foot contour intervals), roads, trails, structures, property lines, directional arrows, scale, and the exact size and boundaries of existing environmental features setback, wetlands, streams, and 100-year floodplain.
  - h. Wetland mitigation plan that includes:
    - A description of the sources of hydrology, the source and type of soil amendments, wetland vegetation establishment, and wildlife structures.
    - A plan view showing all of the proposed conditions of the mitigation site including all contour elevations (at one-foot contour intervals), structures, the type and size of all proposed wetland areas, property lines, directional arrows, scale, the conservation easement area, and the proposed method of demarking the environmental features setback.
    - 3. Cross-sections showing the existing and proposed grades.
  - Landscape plan which includes a plan view, installation methods, planting list that specifies plant type, species list with scientific and common names, size, and quantity as well as distribution within the mitigation areas in accordance with the wetland/environmental mitigation manual.
  - j. Schedule and construction methods: A schedule and methods for completion of the mitigation site must be provided (e.g., initiation, planting, completion). The site preparation and soil erosion/sedimentation control methods to be used during construction should be described.
  - k. Long-term protection plan: A preservation notice and an accompanying recordable size site plan showing the wetland, environmental features setback area, and 100-year floodplain must be provided.

(4)

Only native/indigenous trees, shrubs, grasses, sedges, forbs, vines and other herbaceous plants approved by the director pursuant to the wetland/environmental mitigation manual, may be planted in floodplains, floodways, wetlands, watercourses, woodlands/woodland preservation areas and environmental features setback areas.

- (5) The location of structures (permanent or temporary) is not allowed within recorded and/or township established preservation areas or easements.
- (6) No direct discharge of storm water, sump water or wastewater is permitted to wetlands, watercourses, woodlands/woodland preservation areas and environmental features setback areas.
- (7) Seawalls must meet the following design standards:
  - a. Any type must be installed at or above the ordinary high water mark of a watercourse.
  - b. Existing vertical and horizontal contours of the shoreline shall be maintained.
  - Vertical seawalls (steel or vinyl) are not permitted where vertical walls do not currently exist.
  - d. Boulder seawalls will be installed on a 1:1 slope (forty-five (45) degree angle), approved geotextile fabric shall be installed behind the proposed seawall, and approved stone backfill shall be used to provide adequate drainage.
  - e. Four- to eight-inch diameter natural cobblestone must be placed (minimum width of twelve (12) inches) at the toe of the entire length of the seawall.
- (8) Impervious surfaces within an environmental features setback area must be constructed such that runoff is directed away from watercourses and wetlands or to a native plant area to provide the maximum infiltration as possible.
- (9) Impervious surfaces can not exceed twenty-five (25) percent of an environmental features setback area and shall be constructed in a way to increase infiltration of stormwater.
- (10) Trees within the environmental features setback can be trimmed to a height of twelve (12) feet and herbaceous and/or shrubs can be cut to a minimum height of four (4) feet for the creation of a viewshed.
- (11) Beach sanding must meet the following design standards:
  - a. The purpose of the fill is for the creation, improvement, or restoration of swimming areas and beaches.
  - b. The fill is placed above the ordinary high water mark.
  - c. The fill is ten (10) cubic yards or less and is completed as one (1) complete project.
  - d. The material is from a source approved by the director and is clean, nonpolluting, free from debris, organic materials, and waste metal products.
  - The total area filled should not exceed twenty-five (25) percent of the environmental features setback.
- (12) Driveways must meet the following design standards:
  - a. Any upland on the property or other alternatives, such as obtaining a permanent easement for access from adjacent upland if available or a shared driveway shall be utilized to the greatest degree possible.
  - b. The location of the driveway is at the least damaging place on the property and creates the minimum wetland impact.
- c. The portion of the driveway in the wetland can have a maximum base width of sixteen (16) feet and paved width of twelve (12) feet. The maximum length of the driveway is fifty (50) feet.
- d. No ditches may be placed in the wetland in association with the driveway.
- e. The driveway must terminate at a buildable upland site.

(Ord. No. C-360-F, § 1, 6-18-07)

Sec. 12-38. - Permit terms and conditions.

The following terms and conditions shall apply and be considered a part of every use permit approved and issued under this chapter unless the final permit approval decision by wetland review board, planning commission or township board specifically decides otherwise. Administrative permits may not be approved without all these terms and conditions.

- (1) The following terms and conditions apply to all permits:
  - a. A preconstruction meeting between the petitioner and the director or director's designee and any contractors/subcontractors is required prior to any construction. A copy of the permit shall be posted in a visible location on-site.
  - b. At the time of the preconstruction meeting, the exact location of the request must be measured in the field by the director or director's designee and then field staked by the petitioner or any contractor prior to installation.
  - c. Soil protection measures shall be installed prior to any construction and be inspected by the director or director's designee for proper location and installation.
  - d. The petitioner and his/her contractor(s) shall be responsible for maintaining all soil erosion and sedimentation control measures throughout the duration of the project with daily inspections.
  - No materials (organic or inorganic), spoils, and/or equipment shall be stored within the wetland, environmental features setback area, and 100-year floodplain during and after construction.
  - f. No direct discharge of storm water, sump water, or wastewater unless pretreated is allowed to wetlands and/or watercourses. Any existing direct discharge must be eliminated and discharged in a location approved by the director or director's designee.
  - g. No fill material beyond the request shall be deposited within any wetland, environmental features setback area and/or 100-year floodplain.
  - h. Any and all fill utilized for installation shall be from an approved source.
  - Any and all areas of mitigation, restoration, or planting within a wetland, environmental features setback area and 100-year floodplain shall be planted with native/indigenous plants (trees, shrubs, herbs, and/or vines) only in accordance with the wetland/environmental mitigation manual.
  - j. Ongoing monitoring by the director or director's designee shall be conducted with inspection reports recorded in the case file.
  - k. A final inspection by the director or director's designee shall be conducted with a report added to the case file.

1.

The petitioner shall be responsible for the integrity of all landscaping materials in the mitigation areas for a period of twenty-four (24) months, and replace any vegetation that dies.

- m. Invasive and noxious plant eradication by herbicide applications must be completed by a certified applicator with documentation of the work upon completion submitted to the environmental department.
- The petitioner shall be responsible for installation of department approved preservation signage.
- o. The property owner(s) shall be given a copy of the township's fertilizer ordinance.
- p. A preservation notice and an accompanying recordable size site plan showing the wetland, environmental features setback area, and 100-year floodplain shall be recorded for the property indicating that the preservation methods have been employed to protect the environmental features and cannot be disturbed without a permit.
- q. The petitioner shall place sufficient funds in an escrow account to cover the costs connected with the application, including consultant fees, issuance of a permit, and monitoring.
- r. The initiation of any work on a permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of the permit.
- (2) The following are additional conditions that apply to floodplain permits:
  - a. No fill shall be placed within a designated floodway,
  - b. The placement of fill shall not fragment or create separation of 100-year floodplain areas.
  - c. There will be no loss of floodplain storage (i.e. mitigation volume of material to be removed from the floodplain shall be at least as large as the volume of fill (1:1 mitigation ratio)).
  - d. The mitigation area is directly connected to the floodplain impacted.
- (3) The following are additional conditions that apply to seawall permits:
  - a. At the time of the preconstruction meeting, the exact location of the ordinary high water mark (OHWM) shall be measured and documented using benchmarks in the field by the director or director's designee prior to installation.
  - b. Existing vertical and horizontal contours of the shoreline shall be maintained.
  - c. Boulder seawalls will be installed on a 1:1 slope (forty-five (45) degree angle), approved geotextile fabric must be installed behind the proposed seawall, and approved stone backfill must be used to provide adequate drainage.
  - d. Four- to eight-inch diameter natural cobblestone must be placed (minimum width of twelve (12) inches) at the toe of the entire length of the seawall.
  - e. Any existing direct discharge to a wetland or watercourse must be eliminated and discharged in a location approved by the director or director's designee.

(Ord. No. C-360-F, § 1, 6-18-07)

Sec. 12-39. - Wetland mitigation areas larger than 0.5 acres.

The following design standards, permit terms and conditions shall apply to all wetland mitigation areas that are greater than 0.5 acres in size:

- Wetland mitigation plans. In addition to information required in subsections <u>12-32(1)</u>—(4) and <u>12-37(3)</u>, plans for wetland mitigation of more than 0.5 acres must include all of the following:
  - A map showing the location of the wetland mitigation site in relation to surrounding roads and other landmarks.
  - Baseline conditions: Characterization of the existing conditions at the proposed wetland mitigation site including:
    - 1. A description of the topography, soils, hydrology, and vegetation. Soil boring information and groundwater monitoring data should supplement this description.
    - 2. A plan view that includes topographic information (one (1) or two (2) foot contour intervals), roads, trails, structures, property lines, directional arrows, scale, and the exact size and boundaries of existing wetlands, streams, and floodplain to the 100-year elevation.
    - 3. Typical cross-sections.
    - 4. An explanation of why the site was selected.
  - c. Monitoring plan: A monitoring plan is required as outlined in subsection <u>12-39</u>(4). The locations of vegetative sampling transects, photo points, monitoring wells, and staff gauges for monitoring should be shown on a plan view.
- (2) Wetland mitigation standards. In addition to the environmental design criteria and standards in section 12-37, wetland mitigation areas greater than 0.5 acres must meet all of the following:
  - a. Construction has been completed in accordance with plans and specifications.
  - b. The mitigation wetland is designed to have certain hydrological characteristics, such as water elevation, water depth, water level fluctuations, and frequency and duration of inundation, consistent with the ecological wetland types proposed as set forth below. Wetland design hydrology will be considered to be established when the director determines the following conditions are met for at least one (1) calendar year, based on monitoring of the mitigation site:
    - Forested and scrub-shrub wetlands will be consecutively saturated within twelve (12) inches of the soil surface for at least fifteen (15) percent of the growing season and the water depth will not be more than two (2) inches above the surface for more than thirty (30) percent of the growing season.
    - Emergent wetlands will be consecutively saturated within twelve (12) inches of the soil surface for at least fifteen (15) percent of the growing season and water depth will not exceed eighteen (18) inches over more than fifteen (15) percent of the emergent wetland.
    - 3. Water levels in wet prairie wetland types will be consecutively saturated within twelve (12) inches of the soil surface for at least fifteen (15) percent of the growing season, will have a minimum annual depth of saturation twelve (12) inches below the soil surface for at least fifteen (15) percent of the growing season, with maximum inundation to occur permanently at a depth of three (3) inches.
    - 4. The growing season is defined as April 21 through October 24.
  - c. A layer of high quality soil, from the A horizon of an organic or loamy surface texture soil, exists over the entire mitigation wetland area at a minimum thickness of six (6) inches.
  - d. The mitigation wetland is free of oil, grease, manmade debris, and all other contaminants.

- e. A minimum of six (6) habitat structures, consisting of at least three (3) types, will be placed per acre of mitigation wetland. At least fifty (50) percent of each structure will extend above the normal water level. The types of acceptable wildlife habitat structures are provided below:
  - Tree stumps laid horizontally within the wetland area. Acceptable stumps will be a minimum of six (6) feet long (log and root ball combined) and twelve (12) inches in diameter.
  - Logs laid horizontally within the wetland area. Acceptable logs will be a minimum of ten (10) feet long and six (6) inches in diameter.
  - 3. Whole trees laid horizontally within the wetland area. Acceptable whole trees will have all of their fine structure left intact (i.e., not trimmed down to major branches for installation) and be a minimum of twenty (20) feet long (tree and root ball) and a minimum of twelve (12) inches in diameter at breast height (DBH).
  - 4. Snags which include whole trees left standing that are dead or dying, or live trees that will be flooded and die, or whole trees installed upright into the wetland. A variety of tree species should be used for the creation of snag habitat. Acceptable snags will be a minimum of twenty (20) feet tall (above the ground surface) and a minimum of twelve (12) inches DBH. Snags should be grouped together so as to provide mutual functional support as nesting, feeding, and perching sites.
  - 5. Sand mounds at least eighteen (18) inches in depth and placed so that they are surrounded by a minimum of thirty (30) feet of water measuring at least eighteen (18) inches in depth. The sand mound will have at least a two hundred (200) square foot area that is eighteen (18) inches above the projected high water level and oriented to receive maximum amounts of sunlight.
- f. Mean percent cover of native wetland species, as specified in the wetland/environmental mitigation manual, in the herbaceous layer across the wetland area to achieve fifty (50) percent design cover is not less than:
  - 1. Eighty (80) percent for forested wetland;
  - 2. Eighty (80) percent for scrub-shrub wetland;
  - 3. Eighty (80) percent for wet meadow/prairie wetland; and
  - 4. Sixty (60) percent for emergent wetland.
- g. Extensive open water and submergent vegetation areas with little or no emergent or floating vegetation will not exceed fifteen (15) percent of the mitigation wetland area.
- Extensive areas of bare soil will not exceed five (5) percent of the mitigation wetland area.
  For the purposes of these performance standards, extensive refers to areas greater than 0.01 acre in size.
- i. No mitigation credit will be given for areas deeper than 2.5 feet.
- j. The total percent cover of wetland species in each plot will be averaged for samples taken in the same wetland type to obtain a mean percent cover value for each wetland type. Plots within identified extensive open water and submergent areas, bare soil areas, and areas without a predominance of wetland vegetation will not be included in this average. Wetland species refers to species listed as facultative and wetter in the wetland/environmental mitigation manual.

- k. The wetland supports a predominance of wetland vegetation (as defined in the wetland/environmental mitigation manual) in each vegetative layer and is represented by a minimum number of native perennial wetland species. The minimum number of native wetland species per wetland type will not be less than:
  - 1. Twenty (20) species within the forested wetland;
  - 2. Twenty (20) species within the scrub-shrub wetland; and
  - 3. Thirty (30) species within the emergent wetland.
- The total number of native wetland plant species (as listed in the wetland/environmental mitigation manual), will be determined by a sum of all species identified in sample plots of the same wetland type.
- m. The wetland supports a minimum of:
  - Three hundred (300) individual surviving, established, and free-to-grow trees per acre in the forested wetland that are classified as native wetland species and consisting of at least three (3) different plant species.
  - Three hundred (300) individual surviving, established, and free-to-grow shrubs per acre in the scrub-shrub wetland, that are classified as native wetland species and consisting of at least four (4) different plant species.
  - For the purposes of this performance standard, Fraxinus Pennsylvanica (Green Ash) and Populus spp. (Aspen) are not acceptable species.
- n. The mean percent cover of invasive species including, but not limited to, *Phragmites Australis* (Common Reed), *Lythrum salicaria* (Purple Loosestrife), and *Phalaris Arundinacea* (Reed Canary Grass) and others listed in the wetland/environmental mitigation manual, will in combination be limited to no more than ten (10) percent within each wetland type. Invasive species will not dominate the vegetation in any extensive area of the mitigation area.
- o. If the mean percent cover of invasive species is more than ten (10) percent within any wetland type or if there are extensive areas of the mitigation wetland in which an invasive species is one of the dominant plant species, the owner will submit an evaluation of the problem to the director. If the owner determines that it is not feasible to reduce the cover of invasive species to meet the above performance standard, the director may approve an alternative invasive species standard. The owner must submit an evaluation of the problem, a control plan, and the percent cover that can be achieved to the director for review. Any alternative invasive species standard must be approved in writing by the director.
- p. Any plantings or replantings must be completed at least one (1) calendar year before final approval of a fully functional mitigation site.
- (3) Wetland mitigation construction conditions. In addition to the environmental design criteria and standards in section 12-37, the owner must comply with all of the following mitigation construction conditions:
  - a. The owner must notify the director in writing five (5) days before construction of the wetland mitigation area is commenced, and undertake construction in conformity with the terms and conditions specified in the permit, plans, specifications, and appendices that are part of the approved plans.

- b. If during construction of the wetland mitigation area a previously unknown or unreported material and/or regulated condition, such as an archaeological or historic site, threatened or endangered species, waste, or contamination, is encountered, the owner will discontinue work, notify the director, and initiate contact with appropriate local, state, and federal agencies to determine what response the condition requires.
- c. Construction methods, including water control structures, berms, and tile breaking, must be in accordance with the wetland/environmental mitigation manual.
- d. The owner shall notify the director in writing within five (5) days after completing construction of the mitigation wetland so it may be inspected for conformity to the permit and approved plans.
- e. Modification or adjustment of any water control structures, or manipulation of hydrology, may be made only with the written approval of the director.
- (4) Mitigation monitoring conditions. After the director or director's designee determines that construction is complete, the owner or his authorized agent will commence monitoring as provided in this subsection for a minimum of two (2) years. Monitoring will be required until the wetlands and environmental features setback areas are approved by the director as fully functional, meaning that they are in compliance and consistent with all of the standards in subsection (2). Once deemed fully functional no additional monitoring reports will be required and any performance guarantee that was required will be released.
  - a. Measure inundation and saturation at all staff gauges, monitoring wells, and other stationary points to assess the periods and degree of inundation and saturation, according to the monitoring plan. A minimum of two (2) measurements are required during the growing season.
  - b. Sample vegetation in plots located along transects once between July 15 and August 31. The owner will determine the number of sample plots necessary within each wetland type and environmental features setback area by use of a species-area curve or other approach approved by the director. If the wetland area is less than one (1) acre, then the minimum number of sample plots for each wetland type shall be no fewer than five (5). Sample plots shall be located on the sample transect at evenly spaced intervals or by another approach approved by the director. If additional or alternative sample transects are needed to sufficiently evaluate each wetland type, they must be approved in advance in writing by the director.
  - c. The herbaceous layer (all non-woody plants and woody plants less than 3.2 feet in height) shall be measured with a 3.28 foot by 3.28 foot (one (1) square meter) sample plot. The shrub and tree layer shall be measured with a thirty-foot radius plot. The data recorded for each herbaceous layer sample plot shall include a list of all living plant species, and an estimate of percent cover in five (5) percent intervals for each species recorded, bare ground, and open water relative to the total area of the plot. (The total percent cover for the plot should exceed one hundred (100) percent.) The number and species of surviving, established, and free-to-grow trees and surviving, established, and free-to-grow shrubs shall be recorded for each thirty-foot radius plot.
  - d. Provide plot data and a list of all the plant species identified in the plots and otherwise observed during monitoring. Data for each species must include common name, scientific name and wetland indicator category from the wetland/environmental mitigation manual.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

Excerpts from the Municipal Code of Ordinances

Chapter 12–Floodplain, Floodway, Watercourse and Wetland Protection

Article III Township Wetlands and Drainage Maps Section 12.51-12.54

Appendix AA

- e. The location of sample transects and plots should be identified in the monitoring report on a plan view showing the location of wetland types and the environmental features setback areas. Sample transects shall be staked at a frequency sufficient to locate the transect in the field.
- f. Delineate any extensive (greater than 0.01 acre in size) open water areas, bare soil areas, areas dominated by invasive species, and areas without a predominance of wetland vegetation and provide their location on a plan view.
- g. Delineate any areas of the environmental features setback areas that are being mowed or are dominated by invasive species.
- h. Document any sightings or evidence of wading birds, songbirds, waterfowl, amphibians, reptiles, and other animal use (lodges, nests, tracks, scat, etc.) within the wetland noted during monitoring. Note the number, type, date, and hour of the sightings and evidence.
- i. Inspect the site during all monitoring visits and inspections for oil, grease, manmade debris, and all other contaminants and report findings. Rate (e.g., poor, fair, good, excellent) and describe the water clarity in the mitigation wetland.
- j. Provide annual photographic documentation of the development of the mitigation wetland and environmental features setback areas during vegetation sampling from permanent photo stations located within the mitigation wetland. At a minimum, photo stations shall be located on both ends of each transect. Photos must be labeled with the location, date photographed, and direction.
- k. Provide one-time photographic documentation of at least six (6) inches of high quality soil, from the A horizon of an organic or loamy surface texture soil, across the site during construction.
- I. Provide one-time photographic documentation of the preservation signage and/or demarcation of the environmental features setback areas.
- m. Provide the number and type of habitat structures placed and representative photographs of each structure type.
- Provide a written summary of data from previous monitoring periods and a discussion of changes or trends based on all monitoring including a calculation of the acres of each wetland type established.
- Provide a written summary of all the problems that have been identified and potential corrective measures to address them.
- p. Two (2) copies of a monitoring report which compiles and summarizes all data collected during the monitoring period shall be submitted annually by the owner. Monitoring reports shall cover the period of January 1 through December 31 and be submitted to the director prior to January 31 of the following year.

(Ord. No. C-360-F, § 1, 6-18-07)

Secs. 12-40-12-50. - Reserved.

ARTICLE III. - TOWNSHIP WETLANDS AND DRAINAGE MAPS

Sec. 12-51. - Township flood and drainage map.

(a) The township shall prepare a flood and drainage map for the township showing the following:

(1)

Floodplain boundaries of a flood hazard area as determined by Federal Emergency Management Agency (FEMA) flood insurance study (FIS) entitled "Flood Insurance Study, Oakland County, Michigan, and Incorporated Areas" and dated September 29, 2006, the flood insurance rate maps (FIRMS) panel numbers of 26125C0477F, 26125C0479F, 26125C0481F, 26125C0482F, 26125C0483F, 26125C0484F, 26125C0487F, 26125C0489F, 26125C0491F, 26125C0492F, 26125C0493F, 26125C0494F, 26125C0501F, 26125C0502F, 26125C0503F, 26125C0504F, 26125C0511F, 26125C0512F, 26125C0513F, 26125C0514F and dated September 29, 2006, and an approved survey, by records of local, state and federal agencies.

- (2) Ordinary high water mark boundaries in current evidence.
- (3) Established levels of lakes as regulated by the county and controlled by overflow.
- (b) The township shall be empowered to change or alter the boundaries established by the flood and drainage map, except with respect to the information contained in the FEMA flood insurance study and flood insurance rate maps referenced above, after a public hearing, provided new and substantiated data shows a change in 100-year floodplain boundaries or ordinary high water mark boundaries. The public hearing shall be held in accordance with the procedures outlined in <u>section</u> <u>12-12</u>. With respect to information contained in the FEMA flood insurance study and flood insurance rate maps, the township may petition FEMA for a letter of map revision in accordance with applicable state and federal regulations with respect to changes in the 100-year floodplain boundaries.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 9, 5-23-94; Ord. No. C-360-E, § 4, 8-28-06)

Sec. 12-52. - Interim determinations for floodplains.

- (a) The township may adopt maps showing floodplains as prepared by county, state or federal agencies, as the means of determining location of floodplains, and prepared as follows:
  - (1) Maps prepared from surveys or other data by local, state or federal agencies;
  - (2) Maps prepared from aerial surveys, to a suitable scale, properly labeled and identified to show water and land features.
- (b) Prior to determination of ordinary high water mark and of boundary locations for 100-year floodplains, the township shall, at the applicant's expense, authorize necessary investigations to determine these boundaries as applied to the applicant's property and proposed operations in accordance with proceedings as authorized by this chapter.

(Ord. No. C-229, 9-18-89)

Sec. 12-53. - Township watercourse and wetlands map.

- (a) The township shall prepare and make available to the public at a reasonable cost a watercourse and wetlands map for the township showing the following:
  - (1) Ordinary high water mark boundaries for lakes, streams, watercourses and drainage courses;
  - (2) Wetlands, low lands, swamps and other bottomlands.
- (b) The township shall be empowered to change or alter the boundaries established by the watercourse and wetlands map at any time by order, after a public hearing, provided new and substantiated data shows a change in the watercourse and wetland boundaries or available county, state or federal maps or data show a change. The public hearing shall be held in accordance with procedures outlined in <u>section 12-12</u>.

(c)

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

Excerpts from the Municipal Code of Ordinances

Chapter 12–Floodplain, Floodway, Watercourse and Wetland Protection

Article IV Flooding and Flood Hazard Protection Section 12.71-12.74

Appendix AA

The adoption of the watercourse and wetland map by the township board shall not create any legally enforceable presumptions regarding whether property that is or is not included on the inventory map is or is not in fact a wetland.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 10, 5-3-94)

Sec. 12-54. - Interim determination for watercourse and wetlands locations.

- (a) The township may adopt maps showing lakes, streams, watercourses and wetlands, as prepared by county, state or federal agencies, as the means of determining boundaries of bottomlands and prepared as follows:
  - (1) Maps prepared from surveys or other data;
  - (2) Maps prepared from aerial surveys, to a suitable scale, properly labeled and identified to show bottomland and upland features.
- (b) Prior to determination of the ordinary high water mark and boundaries of watercourses and wetland areas, the township shall, at the applicant's expense, authorize necessary investigations to determine these boundaries as applied to the applicant's property and proposed operations in accordance with records and data currently available, or by field survey.

(Ord. No. C-229, 9-18-89)

Secs. 12-55-12-70. - Reserved.

ARTICLE IV. - FLOODING AND FLOOD HAZARD PROTECTION

Sec. 12-71. - Obstructions declared public nuisance.

Any obstruction in any floodway is hereby declared to be a public nuisance unless a permit has been obtained for such obstruction from the township.

(Ord. No. C-229, 9-18-89)

Sec. 12-72. - Prohibited improvements, structures.

It shall be unlawful to locate within a flood hazard area the following improvements or structures:

- (1) Any structure either public or private for the purpose of assembly.
- (2) Any new residential dwelling unless it complies with all applicable provision and regulations of the state construction code with respect to construction of residential dwellings in flood hazard area or flood hazard prone areas. Prior to a certificate of occupancy being issued for a new residential dwelling in a flood hazard area, a registered professional engineer or architect shall certify that the standards of this subsection are satisfied.
- (3) Mobile homes.

(Ord. No. C-229, 9-18-89; Ord. No. C-360-E, § 5, 8-28-06)

Sec. 12-73. - Acts for which use permit required; application review criteria.

- (a) A written use permit from the township is required to:
  - (1) Alter the topography on lands in a flood hazard area.
  - (2) Locate any operation, obstruction or structure within the floodway.
  - (3) Allow any operation, obstruction or structure to remain within the floodway.
  - (4) Locate any operation, obstruction or structure on lands in a flood hazard area.
  - (5) Allow any operation, obstruction or structure to remain on lands in a flood hazard area.

about:blank

- (6) Make alterations of any obstruction or structure within these floodways or floodplains, whether such obstruction or structure is located in the floodway or floodplain before or after the effective date of the ordinance from which this chapter was derived. Maintenance of an obstruction or structure existing prior to the effective date of the ordinance from which this chapter was derived shall not be construed to be an alteration.
- (b) Subject to the provisions and requirements of the state construction code, appropriate uses in flood hazard area, excluding the floodways, may include railroad tracks, streets, utility lines, storage yards for equipment and nonhazardous material not subject to major damage or displacement by flood, provided such is accessory to a use permitted in an adjoining area.
- (c) Subject to the procedural limitation of article II of this chapter, the township may issue use permits for location or alteration of obstructions and structures provided such use permits do not violate the purpose and intent of this chapter or of any applicable state statutes, including the state construction code.
- (d) In reviewing any application for a use permit under subsection (a), criteria such as the following shall be considered:
  - The provisions and regulations of the state construction code pertaining to new construction and substantial improvements within flood hazard area or flood hazard prone areas;
  - Danger to life, health or property by water which may be backed up or diverted by such obstruction;
  - (3) Danger that the obstruction will be swept downstream to the injury of others;
  - (4) Danger of water pollution resulting from floods;
  - (5) Possible alternatives;
  - (6) Construction or alteration of the obstruction in such a manner as to lessen the danger;
  - (7) Permanence of the obstruction;
  - (8) Anticipated development in the foreseeable future of the area which may be affected by the obstruction, including maintaining the stability of the tax base by preventing improper development of floodprone areas; and
  - (9) Other factors as are in harmony with the purpose of this chapter.
- (e) A use permit shall not be issued unless it is shown that:
  - All provisions and requirements of the state construction code pertaining to new construction and substantial improvement in flood hazard area and flood hazard prone areas have been complied with.
  - (2) Adequate storage capacity remains to control a flood hazard area.
  - (3) The proposed operation is primarily dependent upon being located in a floodplain or floodway.
  - (4) No feasible and prudent alternative is available.

(Ord. No. C-229, 9-18-89; Ord. No. C-360-E, § 6, 8-28-06)

Sec. 12-74. - Act for which use permit not required.

Subject to the conditions of <u>section 12-73</u>, no use permit is required for use of a floodway or flood hazard area for:

(1) Cultivation and harvesting of crops according to recognized soil conservation practices.

Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

Excerpts from the Municipal Code of Ordinances

Chapter 12–Floodplain, Floodway, Watercourse and Wetland Protection

Article V Watercourse and Wetland Protection Section 12.91-12.93

Appendix AA

- (2) Pasture, grazing land, forestry, outdoor plant nursery, orchard, and harvesting of crops.
- (3) Wildlife sanctuary, woodland preserves and arboretums.
- (4) Recreational uses such as parks, day camps, picnic groves and golf courses, so long as a use permit was obtained for construction of any building or structure serving the park, day camp, golf course, or picnic grove and that those buildings or structures comply with the state construction code provisions and regulations pertaining to new construction and substantial improvement in floodprone and flood hazard prone areas.

(Ord. No. C-229, 9-18-89; Ord. No. C-360-E, § 7, 8-28-06)

### Sec. 12-75. - Reserved.

Editor's note— Ord. No. C-360-F, § 2, adopted June 18, 2007, repealed § 12-75, which pertained to fast track permits and derived from Ord. No. C-360-C, § 1, adopted June 20, 2005; and Ord. No. C-360-E, § 8, adopted Aug. 28, 2006.

### Secs. 12-76-12-90. - Reserved.

### ARTICLE V. - WATERCOURSE AND WETLAND PROTECTION

Sec. 12-91. - Acts for which use permit required; application review criteria.

- (a) Fertilization restricted. No fertilization shall be permitted within a wetland.
- (b) Acts requiring written use permits. A written use permit from the township is required to:
  - (1) Deposit any material or structure within or upon any watercourse or wetland area.
  - (2) Remove or drain any material from any watercourse or wetland area.
  - (3) Dredge, fill or land balance bottomlands or wetlands;
  - (4) Create, enlarge, diminish or change the course of any naturally occurring or constructed canal, channel, ditch, lagoon or other watercourse;
  - (5) Construct, enlarge or operate any use or development on a watercourse or wetland except for noncommercial seasonal docks and other recreational facilities conforming to subsections<u>12-</u> <u>92(4)</u> through (6);
  - (6) Construct, extend, enlarge or connect any conduit, pipe, culvert or open or closed drainage facility erected for the purpose of carrying stormwater runoff from any two (2) or more singlefamily residential sites, multiple residences, commercial sites, parking areas, paved or unpaved private or public roads, or any other land use permitting discharge of silt, sediment, organic or inorganic materials, chemical fertilizers, flammable liquids or any substance producing turbidity.
  - (7) Construct, enlarge, extend or connect any private or public sewage or waste treatment plant discharge to any canal, channel, ditch, lagoon or other watercourse;
  - (8) Pump surface water for irrigation or sprinkling of properties, other than for individually owned single family residences under two (2) acres, from any canal, channel, ditch, lagoon or other watercourse unless the water is wholly contained within the user's property.
- (c) Criteria for use permit. In reviewing any application for a use permit under subsection (b) above, criteria such as the following shall be considered.
  - (1) The water quality, including filtering action;
  - (2) The fish and other wildlife, including their habitats;
  - (3) The probable impact if the use is permitted upon adjoining wetland or drainage areas and the cumulative effect of similar proposals on the watershed and water table;

- (4) The economic value, both public and private, of the proposed change to the general area;
- (5) The land use for which the property is zoned or planned;
- (6) The recreational impact;
- (7) The feasibility of alternatives;
- (8) The size of the wetland where the use is proposed; and
- (9) The remaining storage capacity is adequate to control a 100-year flood.
- (d) Conditions for not issuing use permit. A use permit shall not be issued if the affected wetland is contiguous to or drains directly into a watercourse or is over two (2) acres in size, unless it is shown that:
  - (1) Adequate storage capacity remains to control a 100-year flood;
  - (2) The proposed activity is primarily dependent upon being located in the wetland; and
  - (3) A feasible and prudent alternative does not exit.
- (e) Noncontiguous wetlands less than two acres in area. A permit shall be approved with respect to a noncontiguous wetland less than two (2) acres in area unless the township determines that the wetland is essential to the preservation of the natural resources of the township. It shall not be the burden of the property owner to prove that the wetland is not essential to the preservation of the natural resources of the township.
- (f) Analyzation of noncontiguous wetland areas. All noncontiguous wetland areas of less than two (2) acres which appear on the wetlands inventory map, or which are otherwise identified during a field inspection by the township, shall be analyzed for the purpose of determining whether such areas are essential to the preservation of the natural resources of the township. If there is to be a denial of a permit to dredge, fill, construct or otherwise alter or undertake an operation in a noncontiguous wetland area of less than two (2) acres, then, on the basis of data gathered by the township, findings shall be made in writing and given to the applicant stating the basis for the determination that such wetland is essential to the preservation of the natural resources of the natural resources of the township. In order to make such a determination, there shall be a finding that one (1) or more of the following exist within such wetland:
  - (1) The site supports state or federal endangered or threatened plants, fish or wildlife appearing on a list specified in section 6 of the Endangered Species Act of 1974, Act No. 203 of the Public Acts of 1974, being section 299.226 of the Michigan Complied Laws.
  - (2) The site represents what is identified as a locally rare or unique ecosystem.
  - (3) The site supports plants or animals of an identified local importance.
  - (4) The site provides groundwater recharge documented by a public agency.
  - (5) The site provides flood and storm control by the hydrologic absorption and storage capacity of the wetland.
  - (6) The site provides wildlife habitat by providing breeding, nesting or feeding grounds or cover for forms of wildlife, waterfowl, including migratory waterfowl and rare, threatened or endangered wildlife species.
  - (7) The site provides protection of subsurface water resources and provision of valuable watersheds and recharging groundwater supplies.
  - (8) The site provides pollution treatment by serving as a biological and chemical oxidation basin.
  - (9) The site provides erosion control by serving as a sedimentation area and filtering basin,

absorbing silt and organic matter.

- (10) The site provides sources of nutrients in water food cycles and nursery grounds and sanctuaries for fish.
- (g) Data. In connection with the determination whether the wetland is essential to the preservation of the natural resources of the township, the property owner may make an election and response under subsection (1) or (2) below, relative to each noncontiguous wetland area less than two (2) acres:
  - (1) In lieu of having the township or its consultant proceed with the analysis and determination, the property owner may acknowledge that one or more of the criteria in subsections (f)(1) through (10) above exist on the wetland in question, including a specification of the one or more criteria which do exist; or
  - (2) An election to have the township or its consultant proceed with the analysis on whether each of the criterion in subsections (f)(1) through (10) exist or do not exist in the wetland in question, including specific reasons for the conclusion in respect to each criterion.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 11, 5-23-94; Ord. No. C-229/C-360-A, § 1, 10-17-94; Ord. No. C-360-B, § 1, 4-7-97)

Sec. 12-92. - Acts for which use permits not required.

Subject to the conditions of <u>section 12-91</u>, no use permit is required for use of a watercourse or wetland for:

- (1) Conservation of natural habitats, soil, vegetation, water, fish and wildlife.
- (2) Outdoor recreation including play and sporting areas, field trails for nature study, hiking and horseback riding, swimming, skin diving, boating, trapping, hunting (other than firearms) and fishing where otherwise legally permitted and regulated.
- (3) Grazing of animals.
- (4) Farming, horticulture, silviculture, lumbering and ranching activities, including plowing, irrigation, irrigation ditching, seeding, cultivating, minor drainage, harvesting for the production of food, fiber and forest products, or upland soil and water conservation practices, where otherwise legally permitted and regulated. Wetlands altered under this subsection shall not be used for a purpose other than a purpose described in this subsection without a permit from the township.
- (5) Noncommercial, seasonally installed docks extending not more than fifty (50) feet from the ordinary high water mark; provided, the dock does not extend into or obstruct the reasonable boat traffic area of the waterway.
- (6) Noncommercial rafts and diving platforms not exceeding one hundred fifty (150) square feet of area located not more than one hundred fifty (150) feet from the ordinary high water mark; provided, that the facility does not create a safety hazard, extend into or obstruct the reasonable boat traffic area of the waterway.
- (7) Noncommercial seasonally installed slides, swings and other water recreational devices erected upon bottomlands with ordinary high water depth not exceeding four (4) feet; provided, that the devices do not create a safety hazard or obstruct the reasonable boat traffic area of the waterway.

(8)

Maintenance or operation of serviceable structures in existence on October 1, 1980, or constructed pursuant to the Goemaere-Anderson Wetland Protection Act (Act No. 203 of the Public Acts of Michigan of 1979 (MCL 281.701 et seq., as amended).

- (9) Construction or maintenance of farm or stock ponds;
- (10) Maintenance operation or improvement, including straightening, widening or deepening of the following that is necessary for the production of harvesting of agricultural products:
  - a. An existing private agricultural drain.
  - b. That portion of a drain legally established pursuant to the Drain Code of 1956, Act No. 40 of the Public Acts of 1956, as amended, being sections 280.1 to 280.630 of the Michigan Compiled Laws, which has been constructed or improved for drainage purposes.
  - c. A drain constructed pursuant to other provisions of Act 203 of the Public Acts of 1979, as amended.
- (11) Construction or maintenance of farm roads, forest roads or temporary roads for moving mining or forestry equipment if the roads are constructed and maintained in a manner to assure that any adverse effect on the wetland will be otherwise minimized.
- (12) Drainage necessary for the protection and harvesting of agricultural products if the wetland is owned by a person who is engaged in commercial farming and the land is to be used for the production and harvesting of agricultural products. Except as otherwise provided in this chapter, wetland improved under this subsection after October 1, 1980, shall not be used for nonfarming purposes without a permit from the township. This subsection does not apply to a wetland that is contiguous to a lake or stream, or to a tributary of a lake or stream, or to a wetland that the township has determined by clear and convincing evidence to be a wetland that is necessary to be preserved for the public interest, in which case a permit shall be required.
- (13) Maintenance or improvement of public streets, highway or roads within the right-of-way and in such a manner as to assure that any adverse effect on the wetland will be otherwise minimized. Maintenance or improvement does not include adding extra lanes, increasing the right-of-way or deviating from the existing location of the street, highway or road.
- (14) Maintenance, repair or operation of gas or oil pipelines and construction of gas or oil pipelines having a diameter of six (6) inches or less if the pipelines are constructed, maintained or repaired in a manner to assure that any adverse effect on the wetland will be otherwise minimized.
- (15) Maintenance, repair or operation of electric transmission and distribution power lines and construction of distribution power lines if the distribution power lines are constructed, maintained or repaired in a manner to assure that any adverse effect on the wetland will be otherwise minimized.
- (16) Operation or maintenance, including reconstruction, of recently damaged parts of serviceable dikes and levees in existence October 1, 1980, or constructed pursuant to the Goemaere-Anderson Wetland Protection Act (Act No. 203 of the Public Acts of Michigan of 1979, (MCL 281.701 et seq., as amended).
- (17) Construction of iron and copper mining tailings basins and water storage areas.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 12, 5-23-94)

Sec. 12-93. - Permit denial; request for revaluation of affected property.

The owner(s) of any lot, outlot or parcel of land for which a use permit under this chapter is applied for and denied by the township may request a revaluation by the township board of review of the affected property for assessment purposes to determine its fair market value under the use restriction. A landowner who is aggrieved by a determination, action or inaction under this section may protect and appeal that determination, action or inaction pursuant to the General Property Tax Act, Act No. 206 of the Public Acts of 1893, being sections 211.1 to 211.157 of the Michigan Compiled Laws.

(Ord. No. C-229, 9-18-89; Ord. No. C-229/C-360, § 12, 5-23-94)

Sec. 12-94. - Reserved.

Editor's note— Ord. No. C-360-F, § 2, adopted June 18, 2007, repealed § 12-94, which pertained to fast track permits and derived from Ord. No. C-360-C, § 1, adopted June 20, 2005.



Charter Township of West Bloomfield NPDES MS4 Application Reissuance Due April 1, 2016

# Appendix FF

From West Bloomfield Municipal Code of Ordinances

Chapter 26- Zoning

Article 3.0 Section 3.1.21 Woodland Conservation Overlay District Article 5.0 Section 5.4 Site Standards Article 6.0 Section 6.1-7.17 Development Procedures

## CHAPTER 26

# Article 3.0 Zoning Districts















## Woodland Conservation Overlay District

#### A. FINDINGS OF FACT AND INTERPRETATION OF SECTION

- i. Findings of fact: The township finds that continued growth and development along with future redevelopment and emerging tree diseases and threats resulting in increased demands upon natural resources has had the effect of encroaching upon, despoiling or eliminating many of the woodlands and associated forms of vegetation. This natural resource and processes associated therewith if conserved constitutes an important physical, aesthetic, environmental, recreational and economic asset to existing and future residents of the township. Specifically, the township finds that:
  - a. Woodland growth protects public health through the absorption of airborne pollutants and generation of oxygen, through buffering for the reduction of excessive noise and visual screenings, through cooling properties in the summer months and through the protection of groundwater recharge areas and subsurface water resources.
  - b. Woodlands provide for public safety through the prevention of erosion, sedimentation, and flooding and through buffering for wind and storm damage.
  - c. Trees and woodland growth are essential components of the general welfare of the township by maintaining natural beauty, recreation, protecting the reproductive and regenerative capabilities of the woodland areas, maintaining plant and tree diversity, protecting wildlife habitats and the irreplaceable heritage for existing and future township residents.
  - d. The protection of such natural resources is a matter of paramount public concern, as provided by article IV, section 52 of the Michigan Constitution of 1963, and the Michigan Environmental Protection Act, Part 17 of the Natural Resources and Environmental Protection Act, MCL 324.1701 et seq., as amended.
- ii. Interpretation:
  - a. Unless a definition is provided for a term, or context dictates otherwise, the terms of this section, and the definitions applicable thereto, shall be interpreted by reference

to the science of forestry, with the objective of conserving woodlands.

- b. The official woodland map of West Bloomfield Township incorporated into this section by this reference shall be deemed to be a special overlay zoning map. The woodland board shall, in the first instance, interpret this section and the woodland map, subject to review as provided in this section and by law. The woodland map may be updated by an amendment of this chapter at any time new data becomes available or as the growth of trees occurs. In all instances in which the official woodland map is proposed for amendment in a manner which would result in an increase in the area of woodlands on the map, notice of the public hearing to be conducted by the planning commission in connection with such amendment shall be given to the owners of all property on which the area of woodlands is proposed for expansion or new designation.
- Woodlands are identified for mapping purposes by the presence of two (2) criteria: (1) the presence of at least three (3) contiguous acres of area; and (2) the existence of canopy coverage over more than one-half of the area or average tree density of thirty (30) square feet of tree trunk area per acre (basal area). However, a property owner may request the township to have the township's forester perform an on-site analysis of the actual crosssectional square footage of tree trunk area per acre (basal area) over the entire contiguous mapped woodland which includes such owner's property. In the event the township's forester reasonably determines that the mapped woodland area does not contain an average tree density of thirty (30) square feet of tree trunk area per acre (basal area), the township shall, for a period of one (1) year, consider such area to be unregulated under this section of the Code.
- d. It is not the intent of this section to regulate land areas which do not support one (1) or more the objectives set forth in this Subsection A.i. A property owner shall be permitted to apply to the woodland board for an adjustment of the outer boundary of a mapped woodland area. Considering the criteria set forth below, the

Definitions **[1** Purpose and Introduction

**3** Zoning Districts







Admin and Enforcement

3 - 50

1

## Woodland Conservation Overlay District (Continued)

- iv. Tree preservation areas. Where a permit request involves the cutting of trees or removal of forest products lying either wholly or partially within a designated tree preservation area, the township shall apply those provisions contained in subsection G.
- V. Sudivision lots predating ordinance. Where a permit request involves the cutting of trees or removal of forest products lying within a woodland on an existing lot or outlot within a one-family subdivision approved prior to the adoption of the woodland ordinance, the township shall apply those provisions contained in subsection H.
- vi. Woodland harvesting. Where a permit request does not involve a site plan or plat lying either wholly or partially within a woodland, the woodland review board shall evaluate the petition and direct the environmental director or manager on the disposition of the requested permit utilizing those provisions contained in subsection D.

#### D. WOODLAND PERMIT FOR HARVESTING

- i. Application and review:
  - a. There shall be no cutting of trees or harvesting of forest products lying either wholly or partially within a woodland without there first having been a woodland permit applied for jointly by both the owner of record of the woodland and the tree harvester, and the permit having been issued by the township. Woodcutting and harvesting of forest products within a woodland without there first having been a woodland permit issued shall subject the person(s) who authorized or knowingly permitted the individual to remove the trees, as well as the person(s) who removed the trees to fines and penalties as provided for within this chapter.
  - b. There shall be a woodland permit fee established by resolution of the township board.
  - c. The woodland permit application shall be submitted to the environmental department and shall include the following information:
    - (1) A legal description of the property for which the woodland permit is requested.
    - (2) The application shall be signed by both the owner(s) of record of the property

where the harvest is proposed and the tree harvester.

- (3) A harvest plan for the woodland prepared and signed by a forester licensed and registered in the state. The harvest plan shall incorporate the following information and standards in addition to a complete description of the products to be harvested:
  - A present description of the (a) woodland specifying basal area. tree species mixture, a sampling of tree size and the notation of unusual, scarce or endangered trees.
  - (b) A one hundred (100) percent tally of trees to be harvested stating the species, size and quantity. This tally shall include those trees removed which are diseased, damaged or in an otherwise unhealthy condition.
  - (c) A general description of the woodland after the proposed harvest specifying basal area and tree species mixture. A basal area which provides canopy cover, reproductive capacity, understory structure, and wildlife habitat sufficient to maintain the function performed by the particular forested area disturbed shall be maintained within the woodland after harvesting. This basal area will be determined based upon the application of principles of forestry science, as proposed by the applicant and approved in the reasonable discretion of the woodland board after consultation with the township forester.
  - (d) A list of equipment to be used in the harvest process in order to estimate the amount of damage which can be expected to nonharvested trees within the woodland.
  - Trees which have trunk diameter (e) of more than twenty (20) inches, when measured four and fivetenth (4.5) feet from the ground, shall not be included in the

Districts Zoning 3 Standards

Use

4





Enforcement Admin and

3 - 52

2 Definitions

Introduction Purpose and

Purpose and Introduction

Definitions

N

Districts

 $\sim$ 

Standards

4

Site Standards

S

Development Procedures

0

Admin and Enforcement

Use

## Woodland Conservation Overlay District (Continued)

forfeited to the township at a rate of five (5) percent per day for each day of nonperformance. The permit holder shall be entitled to request and obtain a hearing before the woodland board to demonstrate good cause for the delay. Such request shall be presented within twenty-one (21) days of the end of the time limit established in the permit. Following the hearing, the woodland board shall specify the amount of the forfeiture, if any, based upon the amount of time which elapsed following the time limit without good cause. Until the end of the twenty-one (21) days within which a hearing may be requested, or until a decision is made by the woodlands board on a timely request, whichever is applicable, the forfeiture shall be held in abeyance.

- A woodland permit, having been approved, C. shall be valid for a period not exceeding one (1) year from the date of issuance. All restoration work prescribed as part of the woodland permit must be completed within six (6) months from the start of work within the woodland. Extension of the six-month limit may be granted by the planning and environment director up to an additional six (6) months, providing it is requested in writing by the permit holder(s), the conditions which existed at the date the permit was granted remain unchanged, and the reasons necessitating the extension are provided.
- d. The approved woodland permit shall be posted by the petitioner on the site in full and obvious view to the casual observer prior to work starting on the site. Posting location near a road is preferred. The township ordinance enforcement officers and the police department are authorized to enforce the provisions of this section.
- iv. Woodland permit appeal: An appeal of a woodland permit, denial of a woodland permit or denial of the extension of the six-month limit on restoration by the planning and environmental director shall be made to the township board in accordance with subsection J.
- v. Creation of new unregulated woodland:
  - Subject to the conditions set forth below in this Subsection (5), a person may plant trees so as to create a new area which would otherwise be or become a woodland,

as defined in this section, but which shall not be considered or mapped as a woodland.

- b. An area of newly planted trees shall not be considered or mapped as a woodland if all of the following conditions are met prior to the planting of any new trees:
  - No part of the area on which the trees are to be planted shall be within an existing woodland, and the canopy coverage of the trees over the area in question shall be less than fifteen (15) percent of the total area on which the new trees are to be planted.
  - The owner of the property shall (2)submit to the environmental department a plan prepared by a State of Michigan registered forester, outlining and describing the plan for the planting, maintenance and removal of the new trees. Such plan shall be subject to approval by the township's forester for the purpose of confirming that the plan is designed achieve sound to forestry management objectives.
  - (3) There shall be ongoing conformance with the approved forestry management plan.
- c. The environmental department shall maintain the forestry management plan on file at the township unless and until the plan has been carried out to completion.

#### E. WOODLAND PERMITS FOR SITE PLANS, PLATS AND NON-SUBDIVISION LOTS

- i. Application and review:
  - a. There shall be no cutting of trees or harvesting of forest products lying either wholly or partially within a woodland for the purpose of developing a site plan or plat without there first having been a woodland permit applied for and a permit issued by the township. Any woodcutting or removal of forest products within a woodland without there first having been a woodland permit issued shall subject the person(s) who authorized or knowingly permitted the individual to remove the trees, as well as the person(s) who removed the trees, to the fines and penalties as provided for

- within this chapter. It shall be the responsibility of the developer to notify the individual builders or owners of all restrictions pertaining to the preservation of woodlands pursuant to the approved woodland permit.
- b. Development of platted or unplatted parcels containing woodlands shall be subject to the woodland review and approval procedures if the site plan proposes encroachment into the woodland. This woodland acreage is independent of property lines and may incorporate contiguous woodlands on adjacent property.
- c. Maximum woodland disturbance:
  - (1) During a ten-year period prior to the adoption of this amendatory language of this section, a state-registered forester has made determinations in the township with regard to the extent of tree removal which may be permitted within a level of tolerance which achieves the conservation of woodland resources and concurrently allows new development to occur. Measurement has considered physical improvements, and the accompanying fringe damage caused during construction and which results from occupancy and use following construction, Based upon this long pattern and practice of determinations, as well as the actual development experience on woodland properties, and based upon the advice of the township's consulting forester, its has been concluded that, in order to make provision for the conservation of woodland resources and concurrently allow for reasonable development, a specified level of disturbance should be permitted, with flexibility for additional disturbance in those instances in which there are substantial woodlands on the site to be developed. Consistent with this conclusion, subject to adjustments specified in this subparagraph, and subparagraphs (2) and (3) below, there shall be an entitlement to a woodland disturbance in connection with the development and use of a site plan or plat equal to twenty-five

(25) percent of each tree stand within the woodland area on the property in question, with the specific disturbance area to be determined as provided in this chapter. The balance, or seventy-five (75) percent of the area of each tree stand on the property in question shall be preserved from such disturbance. The woodland board shall permit a disturbance level greater than twentyfive (25) percent, but not exceeding forty (40) percent, where the following are demonstrated:

- More than twenty (20) percent of the site to be developed consists of woodlands; and
- (b) The property may not be developed to the following densities unless a greater disturbance level is permitted: for residential property, one and one-half (1 1/2) residential units gross acre; and for per nonresidential property, fifteen (15) percent gross floor area in relation to the total site (for these calculations, the area of the site shall not include those portions of the property which are not buildable as a result of watercourses and wetlands unless and to the extent that a permit has been issued authorizing such development). The extent of greater disturbance permitted by the woodland board shall be the minimum additional disturbance needed to achieve the residential and nonresidential development density specified above.
- (2) Based upon a review of the particular woodland, the woodland board may establish an adjustment maintaining the overall woodland disturbance at twenty-five (25) percent, but specifying greater disturbance than twenty-five (25) percent of one (1) tree stand coupled with a corresponding decrease in disturbance of one (1) or more other tree stands on the property in

Introduction Purpose and

N

3.1.21













- (b) Soil type (permeability, fertility, structure), considering the likelihood of survival following development.
- (c) Reproductive capacity (sexual and vegetative).
- (d) Vegetative species diversity (longevity, food value).
- (e) Vegetative density (stem count).
- (f) Basal area.
- (g) Wildlife habitat.
- (h) Other factors deemed relevant to preservation of the woodland based upon particular characteristics.
- (5) The site plan or plat shall reflect the conservation of the woodland by either:
  - Selective clearing within the woodland to create wooded sites; or
  - (b) Creation of private woodland park areas within which no development or clearing shall take place. Utilities, roads or similar infrastructure may be permitted within such woodland park areas if and to the extent the disturbance of such improvements would not result in the maximum disturbance area being exceeded.
- (6) The site plan or plat shall be considered for review by the woodland board upon completion of the woodland inventory and evaluation report by the township's registered forester and the site plan or plat application requirements. The site plan submitted by the petitioner for review by the woodland board shall include the following information:
  - (a) A plan representing disturbance to the woodland which shall consist of either:
    - (i) A survey showing the location of the entire woodland boundary on

the petitioner's property and the location, size and species of all trees within the woodland contained on the petitioner's property that are equal to or larger than six (6) inches in diameter. The ground survey map shall be of sufficient scale to depict disturbance impact. A printed summary denoting the tag number of each tree, its size and species, the number of trees in each diameter size class, and number of median size trees per acre shall be included as part of the ground survey map for the petitioner's property; or

3.1.21

- (ii) An aerial survey map showing the boundary of the woodland on the petitioner's property as depicted on the official township woodland map. The aerial survey of the site shall include a fifty (50) feet to one (1) inch scale map of the petitioner's property to identify the proposed disturbance area.
- (b) The topographic contours at two-foot intervals, proposed grades, proposed elevations of roads, garage floors and brick ledges for all buildings. This required information shall be provided for a distance of fifty (50) feet beyond the property line.
- (c) The proposed location of all utility lines, including water, sanitary and storm sewers, gas and similar infrastructure and the approximate depth of the buried utility. The site plan shall also include where offsite improvements are intended such as the extension of water and/or

Introduction Purpose and



S

Zoning Districts











## 8-57

when necessary for the location of structures or site improvements and when no feasible and prudent alternative location for the structures or improvements can be accomplished without causing undue hardship.

- (9) The proposed activity shall be in compliance with all other applicable codes and ordinances.
- ii. Public hearing required. After reference by the environmental director or manager, the woodland board shall hold a public hearing as expeditiously as possible on the woodland permit request as established in Subsection I. The woodland board shall inform the planning and environment director or his designee as to the disposition of the permit request.
- iii. Woodland permit.
  - a. For those developments and operations where the planning commission is the final approval authorized as defined in this chapter, the planning commission, after review of the recommendation from the woodland review board, may authorize the issuance or denial of a woodland development permit as specified by the woodland review board. Any permit issued shall be issued by the planning and environment director.
  - b. For those plats, developments and operations where the township board is the final approval authority, the recommendation of the woodland board shall be referred to the township board by the planning commission along with a separate recommendation for the disposition of the plat, development or operation. The township board may authorize the issuance of a woodland development permit by the planning and environment director with or without specific conditions attached or deny the issuance of the woodland development permit.
  - c. Upon approval of a woodland permit, a letter of credit or escrow account shall be posted with the township as a condition of site plan approval by the petitioner to guarantee compliance with the disturbance conditions stipulated in the site plan. The amount of the financial instrument shall be no less than ten (10) percent of the total inventory of median size trees and larger to be preserved on the

site as calculated by the total undisturbed land area times the field tree density data in the forester's report times six hundred dollars (\$600.00). This financial instrument shall be structured in such a manner that if the total disturbed land area, either directly or indirectly, exceeds the number allowed on the approved site plan, this account shall provide for replacement landscaping at the rate of six hundred dollars (\$600.00) per removed tree in excess of approved allowance. The environmental director or manager shall authorize such replacement landscaping as soon as practical. The letter of credit or escrow account shall be maintained until the development is completed or final certificates of occupancy are issued, although reductions in the amount of the instrument are allowed as portions of the site are completed and final certificates of occupancy are issued.

- d. The issuance of building permits shall be contingent upon compliance with the approved clearing schedule and inspections by the township. Through the process of periodic site inspections by or for the environmental director or manager, a tally of both direct and indirect tree removal will be maintained by the township. The petitioner shall be notified in writing by the environmental director or manager or designee when and where replacement plantings are required. There shall be a final inspection made by the township for compliance with these woodland provisions or respective lots upon completion of the development and prior to release of final certificates of occupancy and letters of credit or escrow accounts on deposit with the township.
- e. On single-family lots within a woodland the application for a building permit shall be accompanied by a grading plan developed in accordance with article XIII, Grading. In addition to the minimum requirements required in article XIII, the grading plan shall include the size, location and species of all trees six (6) inches and larger on the subject property, and specify which trees are proposed to be removed.
- f. The petitioner shall stake, paint or otherwise delineate the location of all disturbances proposed in the woodland, including roadways, structures, utilities, stormwater

Purpose and Introduction

3.1.21



S

Zoning Districts











diameter or larger within the construction easement and an area thirty (30) feet on either side of the construction easement.

- (7) The location, size and species of all trees six (6) inches or larger in diameter to be removed.
- (8) A list of the type of construction equipment to be used.
- d. The standards provided in Subsection E.i.c.
  (5), above shall govern the granting or denial of an application for a woodland permit required by this section.
- ii. Public hearing required. After reference by the director of planning and environment or his designee, the woodland board shall hold a public hearing as expeditiously as possible on the woodland permit request as established in paragraph I below. The woodland board shall inform the planning and environment director or his designee as to the disposition of the permit request.
- iii. Woodland permit:
  - a. Upon approval the woodland board may require that a letter of credit or escrow be posted with the township in order to assure compliance with the approved woodland permit. The amount of the letter of credit or escrow shall be determined by the woodland board based on the impact to the woodland.
  - b. The woodland board may require the boring of the utility under certain trees and restoration plantings to preserve the integrity of the woodland.
  - c. The woodland board may require the erection of barriers to protect the trees during construction. Such protection shall remain in its approved location until such time as it is authorized by the township for removal.
- iv. Woodland permit appeal. An appeal of a woodland permit or denial of a woodland permit shall be made to the township board in accordance with subsection J.

### G. WOODLAND PERMITS FOR TREE CUTTING WITHIN DESIGNATED TREE PRESERVATION AREAS AFTER THE APPROVAL OF A WOODLANDS PERMIT

- Permits required. Upon approval of a woodland ì. permit or site plan and unless otherwise specified, it shall be unlawful for any person, without first obtaining a permit from the township, to undertake any construction (i.e., buildings, additions, decks, patios, tennis courts, pools, outbuildings or other attached or detached accessory structures) or activities which will cause the direct or indirect removal of any tree within a designated tree preservation area. A tree preservation area shall be defined as any area within a woodland, regardless of size, where trees are indicated to be saved on the approved woodland permit, site plan or plat.
- ii. Submittal of application. All applications for a permit to remove trees within a designated tree preservation area beyond the prescribed limits of a woodland permit or site plan shall be accompanied by a dimensioned plot plan showing the following:
  - a. Date, north point and scale.
  - b. The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties.
  - c. The dimensions of any easements on the subject property, and the dimensions and depths of any proposed underground utilities or services which require the removal of trees.
  - d. The location and dimensions of the building and driveway envelope as approved on the original woodland permit and/or site plan.
  - e. The location of all existing and proposed structures on the subject property.
  - f. Existing and proposed contour data when the application involves filling or grading activities of more than two (2) cubic yards.
  - g. The size, location and species of all trees four (4) inches and larger on the subject property. The size of a tree is measured in terms of diameter, measured four and fivetenth (4.5) feet (dbh) from the base of the tree.
  - h. The size, location and species of all trees four (4) inches dbh and larger to be

Purpose and Introduction

3.1.21



Zoning Districts

N











Woodland Conservation Overlay District (Continued)

the property owners and occupants within three hundred (300) feet of the subject property. Such notice shall also be sent to all subdivision associations and lake associations which are contiguous to the property and are registered with the township. The notice shall indicate that a public hearing has been requested, the nature of the woodland permit request, the petitioner's name and address, and the time, date and location of the hearing. A synopsis of the notice shall also be published in one (1) of the legally approved newspapers of general circulation in the township.

#### J. APPEAL OF WOODLAND PERMIT RECOMMENDATION

- i. An appeal may be made by any person from a recommendation or decision of the woodland review board. Such an appeal shall be made to the township board which shall have the authority to approve, reverse or modify any such recommendation or decision. This shall be the only appeal to consider matters pertaining to woodlands.
- ii. Any appeal to the township board must be received in writing by the township clerk within twenty-one (21) days of the woodland board recommendation.
- iii. Public notification of the appeal shall be in accordance with subsection I.
- iv. The township board shall be the only body empowered to reverse or modify a recommendation or decision of the woodland review board. In the absence of reversal or modification by the township board, a recommendation of the woodland review board shall be binding.

#### K. WOODLAND PERMITS APPROVED PRIOR TO OCTOBER 27, 2989

Site plans or plats approved by the woodland board, planning commission or township board prior to October 27, 1989, shall be exempt from the terms and provisions of the amendments of this section, which became effective on October 27, 1989. Those site plans and plats approved prior to October 27, 1989, shall comply with the terms and conditions of the woodland permit.

### L. PERMIT EXPIRATION

Permit Expiration: A woodland permit shall be valid for a period consistent with a valid site plan approval in accordance with section 26-6.1. If not a part of a valid site plan, a woodland permit shall be valid for one (1) year. Any modifications to a site or plat which proposes additional plan encroachment into a woodland other than what was originally approved shall be subject to review of the woodland review board. Where the renewal of a site plan or plat is proposed which would be contrary to the woodland ordinance as a result of amendments to the ordinance subsequent to the original approval of the site plan or plat, the woodland review board shall apply the provisions of the current ordinance in reviewing the proposed renewal of the site plan or plat.

### M. ENFORCEMENT

- i. Any person found guilty of violating any of the provisions of this section shall be guilty of a misdemeanor and shall be subject to the fines and penalties as outlined in the Township's Code of Ordinances. Each violation of this section shall constitute a separate offense.
- ii. Any use or activity in violation of the terms of this section is hereby declared to be a nuisance per se and may be abated by order of any court of competent jurisdiction. The township, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation. All costs, fees and expenses in connection with such action may be assessed as damages against the violator by a court of competent jurisdiction.
- iii. In addition to the remedies stated herein, the township may order the restoration and reforestation of any woodland which has been impacted as a result of a violation of this section at the violator's expense.

#### N. MAINTENANCE

Nothing in this section shall be construed to limit or prohibit the regular trimming, pruning and maintenance of trees; the removal of dead, diseased or dying trees; or the trimming or removal of trees which might reasonably be expected to cause injury to persons or property or cause damage to an essential service/utility if left unattended. However, if such maintenance by an essential service/utility will involve woodland tree cutting in an existing easement or right-of-way, a

Introduction Purpose and



ເມ

Zoning Districts













N

Definitions

CHAPTER 26

# Article 5.0 Site Standards















Purpose and Introduction

 $\mathbf{2}$  Definitions



4

Use Standards



- E. Satellite television dish antennas are permitted subject to the provisions of Section 26-5.19 and require a building department permit prior to placement on any residential zoned site.
- Regulations for accessory buildings and structures including animal enclosures in the RM Multiple Family residential districts:
  - A. In the RM-6, RM-9 and RM-12 multiplefamily residential districts satellite television dish antennas are considered to be accessory structures and may be permitted only with the approval of the planning commission.
  - B. A building or structure accessory to a residential building shall not be erected in the required front, side or rear yard (perimeter) of a multiple development.
  - C. Landscaping and/or screening of the accessory building or structure may be required by the planning commission.

### 5.2 ACCESS TO MAJOR OR SECONDARY THOROUGHFARE TO ALLOW ACCESS TO A SIDE STREET UNDER CERTAIN CONDITIONS

Whenever this chapter requires users to have direct access or ingress and egress to a major or secondary thoroughfare, access driveways may be permitted to other than a major or secondary thoroughfare or freeway service drive where such access is provided to a street where the property directly across the street from such driveway and all property abutting such street between the driveway and the major or secondary thoroughfare or freeway service drive is zoned for multiple-family use or any nonresidential uses, is developed with permanent uses other than single-family residences or is an area which in the opinion of the planning commission will be used for other than single-family purposes in the future. This exception shall apply only if the planning commission finds that there are special circumstances which indicate that there will be a substantial improvement in traffic safety by reducing the number of driveways to a thoroughfare.

#### **5.3 CORNER CLEARANCE**

No fence, wall, shrubbery, sign, landfill or other obstruction to vision above the height of three (3) feet from the established street grades shall be permitted within the triangular area formed at the intersection of any street right-of-way lines by a straight line drawn between the right-of-way lines at a distance along each line of twenty-five (25) feet from their point of intersection.

#### 5.4 ENVIRONMENTAL FEATURES SETBACK

- 1. Intent and purpose. It is the intent of this article to require a minimum setback from environmental features, and to regulate property within such setback in order to:
  - A. Prevent physical harm, impairment and/or destruction of or to an environmental feature. It has been determined that, in the absence of such a minimum setback, intrusions in or onto environmental features would occur, resulting in harm, impairment and/or destruction of environmental features contrary to the public health, safety and general welfare.
  - B. Achieve the following objectives in relation to setback areas:
    - i. Protect unique wildlife habitat and habitat transition, including, without limitation, feeding, nesting, resting and traveling areas for numerous animals.
    - Protection of surface water runoff and water quality for pollution prevention purposes, and assistance in beneficial water recharge for drinking, irrigation and other purposes.
    - iii. Provide water storage area in s t o r m events.
    - iv. Provide areas which are unique due to geographic relationship to environmental feature.
    - v. Preserve aesthetic views and areas for the enjoyment of natural resources.
    - vi. Preserve threatened and endangered species habitat, including upland species.
    - vii. Reduce the need for on-site and offsite stormwater storage capacity based upon the availability of a greater area of absorption and a smaller impervious area.
    - viii. Stabilize and protect soil resources, including the prevention of erosion and prohibition of loss due to moving water resulting in destruction of upland, structures and infrastructure on the upland, and prevention of the







Purpose and Introduction

N

Definitions

S

Zoning Districts

- C. Within an established environmental feature setback, unless and only to the extent determined to be in the public interest by the body undertaking the plan review, there shall be no: removal, deposition or assembly of materials or structures, permanent or temporary, above or below the surface of the land or water, including, but not limited to, houses, buildings, plants, bulkheads, piers, docks, rafts, landings, dams or waterway obstructions; removal of any soils, minerals or vegetation; dredging, filling or land balancing; or constructing or undertaking seasonal or permanent operations. This prohibition shall not apply with regard to those activities exempt from this prohibition, below.
- D. In determining whether the proposed construction or operations are in the public interest, the benefit which would reasonably be expected to accrue from the proposal shall be balanced against the reasonably foreseeable detriments of the construction or other operation, taking into consideration the local, state and national concern for the protection and preservation of the environmental feature in question. The following general criteria shall be applied in undertaking this balancing test:
  - i. The relative extent of the public and private need for the proposed activity.
  - ii. The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity.
  - iii. The extent and permanence of the beneficial or detrimental effects which the proposed activity may have on the public and private use to which the area is suited, including the benefits the environmental feature or environmental feature setback provides.
  - iv. The probable impact of the proposed construction or operation in relating to the cumulative effect created by other existing and anticipated activities in the environmental feature to be protected.
  - v. The probable impact on recognized historic, cultural, scenic, ecological or recreational values and on fish, wildlife and the public health.

- vi. The size and quantity of the environmental feature setback being considered.
- vii. The amount and quantity of the remaining environmental feature setback.
- viii. Proximity of the proposed construction or operation in relation to the environmental feature, taking into consideration the degree of slope, general topography in the area, soil type, drainage, erosion and sedimentation control, type of vegetation and the nature of the environmental feature to be protected.
- ix. Economic value, both public and private, of the proposed construction or operation, and economic value, both public and private, if the proposed construction or operation were not permitted.
- x. Mitigation and the other applicable environmental design criteria and standards in Subsection 26-5.4.3.E.
- E. Mitigation and environmental design criteria and standards. As used in this section, mitigation means actions designed to compensate for or offset impacts from operations to or in the area for which a use permit is requested. Compliance with the applicable design criteria and standards in this section, as determined by the environmental department director, shall be required for a minor project to be considered for approval by an administrative permit under Subsection 26-5.4.4.B and may be required for other use permits by the entity with final approval authority in the absence of a demonstration by the applicant that compliance with a particular design criteria or standard is not feasible and prudent or is not necessary to assure that the operation will cause the least possible damage and encroachment or interference with the environmental features setback and the natural resources and natural processes within the watercourse and wetland areas in the township. References this section to the "wetland/ in environmental mitigation manual" means a written document that is maintained and available to the public at the environmental department containing definitions of terms and detailed or technical lists, descriptions,









Purpose and Introduction







- Site Standards





5-11

- b. Existing vertical and horizontal contours of the shoreline shall be maintained.
- c. Vertical seawalls (steel or vinyl) are not permitted where vertical walls do not currently exist.
- d. Boulder seawalls will be installed on a 1:1 slope (forty-five (45) degree angle), approved geotextile fabric shall be installed behind the proposed seawall, and approved stone backfill shall be used to provide adequate drainage.
- e. Four- to eight-inch diameter natural cobblestone must be placed (minimum width of twelve (12) inches) at the toe of the entire length of the seawall.
- vii. Impervious surfaces can not exceed twenty-five (25) percent of an environmental features setback area and must be constructed such that runoff is directed away from watercourses and wetlands or to a native plant area to provide the maximum infiltration of storm water and runoff as possible.
- viii. Trees within the environmental features setback can be trimmed to a height of twelve (12) feet and herbaceous and/or shrubs can be cut to a minimum height of four (4) feet for the creation of a viewshed.
- ix. Beach sanding must meet the following design standards:
  - a. The purpose of the fill is for the creation, improvement, or restoration of swimming areas and beaches.
  - b. The fill is placed above the ordinary high water mark.
  - c. The fill is ten (10) cubic yards or less and is completed as one complete project.
  - d. The material is from a source approved by the environmental department director and is clean, nonpolluting, free from debris, organic materials, and waste metal products.
  - e. The total area filled shall not exceed twenty-five (25) percent of

the environmental features setback.

- x. Driveways must meet the following design standards:
  - a. Any upland on the property or other alternatives, such as obtaining a permanent easement for access from adjacent upland if available or a shared driveway shall be utilized to the greatest degree possible.
  - b. The location of the driveway is at the least damaging place on the property and creates the minimum wetland impact.
  - No ditches may be placed in the C wetland in association with the driveway.
  - d. The driveway must terminate at a buildable upland site.

#### 4. Exemption and administrative permits.

- A. Exemption. If and to the extent the township is prohibited by its ordinance or law from regulating or prohibiting the proposed activity in or on the respective environmental feature, regulation under this article shall be exempt.
- B. Administrative permits. Use permits may be approved administratively as provided in this subsection for the installation of native plants listed in the wetland/ environmental mitigation manual, on any property or for proposed operations on or in connection with the lawful use of a single-family residential property that has received and is or will be in compliance with the conditions of all other required township permits or approvals and that does not involve, include or propose any of the following as determined by the environmental department director upon reviewing a use permit application:
  - î. Operations by or on behalf of a public agency or utility for purposes other than maintenance or repair of existing structures.
  - ii. Operations that require site plan approval under the zoning ordinance.
  - iii. New home construction.
  - iv. More than twenty-five (25) percent impact on the existing environmental features setback area.



**1** Purpose and Introduction

2 Definitions





5 Standards





which shall be at least twenty-one (21) days after the date the notice is given.

- iii. Explain the right of persons, associations and wetland review board members entitled to the notice, to file written objections or challenges to the administrative permit on or before the date of intended permit issuance and that such objections or challenges must be based on and include some substantiation for claims that the environmental department director has not properly interpreted and/or applied this section in determining that the permit should be issued, that the proposed operations warrant a broader review by the wetland review board for specified reasons, or that specified feasible and prudent alternatives exist.
- F. Administrative permit decision. If no objections or challenges described in Subsection 26-5.4.4.E.iii are filed within the time allowed, the environmental department director shall approve the administrative permit for issuance subject to the appeal period under Subsection 26-5.4.6. If objections or challenges described in Subsection 26-5.4.4.E.iii are filed within the time allowed, the environmental department director shall provide copies to the applicant and may:
  - Approve the administrative permit for issuance subject to the appeal period under Subsection 26-5.4.6, and shall provide written notice to all persons or associations that filed objections or challenges of the decision and their appeal rights; or
  - ii. Upon determining that the challenges or objections may have merit, provide written notice to the applicant that the administrative permit is denied and refer the application to the wetland review board as a new use permit application for review and decision as provided in Subsection 26-5.4.3.B.
- G. Administrative permit requirements. An administrative permit shall include a deadline for performance of the operations and mitigation established by the environmental department director and shall not be issued until the applicant has provided a cash bond, irrevocable letter of credit, secured promissory note or other form of performance guarantee approved

by the township board, for one hundred twenty-five (125) percent of the cost of the work to assure the satisfactory and timely completion of the operations and mitigation and which shall be available to and enforceable by the township for that purpose upon the applicant's default.

- H. Administrative permit appeals. Approval of an administrative permit may be appealed to the township board in the same time and manner and subject to the same process as provided in Subsection 26-5.4.6 by a property owner or occupant or subdivision or lake association that would be entitled to receive notice under that subsection.
- 5. Setback standards. Unless otherwise determined by the body undertaking the plan review, the following setbacks shall apply:
  - A. A twenty-five-foot setback from the boundary or edge of a wetland.
  - B. A twenty-five-foot setback from the ordinary high water mark of a watercourse.
- 6. Appeal of approval or denial. A decision on an application regarding a use permit application under this section may be appealed only to the township board and provided such appeal is received in writing by the township clerk within twenty-one (21) days of such decision. Notice that a timely appeal has been made shall be sent by first-class mail by the township clerk to property owners and occupants within three hundred (300) feet of the property on which the requested construction or operation is to take place. Such notice shall also be sent to all subdivision associations and lake associations registered with the township that are contiguous to the property or environmental feature affected and members of the body that reviewed and decided upon the application. The notice shall indicate that an appeal hearing has been requested, use permit being appealed, the appellant's name and address; and the time, date and location of the hearing. A synopsis for the notice shall also be published in at least two (2) of the legally approved newspapers of general circulation in the township.
- 7. Conditions of issuance:
  - A. All operations permitted or approved by use permits shall be conducted in such a manner as will cause the least possible damage and encroachment or interference within the environmental feature setback



1 Purpose and Introduction







UП

- v. No materials (organic or inorganic), spoils, and/or equipment shall be stored within the wetland, environmental features setback area, and 100-year floodplain during and after construction.
- vi. No direct discharge of storm water, sump water, or wastewater unless pretreated is allowed to wetlands and/ or watercourses. Any existing direct discharge must be eliminated and discharged in a location approved by the environmental department director's designee.
- vii. No fill material beyond the request shall be deposited within any wetland, environmental features setback area and/or 100-year floodplain and the existing vertical and horizontal contours of the shoreline shall be maintained in connection with all seawalls.
- viii. Any and all fill utilized for installation shall be from an approved source.
- ix. Any and all areas of mitigation, restoration, or planting within a wetland, environmental features setback area and 100-year floodplain shall be planted with native/ indigenous plants (trees, shrubs, herbs, and/or vines) only in accordance with the wetland/ environmental mitigation manual.
- x. Ongoing monitoring by the environmental department director or environmental department director's designee shall be conducted with inspection reports recorded in the case file.
- xi. A final inspection by the environmental department director or environmental department director's designee shall be conducted with a report added to the case file.
- xii. The petitioner shall be responsible for the integrity of all landscaping materials in the mitigation areas for a period of twenty-four (24) months, and replace any vegetation that dies.
- xiii. Invasive and noxious plant eradication by herbicide applications must be completed by a certified applicator with documentation of the work upon

completion submitted to the environmental department.

- xiv. The petitioner shall be responsible for installation of department approved preservation signage.
- xv. The property owner(s) shall be given a copy of the township's fertilizer ordinance.
- xvi. A preservation notice and an accompanying recordable size site plan showing the wetland. environmental features setback area, and 100-year floodplain shall be recorded for the property indicating that the preservation methods have been employed to protect the environmental features and cannot be disturbed without a permit.
- xvii. The petitioner shall place sufficient funds in an escrow account to cover the costs connected with the application, including consultant fees, issuance of a permit, and monitoring.
- xviii.The initiation of any work on a permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of the permit.
- 8. Penalties and enforcement:
  - A. Any person found guilty of violating any of the provisions of this section shall be punished as provided in the Township's code of ordinances and may be cited for each day of violation. The township, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation.
  - B. In addition to the provisions contained here and above, the body undertaking the review, at a formal meeting, shall have the authority to direct the planning and environmental staff to notify the supervisor that a stop work order shall be issued upon any project for development, with concurrence of the supervisor, when it is determined that a violation has occurred. And if it is not issued, the supervisor shall notify the body undertaking the review in writing within forty-eight (48) hours of the reason for non issuance.



nt **7** Admin and Enforcement

5-15



## CHAPTER 26

## Article 6.0 Development Procedures

















Definitions

## 6.0 Development Procedures

## 6.1 SITE PLAN, SKETCH PLAN AND ADMINISTRATIVE REVIEW (ALL DISTRICTS)

- 1. Uses Requiring Review. A building permit shall not be issued until a site plan or sketch plan has been reviewed and approved in accordance with this Article and all necessary fees have been paid. The types of review for various types of projects are classified into three (3) types as described below and in the following table.
  - A. Site Plan Review. Site plan review provides the Township with an opportunity to review the proposed use of a site in relation to all applicable provisions of the zoning ordinance and township plans. Site plan review also provides the township with an opportunity to review the relationship of the plan to surrounding uses, accessibility, on and off-site pedestrian and vehicular circulation, off-street parking, public utilities. drainage, natural features, screening, and other relevant factors which may have an impact on the public health, safety and general welfare. This process is for new developments, major expansions and as provided in section 6.2, and requires site plan review and approval unless review is allowed under subsections B. or C. below. Formal review and approval of a site plan is required for all special land uses.
  - B. Sketch Plan Review. Small scale projects, small scale expansions or changes in use that are similar or have a less intense impact than the existing uses of the site are allowed to provide less detailed information than a full scale site plan review under certain circumstances. The level of information is intended to be proportionate to the extent of the change and what is adequate to insure proper review for compliance with applicable ordinances and standards. Sketch plans shall undergo a formal review and approval by the Planning Commission.
  - C. Administrative Review. Select small scale projects, minor expansions or minor changes in use to existing sites are also required to provide a sketch plan. In certain circumstances the plan does not require review by the Planning Commission; but shall undergo a formal review and approval by the Community Development Department. The Community

Development Department may forward an application to the Planning Commission if it is determined, in the Community Development Department's discretion, that there are special conditions or the scale of the project requires Planning Commission review.

- 2. Site Plan Review. Except for special land use and site plan approvals required to be by the Township Board after recommendation from the Planning Commission, the Planning Commission review and approval of site plans is required. Site plan review and approval is required for any development of previously undeveloped property, nonresidential condominiums, special land uses, amendments to previously approved site plans, changes in uses that require structural or site alterations, and all special land uses, including residentially related uses permissible on special approval in one-family districts such as, but not limited to, places of worship, schools and public facilities
  - A. The following information shall be included on site plan submissions:
    - i. General Site Data.
      - a. A completed site plan application signed by the petitioner
      - b. Written documentation of property owner approval.
      - c. The site plan shall be prepared by and carry the seal and signature of the registered architect, landscape architect, community planner, land surveyor or professional engineer who prepared it, and shall consist of one or more sheets necessary to adequately provide the required data.
      - d. The dimensions of all improvements and yards shall be labeled in a manner that clearly indicates the plan's compliance with the applicable Zoning Ordinance standards.
      - e. North arrow and scale should customarily be provided at 1" =20', or 1" = 30'. For proposals larger than three acres, 1" = 50' or 1" = 100' may be acceptable, provided all important typical areas and Ordinance requirements are thoroughly detailed in clearly

UT Site Standards




		-	Туре	es of Plan Re	eview
			Re	equired Revi	iew
Situation/Use			Site Plan	Sketch Plan	Admin
Change In Use					
19. Any chang determine involve sul hours of o entail subs site	e of use in land or building to a more intensive d by the Community Development Department, ostantial change in such features as parking, tr peration, public services, effluent discharge, the stantial alteration of an important physical aspe	use, as , that may raffic flow, at may ect of the	РС		
20. Change in	use to a special land use		PC/ TB		
21. Reuse of a posed only the new us parking, trics and other series of the series of	n existing building where no building expansion if the Community Development Department de se is similar or less intense than the past use in affic generation, drainage, utility needs, noise, a ner external impacts	n is pro- etermines n terms of aesthet-			CDD
PC=Planning C	ommission TB=Township Board CDD=Commu	inity Develo	pment Depa	rtment	
	recognizable form and presented at the customary scale.		two hund property li	red (200) nes.	feet of all
f.	Complete legal description of properties and executed and proposed easements.	q.	Topograph contours within two	ny at tw (existing an hundred (	vo-foot (2') d proposed) 200) feet of
g.	Parcel identification number.		Benchmar	y lines.	S Peference
h. i.	Size (Lot area) of the site. Location map showing major roads, nearby cross-streets and	ii. Bu	Points. ilding Plans.	tural huildir	
j.	Zoning of site and all surrounding property. If the site has split zoning, show the line between the	Δ.	(front, longitudin building se	sides a al, and ections.	nd rear), latitudinal
	districts.	b.	Type of design of a	surface m	naterial and
k. I.	Existing or proposed address. Location of existing structures and	c.	Dimension	ed floor pla	ins (principal
	improvements. (Indicate if any such structure or improvement is to be removed).	d.	Decks and location, h	l/or patios eight and m	(dimensions, aterials).
m	. All above and below ground utilities.	e.	All exterio but not lin	r appliance nited to, co	s, including, oling towers,
	Location of proposed structures and improvements.		dust collect other collect	tors, air cor ndensers,	evaporators,
n.			heat pumps, generators and ot noise producing mechani equipment or system componer and method of screening.		mechanical
n. o.	Yards/setbacks and critical dimensions between buildings and other site improvements.		equipment and metho	or system of screen	components, ing.



6-5



w

Zoning Districts

- k. Traffic Impact Studies or Market Studies, as required by the Planning Commission or Township Board.
- I. The Planning Commission or Township Board with approval authority may waive site plan requirements of this section that are not necessary to the review and understanding of the site.
- m. The Planning Commission or Township Board may require additional information necessary for the review and understanding of the site.
- B. In the process of reviewing the site plan the following e shall be considered:
  - i. One-family development on the basis of a subdivision and in accord with the procedures and standards of the Township Subdivision Regulations (Chapter 21); Subdivision Open Spaces Plans (Sec. 26-3.12.1.); Average Lot Sizes (Sec. 26-3.12.2); One Family

Clustering Options (Sec. 26-3.12.3); Planned Subdivision Options (Sec. 26-3.12.4); Condominium Subdivisions (Sec. 26-5.22) and Planned Recreation Development (Sec. 26-3.1.19).

- ii. Applicable general district regulations contained in article 5 of this chapter.
- iii. Applicable specific standards for the zoning district(s) in which the subject property is located.
- iv. Applicable standards for special land uses.
- 3. Administrative and Sketch Plan Review
  - A. This section provides for review and approval by the Planning Commission or Community Development Department of plans for small scale or minor projects, expansions or changes in use as provided in subsection 1. above.
  - B. The minimum contents of a plan submitted for administrative or sketch plan review shall be in accordance with the following.











2 Definitions





UЛ

Site Standards

experiencing or determined to present significant problems with drainage, traffic, noise, aesthetics or other general health and safety issues.

- Effective period. Site plan and sketch plan approval shall be effective for a period of one (1) year. If a building permit is not obtained within that year, then the site plan or sketch plan approval shall expire.
- Extensions. The effective period for site plan and sketch plan approval under subsection 4 may be extended as provided in this subsection.

An extension of plan approval must be requested in writing prior to the expiration of the approval period, with any extension that is granted to be effective for one (1) year from that expiration date.

- A. A maximum of two (2) one (1) year extensions may be granted. An extension of plan approval shall be void in the event of rezoning that is inconsistent with the use for which it was granted.
- B. It is the obligation of the applicant to show good cause for the granting of the requested extension(s). The Planning Commission shall consider the following factors in its determination of whether good cause exists:
  - i. The extension shall be based on evidence from the applicant that the development shall commence construction within the extension period.
  - ii. The applicant has demonstrated that needed utility services have been delayed.
  - iii. The applicant has demonstrated that technical reviews of the final site plan have raised unforeseen development problems.
  - iv. The applicant has demonstrated that unforeseen economic events or economic conditions have caused delays.
  - v. The approved plan to be extended is in compliance with all current site plan criteria and current ordinances, laws, codes and regulations.
  - vi. There is no pending zoning ordinance which would substantially change the requirements of the approved plan.

- vii. Any other extraordinary factors which the Planning Commission deems appropriate.
- C. Any plan that expires prior to the filing of a written request for extension shall require a new site plan submittal for review and approval by the township.
- D. A plan that was approved prior to the effective date of the ordinance that added this subsection (3) may be extended under its provisions, provided that the request for extension was made prior to the expiration of the approved plan.
- Amendment to Approved Plans. Amendments to an approved site or sketch plan may occur only under the following circumstances:
  - A. An applicant or property owner who has been granted plan approval shall notify the Community Development Department of any proposed amendment to such approved plan.
  - Β. Minor Changes. Minor changes may be approved by the Community Development Department prior to the issuance of any permits affected by the modification. The Community Development Department must provide written documentation to the Planning Commission that the proposed revision does not alter the basic design, standards of this Article or any specified conditions of the approved plan. This documentation shall be provided to the Planning Commission prior to the issuance of any permits affected by the modification. If the Planning Commission determines the modification is not minor, the modification shall be reviewed in accordance with subsection C. below. In making its determination, the Community Development Department shall consider the following to be a minor change provided that all other Ordinance requirements and previous conditions of approval are met:
    - Change in size of structures, for residential buildings by five percent (5%) or less, provided that the overall density of units does not increase.
    - Change in square footage of nonresidential buildings by five percent (5%) or less or five hundred (500) square feet, whichever is smaller.
    - iii. Movement of building(s) or structure (s) by no more than five (5) feet.







2 Definitions





UT

Site Standards

Development Procedures

J

Admin and Enforcement

6-11

- a. Taking into consideration the size, location and character of the proposed land use, viewed within the context of surrounding land uses in the area, the proposed use shall not be incompatible nor inharmonious, as determined by the application of generally accepted planning standards and principles, with surrounding uses and the orderly development of the surrounding area as contemplated in the zoning ordinance and master plan.
- b. The proposed use shall be of a nature that an unreasonable hazard shall not be created with respect to vehicular and pedestrian traffic, taking into consideration vehicular turning movements in relation to routes of traffic flow, proximity and relationship to intersections, adequacy of sight distances, location and access of off-street parking, and provisions for pedestrian traffic, with particular attention to minimizing child and moving vehicle conflict. In those instances where permanent seating is proposed, there shall be parking provided at a ratio of one (1) parking space for each three (3) seats in the grandstand, in addition to the other required parking which may be associated with the use of the parcel as provided in this section.
- c. The proposed use shall be such that the proposed location and height of buildings or structures will not interfere with nor discourage the appropriate development and use of adjacent land and buildings or unreasonably affect their value.
- d. The proposed use shall relate harmoniously with the adjacent land uses in terms of aesthetics, impact upon enjoyment of property, harmonious signage and structures.
- e. The proposed use shall be designed, located, planned and operated in a manner which will

not threaten nor endanger the public health, safety and welfare.

- f. The proposed use shall be designed so as to recognize the natural resources and natural features of the parcel and to minimize the disruption of those features within the context of the special use which is proposed.
- In reviewing the design and layout g. of structures and features of the development, the planning commission shall, among other things, review and consider: perimeter setbacks and berming; internal thoroughfares; drainage and utility design; achievement of an integrated development with respect to signage; outdoor lighting; landscaping and building materials; and noise reduction and visual screening, particularly in cases where the use adjoins residentially zoned property.
- h. The manner of refuse collection, storage and removal shall be part of the site plan approval and dumpsters shall be screened.
- i. The use of outdoor lighting, outdoor speakers and accessory activities such as snack bars, picnic areas and sanitary facilities shall be part of the site plan approval and shall be located and operated as to not create an unreasonable nuisance or annoyance to surrounding properties. In no case shall speakers or lights be directed toward residential development.
- ii. Special approval uses which are approved in the REC district must be exercised within eighteen (18) months from the date of approval or the right of special use will expire.

### 6.3 PUBLIC HEARING REQUIREMENTS AND NOTIFICATION PROCEDURES

In those instances where a public hearing is required, the reviewing board or commission shall hold a public hearing and the Township shall:

 Publish notice of the request in a newspaper of general circulation in the Township.









Site Standards

 $\overline{\mathcal{O}}$ 

Procedures Development

the amount of the cost of the proposed agreement approved by the building improvements to the open land, as estimated by the township engineer and township planner, guaranteeing the completion of such improvement within a time to be set by the township.

- C. The township board may require the preparation and recordation of master deed provisions and/or deed restrictions and/or an open space agreement in a form approved by the township attorney. The purpose of such documentation shall be to ensure use of the condominium subdivision in a manner consistent with township ordinances, all applicable law and consistent with reasonable conditions imposed upon the use of the condominium subdivision by the township board. The master deed shall also be reviewed by the township attorney to ensure inclusion of a provision enabling statutory proceedings for public road improvement special assessments in a form provided by adopted resolution, rule or ordinance of the road agency having jurisdiction of the roads within and/or adjacent to the condominium subdivision.
- D. Prior to the issuance of building permits for units, the developer shall demonstrate approval by county and state entities having jurisdiction with regard to any aspect of the condominium subdivision, including, without limitation, roads, drainage, water supply and sewage disposal.
- E. Prior to issuance of certificates of developer shall occupancy, the demonstrate approval by any other governmental entities having jurisdiction and the building director shall determine all improvements have been that completed in accordance with approved plans. If the building director determines that a temporary certificate of occupancy may be issued prior to full completion, such a temporary certificate of occupancy may be granted for a specified period on the condition that a suitable letter of credit or corporate surety bond is issued by a company licensed to do business in Oakland County, in a form and in the amount approved by the building director following advice from other township departments or consultants, or on the conditions that an escrow is established with the escrow agent and escrow

director, following advice from other departments and township consultants. The security shall be in an amount equal to one and one-half (1 1/2) times the cost of the improvement based upon either a contract executed for completion of the improvement or estimate of the cost by the township engineer, as determined appropriate by the building director. F. Any proposed amendment of the master

- deed which would involve any subject matter reviewed or reviewable under this section shall first be reviewed and approved by the township board prior to recordation.
- G. Fees. The required fees for the planning commission and township board review of condominium subdivision shall be equal to the fees as established for single-family development under the one-family clustering option.
- H. The master deed shall include a procedure for the dedication to the public of any road "private" on the site designated condominium plan, including the method of voting on the dedication issue by the condominium co-owners. In this regard, if improvements to the road are required by the road commission as a condition to acceptance of the dedication, the master deed shall also provide a means of financing and accomplishing such improvements so that each co-owner would participate and cooperate in the improvements by way of special assessment financing, either through the association or through the township or county.
- 1. The master deed shall make provision for the pursuit and finance of improvements to public and private roads within the condominium subdivision apart from dedication. The master deed shall specify the voting requirement by co-owners in order to approve such improvements, and the finance of such improvements by way of special assessment within the association or a special assessment at the appropriate governmental level.
- If the condominium subdivision is to be J. developed in phases, each phase of the development shall comply with the provisions of this section. The condominium subdivision plan review must

Admin and Enforcement



CHAPTER 26

# Article 7.0 Administration, Appeals and Enforcement













1

# Definitions

w







### 7.1 NONCONFORMING LOTS, STRUCTURES & USES

- 1. Intent. Within the districts established by this chapter or amendments that may later be adopted there exists lots, structures and uses of land and structures which were lawful before this chapter was passed or amended, but which would be prohibited, regulated or restricted under the terms of this chapter or future amendment. It is the intent of this chapter to permit these nonconformities to continue until they are removed, but not to encourage their survival. Such uses are declared by this chapter to be incompatible with permitted uses in the districts involved. It is further the intent of this chapter that nonconformities shall not be enlarged upon, expanded or extended, nor be used as grounds for adding other structures or uses prohibited elsewhere in the same district. A nonconforming use of a structure, a nonconforming use of land or a nonconforming use of a structure and land shall not be extended or enlarged after June 1, 1966 by attachment on a building or premises of additional signs intended to be seen from off the premises, or by the addition of other uses of a nature which would be prohibited generally in the district involved. To avoid undue hardship, nothing in this chapter shall be deemed to require a change in the plans, construction or designated use of any building on which actual building construction was lawfully begun prior to June 1, 1966, or upon amendment hereto, and upon which actual construction has been diligently carried on. Actual construction is hereby defined to include the placing of construction materials in permanent position and fastened in a permanent manner, except that where demolition or removal of an existing building has been substantially begun preparatory to rebuilding, such demolition or removal shall be deemed to be actual construction, provided that work shall be diligently carried on until completion of the building involved.
- 2. Nonconforming lots.
  - A. In any district in which single-family dwellings are permitted, a single-family dwelling and customary accessory buildings may be erected on any single lot of record on June 1, 1966, or upon amendment hereto; provided that yard dimensions and other requirements not involving area or width, or both, of the lot shall conform to

the regulations for the district in which such lot is located. Variance to yard requirements may be obtained through approval of the board of appeals.

- B. If two (2) or more lots or combination of lots and portions of lots with a continuous frontage and single ownership are of record on June 1, 1966, or upon amendment hereto, or any time thereafter; and if all or part of the lots do not meet the requirements for lot width or area as established by this chapter, the lands involved shall be considered an undivided parcel for the purpose of this chapter, and no portion of the parcels shall be used or occupied which does not meet lot width and area requirements established by this chapter, nor shall any division of the parcel be made which leaves remaining any lot with width or area below the requirement stated in this chapter.
- C. In a platted subdivision where lots do not meet the area width and open space requirements of this chapter, and where a substantial number of the lots in an immediate area have an established residence built thereon, this requirement may be waived by the board of appeals provided that:
  - i. No good purpose would be served by enforcing such a requirement;
  - A sanitary sewer is available or necessary permits for sewage treatment are available from the department of health;
  - Lot width and area conform to that which has been established as a pattern of development for the immediate area;
  - iv. Side yard setbacks meet those required in Section 26-3.5.2.A;
  - v. In the case of such a lot where open space requirements do not permit a building which meets the minimum floor area requirements of the district, front or rear yard setbacks may be reduced to conform to that which has been established in the immediate area.
- Nonconforming uses of land. Where, on June 1, 1966, or upon amendment hereto, lawful use of land exists that is made no longer permissible under the terms of this chapter as



UT











w



U

ordinary repairs, or on repair or replacement of nonbearing walls, fixtures, wiring or plumbing to an extent not exceeding the state equalized value of the buildings, provided that the cubic content of the building as it existed on June 1, 1966, or upon amendment hereto, shall not be increased. Nothing in this chapter shall be deemed to prevent the strengthening or restoring to a safe condition of any building or part thereof declared to be unsafe by any official charged with protecting the public safety, upon order of such official.

- Uses under exception provisions, not nonconforming uses. Any use for which a general exception or special approval is permitted as provided in this chapter shall not be deemed a nonconforming use but shall without further action be deemed a conforming use in such district.
- 8. Change of tenancy or ownership. There may be a change of tenancy, ownership or management of any existing nonconforming uses of land, structures and premises provided there is no change in the nature or character of such nonconforming uses except in conformity with the provisions of this chapter.
- 9. Condemnation nonconformities. The regulations in this Subsection 26-7.1.9, shall apply to lawfully existing and conforming lots, buildings, structures and improvements that become nonconforming with one (1) or more regulations in this chapter as a result of a property acquisition for a public purpose by a public agency, referred to in this section as "acquisition." When used in this section. "improvement" means conditions required on a lot by this chapter or an approval granted under it, including, but not limited to, landscaping, landscaped yards, screen walls or fences, greenbelts, site lighting, trash containers and enclosures, open spaces and preservation areas.
  - A. Subject to and conditioned on issuance of a certificate of occupancy under Subsection 26-7.1.9.E, the size, width and percentage of a lot covered by buildings, structures and/or impervious surfaces that results from an acquisition shall be considered to be in conformity with those regulations in the appropriate district or other provisions of this chapter, with that size and width thereafter considered as the minimums required and the coverage thereafter considered as the maximum allowed by this chapter.

- B. Subject to and conditioned on issuance of a certificate of occupancy under Subsection 26-7.1.9.E, the setbacks of a building or structure that result from an acquisition shall be considered to be in conformity with the setback regulations in the appropriate district or other regulations in this chapter, with those setbacks thereafter considered as the minimums required by this chapter.
- C. Subject to and conditioned on a planning commission determination under Subsection 26-7.1.9.F, if an acquisition results in alteration or removal by or at the direction of the acquiring public agency of part of a building, structure or improvement, any parts remaining shall be considered to be in conformity with the regulations in this chapter.
- D. A property owner that desires to alter or remove part of a building, structure or improvement after an acquisition may apply to the planning commission for a determination that any parts remaining be considered to be in conformity with the regulations in this chapter as provided in Subsection 26-7.1.9.F.
- E. The existence, nature and extent of a conforming lot, building or structure status recognized in Subsections 26-7.1.9.A and 26-7.1.9.B must be documented by a certificate of occupancy applied for and issued as provided in Section 26-7.6.
- F. The existence, nature and extent of a conforming building, structure or improvement status recognized in Subsections 26-7.1.9.C and 26-7.1.9.D must be documented by and shall be subject to conditions imposed in a planning commission determination as provided in this subsection, which shall be by a site plan or amendment approval under Section 26-6.1 for all lots except one-family residences.
  - Applications shall include an accurate plan of the lot that shows and describes:
    - The pre-acquisition compliance with this chapter of the building, structures and improvements for which conforming status is recognized and sought.
    - b. The portions of the lot acquired by the public agency and any







 $2 \; {\rm Definitions} \;$ 





UT

Site Standards

despite violations of contracts, such as<br/>covenants or private agreements which may<br/>occur upon the granting of the permit.3.Permits for new use o<br/>structure, or part ther<br/>or occupied by a use o<br/>unless a certificate

#### 7.4 PLOT PLANS

The building inspector shall require that all applications for building permits shall be accompanied by plans and specifications including a plot plan, in duplicate, showing the following:

- A scale of not less than 1" = 50' if the subject property is less than three (3) acres and 1" = 100' if three (3) acres or more;
- 2. Date, north point and scale;
- The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties;
- Except for single-family lots, the location of all existing and proposed structures on the subject property and all existing structures within one hundred (100) feet of the subject property line;
- The location of all existing and proposed parking areas and, except for single-family lots, the location of all drives;
- The location and right-of-way widths of all abutting streets and alleys;
- The names and addresses of the person or firm responsible for the preparation of the site plan;
- 8. When this chapter requires site plan approval by the planning commission and/or township board prior to the use or development of a parcel of land, such approved site plan with required revisions, if any, shall be submitted in duplicate to accompany the application for a building permit and completion of the work indicated on the site plan shall be considered part of that permit.

#### 7.5 PERMITS

The following shall apply in the issuance of any permit:

- Permits not to be issued. No building permit shall be issued for the erection, alteration or use of any building or structure or part thereof, or for the use of any land, which is not in accordance with all provisions of this chapter.
- Permits for new use of land. No land heretofore vacant shall be used or an existing use of land be changed to a use of a different class or type unless a certificate of occupancy is first obtained for the new or different use.

- Permits for new use of building. No building or structure, or part thereof, shall be changed to or occupied by a use of a different class or type unless a certificate of occupancy is first obtained for the new or different use.
- 4. Permits required. No building or structure, or part thereof, shall be hereafter erected, altered, moved or repaired unless a building permit shall have been first issued for such work. The terms "altered" and "repaired" shall include any changes in structural parts, stairways, type of construction, type, class or kind of occupancy, light or ventilation, means of egress and ingress, or other changes affecting or regulated by the township building code, the housing law of the state, or this chapter, except for minor repairs or changes not involving any of the aforesaid features.
- 5. Inspection. The building inspector shall be notified by the person obtaining the permit when the foundations are completed and the inspector shall inspect same within three (3) days after notification. If in conformance with the provisions of this chapter, the building inspector shall endorse such fact upon the building permit.
- 6. Building permit performance bond:
  - A. Upon the issuance of any building permit. the applicant shall deposit a building permit performance bond. Such bond shall be in the form of cash, in an amount to be specified by resolution of the township board. The purpose of the bond is to assure the township that the applicant shall complete the work called for by the building permit application during the life of the permit and any extensions of the permit; remove or cause to be removed all debris, rubbish and trash on the building site and adjacent right-of-way; establish ditches, culverts and driveway approaches in accordance with the requirements and specifications of all applicable rules, resolutions, ordinances or law; and install any necessary trees as required by the township's code.
  - B. The building permit performance bond shall be returned to the applicant after final inspection and approval by the building inspector, issuance of a certificate of occupancy, inspection and approval by the applicable road agency, and tree installation and approval by the township, plus the necessary length of time required for processing by the township. If demand







7-1



S

Zoning Districts

4

Use Standards

not completed by the building permit holder within the time specified in the temporary certificate of occupancy.

- F. Records of certificates. A record of all certificates issued shall be kept on file in the office of the building inspector, and copies shall be furnished upon request to any person having proprietary or tenancy interest in the property involved.
- G. Certificates for dwelling accessory buildings. Buildings accessory to dwellings shall not require separate certificates of occupancy but may be included in the certificate of occupancy for the dwelling when shown on the plot plan when completed at the same time as such dwellings.
- H. Applications for certificates. Application for certificates of occupancy shall be made in writing to the building inspector on forms furnished by the township and such certificates shall be issued within ten (10) days after receipt of such application if it is found that the building or structure or part thereof or the use of land is in accordance with the provisions of this chapter. If such certificate is refused for cause, the applicant therefore shall be notified of such refusal and cause thereof, within the aforesaid ten-day period.

#### 7.7 FINAL INSPECTION

The holder of every building permit for the construction, erection, alteration, repair or moving of any building, structure or part thereof shall notify the building inspector, immediately upon the completion of the work authorized by such permit, for a final inspection.

#### 7.8 FEES

Fees for inspection and the issuance of permits or copies thereof required or issued under the provisions of this chapter may be collected by the building inspector in advance of issuance. The amount of such fees shall be established by the building code. A fee to be established by the township board shall be required of applicants for a certificate of occupancy when the certificate is for a change of use of an existing building for which a building permit is not necessary.

### 7.9 INTERPRETATION, PURPOSE AND CONFLICT

In interpreting and applying the provisions of this chapter they shall be held to be the minimum requirements for the promotion of the public safety, health, convenience, comforts, morals, prosperity and general welfare. It is not intended by this chapter to interfere with or abrogate or annul any ordinance, rules, regulations or permits previously adopted or issued, and not in conflict with any of the provisions of this chapter, or which shall be adopted or issued pursuant to law relating to the use of buildings or premises and likewise not in conflict with this chapter; nor is it intended by this chapter to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that where this chapter imposes a greater restriction upon the use of buildings or premises or upon height of buildings, or requires larger open spaces or larger lot areas than are imposed or required by such ordinance or agreements, the provisions of this chapter shall control.

#### 7.10 ZONING COMMISSION

The township planning commission is hereby designated as the commission specified in section 11 of Act No. 33 of the Public Acts of Michigan of 2008 (MCL 125.3811 et seq.) as amended, and shall perform the duties of the commission so provided in the statute in connection with the amendment of this chapter.

#### 7.11 CHANGES AND AMENDMENTS

1. Procedure. The township board may, from time to time, on recommendation from the township planning commission, or on its own motion, or on petition, amend, supplement, modify or change this chapter in accordance with the authority of Act No. 110 of the Public Acts of Michigan of 2006 (MCL 125.3202 et seq.) as amended. Upon the filing of a petition by an owner of real estate seeking an amendment of this chapter 26, so as to amend the zoning map, such petition shall be accompanied by a fee. The amount of such fee shall be set by resolution of the township board and shall be used to defray the expense of planning commission. An application for a rezoning shall include written evidence identifying all persons with an ownership interest in the property proposed for rezoning and a written and signed authorization by each such person for submission to and approval by the township of the rezoning application.











Purpose and Introduction



**3** Zoning Districts









7-11

the parties relative to land for which the township has approved a rezoning with planned rezoning overlay. Mutually agreeable terms shall include, but shall not be limited to, the following:

- a. Agreement and acknowledgment that the rezoning with planned rezoning overlay was proposed by the applicant to induce the township to grant the rezoning, and that the township relied upon such proposal and would not have granted the rezoning but for the terms spelled out in the PRO agreement; and, further agreement and acknowledgment that the conditions and PRO agreement are authorized by all applicable state and federal law and constitution, and that the agreement is valid and was entered into on a voluntary basis, and represents a permissible exercise of authority by the township.
- Agreement and understanding that the property in question shall not be developed or used in a manner inconsistent with the PRO site plan and PRO agreement.
- c. Agreement and understanding that the approval and PRO agreement shall be binding upon and inure to the benefit of the property owner and township, and their respective heirs, successors, assigns, and transferees.
- d. Agreement and understanding that, if a rezoning with planned rezoning overlay becomes void in the manner provided in this Section 26-7.11, the zoning classification in effect immediately preceding the approval of the rezoning with planned rezoning overlay shall, following notice from the township to the property owner as provided in Subsection 26-7.11.2.E, below, be reinstated without further action by any party, and that no development shall be undertaken or permits for development issued until a site plan has been approved and all other requirements for development and building approval have been met in accordance with

the then established zoning on the property.

- e. Agreement and understanding that each of the requirements and conditions in the PRO agreement represents a necessary and reasonable measure which, when considered with all other conditions and requirements, is roughly proportional to the increased impact created by the use represented in the approved rezoning with planned rezoning overlay, taking into consideration the changed zoning district classification and the specific use authorization granted.
- f. Other provisions based upon conditions imposed by the township and or otherwise agreed upon by the applicant and the township.
- iv. PRO site plan shall mean a plan for the property which is the subject of a rezoning with planned rezoning overlay, prepared by a licensed civil engineer or licensed architect, that shall show the location, size, height or other measure for and/or of buildings, structures, improvements and features on, and in some cases adjacent to, the property. The details to be included within the PRO site plan shall be determined as part of the process of review and approval. Approval of a PRO site plan shall not relieve an applicant from compliance with all site plan review requirements.
- v. Rezoning shall mean the amendment of this article to change the zoning map classification on property from its existing district to a new district classification.
- C. Authorization and eligibility.
  - i. A property owner shall have the option of making application under this Section 26-7.11 in connection with a submission of a petition seeking a rezoning. Such application may be made at the time the request for rezoning is filed, or at a subsequent point in the process of review of the proposed rezoning. The application for a planned rezoning overlay shall conform with this section, and shall



2 Definitions





**5** Site Standards



Admin and Enforcemen

7 - 13



- v. The applicant shall have the burden of demonstrating, and the township board must find in its discretion, after recommendation from the planning commission, that there is compliance with all of the following requirements and standards:
  - a. Approval of the application shall accomplish, among other things, the integration of the proposed land development project with the characteristics of the project area, and result in an enhancement of the project area as compared to the existing zoning, and such enhancement would be unlikely to be achieved or would not be assured in the absence of the use of a planned rezoning overlay.
  - b. Sufficient conditions shall be included in the PRO site plan and PRO agreement on the basis of which the township concludes that, as compared to the existing zoning and considering the site specific land use proposed by the applicant, it would be in the public interest and result in an improvement to the public health, safety and welfare in the area affected to grant the rezoning with planned rezoning overlay. In determining whether approval of a proposed application would be in the public interest and result in an improvement to the public health. safety and welfare in the area affected, the benefits which would reasonably be expected to accrue from the proposal shall be balanced against, and be found to clearly outweigh the reasonably foreseeable detriments thereof. In reviewing the applicant's proposal, this comparative assessment by the township shall take into

consideration reasonably accepted planning, engineering, environmental and other principles, as presented to the township, and also taking into consideration the special knowledge and understanding of the township by the township board and planning commission.

- c. Compliance with all of the general standards for the approval of uses subject to special approval are met, as enumerated in Sections 26-3.1.1.C, 26-3.1.2.C, 26-3.1.3.C, 26-3.1.5.C, 26-3.1.6.C, 26-3.1.7.C, 26-3.1.8.C, 26-3.1.12.C, 26-3.1.14.C, 26-3.1.12.C, 26-3.1.14.C, 26-3.1.17.C, and 26-3.1.18.C of this Ordinance.
- Substantial compliance with the goals and objectives of the master plan for land use.
- vi. The rezoning with planned rezoning overlay shall expire following a period of one (1) year from the effective date of the rezoning unless approved bona fide development of the property pursuant to permits issued by the township commences within such one (1) year period and proceeds in due course to completion. An extension of not longer than one (1) year may be requested by the property owner, and may be granted by the township board upon finding that good cause has been shown. A request for an extension must be submitted in writing during the effective period of the approved rezoning with planned rezoning overlay. In the event bona fide development has not commenced within the effective period of the rezoning with planned rezoning overlay, as the same may have been extended, the rezoning and planned rezoning overlay shall be void and of no effect, and shall be subject to Section 26-7.11.2.E.ii., below.
- Effect of noncompliance with or a voiding of a PRO.
  - If development and/or actions are undertaken on or with respect to the property in violation of the PRO agreement, such development and/or actions shall constitute a nuisance per



Purpose and Introduction



w

Zoning Districts

final determination to approve, approve with conditions or deny the rezoning with planned rezoning overlay.

- vii. Amendment of PRO agreement. Amendment of a PRO agreement shall be proposed, reviewed and approved in the same manner as a new rezoning with planned rezoning overlay.
- viii. Recordation of PRO agreement. A rezoning with planned rezoning overlay shall become effective following publication in the manner provided by applicable laws and ordinances, and, after recordation of the PRO agreement, whichever is later.
- ix. Fee. The applicant for a rezoning with planned rezoning overlay shall pay as a fee the township's costs and expenses incurred by the township in the review of and preparation of documents for a rezoning with planned rezoning overlay. An escrow shall be established in an amount specified by resolution of the township board, and additional reasonable amounts shall be contributed as required in order to complete the process of review and approval. Any unexpended amounts from such escrow shall be returned to the applicant.

#### 7.12 DECLARATION OF NUISANCE PER SE

Any person, persons, firm or corporation, or anyone acting on behalf of any person, persons, firm or corporation, violating any of the provisions of this chapter shall, upon conviction, be punished as provided in the Township's Code of Ordinances.

#### 7.13 VIOLATIONS AND PENALTIES

 In addition to all other remedies, including the penalties provided in this section, the township may commence and prosecute appropriate actions or proceedings in a court of competent jurisdiction, to restrain or prevent any noncompliance with, or violation of, any of the provisions in this chapter, or to correct, remedy or abate such noncompliance or violation. Buildings erected, altered, razed or converted, or uses carried on in violation of any provisions of this chapter or in violation of any regulations made under the authority of Act No. 110 of the Public Acts of Michigan of 2006, as amended, are hereby declared to be a nuisance per se, and the court may order such nuisance abated.

 Any person, persons, firm or corporation, or anyone acting on behalf of any person, persons, firm or corporation, violating any of the provisions of this chapter shall, upon conviction, be punished as provided in section 1-10 of this Code.

#### 7.14 RIGHTS AND REMEDIES CUMULATIVE

The rights and remedies provided in this article are cumulative and in addition to any other remedies provided by law.

#### 7.15 FORBEARANCE NOT CONDONATION

Forbearance in enforcement of this chapter shall not be deemed condonation of any violation thereof.

#### 7.16 BOARD OF ZONING APPEALS

- 1. Creation; Membership:
  - A. There is hereby established a township board of zoning appeals, hereinafter called the board, which shall perform its duties and exercise its power as provided in Act No. 110 of the Public Acts of Michigan of 2006 (MCL 125.3201 et seq.), as amended, and in such a way that the objectives of this chapter shall be observed, public safety and welfare secured, and substantial justice done. The board shall be composed of not less than five (5) regular members who shall be selected in accordance with section 601 of Act No. 110 of the Public Acts of Michigan of 2006 (MCL 125.3603, et seq.), as amended.
  - B. The township board may appoint no more than two (2) alternate members of the zoning board of appeals who shall serve as a member of the board upon the call of the chairman where a regular member is absent from or unable to attend two (2) or more consecutive meetings of the board or for a period of thirty (30) consecutive days. An alternate member may also be called to serve in place of a regular member for the purpose of reaching a decision on a case in which the regular member has abstained for the reasons of conflict of interest. The alternate member having been appointed shall serve in the case until a final decision has been made. The alternate member













w

Zoning Districts

4

Use Standards

chapter would involve practical difficulties or cause unnecessary hardship within the meaning of this chapter, the board of appeals shall have power upon appeal in specific cases to authorize such variation or modification of the provisions of this chapter with such conditions and safeguards as it may determine, as may be in harmony with the spirit of this chapter and so that public safety and welfare be secured and substantial justice done. No such variance or modification of the provisions of this chapter shall be granted unless it appears beyond a reasonable doubt that all of the following facts and conditions exist:

- That there are exceptional or extraordinary circumstances or conditions applicable to the property involved or to the intended use of the property that do not apply generally to other properties or class of uses in the same district or zone;
- That such variance is necessary for the preservation and enjoyment of a substantial property right possessed by other property in the same zone and vicinity;
- That the granting of such variance or modification will not be materially detrimental to the public welfare or materially injurious to the property or improvements in such zone or district in which the property is located;
- iv. That the granting of such variance will not adversely affect the purpose or objectives of the master plan of the township.
- E. In consideration of all appeals and all proposed variations to this chapter, the board of appeals shall, before making any variations from this chapter in a specific case, first determine that the proposed variation will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property values within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the township. The concurring vote of a majority of the board of appeals shall be necessary

to reverse any order, requirement, decision or determination of the building inspector, or to decide in favor of the applicant any matter upon which it is authorized by this chapter to render a decision;

- F. Nothing contained in this section shall be construed to give or grant to the board of appeals the power or authority to alter or change the zoning ordinance or the zoning map, such power and authority being reserved to the township board in the manner provided by law.
- Determination of fees. All fees required by the provisions of this chapter shall be established by resolution of the township board.
- 6. Exercising powers. In exercising the powers set forth in this article, the board of appeals may reverse or affirm wholly or partly, or may modify, the order, requirement, decision or determination appealed from and may make such order, requirement, decision or determination as ought to be made, and to that end shall have all the powers of the building inspector from whom the appeal is taken.
- 7. Notice. The board of appeals shall make no recommendation except in a specific case and after a hearing conducted by the board. A written notice of the time and place of such public hearing shall be mailed at least fifteen (15) days prior to the date of the hearing, to the owners of all lots or parcels of land lying within three hundred (300) feet of the property in question.
- 8. Miscellaneous.
  - A. No order of the board of appeals permitting the erection or alteration of a building shall be valid for a period longer than one (1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.
  - B. No order of the board of appeals permitting a use of a building or premises shall be valid for a period longer than one (1) year unless such use is established within such period; provided, however, that where such use permitted is dependent upon the erection or alteration of a building, such order shall continue in force and effect if a building permit for the erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of the permit.







7-17



Name of person conducting inspection: \_\_\_\_\_

Date: \_\_\_\_

Reason for inspection (circle one): Quarterly Inspection

\_\_\_\_\_

Annual Inspection

Maintenance

General Maintenance					
Task	Checked (Y/N)	Maintenance	Inspection	Comments	
		Needed (Y/N)	Frequency		
Condition of gate and fence			Annually		
Presence of nuisance			Quarterly		
waterfowl, feral critters, or					
guests					
Presence of debris/trash			Quarterly		
Appearance of vandalism			Quarterly		
	Vege	tation Manageme	ent		
Presence of algae growth			Quarterly		
Presence of invasive species (Purple Loosestrife, Phragmites, etc.)			Annually		
Presence of bank erosion			Quarterly	Location:	
Presence of erosion around inlets/outlets			Quarterly	Location:	
Vegetation loss along embankments			Quarterly		
Presence of vegetation in/and around the inlets/outlets that is obstructing or slowing the flow of water			Quarterly	Location:	
	Sto	orm Sewer System		·	
Accessibility to the inlet/outlet			Quarterly		
Presence of sediment, etc. in inlet/outlet			Quarterly		
Condition of inlet/outlet pipes (crumbling, broken, or showing sign of structural deterioration)			Quarterly	Location:	
Presence of trash/debris in and around the inlet/outlet			Quarterly	Location:	
Presence of oil, grease, or other fluids entering the pond			Quarterly		
Additional Items Noted:			Quarterly		
Maintenance Activities					

		• • • • • • • • • • • • •	<b>6</b>	
lask		Maintenance Frequency	Comments	
Cutting plants down		Semi-Annually		
Trash removal		As-Needed		
Bank stabilization		As-Needed		
Inlet/Outlet cleaning		As-Needed		
Other:		As-Needed		
Additional Notes				

#### Permeable Pavement Inspection Checklist

Name of person conducting inspection: \_\_\_\_\_

Date: \_\_\_\_\_

Date of last rainfall:

\_\_\_\_\_

Circle One: Quarterly Inspection Maintenance

Wantenance

Complaint Response

		Gener	al Maintenance		
Item Inspected		Checked (Y/N)	Maintenance	Inspection	Comments/
			Needed (Y/N)	Frequency	Recommendations
Presence of oil/chemical				Quarterly	
accumulation					
Condition of aggregate				Quarterly	
Condition of pavement (tri	р			Quarterly	
hazards, etc.)					
Additional Items Noted:				Quarterly	
			Drainage		
Presence of standing water	•			Within 24 hrs of	
				a rainfall/	
				Quarterly	
Presence of sediment, leaf				Quarterly	
debris accumulation					
Additional Items Noted:				Quarterly	
			•		
		Mainte	-		
Task		Maintenan	ce Frequency	Co	mments
Vacuum pavement		Bi-Ar	nually		
Sweep access sediment	п	As-N	eeded		
Replace aggregate		As-Needed			
Additional Notes					

### West Bloomfield Township **Vegetated Swale Inspection Checklist**

Name of person conducting inspection: \_\_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_ Date of last rainfall: \_\_\_\_\_

Reason for inspection (circle one): Quarterly Inspection Annual Inspection

Maintenance

		Genera	al Maintenance		
Task		Checked (Y/N)	Maintenance Needed (Y/N)	Inspection Frequency	Comments
Presence of debris and/o	or trash			Quarterly	
Presence of nuisance crit	ters			Quarterly	
		Vegetat	ion Management		
Presence of tree root obstructions				Quarterly	
Presence of weeds/invas	ives			Quarterly	
Grass roots encroachmei vegetated swale	nt into			Quarterly	
Presence of plant wilting or drought conditions				Quarterly	
Presence of plant die- off/sparse areas				Quarterly	
Condition of mulch layer				Annually	
		C	heck Dams		
Presence of ponding water				Within 24 hrs after a rainfall/ Quarterly	
Additional Items Noted:				Quarterly	
		Mainte	nance Activities		
Task	T	Maintenand	ce Frequency	Co	omments
Watering		As-N	eeded		
Replace mulch layer		Ann	ually		
Weeding		Bi-Annually (	(Spring & Fall)		
Cutting plants down		As-N	eeded		
Re-planting		As-N	eeded		
Other:		As-N	eeded		
L	1			1	

# SECTION F – PRIORITIZATION CRITERIA OF STREET SWEEPING AND CATCH BASIN INSPECTIONS

The criteria for prioritizing street sweeping and catch basin cleaning activities has been defined as described below.

High Priority streets and catch basins have one or more of the following criteria:

- Immediately adjacent to stockpiles or potentially polluting materials that are not equipped with secondary containment measures or other BMPs;
- Frequently used, Township-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:

- Immediately adjacent to stockpiles or potentially polluting materials that have with secondary containment measures or other BMPs;
- Frequently used, Township-owned lots;
- Township-owned and maintained streets with moderate traffic volumes (speed limit greater than 30 mph).

Low Priority streets and catch basins have one or more of the following criteria:

- Township-owned parking lots with no material storage or handling;
- Areas with no catch basins (sheet runoff only);
- Catch basins located within vegetated areas; and/or
- Township-owned and maintained streets with low traffic volumes.

# SECTION G – SCHEDULE OF PARKING LOT SWEEPING AND CATCH BASIN INSPECTIONS

The frequency of parking lot sweeping and catch basin inspections associated with each priority level is provided in **Table 2** below.

Maintenance Activity	Priority Level – Schedule			
	High	Medium	Low	
Parking Lot Sweeping	1x /year	1x /year	As-Needed	
Catch Basin Inspections	1x/year	As-Needed	As-Needed	

#### Table 2

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.

#### P2/GH Program (Section 10) Information

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 Township.

The catch basins at the Water & Sewer Department 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 and bi-annual comprehensive inspections.

#### SECTION J – DISPOSAL OF COLLECTED MATERIAL

Collected material from catch basin maintenance and parking lot sweeping activities is collected by a contractor and taken to a landfill for proper disposal.

#### SECTION K – ROAD, PARKING LOT, AND SIDEWALK MAINTENANCE

Parking lot and sidewalk maintenance activities includes pothole repair, sidewalk repair/replacement, and curb and gutter repair. These services are provided by a contractor.

#### K.1 Stockpiled Materials

Designated stockpile areas are located in the Water and Sewer Building yard, Marshbank Park Storage Yard, and in the Drake Sports Park Yard. Materials are infrequently stockpiled in this location and may include cold patch, topsoil, sand, gravel, woodchips and other earthen materials. All stockpiles have perimeter controls in place to prevent erosion which are comprised of precast concrete blocks that are positioned at the rear and sides of the stockpile. The front is left open to provide access for loading. Catch basins adjacent to the Water & Sewer Building yard are equipped with filter inserts to trap sediment and other debris. There are no catch basins located in the other 2 storage yards.

Maintenance Activity	Prior	erties	
	High	Medium	Low
Parking Lot Sweeping	Water & Sewer Building, Civic Center, Marshbank Park Yard, Drake Sports Park Yard	Library, Parks Building, Police Station	All Other Township- Owned Streets and Parking Lots
Catch Basin Inspections	Water & Sewer Building, Civic Center (no CBs at Marshbank Park or Drake Sports Park Yards)	Library, Parks Building, Police Station	All Other Township- Owned Catch Basins

#### Table 3

The Water & Sewer Building Yard, Marshbank Park Yard, and Drake Sports Park Yard are classified a high priority due to the presence of stockpiles, fuel tanks, and the storage and use of other polluting materials.

The Civic Center is classified a high priority due to traffic levels, public usage, and its vicinity to adjacent wetlands and ponds.

All other Township-owned arking lots and catch basins are classified as low priority due to their limited potential for pollutant runoff or other environmental impacts.

If the Environmental Services Department receives a complaint, a determination of the area will be made by Township 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 the Environmental Services Department. 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 H – CATCH BASIN INSPECTION, MAINTENANCE, AND CLEANING METHODOLOGY

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. Catch basins will

### **Construction Storm Water Runoff Control SOP**

#### West Bloomfield Township

#### Purpose

To notify the MDEQ of discharges of sediment and waste from construction activity in the Township. To assure that developers submit site plans containing adequate SESC controls. To receive and consider complaints or other information submitted by the public regarding construction activities that discharge wastes to the MS4. To notify the landowner or recorded easement holder of a property where construction activity will occur of the State of Michigan Permit By Rule.

#### **Objectives**

- Contain
- Educate
- Reduce/Minimize

<b>Targeted Const</b>	tituents
Sediment	$\checkmark$
Nutrients	$\checkmark$
Trash	$\checkmark$
Organics	$\checkmark$
Oxygen Demanding	$\checkmark$

#### Approach

#### Notifying the MDEQ

• If a discharge of sediment or waste from a construction site endangers health or the environment, a report verbally or in writing will be made to the MDEQ District Representative within 24 hours from the time a discharge from a construction site is confirmed. Included with the report will be a description of the discharge and cause of noncompliance, the site address, dates and times, and the property owner and contractor.

#### Notifying the Landowner and/or Contractor of the Permit by Rule

• This information is identified during the Township Plan Review process and construction is not allowed to commence until all permits are acquired. SESC measures are required on all site plans within 500 feet of a waterbody and/or construction that disturbs 1 or more acres of land (per Township Ordinances). For construction performed on Township properties, the Township consultant would advise the Township to acquire the NPDES permit. All required permits (NPDES, RCOC, Sanitary, etc.) are identified in the bid documents.

#### Complaints from the Public Regarding Construction Activities

• The Township documents all phone calls, emails, or verbal complaints of information that are received by the public. The Township follows up on SESC complaints by visiting the construction site and notifying the landowner/developer as necessary. If there is a violation, as the MEA, the Township will send out an official violation letter and post the violation at the construction site. A courtesy follow-up communication is then made to the individual with the initial complaint.

#### Training

Township employees overseeing the SESC program have the proper Michigan licenses and certifications and all Township staff will receive training on SESC, IDEP, and good housekeeping at least once within the permit period. All new employees will be trained within the first year of hire.

### **Non-Stormwater Discharges SOP**

#### West Bloomfield Township

#### Description

The MS4 permit requires that all discharge locations be evaluated for the presence of non-stormwater discharges. Any Unauthorized stormwater discharges must be eliminated, or covered under another NPDES permit.

#### Approach

• Stormwater shall be defined to include all of the following non-stormwater discharges provided pollution prevention controls for the non-stormwater component are identified. The following categories are prohibited non-stormwater

Discharges if identified as a significant contributor of pollutants to the Township:

- Water line flushing and discharges from potable water sources
- Landscape irrigation runoff, lawn watering runoff, and irrigation waters
- Diverted stream flows and flows from riparian habitats and wetlands
- Rising groundwaters and springs
- Uncontaminated groundwater infiltration and seepage
- Uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits
- Foundation drains, water from crawl space pumps, footing drains, and basement sump pumps
- Air conditioning condensation
- Waters from noncommercial car washing
- Street wash water
- Dechlorinated swimming pool water from single, two, or three family residences.
- Discharges or flows from firefighting activities are not prohibited unless they are identified as a Significant source of pollutants to waters of the state.

#### <u>Objectives</u>

- Contain
- Educate
- Reduce/Minimize

<b>Targeted Const</b>	<u>ituents</u>
Sediment	$\checkmark$
Nutrients	$\checkmark$
Trash	$\checkmark$
Metals	$\checkmark$
Bacteria	$\checkmark$
Oil and Grease	$\checkmark$
Organics	$\checkmark$
Oxygen Demanding	$\checkmark$

### Catch Basin, Parking Lot and Safety Path Maintenance SOP West Bloomfield Township

#### Description

Catch Basins, parking lots, and safety paths can be significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from catch basin, parking lot, and safety path maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address lot and pathway sweeping, and repair will reduce pollutants in stormwater.

#### <u>Objectives</u>

- Contain
- Educate Reduce/Minimize

<b>Targeted Consti</b>	ituents
Sediment	$\checkmark$
Nutrients	$\checkmark$
Trash	$\checkmark$
Metals	$\checkmark$
Bacteria	$\checkmark$
Oil and Grease	$\checkmark$
Organics	$\checkmark$
Oxygen Demanding	$\checkmark$

#### Approach

- We have adopted a ban on driveway sealants containing coal tar. All sealing contractors are required to be licensed with the Township.
- We enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.
- The Township staff bi-annually inspect parking lots and catch basins for deterioration and accumulation of sediment/debris and trash.

#### Catch Basin, Parking Lot & Pathway Inspections, Sweeping and Cleaning

- All catch basins and parking lots and catch basins with storage yards, vegetated swales, rain gardens, detention basins, and bioswales will be inspected bi-annually.
- The Township will hire a contractor to sweep parking lots every year and safety paths will be swept every 2-3 years. The materials will be taken to a Type II Landfill for proper disposal.
- Catch basins are cleaned as needed. Each department will be responsible for cleaning at their properties. Notification upon cleaning will be disseminated to the Development Services Department. Refer to the Prioritization Process document for more details.
- Catch basins located adjacent to storage yards have silt sacks that are inspected and maintained.
- Pathways are broom swept once per year by the Parks Department.

#### Catch Basin, Parking Lot & Pathway Repair and Maintenance

• Pathway sweeping is performed by Township staff. All other catch basin, parking lot, or pathway maintenance is performed by a contractor.

#### Patching, resurfacing, and surface sealing

- Patching, resurfacing, and surface sealing is performed by a contractor.
- Contractors are encouraged to utilize best management practices to minimize pollutant runoff.

#### Equipment cleaning maintenance and storage

• We inspect equipment frequently and repair any leaks.

#### Bridge Inspections

N/A – The Township does not own or maintain any bridges.

#### Training

We will train employees regarding proper sweeping operation and repair and maintenance at least once within the permitting period. All new employees will be trained within the first year of hire. We will utilize a training log or sign-in sheet to document training. We will train employees on proper spill containment and clean up, and in identifying non-stormwater discharges.

### Catch Basin, Parking Lot and Safety Path Maintenance SOP West Bloomfield Township

#### Description

Catch Basins, parking lots, and safety paths can be significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from catch basin, parking lot, and safety path maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address lot and pathway sweeping, and repair will reduce pollutants in stormwater.

#### Approach

- We enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.
- The Township staff bi-annually inspect parking lots and catch basins for deterioration and accumulation of sediment/debris and trash.

#### Catch Basin, Parking Lot & Pathway Inspections, Sweeping and Cleaning

- All catch basins and parking lots and catch basins with storage yards, vegetated swales, rain gardens, detention basins, and bioswales will be inspected bi-annually.
- The Township will hire a contractor to sweep parking lots every year and safety paths will be swept every 2-3 years. The materials will be taken to a Type II Landfill for proper disposal.
- Catch basins are cleaned as needed. Refer to the Prioritization Process document for more details.
- Catch basins located adjacent to storage yards have silt sacks that are inspected and maintained.
- Pathways are broom swept once per year by the Parks Department.

#### Catch Basin, Parking Lot & Pathway Repair and Maintenance

• Pathway sweeping is performed by Township staff. All other catch basin, parking lot, or pathway maintenance is performed by a contractor.

#### Patching, resurfacing, and surface sealing

- Patching, resurfacing, and surface sealing is performed by a contractor.
- Contractors are encouraged to utilize best management practices to minimize pollutant runoff.

#### Equipment cleaning maintenance and storage

• We inspect equipment frequently and repair any leaks.

#### Bridge Inspections

N/A – The Township does not own or maintain any bridges.

#### Training

We will train employees regarding proper sweeping operation and repair and maintenance at least once within the permitting period. All new employees will be trained within the first year of hire. We will utilize a training log or sign-in sheet to document training. We will train employees on

#### **Objectives**

- Contain
- Educate
- Reduce/Minimize

#### Targeted Constituents Sediment ✓

Sealment	v
Nutrients	$\checkmark$
Trash	$\checkmark$
Metals	$\checkmark$
Bacteria	$\checkmark$
Oil and Grease	$\checkmark$
Organics	$\checkmark$
Oxygen Demanding	$\checkmark$

proper spill containment and clean up, and in identifying non-stormwater discharges.

proper spill containment and clean up, and in identifying non-stormwater discharges.

# SECTION F – PRIORITIZATION CRITERIA OF STREET SWEEPING AND CATCH BASIN INSPECTIONS

The criteria for prioritizing street sweeping and catch basin cleaning activities has been defined as described below.

High Priority parking lots and catch basins have one or more of the following criteria:

- Immediately adjacent to stockpiles or potentially polluting materials that are not equipped with secondary containment measures or other BMPs;
- Frequently used, Township-owned and maintained parking lots that have a high potential for pollutant runoff; and/or
- Receive drainage from unpaved roadways.

Medium Priority parking lots and catch basins have one or more of the following criteria:

- Immediately adjacent to stockpiles or potentially polluting materials that have secondary containment measures or other BMPs;
- Frequently used, Township-owned lots;
- Township-owned and maintained lots with moderate traffic volumes (speed limit greater than 30 mph).

Low Priority parking lots and catch basins have one or more of the following criteria:

- Township-owned parking lots with no material storage or handling;
- Areas with no catch basins (sheet runoff only);
- Catch basins located within vegetated areas; and/or
- Township-owned and maintained lots with low traffic volumes.

## SECTION G – SCHEDULE OF PARKING LOT SWEEPING AND CATCH BASIN INSPECTIONS

The frequency of parking lot sweeping and catch basin inspections associated with each priority level is provided in **Table 2** below.

Maintenance Activity	Priority Level – Schedule		
	High	Medium	Low
Parking Lot Sweeping	3x /year	1x /year	Every 2 years
Catch Basin Inspections	2x/year	1x/year	Every 2-3 years

#### Table 2

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.

Maintenance Activity	Priority Level – Municipal Properties		
	High	Medium	Low
Parking Lot Sweeping	Water Utilities Complex	Drake Sports Park, Marshbank Park, Parks Building, Civic Center Complex	All Other Township- Owned Drives and Parking Lots
Catch Basin Inspections	Water Utilities Complex, Civic Center, Fire Stations (no CBs at Marshbank Park or Drake Sports Park Yards)	Library, Police Station	Township Parks

#### Table 3

The Water Utilities Complex is classified as high priority due to the presence of stockpiles, fuel tanks, the storage and use of other polluting materials, and due to trucks carrying materials in and out of the storage yard on a daily basis. Catch basins are inspected twice per month at the Civic Center and Fire Stations during our bi-annual SWPPP inspections. Catch basins at the Water Utilities Complex are inspected once a month (by Township staff) and bi-annually by our Storm Water Operator.

Drake Sports Park, Marshbank Park, Parks Building, and the Civic Center Complex are classified as medium priority due to traffic levels, public usage, and vicinity to adjacent wetlands and ponds.

All other Township-owned parking lots and catch basins are classified as low priority due to their limited potential for pollutant runoff or other environmental impacts. Township Parks Department inspects and cleans their catch basins at least every 2-3 years.

If the Environmental Services Department receives a complaint, a determination of the area will be made by Township 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 the Environmental Services Department. 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 H – CATCH BASIN INSPECTION, MAINTENANCE, AND CLEANING METHODOLOGY

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. 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 Township.

The catch basins at the Water Utilities Complex 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 and bi-annual comprehensive inspections.

#### SECTION J – DISPOSAL OF COLLECTED MATERIAL

Collected material from catch basin maintenance and parking lot sweeping activities is collected by a contractor and taken to a landfill for proper disposal.

#### SECTION K - ROAD, PARKING LOT, AND SIDEWALK MAINTENANCE

Parking lot and sidewalk maintenance activities includes: pothole repair, sidewalk repair/replacement, and curb and gutter repair. These services are provided by a contractor.

#### K.1 Stockpiled Materials

Designated stockpile areas are located in the Water Utilities Complex, Marshbank Park Storage Yard, and in the Drake Sports Park Yard. Materials are infrequently stockpiled at the parks and may include: cold patch, topsoil, sand, gravel, woodchips, and other earthen materials. All stockpiles have perimeter controls in place to prevent erosion which are comprised of precast concrete blocks that are positioned at the rear and sides of the stockpile. The front is left open to provide access for loading. Catch basins adjacent to the Water Utilities Complex yard are equipped with filter inserts to trap sediment and other debris. There are no catch basins located in the other 2 storage yards. The Marshbank Park yard contains a rain garden to capture and filter materials before entering the storm sewer system.



Charter Township of West Bloomfield 4550 Walnut Lake Road West Bloomfield, MI 48325

# Attachment A Storm Water Discharge Reissuance Permit Application Summary

Revised October 2018

National Pollutant Discharge Elimination System

MS4 Jurisdictional General Permit

Certificate of Coverage No.MIS040102

#### Section 1-Applicant Information

West Bloomfield Township MS4-0akland County Municipal Separate Sewer System 4550 Walnut Lake Road PO Box 250130 West Bloomfield, MI 48325 TRS: 02N09E23 TRSQQ : 02N09E23SWNW

#### Section 2-Facility Location of West Bloomfield Civic Center

Coordinates: 42.5603826, -83.3733439999997



Section 3-MS4 Contacts

Application Contact, Storm Water Program Manager, and Storm Water Billing:

Ms. Amy Neary, AICP Development Services Director 4550 Walnut Lake Road West Bloomfield, MI 48325-0130 Phone: 248-451-4828 Fax 248-451-4871 aneary@wbtownship .org

#### **Application Contact :**

John Roda, MSES, PWS Environmental Manager 4550 Walnut Lake Road West Bloomfield, MI 48325-0130 Phone: 248-451-4829 Fax 248-451-4871 jroda@wbtownshi p.org

#### Application Contact :

Pamela Sych, Project Manager 4550 Walnut Lake Road West Bloomfield, MI 48325-0130 Phone: 248-451-4815 Fax 248-451-4871 psych@wbtownship.org

#### Section 3-Introduction and Background

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

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

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

The existing West Bloomfield Township Storm Water Management Program (SWMP) dated April 8, 2014, that was submitted pursuant to the Certificate of Coverage No. MIS040102, executed between the Michigan Department of Environmental Quality (DEQ) and the Charter Township of West Bloomfield remains in effect. The new Storm Water Management Plan (SWMP) submitted with the permit application due on April 1, 2016 will become effective once approved by the DEQ.

The MS4 storm water management systems exist only on Township owned properties.

It is important to note that the Township is not responsible for public and private roads within the Township boundaries. The storm water management systems associated with the public roads are owned and operated by the Road Commission of Oakland County. These storm water management systems are covered by their National Pollutant Discharge Elimination System (NPDES) permit. The storm water management systems within subdivisions, site condominiums and other commercial properties also are not owned and operated by the Township. Many of these systems are Chapter 18 Drainage Districts owned and operated by the Oakland County Water Resource Commission (OCWRC) and are thus covered by the OCWRC's NPDES Permit. The remaining storm water management systems are private systems not owned and operated by the Township. It is significant to note that many of the private storm water management systems on commercial properties are covered by Storm Water Management Agreements that obligate the owners to properly maintain those systems.

#### Section 3-Community Overview, continued

While the Township is not directly responsible for public and private roads and private storm water management systems, it does provide extensive guidance, assistance, and regulation regarding the management of storm water and the protection of our natural resources. A list of programs and ordinances is provided in subsequent sections, attachments, or appendices.

The Township holds a jurisdictional MS4 permit and recognizes that moving forward ,whenever achievable, it will collaboratively work with stakeholders on a regional and watershed basis to eliminate illicit discharge, and educate the public on a variety of water related topics.

The Township owns and operates 21 outfalls and discharge points.

Within the Township Informational Technologies Department, Geographic Information System (GIS) division there are electronic digital copies and or hardcopy maps of its MS4 infrastructure. The Township's maps are continuously revised to reflect any changes in the system, typically within 30-60 days of receiving updated information.

The Township shall seek authorization for discharge for any future discharge point that is identified, constructed, or installed as a result of new development or re-development on Township owned properties. The Township will provide an updated outfall map clearly showing the location of the discharge point, its identifying number, the coordinates of the discharge point, and the receiving waters of the state.

The Charter Township of West Bloomfield covers an area of approximately 19,968 acres and endeavors to provide high quality, efficient services through collaborated efforts, coordinated action and stewardship to ensure the health and safety of the community and its natural and built environments. The Township has approximately 65,935 residents within approximately 25,846 households. The Township is located within the headwaters of 3 watersheds, namely the Clinton River, Huron River, and the Rouge River. West Bloomfield has 28 lakes, 150 ponds, 1,394 acres of protected wetlands and over 2, 689 acres of protected woodlands. To ensure the protection of these valued community resources, West Bloomfield has adopted a suite of ordinances and environmental programs that began in 1978. The complete West Bloomfield Code of Ordinances (Codified through Ordinance No. C-782-C, adopted December 7, 2015,Supp. No 78) can be viewed at www.wbtownship.org, select Government/Departments/Community Developmental then on the left side choose West Bloomfield Municipal Code. However, the following list refers to the more detailed ordinances that embody water quality management.

**Chapter** 8-Article XIII-Grading and Drainage Sections 8-302-8.316, Article XV-Soil Erosion and Sedimentation Control Sections 8-360-8.383 (Appendix Z)

**Chapter 12-** Floodplain, Floodway, Watercourse and Wetland Protection Articles HV Sections 12.1 through 12.93 See (Appendix AA)

Chapter 13-Solid Waste Management Articles I-IV Sections 13.1 through 13.110 (Appendix BB)

**Chapter 14.5-** Miscellaneous Provisions - Article II Manufactured Fertilizers Sections 14.5-11 through 14.5-22 (Appendix CC)

Chapter 23-Vegetation Section 23.31(b), Section 23.24(b) (Appendix DD)
## Section 3-Community Overview, continued

**Chapter** 24-Water Supply and Sewage Disposal Systems, Articles I-VI Sections 24.26-24.229 (Appendix EE)

**Chapter 26-** Zoning Article 3.0-Woodland Conservation Overlay District Section 3.1.21, Article 5.0-Site Standards Section 5.4, Article 6.0 Development Procedures Section 6.1-7.17 (Appendix FF)

## Section 4-Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdiction

Regulated Area: West Bloomfield Township is part of the Detroit Michigan urbanized area according to the 2010 census.

Outfalls and Points of Discharge Information: The Township owns and operates 21 outfalls and discharge points. GIS maps of these points were recently updated.

Nested Jurisdictions: West Bloomfield Township does not have any nested jurisdictions.

#### Section 5- Stonn Water Management Program (SWMP)

### **Enforcement Response Procedure (ERP)**

Since the Township MS4 is limited in nature and totally under the control of Township personnel, violations related to the Township's MS4 are avoided by employee training and supervision. However West Bloomfield Township has various regulations and ordinances that are applicable to storm water issues in coordination with the Oakland County Drain Commissioner's Office, the Oakland County Road Commission, and the State of Michigan and Federal Regulatory agencies.

Upon receipt of a complaint regarding an alleged violation, information regarding the nature of the violation, the location, the date and time that the complaint was received is recorded.

The urgency of the complaint is determined and it is then forwarded to the appropriate enforcement official or Department for investigation. At times, the appropriate investigating agency may not be the Township, but an adjacent community, the Road Commission, County, State, or Federal agency. If an outside agency is the responsible enforcement agency, the Township will follow up on the status of the situation with that agency to determine what action, if any was taken.

In those cases where the Township is the enforcement agency, an investigation is performed by the appropriate official and the presence or absence of a violation is determined. If no violation is present, it is so noted, along with the date and time of the investigation. No further action is taken.

If the presence of a violation is confirmed, the investigating official verifies and records the location, date, and time of investigation. The investigating official then identifies the responsible party and may either issue a stop work order at the site requiring noncompliant activities to cease and be corrected, or write a violation letter to the responsible party mandating that the situation be brought into compliance within a reasonable period of time. A citation may also be issued.

## Section 5-General Storm Water Management Program SWMP

## Enforcement Response Procedure (ERP), continued

A follow up investigation is performed to determine compliance within the time period specified by the enforcement official. If compliance is gained, it is so recorded and the file is closed. If further action is necessary, stop work orders will remain in effect, additional citations will be issued with an escalating schedule of fines until compliance is gained, or an appearance ticket is written requiring an appearance before the Oakland County Magistrate. For those refusing compliance, the matter will be referred to the Oakland County Prosecutor's Office for legal action.

In all cases, the final resolution of the violation is recorded digitally in the BS&A building software program utilized by the Township Building Department.

See the IDEP Spill Notification & Complaint Reporting Form.

See the Township's Code of Ordinances and ERP for more details.

## Section 5-Storm Water Management Program SWMP

#### Public Participation/Involvement Program (PPP)

West Bloomfield Township is collaborating with the ARC on the PPP development and implementation. A copy of the PPP is provided with the application.

The existing SWMP is posted on the website on the Engineering news web page. Phone contact information is provided for those who may have questions or comments.

Once the newly approved SWMP is available it will be posted on the website with contact information and phone number/email. The public will be invited to respond. The Township will review the SWMP every 2 years and as required, report this progress biennially.

## Section 6- Public Education Program (PEP)

West Bloomfield Township is collaborating with the ARC on PEP development and implementation. A copy of the PEP is provided with the application.

## Section 7-Illicit Discharge Elimination Program (IDEP)

#### Overview

The purpose of the IDEP section of the SWMP is to effectively eliminate illicit discharges (including the discharge of sanitary wastewater) into the separate storm water drainage system that is under the Township's jurisdiction. Again, it is important to note that West Bloomfield Township owns or operates only a very small portion of the land area located within the defined

urbanized area. West Bloomfield Township owns or operates a total of 21 outfalls and discharge points that outlet in County drains under the jurisdiction of the Road Commission of Oakland County, the Oakland County Drain Commission and to the

natural drainage system. As noted previously, West Bloomfield Township is not a nested jurisdiction. Maps detailing the Township's MS4 facilities are available for viewing in electronic digital and/or hardcopy form by contacting the Township's Informational Technologies Department GIS Division.

By right of ownership, the Township maintains the authority to inspect, investigate, and monitor suspected illicit discharges to the Township's MS4, which is limited to facilities located at Township owned and operated properties.

The Township is also collaborating with the ARC on all IDEP initiatives. A copy of the IDEP /TMDL Plan is attached to the application.

## Program Procedures:

The following procedures have been developed to eliminate all illicit connections or discharges from the Township's facilities and restrict the discharge of polluting substances into its MS4. The Township will inspect its MS4, maintain/update maps of all storm water conveyances, locate discharge points, conduct dry weather screening of outfalls, and as necessary, test outfalls to identify the presence of potential illicit connections or discharges.

Illicit Discharge Identification and Investigation

MS4 Dry-Weather Screening Frequency:

The NPDES MS4 Permit requires that the Township identify and investigate possible illicit discharges.

The infrastructure on Township owned properties is continually maintained. The Township does not own any industrial or commercial properties. The Township owned properties do not have any history of past illicit discharges or illegal dumping. All Township owned sewer systems perform at optimal standards and there has never been any incidence of sewer overflow or cross-contamination. The Township does not own any properties with septic systems.

The Township will perform dry weather screening on all of its discharge points during the permit cycle.

If suspicious flow is observed at any time from any of Township's discharge points an investigation and field screening will be performed within 24 to 48 hours from the time of that observation.

The Township will perform necessary follow-up investigations, and address any newly discovered discharge points or outfalls.

#### Orv-Weather Screening:

Field observations at discharge points will be conducted by trained technicians and will focus on the following as required by the permit:

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

Floatable materials.

Trained technicians will inspect each outfall or discharge point following a period of at least 48 to 72 hours or dry weather. Visual inspection observations will be recorded and kept on file.

Samples will be collected from outfalls and discharge points with indications of illicit discharge. Field screening of samples will be conducted by trained technicians to determine the potential presence of illicit discharges. At a minimum, collected samples will be analyzed for E. coli, MBAS, and TP.

Additional physical and/or chemical analysis may be conducted based on the determination of the technician operator to provide evidence of suspected illicit connections or discharges. Results of analyses will be recorded and kept on file.

#### General guidelines for managing spills and accidental releases:

For spills in which there is no immediate danger to employees or the general public and does not represent a danger of contamination to a sanitary sewer or storm sewer:

Contain spill to the smallest area possible.

Review the Material Safety Data Sheet Binder, for determination of proper spill handling, and appropriate personal protective equipment selection.

Place compatible absorbent material or spill pads on the area.

Clean up and containerize the absorbent materials.

Properly dispose of waste materials.

Determine and perform any additional cleaning requirements.

For a spill that represents an immediate danger to employees or the general public and/or has the potential to impact the sanitary sewer, storm sewer, or the ground:

Notify the Departmental Supervisor on duty.

If there is the threat of fire, explosion, or **i** any person(s) exhibit severe symptoms of exposure, contact 911 and the Township Fire Department to initiate local emergency services.

Alert anyone in the area and begin evacuation procedures.

Use booms or other absorbents to contain the spill area if safe to do so, and secure the area from unauthorized personnel. Refer to the Material Safety Data Sheet to determine the proper personal protective equipment.

Remove all sources of ignition for releases of flammable or combustible materials.

The Departmental Supervisor will initiate all notification procedures and contact the contracted emergency response company to mitigate and remediate the release.

The Departmental Supervisor will assess the spill and notify all agencies as required.

<u>Illicit Discharge Regula</u>tions: The Township's MS4 only includes Township owned and operated facilities. Outside of these facilities storm water regulation falls to the Oakland County Drain Commissioner's Office, the Oakland County Road Commission, and or the Michigan Department of Transportation. The Township works cooperatively with these agencies in ensuring storm water quality. Illicit discharges into the Township's MS4 are avoided via employee training and periodic system inspections.

Refer to the applicable Township ordinances (Appendix Z, AA, BB, CC, DD, EE.FF) for requirements to reduce or eliminate the potential for illicit discharges.

Reporting:

Spills will be reported in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to 911.

Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the State Emergency Response Center (SERC), Michigan Department of Agriculture (MDA), various divisions of DEQ, and the Department of Labor and Economic Growth (OLEG).

After the spill has been contained and cleaned up, a detailed report about the incident will be generated and kept on file. The incident may also be used in briefing staff about proper procedures.

## IDEP Training & Evaluation of Program Effectiveness:

The Township will develop a program to train staff and selected commercial contractors engaged by the Township that are involved with illicit discharge related activities which would include, but not be limited to, the following:

Proper storage, handling, and use of cleaning, salts and other products.

Good housekeeping and pollution prevention activities.

The definition of an illicit discharge, an illicit connection, and sanitary seepage.

Techniques for locating illicit discharges.

Methods for eliminating illicit discharges.

Proper procedures for responding to spills and emergency situations as well as proper reporting.

Maintenance staff will be trained on storm water pollution prevention once per permit cycle. New employees will be trained within the first year of employment. All topics related to storm water pollution prevention/good housekeeping of municipal facilities and activities will be covered during the training.

The Township will maintain a record of any inspection and incident reports in the Township BS&A digital data system; and the response measures taken in the event of suspected illicit discharge occurrences. These records will be reviewed biennially to determine adher ence to the aforementioned guidelines and procedures, and the adequacy of these in resolving identified issues in a satisfactory manner. Procedures will be modified as necessary to achieve and maintain program effectiveness.

## Process for Updating/Revising this Procedure

This procedure shall be reviewed on a biennial basis by the Storm Water Manager for any updates.

## Illicit Discharge Ordinances:

The Township Code of Ordinances does not include an ordnance specifically on illicit discharge. However, through many existing ordinance sections effective regulatory mechanisms to prohibit illicit dis- charge are practiced. In addition, the Township relies on cooperation by the public to report any code violation including illicit discharge. Information is published on the web site including a request for investigation by the Township Code Enforcement Department.

## Section 8-Construction Storm water Runoff Control

## **Qualifying Local Soil Erosion & Sedimentation Control Programs**

West Bloomfield Township is responsible for administering the Soil Erosion and Sedimentation Control Act, (Soil Erosion Act, Part 91 of PA 451 of 1994 as amended), (SESC), Municipal Enforcing Agency (MEA) for soil erosion and sedimentation control compliance for its own projects and the remainder of the Township.

The impact of soil erosion and sedimentation continues to be of great concern in areas undergoing construction activities. This program requires that anyone disturbing soil for construction or other earth disturbance to obtain a permit before work begins.

Before any construction, contractors are advised of the necessary soil erosion and sedimentation control measures that must be implemented for each project. Township construction inspectors ensure that all measures are established and remain in place throughout the construction phases of the project.

Ongoing, the Township will continue to work with Oakland County and the Michigan DEQ, as appropriate, to address any SESC issues that may occur in the Township.

## Section 9-Post Construction Storm Water Runoff Program

Post Construction Storm Water Runoff Program Procedures, Ordinances and Regulatory Mechanisms as follows:

There are several codes and ordinances in place for development and redevelopment within the Township to control post construction storm water runoff.

Storm water best management practices and techniques will help reduce pollutants within storm water, pre-treat storm water before it reaches a surface water body (storm water quality), or maintain the same amount of flow (storm water quality) after development as existed before development.

The Township has an existing Stormwater Management Ordinance in place that requires water quality protection, TSS removals, and O&M.

When a site is within 500 feet of a waterway and/or one acre or more in size, then an SESC permit is to be submitted with the building permit application. The Township Engineer and staff reviews all site plan applications. If an SESC or NPDES permit is required for the proposed construction, the Township will notify the landowner or developer in writing. Building permits are issued once the SESC is issued.

## Federal Facilities:

The Township does not own any federal facilities.

## Water Quality Treatment Performance Standard:

The Township has an existing Stormwater Management Ordinance in place that requires water quality protection, TSS removals, and O&M. For all developments draining to a County drain, the Township Engineer and County staff review plans to ensure OCWRC Stormwater Standards are adhered to.

## Channel Protection Performance Standard and Site Specific Standards:

The Township has an existing Stormwater Management Ordinance in place that requires water quality protection, TSS removals, and O&M. For all developments draining to a County drain, the Township Engineer and County staff review plans to ensure OCWRC Stormwater Standards are adhered to.

## Site Specific Requirements:

The Township suite of ordinances and various permit applications refers to the procedures for reviewing development or redevelopment to meet water quality treatment standards.

Innovative best management practices such as green roofs, bio swales, pervious pavement, manufactured storm water treatment systems, and others are strongly encouraged when landowners and developers contemplate projects in the Township. This information is communicated at the anticipation of a project during the very first development meeting between the Township staff and the land owner or developer.

The Township Water Utilities Complex was just renovated, that includes: 3 vegetated swales, permeable paving, and a StormCeptor to collect runoff before entering the detention pond and adjacent wetlands.

Off-Site Mitigation and Payment in Lieu Programs:

Please see the Water Supply Ordinance, Section 24-214 for off-site mitigation details.

## Sie Plan Review:

The Township has a detailed site plan review procedure and application requirement.

All site plans, depending on specific site attributes are reviewed by the Planning Commission, Environmental Commission, and the Township professional staff.

## Long Term Operation and Maintenance of Best Management Practices:

There are detailed maintenance agreements that are identified during the site plan review and application process for features such as retention and detention basins, bioswales, and much more.

The maintenance agreement allows the Township to inspect the structural or vegetative best management practice. It also requires evidence of any maintenance or corrective action. The agreement allows the Township to track any transfer of operation for maintenance responsibility and compliance to ensure that performance standards are met in perpetuity.

All best management practices and features on Township owned properties will be maintained as required.

## Section 10- Pollution Prevention / Good Housekeeping Program

## Municipal Facility & Structural Storm Water Control Inventory:

An inventory of West Bloomfield Township's owned and operated facilities is provided in the Facilities List document, provided in the application.

The structural storm controls for each site such as existing catch basins, detention basins, bio swales, etc., are identified on the Township property inventory list.

As new structural controls are identified and built the Township property inventory list and related maps will be updated within 90 days.

Facility-Specific-Storm water Management:

The Township owned facilities will be assessed bi-annually during the application cycle. The following factors will be considered:

Amount of urban pollutant stored at the site.

Identification of improperly stored materials.

The potential for polluting activities to be conducted outside the building.

Proximity to water bodies.

Housekeeping practices.

Discharge of pollutants of concern.

Inadequate housekeeping practices discovered during an assessment will be corrected in an expedient manner.

#### Detention/Retention Basins:

All township owned detention/retention basins, porous pavements, bio swales, etc. will be inspected twice during the permit cycle to ensure adequate design performance standards are achieved. Action to correct any deficiencies will be taken within 90 days.

#### Clean up Procedures:

All Township owned facilities have procedures and clean up material to address any leaks or spills. In addition all Township facilities have a materials specification data resources to identify any cleaning products or other items that may be considered pollutants.

#### FuelTanks:

Underground fuel tanks are located at the W at er U tilities Complex, Police Station, and Fire Stations 2, 4, 5, 9. Police and Fire Department personnel are trained in good housekeeping methods and to respond to any potential hazardous discharge.

All fuel tanks are certified by the appropriate County and Sate agencies at least annually for safe operation.

#### General Sweeping:

Sweeping activity details are provided in the Plot, Pthway, CB Maint SOP and Priortization Process document.

The Township currently has a ban on coal tar sealant for municipal, residential, and commercial properties.

#### Municipal Operation and Maintenance Activities:

The Township does not own any bridges or unpaved roadways. Potential pollutants from operations and maintenance activities may include:

Sediments from parking lots and catch basins.

Fertilizers utilized on Township owned properties.

Salt in limited applications utilized on sidewalks for Township-owned properties.

#### Managing Vegetated Properties:

The Township pesticide application contractor (Trugreen Commercial, Waterford, MI) for Township owned properties exclusively uses ready-to use products from the original container. The contractor is certified by the State of Michigan as an applicator. In addition, the Township requires that all pesticide application contractors working in the Township must prove current certification by the State of Michigan. This evidence is retained by the Township Clerk's office.

#### Contractor Requirements & Oversight:

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

The Township has prepared a Pollution Prevention and Good Housekeeping Program. Biannual site inspections for Township owned facilities are performed by a Certified Storm Water Operator.

#### Employee and Contractor Training:

Maintenance and all other required staff and commercial contractors will be trained on storm water pollution prevention once per permit cycle. New employees will be trained within the first year of employment. All topics related to storm water pollution prevention/good housekeeping of municipal facilities and activities will be covered during the training. The training includes topics such as:

Definition and examples of storm water.

How storm water relates to general maintenance and lawn care operations.

Materials such as sand, gravel, fertilizers, storage, handling and use.

Chemicals storage, management, proper use and how to report any illicit discharges.

Vehicle and equipment washing using appropriate environmentally friendly cleaning products and maintenance,

Sidewalk, safety path and parking lot maintenance, including sweeping.

Salt storage and application.

Landscape practices, including grass cutting, planting bed and leaf maintenance.

Waterfowl management in park areas.

## Section 11-Total Maximum Daily Load (TMDL) Implementation

A copy of the draft ARC TMDL document is provided with the application.

The Township will continue to partner, when achievable, with other agencies and governmental units to design and implement projects and programs to reduce any stream ecology impacts.

## Section 12-Phase 1 only-Industrial Facility Inspection Program

The Township does not own any industrial facilities. There are currently no significant industrial facilities within the Township. If at any time an industrial facility were to be located within the Township it would have to meet the current Township ordinances and a procedure would be developed to specifically monitor those facilities for any potential pollutant contribution. The West Bloomfield Township complete code of ordinances can be viewed at the following link:

## www.wbtownship.org

## Select Government then Department then Community Development and from the left side select West Bloomfield Municipal Code.

## Section 13-Certify and Submit

This document is certified by the Township Storm Water Program Manager then submitted to the Michigan DEQ and is part of the public record.

## Table and Appendix List

Table 1-Outfall and Point of Discharge Information Table 2-Public Education Program (PEP) Appendix A-Map of Urbanized Area Appendix B-Outfalls and Points of Discharge Location Reference Table Appendix C-Enforcement Response Procedure (ERP) Appendix 0-Public Participation Program (PPP) Appendix E-Spill Notification & Complaint/Concern Reporting Form Appendix F-Code Enforcement & Code Violation General Information Appendix G-Facilities and Structural Controls-Illicit Discharge Identification and Investigation Table Appendix H-Outfall Maps of Township Owned Properties Appendix I-Construction Storm Water Runoff Control Appendix J- Grading/Soil Erosion & Sedimentation Control Permit Appendix K-Public Education Program (PEP) Appendix L-Protect Our Watersheds Appendix M-Storm Drains Aren't Garbage Cans Appendix N-IDEP Appendix O-Oakland County's 24 Hour Pollution Hotline Appendix P-RiverSafe Home Appendix Q-Waterfront Wisdom Appendix R-Healthy Lawn Care Tips Appendix S-Household Hazardous Waste Events Appendix T-Septic and Well Program Appendix U-Low impact Development Appendix V-Michigan Business Prevention Partnership Appendix W-Detention Basin Checklist Appendix X-Total Maximum Daily Loads (TMDL) Appendix Y-Storm Water Pollution Prevention and Good Housekeeping Program Appendix AA-Chapter 12 Ordinance Appendix BB-Chapter 13 Ordinance Appendix CC-Chapter 14.5 Ordinance Appendix DD-Chapter 23 Ordinance Appendix EE-Chapter 24 Ordinance Appendix FF-Chapter 26 Ordinance Appendix GG-Engineering Permit Application Appendix HH-Storm Water Permit Application Appendix II-Wetland Permit Application Appendix JJ-Woodland Permit Application Appendix KK-Pavement Permit Application Appendix LL-Grinder Pump Application Appendix MM-Grading permit Application

Charter Township of West Bloomfield NPDES MS4 Application Reissuance

# Appendix Y

Storm Water Pollution Prevention and Good Housekeeping Program

Pollution Incident Prevention Plan for The Parks and Recreation Division

**Revised October 2018** 



Charter Township of West Bloomfield 4550 Walnut Lake Road West Bloomfield, MI 48325

Appendix Y

Pollution Incident Prevention Plan and Good Housekeeping for Municipal Operations Program

## Section 1 Introduction

## 1.1 Introduction

The Charter Township of West Bloomfield (Engineering & Environmental Services Department) has developed a comprehensive and coordinated Township wide effort to prevent pollution in storm water runoff from Department facilities. This effort complies with State issued Storm Water permits that regulate the discharge of pollutants from the Township's separate municipal storm water facilities.

The permit requires that The Charter Township of West Bloomfield submit a Pollution Incident Prevention Plan (PIPP) for all of the Township's municipal facilities that store or transport salt, oils/gas, or materials piles.

This guidance document was developed as a "Good House Keeping Tool" for our Township Departments who are responsible for the storage, maintenance, inspection, and application of potential harmful pollutants as they could be entered into the environment from our facilities.

The Engineering and Environmental Services Department are implementing a formal Pollution Prevention Program for our garage and vehicle maintenance facilities associated with the Police Department, Fire Department(s), Water and Sewer Department, Town Hall and Parks & Recreation.

## 1.2 Purpose and Goal

The purpose and goal of this Pollution Incident Prevention Plan (PIPP) is to bring together storm water pollution control efforts for The Charter Township of West Bloomfield. This will help in the reduction of unwanted pollution of chemicals and sediments to be discharged into downstream areas that will have a potential harm to wild life habitat and water quality.

This community-specific PIPP contains The Charter Township of West Bloomfield's commitments as required in the referenced Watershed Management Plans, in an attempt to reduce the discharge of pollutants to the Rouge, Huron and Clinton Watersheds and Rivers, to the maximum extent practicable. The PIPP includes those actions expected to be implemented over the term of the permit, and in some cases beyond.

## **1.3 Importance of the PIPP and the Process**

The program plan will involve twice-a-year comprehensive inspections of chemical and material storage location and methods of use and application as well as a review of general operations to identify areas for improvement to protect our natural resources.

The last component of the program will be reviewing Town Hall and Parks and Recreation use of pesticides, herbicides and fertilizer usage to find ways to reduce their use and revise application methods.

West Bloomfield Township currently has an ordinance prohibiting the commercial application of phosphorus, requiring post application fertilizer clean-up, licensing of fertilizer applications and golf courses and schools and establishing application periods.

## Section 2 SWWPI Review Approach

## 2.1 Seven key pollution prevention principles for good housekeeping

- 1. Provide for waste management
- 2. Establish proper product material storage areas
- 3. Establish proper equipment/vehicle fueling and maintenance practices
- Control equipment/vehicle washing and allowable non-storm water discharges
- 5. Develop a spill prevention and response plan
- 6. Establish proper product usage and applications
- 7. Establish a monitoring of structure maintenance

## 2.2 Inspections, Maintenance, and Record keeping

## Appendix A: Outline of SWPPI Approach

1. Inspections - All Township properties with storage yards and vegetated swales, bioswales, detention basins, and rain gardens are inspected twice per year by a Storm Water Operator. All storage yards will be inspected monthly by Township staff.

## A. Inspections

- Spot inspections
- Informal inspections
- · Before or even during rain event inspections
- Train staff

## **B. Inspection Reports**

- Inspection date
- Inspector information, including the names, titles, and qualifications of personnel conducting the inspection
- Weather information for the period since last inspection
- Current weather information
- Descriptions of evidence of previous or ongoing discharges
- Location(s) of structures that need to be maintained
- Corrective action required, including any necessary changes to the SWPPI and implementation dates
- Reference to past corrective actions taken

## Appendix B: SWPPI Inspection Report

## C. Inspection Sequence

- Plan the inspection
- Inspect discharge point and downstream off-site areas
- Inspect perimeter controls and slopes
- Inspect site entrances
- Inspect pollution prevention and good housekeeping practices

## **II.** Maintenance

## A. Maintenance

- Maintenance of products will vary according to the specific area and site conditions
- Remove sediment from storm drain inlets, paved roadways, and parking lot(s) as appropriate and properly dispose of sediment into controlled areas to prevent soil from returning to the area(s) during rain events
- Ensure waste areas and material storage areas are cleaned and maintained

## **B.** Maintenance Activities Report

- Date
- Location
- Maintenance Activity Performed

## Appendix C: SWPPI Maintenance Activity Report

## III. Record keeping

- Include copy of PIPP
- Copy of Notice of Intent (NOi) and any storm water related correspondence with federal, state, and local regulatory authorities
- Inspection forms, including the date, place, and time of the inspection
- Name(s) of inspector(s)
- The date, time, exact location, and a characterization of significant observations, including spills and leaks
- Records of any non-storm water discharges
- Corrective actions
- Weather conditions

## ► Scheduling

Method for scheduling and coordinating prevention maintenance measures

- All Township-owned facilities
- Twice a year inspections: Spring, Fall

## V-Evaluation/Recommendations

Method for evaluating and making recommendations for future improvement

- Are the inspections working?
- Are the maintenance activities working?

## PIPP Check List Management procedures and practices

## P2 Principle 1: Provide for Waste Management

Procedures and practices to prevent or reduce the discharge:

- Solid
- Liquid
- Gas
  - 1. Trash Disposal
  - 2. Recycling
  - 3. Proper Material Handling
  - 4. Clean-up Measures
  - 5. Storage
  - 6. Waste Disposal
  - 7. Training Employees

## Waste Management Practices: Hazardous or Toxic Materials

- Paints
- Solvents
- Petroleum Products
- Pesticides
- Wood Preservatives
- Acids
- Roofing Tar
- Other Materials

## P2 Principle 2: Establish proper material handling and storage areas

- Stored Indoors and/or
- Under Cover
- Areas of Secondary Containment
  - 1. Dikes
  - 2. Berms
  - 3. Curbing
  - 4. Other methods

P2 Principle 3: Establish proper equipment and vehicle fueling and maintenance practices

- Off Site **I** Possible
- Clean and Dry Site
- Spill Kit, Trained Staff
- Covered Area

P2 Principle 4: Control equipment and vehicle washing and allowable non-stormwater discharges

- Washout Facilities
- Concrete Washout Areas
- Must Handle Washout Water
- At Least 50 Yards Away from Storm Drains and Watercourses
- Prefabricated Washout Containers
- Develop funds to provide for indoor vehicle and equipment washing
- Above Ground Structure from Straw Bales or Sandbags with a Plastic Liner

P2 Principle 5: Develop a spill prevention and response plan

- Clearly Identify Ways to Reduce the Chance of Spills
- Stop the Source of Spills
- Contain and Clean Up Spills
- Dispose of Materials Contaminated by Spills
- Train Personnel
- Specify Material Handling Procedures and Storage Requirements
- Clear and Concise Spill Cleanup Procedures are Provided and Posted
  - 1. Note the locations of chemical storage areas, storm drains, tributary drainage areas, surface water bodies on or near the site, and measures to stop spills from leaving the site.
  - 2. Specify how to notify appropriate authorities, such as police and fire departments, hospitals, or municipal sewage treatment facilities to request assistance.
  - 3. Describe the procedures for immediate cleanup of spills and proper disposal.
  - 4. Identify personnel responsible for implementing the plan in the event of a spill

## <u>P2 Principle 6</u>: Establish proper product usage and applications

- blentify materials used
- blentify how they are used
- blentify amounts used
- Establish alternatives on the materials used, how they are used, and the amount that is used

## P2 Principle 7: Establish a monitoring of structure maintenance

- Spot Inspections
- Informal Inspections
- Monitor the structure integrity (check for damage)
- Monitor the capability of the structure (if it is doing its job)
- Inspect for normal clean-out maintenance

## Appendix A: PIPP Approach Outline

## I. Inspections

- A. Inspections
- **B. Inspection Reports**
- C. Inspection Sequence

## Twice-a-year comprehensive Inspections

- 1. Police Station
- 2. Water Utilities Complex
- 3. Town Hall
- 4. Parks
- 5. Library
- 6. Fire Department(s)
  - a. Garage Maintenance
  - b. Vehicle Maintenance
  - c. Chemical Storage
  - d. Material Storage
    - 1. Locations
    - ii. Methods
    - 111. Review of general operations to identify areas for improvement
  - e. Catch basins
  - f. Parking lot
  - g. Detention basins
  - h. Storm water wetlands
    - 1. Maintenance
      - 1. Sediment removal
      - 2. Collected material removal
      - 3. All material removed is disposed of in a regulated upland facility
    - ii. Repairs

## Review the use of chemical applications

- 1. Town Hall
- 2. Parks
  - a. Pesticides usage
  - b. Herbicides usage
  - c. Fertilizer usage
  - d. Salt applications
    - i. Ways to reduce usage
    - ii. Revision of application methods

## II. Maintenance

- A. Maintenance
- B. Maintenance Activities Report
- III. Record keeping
- N. Scheduling
- V. Evaluation/Recommendations

## **Appendix B: Inspection Report**

The SWPPP inspection sheets have been customized to fit the needs for each facility, based on what materials, non-structural controls, and structural controls exist on site. An example is provided below:

Material/Contents/Structural BMP	Location	Observation	Additional Comments
Fueling Area (Above Ground Tank)	Outdoors		
Catch Basins	Outdoors		
Trench Drains	Indoors		
Chemicals Storage	Indoors		
Labeling of Containers	Indoors		
Oil/Water Separator	Indoors		
Detention/Retention Basin	Outdoors		
Outfall TC9-1	Outdoors		
Additional Comments:			



Name of person conducting inspection = \_\_\_\_\_\_ Date:\_\_\_\_\_

Date of lastrain fall:

Reason for inspection (circle one): Quarterly Inspection Annual Inspection Maintenance

General Maintenance					
Task		Checked (Y/N)	Maintenance	Inspection	Comments
			Needed (Y/N)	Frequency	
Presence of debris and/o	or trash			Quarterly	
Presence of nuisance cri	itters			Quarterly	
		Vegetati	ion Management		
Presence of tree root				Quarterly	
obstructions					
Presence of weeds/invas	sives			Quarterly	
Grass roots encroachme	nt into			Ouarterly	
vegetated swale					
Presence of plant wilting	g or			Quarterly	
drought conditions					
Presence of plant die-				Quarterly	
off/sparse areas					
Condition of mulch layer				Annually	
		CI	heck Dams		
Presence of ponding wa	ter			Within 24 hrs	
				after a rainfall/	
				Quarterly	
Additional Items Noted:	Additional ItemsNoted:			Quarterly	
		Mainte	nance Activities		
Task		Maintenance	e Frequency	Com	iments
Watering	0	As-N	eeded		
Replace mulch layer	0	Annually			
Weeding	0	Bi-Annually (Spring & Fall)			
Cutting plants down	0	As-Needed			
Re-planting	0	As-Needed			
Other:	0	As-N	eeded		

Charter Township of West Bloomfield

## Under Ground Storage Tank Storage

## Description

Vehicle and equipment fuel, if improperly stored, can potentially impact water quality from runoff into nearby drainage ways and catch basins. Gasoline and diesel fuel contain hydrocarbons which can be detrimental to aquatic life.

## Procedure

Fuel dispensing equipment should be properly maintained, secondary containment should be installed, and spill kits should be located onsite to prevent runoff into local waterways.

## Objectives Cover Contain Educate Reduce/Minimize Targeted Constituents Gasoline Diesel Fuel Hydrocarbons

## **Pollution Prevention**

We store gasoline and diesel fuel onsite in underground storage tanks, which are double-walled. One tank is located above ground on a concrete pad and surrounded by crash barrier posts, at Fire Station 9.

Underground tanks are located at Fire Stations 2, 4, 5 and the Water Utilities Complex. Spill kits are located onsite.

## Inspections

Bi-annual inspections of these areas are performed by a Certified Storm Water Operator. Additional quarterly inspections are performed by a contractor (per state standards).

## Training

We train our staff at least once every permit cycle on good housekeeping and pollution prevention practices in regard to fueling and fuel storage.

## Salt Application and Storage

## Description

The application and storage of deicing materials, most commonly salts such as sodium chloride, can lead to water quality problems for surrounding areas. Salts, are applied to parking areas to reduce the amount of ice during winter storm events. Salts lower the melting point of ice, allowing roadways to stay free of ice buildup during cold winters.

## Procedure

The Township Parks Department has a salt pile at Marshbank Park and applies their own salt. All other departments utilize a contractor. During parking area salt application, certain best management practices can produce significant environmental benefits. The amount of parking area salt applied should be regulated to prevent over-salting of motorways and increasing runoff concentrations. The amount of salt applied should be varied to reflect site-specific characteristics, such as parking lot area and design, traffic concentration, and proximity to surface waters.

## **Pollution Prevention**

We utilize a less corrosive salt for application to the sidewalks. The Parks mostly utilize brine.

## Training

We encourage our contractors attend training on loading of materials, application techniques, reduce losses, and "over salting".

### Objectives

Cover Contain Educate Reduce/Minimize Production Substitution **Target Constituents** Sediment Nutrients Trash Metals Bacteria Oil and Grease Organics Oxygen Demanding

## Vehicle & Equipment Washing

Description	Objectives
Salts, gravel, sand, and other materials from vehicles and equipment,	Cover
when washed off with a hose, can enter into the storm sewer system, if the vehicle and equipment washing operations are poorly managed.	Contain
	Educate
Procedure	Reduce/Minimize
Township Parks Department vehicles and equipment are washed outside, with water only, where the wash water is directed to a rain garden to help filter runoff. Vehicles and equipment are also periodically washed indoors.	Product Substitution
By 2020, a building addition will allow for ALL indoor vehicle and equipment	Target Constituents
washing.	Sediments
All other Township vehicles are either washed indoors or at a commercial car wash facility	Nutrients
car wash raointy.	Trash
	Metals
Pollution Prevention	Oils and Grease
Itilize biodegradable soap	Organics
	Oxvgen Demanding
Sweep up excess airt and debris when hecessary.	Crygen Demanding

## Training

We train our Township staff at least every 3-5 years on proper vehicle and equipment practices and storm water awareness.



Name of person conduct ing inspection = \_\_\_\_\_\_ Date:\_\_\_\_\_

Reason for inspection (circle one): Quarterly I nspection Annual Inspection Maintenan ce

General Maintenance					
Task	Checked (Y/N)	Maintenance Needed (Y/N)	Inspection Frequency	Comments	
Condition of gate and fence			Annually		
Presence of nuisance waterfowl, feral critters, or guests			Quarterly		
Presence of debris/trash			Quarterly		
Appea rance of vandalism			Quarterly		
	Vege	etation Manageme	nt	1	
Presence of algae growth			Quarterly		
Presence of invasive species (Purple Loosestrife, Phragm ites, etc.)	-		An nually		
Presence of bank erosion			Quarterly	Location:	
Presence of erosion around inlets/outlets	1	I	Quarterly	Location:	
Vegetation loss along embankments			Qua rterly		
Presence of vegetation in/and around the inlets/outlets that is obstructing or slowing the flow of water			Qua rterly	Location:	
	St	orm Sewer System			
Accessibility to the inlet/outlet			Quarterly		
Presence of sediment, etc. in inlet/outlet			Quarterly		
Condition of inlet/outlet pipes (crumbling, broken, or showing sign of structural deterioration)			Quarterly	Location:	
Presence of trash/debris in and around the inlet/outlet			Quarterly	Location:	
Presence of oil, grease, or other fluids entering the pond			Quarterly		
Additional Items Noted:			Quarterly		

## Detention Basin Inspection Checklist, continued

MaintenanceActivities						
Task		Maintenance Frequency	Comments			
Cutting plants down	0	Semi-Annually				
Trashremoval	0	As-Needed				
Bank stabilization	0	As-Needed				
Inlet/Outlet cleaning	0	As-Needed				
Other:	0	As-Needed				
	I	Additional Notes				

TRUGREEN COMMERCIAL SERVICE AGREEMENT			BranchAddress: Branch: 5787 Phone Number:248 379 9037 FAX: 248-674 3150 Emai: scottdilwonh@trugreenmailcom Address Line 1 5401Perry Dr. Address Line 2 City Waterford State MI Zip 48329		
Property Address: Name: We Contact Name: Cat Email: Address Line 1 mul Address Line 2 City WEST BLOC	st Bloomfield Township herine Elleson Phone Numbtr:248451 litiplebcations per attached spreadsheet DMFIELD State MI Zip48322	4801	Biii To: Name: ON FILE Contact Name: Email: Address Line 1 Address Line 2 City: State	Phone Number: Zip	
	LAWN CARE SERVICES	0007		EEANDSHRUBCARESERVICES	
TREATMENT		COST			COST
APPLICATION 1	VHOCONTROL CRABGRASS CONTROL		APPLICATION 1		
APPLICATION2	FERTILIZATION WEEDCONTROL		APPLICATION 2	ROOTZONE FERTILIZATION	
	CRABGRASS CONTROL	)		•	
APPLICATION 3	FERTILIZATION WEED CONTROL		APPLICATION 3	NSECTCONTROL DISEASE CONTROL	
	FERTILIZATION			INSECTCONTROL	
APPLICATION 4	WEEO CONTROL		APPLICATION 4	DISEASE CONTROL	
	FERTILIZATION			INSECTCONTROL	
APPLICATION 5	• WEEO CONTROL		APPLICATION 5	DISEASE CONTROL	
	FERTILIZATION			·	
APPLICATION 6	• WEEOCONTROL		APPLICATION 6	:	
	FERTILIZATION			SUPERIOR HORTICULTURE OIL	
APPLICATION 7	WEEO CONTROL		APPLICATION 7		
	ANNUALLAWNCARECOST:			ANNUAL TREE/SHRUB CARE COST:	
	BEN EFICIAL SERVICES			BEN EFICI A L SERVICES	
DESCRIPTION/As Ne	eeded	COST	DESCRIPTION/As Need	led	COST
181 GRUB PREVENTATIVE			OWTER PROTECTION SPRAY	(ANTI-OESSICANT)	
OCORE AERATION				N	
Oseeo1NG			0 BORINGNSECT NJECTION		
0FUNGICIOE5			0 APPLE SCAB ANO RUSTFUN	IGIODES	
0NSECT!OOES			Q OIPLOOIA FUNGICIDES		
0 BEDWEEDING LOTWEE	EDING		0ZIMMERMAN MOTH SPRAYS	SPRING ANO FALL	
0 GOOSE CONTROLS			OPRUNNG		
	ANNUAL BENEFICIAL SERVICES COST:			ANNUAL BENEFICIAL SERVICES COST:	
TOTAL SALESTAX:				TOTAL SALES TAX:	
1	TOTAL ANNUAL LAWN CARE SERVICE COST:		ΤΟΤΑ	LANNUALTREE/SHRUBSERVICECOST:	
COMMENTS: prepa;y pbe is. 3747.47			COMMENTS:		
Cl 2011 TruGrttn LP. All Rig	hts RcsCffd SEE REVERSE SIDE FOR ADD	ITIONALTERMS	Т	Tot\1\NNI1.\1. $s1.1:v1n.cost$	\$4,163.85

.

3-8-		
2(Date:		

## West Bloomfield Parks & Recreation Maintenance Facility

MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT PART 5 RULES

Pollution Incident Prevention Plan

## **Table of Contents**

Chapter I: General Facility Information	3
Chapter 2: Spill Response Team	4
Chapter 3: Site Map	.4
Chapter 4: Polluting Material Inventory	. 6
Chapter 5: Routine Inspections	?
Chapter 6: Tree-Year Plan Review	7
Appendix A: SWPPP Routine Inspection Form	. 8
Append ix B: Three-Year PIPP Review Form	. 9
Appendix C: West Bloomfield Parks & Recreation Facility Spill Response Plan	0
Appendix D: Spill Reporting Sheet	13

## Chapter 2: Spill Response Team

Table 1: General Facility Information

NAME OF FACILITY:	West Bloomfield Parks and Recreation Maintenance Garage	
FACILITY ADDRESS:	Marshbank Park, 2805 Hiller Road, West Bloomfield, Ml 48323	
FACILITY CONTACT INFORM	AATION	
Name and Title:	Joe Ketchum, Parks Superintendent	
Mailing Address:	West Bloomfield Parks and Recreation, 4640 Walnut Lake Road, West Bloomfield, Ml 48323	
Telephone:	248-451-1920	
Email:	jketchum@westbloomfieldparks.org	
SPILL PREVENTION AND CONT	ROL COORDINATOR	
Name and title:	Joe Ketchum, Parks Superintendent	
Telephone:	248-451-1920	
Email:	jketchum@westbloomfieldparks.org	
24-Hour Emergency Telephone:	Cell: (248) 640-2749	
# **Chapter 2: Spill Response Team**

Drake Sports Park yard contains fuel storage (inside) and outdoor material stockpiles. Marshbank Park contains outdoor fuel storage, new and used oils, a salt pile, and outdoor material stockpiles. The Police Station complex contains a fuel island. Fire Stations 2, 4, 5, and 9 contain outdoor fuel islands and/or tanks. The Water Utilities Department complex contains new and used oils storage, a fuel island, and outdoor material stockpiles.

### Table 2: Spill Response Team

NAME AND TITLE	RESPONSIBILITY
Joe Ketch um, Parks Superintendent	Spill Response Program Oversight and Surveillance Activities
Chris Frey, Parks Supervisor and Mike Lee, Parks Operations	Onsite Spill Prevention and Control
Laura Gruzwalski, Certified Storm Water Operator	Facility Inspections, Program Administration

## **Chapter 3: Site Maps**

### Water Utilities Department Complex



### Drake Sports Park Yard



### Marshbank Park Storage Yard



#### **Police Station**











## **Chapter 4: Polluting Material Inventory**

### Inventory and Description of Polluting Materials

Water Utilities Dept. Complex - new/used oils, fuel island, and outdoor spoil piles are housed

Drake Sports Park - indoor fuel storage (cabinets), outdoor spoil piles are housed

Marshbank Park - new/used oils, salt bin, outside fuel storage, outdoor spoil piles are housed

Police Station - outdoor underground (UG ) fuel tank

Fire Station 2 – outdoor UG fuel tank

Fire Station 4 – outdoor UG fuel tank

Fire Station 5 – outdoor UG fuel tank

Fire Station 9 – outdoor above ground (AG) fuel tank

#### Solid Salt Storage Area Description

The West Bloomfield Parks & Recreation Facility stores road salt inside a covered Salt Bin on the North side of the Maintenance Yard. The Salt Bin is a steel framed structure with vinyl sides and roof, asphalt floor, concrete footer walls sealed with tar. The capacity of the Salt bin is approximately 50 tons. The loading area outside of the Salt Bin consists of an asphalt pad. There are no interior floor drains inside the Bin.

Salt is delivered to the West Bloomfield Parks & Recreation Facility and is placed just outside the Salt Bin. Salt deliveries only occur between normal business hours, so that a staff person can be present onsite during all salt deliveries to direct where and how the salt is delivered. After the salt is unloaded from the delivery truck, West Bloomfield Parks staff then immediately loads the salt into the bin using a front end loader. Employees are trained in the procedure to immediately sweep excess salt that tracks out or spills back into the barn.

The West Bloomfield Parks & Recreation Maintenance Staff performs onsite maintenance for the vehicles and equipment used in the department, including the loader and dumps trucks used for snow and salt activities. These vehicles are stored onsite.

The Salt Bin has an access gate that remains locked when not in use and during non-business hours.

The salt bin is not located within 50 feet of a lake shore, stream bank, or wetland, nor is it located in a floodplain.

#### Fuel Tank Description

Fueling areas are inspected twice per year by a Certified Storm Water Operator and quarterly by a contractor (per state standards).

Material Stockpile Description

Material Stockpile areas are inspected twice per year by a Certified Storm Water Operator and swept as needed to maintain material in the designated areas.

Oil Water Separators are located at Fire Stations 1-5 and 9.

### Spill Response Procedures and Equipment

Spill Response Procedures and a Spill Response Form have been created for the West Bloomfield Parks & Recreation Facility.

### **Chapter 5: Routine Inspections**

Preventive maintenance at the West Bloomfield Parks & Recreation Facility involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. A Routine Inspection Form has been created for the West Bloomfield Parks & Recreation Facility and is located in **Appendix** A. The Routine Inspection Form will be used by facility staff during site walk-throughs that will be conducted on a **monthly** basis to observe the salt storage area. The purpose of these inspections is to identify and prevent conditions that could lead to the release of polluting materials to sewers, drains, or otherwise directly or indirectly into any public sewer system or to the surface or groundwater's of this state. Good housekeeping procedures reduce the potential for pollutants to come into contact with the environment. A log of the routine inspections and corrective actions shall be maintained on file and shall be retained for three years. Comprehensive inspections shall be performed every 6 months by a Storm

#### Water Operator.

### **Chapter 6: Three-Year Plan Review**

The completed PIPP requires that West Bloomfield Parks and Recreation will notify the MDNRE Water Bureau

District Office within 30 days at:

SE Michigan District Office 27700 Donald CT Warren MI 48092-2793 (586) 753-3700

West Bloomfield Parks and Recreation will also notify the following agencies that the PIPP requirements have been completed:•

Oakland County Health Department Health Administration, County Service Center 1200 North Telegraph, Building 34 East Pontiac, Michigan, 48341 Phone: 248-858-1280 Local Emergency Planning Committee Ms. Tricia Smith 1200 N. Telegraph Rd., Dept. 410 Pontiac MI 48341-0410 Phone: 248-858-5371

Part 5 requires that the PIPP be evaluated every three years and after any release requiring implementation of the plan. The Plan will also be updated if any facility personnel, processes, materials, or procedures that were included in the plan change (See **Appendix** C for PIPP Review Form).

Based on the three-year review, the West Bloomfield Parks & Recreation Facility will amend the PIPP as needed to ensure continued compliance with the terms and conditions of Part 5. Recertification and renotification of updates need to be sent to the MDNRE District Office, the Oakland County Health Department, and the Local Emergency Planning Committee.

West Bloomfield Parks & Recreation Facility will maintain records of all PIPP-related inspections and activities, including Routine Inspections, Three-Year Review, and Spill Reports. Records will also be kept describing other illicit discharges that can affect the quality of storm water runoff. All such records will be retained for three years.

# Appendix A: PIPP Routine Inspection Form - Template

Material/Contents/Structural BMP	Location	Observation	Additional Comments
Fueling Area / Propane Tank Area	Outdoors		
Catch Basins	Outdoors		
Trench Drains	Indoors		
Chemicals Storage	Indoors		
Labeling of Containers	Indoors		
Oil/Water Separator	Indoors		
Gravel Parking Lot	Outdoors		
Dumpster	Outdoors		
Outfall FS1-1	Outdoors		
Additional Comments:			

# Appendix B: Three-Year PIPP Review Form

### Date of Review:

### Reviewer Name

Print:

Signature:

I) Facility general information and Spill Response Team information is current and accurate	Yes	No
2) Site map is current and accurate	Yes	No
3) Polluting material inventory is current and accurate	Yes	No
4) New exposures, processes and related controls have been documented	Yes	No
5) Spills have been recorded and reported as appropriate	Yes	No
6) Review Routine Inspections and have all forms available	Yes	No
7) Review spill reports (if applicable)		
8) Review Spill Response Procedures and phone numbers for updates		
I0) Ensure Material Safety Data Sheets are up-to-date and available for all chemicals onsite		

Additional Comments:

## Appendix C: West Bloomfield Parks & Recreation Facility Spill Response Plan

EMERGENCY NUMBERS (to be posted at key telephones throughout facility)

Agency Name	Phone Number
Local Fire Department	
Emergency	911
Nonemerge ncy	248-975-9200
. 18.f ·	
Emergency	911
V.S. COAST GUARD	200, 424, 2202
	000-424-8802
Michigan Department of Natural	Resources and Environment
(MDAKE) 8:00a.m 5:00 p.m.	(59() 752 2700
Southeast Michi an District Office	(380) /33-3/00
After Hours:	
reas nouine	1 800 202 4706

1-800-292-4706

### SPILL RESPONSE PLAN

### SPILL RESPONSE PLAN

To The	Ground:	To Waters of the State:		To Sanitary Sewer (contact WWTP only):	
New Oil	50 gallons	Salt	Any quantity that causes visible sheens	Salt	Any quantity
Used Oil	50 gallons	Liquid Brine	oil films, unnatural	Liquid Brine	authorized by receiving WWTP
Fuel	7 gallons	Oil	or deposits in water body	Oil	

- 1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder.
- 2. Stop source of spill (plug hole, shut off valve, etc.)
- 3. Call the various Department Superviror(s) to advise of the spill and potential dangers. Notify police and fire departments if necessary for possible traffic lane closures and need for assistance.

### 4. IF NECESSARY, CONTACT SPILL RESPONSE SERVICES FROM ENVIRONMENTAL RESTORATION LLC

5. Protect all drains (interior and exterior) by diking spill with absorbents. If spill is large, use stockpiled sand. Any contaminated sand used in any spill response activities will be stockpiled, tarped, and properly disposed of.

- 6. Do not flush spills with water. All spilled oil will be absorbed.
- 7. Dispose of cleaned material/absorbent into secure container for proper disposal.
- 8. A call to the DEQ or PEAS will be made to report the release:

During Regular Business Hours: SE Michigan District Office 27700 Donald CT Warren MI 48092-2793 (586) 753-3700

During Non-Business Hours: Pollution Emergency Alert System (PEAS) 1-800-292-4706

### **MDEO Water Bureau Chief**

525 West Allegan Street P.O. Box 30473 Lansing, MI 48909-7973

### 9. A written report **MUST** be submitted within 10 days after the release to:

#### **Oakland County Health Department**

Health Administration, County Service Center 1200 North Telegraph, Building 34 East Pontiac, Michigan, 48341 Phone: 248-858-1280

### AVAILABLE SPILL RESPONSE EQUIPMENT

- Sand (50 tons)
- 20 Bags of Floor Dry (40 lbs. / bag)
- 2 Brooms
- 2 Shovels
- 20 Absorbent Booms
- 20 Absorbent Pads
- Caution Tape
- 2 9-Yard Vactors
- 2 Street Sweepers

# Appendix D: SPILL REPORTING SHEET

Date of Incident		
Time of Incident		
Location & Cross Streets		
Type of Spill		
Estimated Quantity		
Reported To		
Time Reported		
Responsible Party		
Address		
Phone Number/Contact		
Describe materials used to clean up spill:		

Describe response measures that have been done, and the schedule for completion of other measures to be taken, or both

Describe measures taken to prevent recurrence of similar releases

Completed By:

Additional Notes:

# Appendix D: SPILL REPORTING SHEET

	-			
Date of Incident				
Time of Incident				
Location & Cross Streets				
Type of Spill				
Estimated Quantity				
Reported To				
Time Reported				
Responsible Party				
Address				
Phone Number/Contact				
Describe materials used to cl	ean up spill:			
Describe response measures that have been done, and the schedule for completion of other measures to be taken, or both				
Describe measures taken to prevent recurrence of similar releases				
Completed By:				

Additional Notes: