ARTICLE 24
ENVIRONMENTAL PROTECTION STANDARDS

Sec. 24.01 Wetland Protection

a. **Purpose.** The standards of this Section are intended to ensure compliance with the Geomaere-Anderson Wetland Protection Act 203 of 1979 through coordination with the Michigan Department of Environmental Quality (MDEQ) wetland protection and permit program. The standards of this Section exceed the MDEQ regulations by requiring a setback from MDEQ regulated wetlands and encouraging the placement of buildings to protect non- MDEQ regulated wetlands between two (2) acres and five (5) acres in size. This Section, in conjunction with *ARTICLE 13 PLANNED UNIT DEVELOPMENT OVERLAY STANDARDS*, and *ARTICLE 16 SITE PLAN REVIEW*, are mechanisms to promote the *City of Fenton Master Plan* goal to "maximize the preservation of unique and valuable natural resources from the impacts of development." Among the purposes of this Section are to:

1. Recognize the "unique and valuable" attributes of wetlands as a stormwater recharge area, thereby controlling the rate of runoff, improving groundwater quality, providing erosion control and lessening the affects of flooding.
2. Provide open space and enhance aesthetics in the City.
3. Promote preservation of habitat for plants, fish, and/or wildlife.
4. Ensure that the public has access to information on the MDEQ wetland protection regulations, and help ensure compliance with MDEQ wetland regulations through a coordinated local process.
5. Provide a higher degree of protection for wetlands which are MDEQ regulated through requirements for building and parking lot setbacks.
6. Encourage protection of important wetlands which may be exempt from MDEQ regulation;
7. Promote the proper integration of wetlands into site plans.
8. Recognize the property owners right to develop their property in a reasonable manner.
9. Minimize the long term economic and environmental losses associated with the dredging and filling of wetlands.

b. **Applicability**

1. No permit shall be issued for any construction, reconstruction, erection, expansion and/or change in use requiring site plan approval except in accordance with the standards of this Section.
2. The MDEQ wetland standards and regulations under Public Act 203 of 1979 which are referenced in this Section apply to both new and existing development (including grading, parking, storage, building construction, etc.). The standards also apply to any drainage structure or basin within an MDEQ-regulated wetland and/or use of a MDEQ-regulated wetland as a retention or detention ponds/basin; which, if constructed below the ordinary high water mark of an inland lake or stream, will require a MDEQ permit under the Inland Lakes & Streams Act, PA 346 of 1972. Copies of Public Act 203 of 1979 and Public Act 346 of 1972 are available from the MDEQ.
3. The provisions of this Section are based on the PA 203 of 1979 and the policies, standards and procedures of the MDEQ. Any changes to the legislation, policies, standards and/or procedures of the state shall supersede the appropriate provisions of this Section.

c. **MDEQ Regulated Wetlands Process**

1. Wetlands maps of the Fenton area, available from the City of Fenton, may serve as a guide in determining the likelihood of wetlands. However, the applicant is responsible for the accurate delineation/determination of the wetland area, in accordance with the definition of a wetland

in Section 19(3) and Rule 4 of Public Act 203 of 1979. When a potential wetland exists, the applicant can reference available sources of information to further determine if the site exhibits the physical and biological characteristics of a wetland; and/or obtain the opinion of a qualified wetland consultant. Available sources of information, such as local wetland maps and the Genesee County Soil Conservation Survey are available from the City, the U.S. Soil Conservation Service and/or the MDEQ

2. Locations meeting the definition of a wetland in *ARTICLE 28 DEFINITIONS* are regulated by the MDEQ when any of the following apply:

   (a) Wetland is contiguous to an inland lake, pond, river or stream as defined in Rule 1(e) of Public Act 203 of 1979.
   (b) Wetland is more than five (5) acres in size.
   (c) Wetland is under five (5) acres in size where the MDEQ determines that any one (1) of the following conditions exist:

      (1) Wetland supports endangered or threatened plants, fish or wildlife.
      (2) Wetland represents a rare and unique ecosystem.
      (3) Wetland supports plants or wildlife of an identified regional importance.
      (4) Wetland provides groundwater recharge documented by a public agency.

3. The City will not issue a permit for activity (such as dredging or filling) or act on a development proposal on a property where wetlands are believed to exist and/or are indicated on the natural features map in the City of Fenton Master Plan.
4. Should the available sources of wetland information, consultants report or MDEQ wetland determination indicate the potential or known presence of a wetland, the City may require an MDEQ approved wetland determination prior to approving any development plan. Should the site development include disturbing a MDEQ -regulated wetland, locating a stormwater outfall structure or catch basin in the regulated wetland, and/or using a regulated wetland as a retention basin, the Planning Commission will require that the applicant submit a copy of an MDEQ permit, including any attached conditions and mitigation plan, prior to the issuance of a building permit. Should the MDEQ deny an application for permit which is necessary to develop the site plan, the site plan shall be resubmitted according to the standards of *ARTICLE 16 SITE PLAN REVIEW.*

d. **Further Wetland Protection Standards of City**

1. Any disturbance of soils, removal of landmark trees or stumps, grading, alteration of water flowing into or from an MDEQ -regulated wetland, or any prohibited activity as listed in Section 5 of Public Act 203 of 1979, without a permit from the MDEQ, may result in a stop work order issued by the City and/or require restoration of the wetland in accordance with MDEQ standards.
2. All buildings and parking lots shall be set back twenty-five (25) feet from a MDEQ-determined/regulated wetland. Trails and recreational areas, including playground equipment, may be allowed in the wetland setback.
3. Judicious effort shall be made through site plan design to preserve non-MDEQ-regulated wetlands which exceed two (2) contiguous acres in size. Use of non-MDEQ-regulated wetlands as detention or retention ponds may be allowed, following review of such plans by the City engineer. Site plans shall be reviewed in accordance with *ARTICLE 16 SITE PLAN REVIEW* and *ARTICLE 13 PLANNED UNIT DEVELOPMENT OVERLAY STANDARDS*, to determine compliance with the requirements in this Section.
4. Land containing wetlands shall not be divided in a manner creating parcels or lots which cannot be used in conformance with the requirements of this Section or the MDEQ regulations.

e. **Variances from Wetland Setback Requirement**

In considering a variance for the wetland setback, the applicant must demonstrate to the Zoning Board of Appeals that:

1. The setback is not necessary to preserve the ecological and aesthetic value of the wetland.
2. The natural drainage pattern to the wetland will not be significantly affected.
3. The variance will not increase the potential for erosion, either during or after construction.
4. No feasible or prudent alternative exists and the variance distance is the minimum necessary to allow the project to proceed.
5. MDEQ permit requirements have been met and all possible avoidable impacts to wetlands have been addressed.

Sec. 24.02 Woodland Protection

Woodlands are regulated in association with site plans in *Section 21.03 Replacement of Removed Trees* and *Section 21.04 Incentives to Preserve Existing Trees*.

Sec. 24.03 Flood Hazard Area Overlay Zone

a. **Purpose.** It is the purpose of this Section to significantly reduce hazards to persons and damage to property as a result of flood conditions in the City, and to comply with the provisions and requirements of the National Flood Insurance Program, as constituted in accord with the National Flood Insurance Act of 1968, and subsequent enactments and the rules and regulations promulgated in furtherance of this program by the Federal Emergency Management Agency, as published in the Federal Register, Vol. 41, No. 207, Tuesday, October 26, 1976, and redesignated as 44 FR 31177, May 31, 1979. Further, the objectives of this Section include:

1. The protection of human life, health, and property from the dangerous and damaging effects of flood conditions.
2. The minimization of public expenditures for flood control projects, rescue and relief efforts in the aftermath of flooding, repair of flood damaged public facilities and utilities, and the redevelopment of flood damaged homes, neighborhoods, commercial, and industrial areas.
3. The prevention of private and public economic loss and social disruption as a result of flood conditions.
4. The maintenance of stable development patterns not subject to the blighting influence of flood damage.
5. To ensure that the public has access to information indicating the location of land areas subject to periodic flooding.
6. To preserve the ability of floodplains to carry and discharge a base flood.

b. **Delineation of Flood Hazard Area Overlay Zone**

1. The flood hazard area overlay zone shall overlay existing zoning districts delineated on the official Zoning Map of the City. The boundaries of the flood hazard area overlay zone shall coincide with the boundaries of the areas indicated as within the limits of the one hundred-year flood area in the report entitled “The Flood Insurance Study City of Fenton, Genesee County, Michigan," with accompanying flood insurance rate maps. The study and accompanying maps are adopted by reference, appended, and declared to be a part of this Section
2. Where there are disputes as to the location of a flood hazard area overlay zone boundary, the Zoning Board of Appeals (ZBA) shall resolve the dispute in accord with *ARTICLE 27 ZONING BOARD OF APPEALS.*
3. In addition to other requirements of this chapter applicable to development in the underlying

zoning districts, compliance with the requirements of this Section shall be necessary for all development occurring within the flood hazard area overlay zone. Conflicts between the requirements of this Section and other requirements of this section or any other section shall be resolved in favor of this Section, except where the conflicting requirement is more stringent and would further the objectives of this Section to a greater extent than the requirements of this Section. In such cases, the more stringent requirement shall be applied.

c. **Use and Principal Structure Regulations**. Within the flood hazard area overlay zone, no land shall be used except for one (1) or more of the following uses:

1. Grading and agriculture, pastureland, and animal grazing.
2. Harvesting of a native or wild crop permitted by law such as wild rice, marsh hay, berries, and seeds.
3. Harvesting of trees.
4. Parks, picnic areas, playgrounds, playfields, athletic fields, golf courses, par three golf courses, golf driving ranges, bridle paths, nature paths, and trails.
5. Wildlife preserves.
6. Fishing, trapping, and hunting in compliance with current laws and regulations.
7. Hunting and conservation clubs, noncommercial archery, rifle, and shooting ranges;
8. Historic sites and structures.
9. Swimming beaches, fishing, and boating docks in accord with the provisions of the Inland Lakes and Streams Act of 1972.
10. Sand and gravel extraction.
11. Required open space or lot area for structural uses that are landward of the overlay zone.

d. **Accessory Buildings, Structures and Uses**

1. Within the flood hazard area overlay zone, no building or structure shall be used except for one (1) or more of the following uses and only in a manner consistent with the requirements of principal uses and accessory buildings, structures and uses in the underlying district, and with those that follow.
2. The following accessory buildings, structures and uses are permitted: off-street parking, streets, roads, bridges, outdoor play equipment, sheds and garages, boathouses, boat hoists, utility lines, pumphouses, bleachers, bank protection structures, signs, fences, gazebos, and similar outdoor equipment and appurtenances; provided each of the following requirements are met:

   (a) The building or structure would not cause an increase in water surface elevation, obstruct flow, or reduce the impoundment capacity of the floodplain.
   (b) All equipment, buildings and structures shall be anchored to prevent flotation and lateral movement.
   (c) Compliance with these requirements is certified by an engineering finding by a registered engineer.

e. **Filling and Dumping**. Dredging and filling and/or dumping or backfilling with any material in any manner is prohibited unless through compensating excavation and shaping of the floodplain, the flow and impoundment capacity of the floodplain will be maintained or improved, and unless all applicable state regulations are met including, but not limited to, approvals pursuant to P.A. 245 of 1929, as amended by P.A. 167 of 1968; P.A. 347 of 1972, as amended; P.A. 346 of 1972, as amended; and P.A. 203 of 1979, as amended.

f. **General Standards for Flood Hazard Reduction**

1. No building or structure shall be erected, converted, or substantially improved or placed, and

no land filled or building or structure used in a flood hazard area overlay zone unless a certificate of zoning compliance, or variance from the Z BA, is obtained, which approval shall not be granted until a permit from the MDEQ under authority of Act 245 of the Public Acts of 1929, as amended by Act 167 of the Public Acts of 1968 has been obtained.

2. All public utilities and facilities shall be designed, constructed, and located to minimize or eliminate flood damage.
3. Site plans shall be reviewed in accordance with *ARTICLE 16 SITE PLAN REVIEW* to determine compliance with the standards in this Section.
4. Land shall not be divided in a manner creating parcels or lots which cannot be used in conformance with the requirements of this Section.
5. The flood-carrying capacity of any altered or relocated watercourse not subject to state or federal regulations designed to ensure flood-carrying capacity shall be maintained.
6. Available flood hazard data from federal, state, or other sources shall be reasonably utilized in meeting the standards of this Section. Data furnished by the Federal Insurance Administration shall take precedence over data from other sources.

g. **Flood Hazard Area Overlay Zone Variances** . Variances from the provisions of this Section shall only be granted by the ZBA upon a determination of compliance with the general standards for variances contained in this Section and each of the following specific standards:

1. A variance shall be granted only upon:

   (a) A showing of good and sufficient cause.
   (b) A determination that failure to grant the variance would result in unnecessary hardship or practical difficulty to the applicant.
   (c) A determination that the granting of a variance will not result in a harmful increase in flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.

2. The variance granted shall be the minimum necessary, considering the flood hazard, to afford relief to the applicant.

h. **Disclaimer of Liability**

1. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based upon engineering and scientific methods of study. Approval of the use of land under this Section shall not be considered a guarantee or warranty of safety from flood damage.
2. This section does not imply that areas outside the flood hazard area overlay zone will be free from flood damage. This section does not create liability on the part of the City or any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

Sec. 24.04 Storm Water Management

a. **Purpose.** The standards of this Section are intended to protect the public health, safety, and welfare of City residents and to protect property values, quality of life, and natural systems relating to storm water runoff control and management. The City finds it is a matter of public concern and benefit to protect water bodies and properties within the City and to reduce the future need for public expenditures relating to flooding, water quality, and storm water system maintenance. Both the quality and quantity of storm water runoff are a matter of public concern.

b. **Applicability.** Residential, commercial, and industrial developments should provide two (2) stage storm water management facilities consisting of a sediment forebay and storage for the one hundred

(100) year storm event. Commercial and industrial facilities must indicate what type of site precautions will be implemented to minimize the potential of contaminants entering the storm water management facilities.

c. **Sizing of Storm Water Management Facilities**

1. **General Criteria**

(a) Storm water management facilities should be located in the low area of a site and set at least twenty-five (25) feet from any lakes, streams, wetlands, or watercourses. In addition, these facilities should not be located in any existing one hundred (100) year floodplains.

(b) Composite runoff coefficients should be based on the values shown in *the table below Storm Water Management Facilities Composite Runoff Coeffients.*

Storm Water Management Facilities Composite Runoff Coeffients			
Type of Surface	**Runoff Coefficient**		
Water surfaces	1.00		
Roofs	0.95		
Asphalt or Concrete Pavements	0.95		
Gravel, Brick, or Macadam Surfaces	0.85		
Semi-Pervious; Lawns, Parks, Playgrounds	Slope <4%	Slope 4%-8%	Slope >8%
Hydrologic Soil Group A	0.15	0.20	0.25
Hydrologic Soil Group B	0.25	0.30	0.35
Hydrologic Soil Group C	0.30	0.35	0.40
Hydrologic Soil Group D	0.45	0.50	0.55

(c) Clear maintenance access that supports heavy equipment should be provided to all sides of the basin.

(d) Side slopes should be no steeper than one to five (1:5) unless a fence has been approved by the City of Fenton.

(e) A minimum one (1) foot of freeboard must be provided above the detention basin design storm event.

(f) All detention basins shall be lined with either a two (2) foot clay liner or geosynthetic liner.

2. **Sediment Forebay**. A sediment forebay should be provided at the inlet of all detention basins for energy dissipation and sediment deposition. The volume of the forebay should be at least five percent (5%) of the design storm event based on the inlet's tributary area.

3. **Detention Basin**. The detention basin should be sized to handle the first flush, bankfull and the design storm events.

(a) The first flush is defined as the half (½) inch rain runoff across the entire site. The volume of first flush storage is determined as follows:

V = 1815*A*C where,
V = volume (cf)

A = acreage
C = composite runoff coefficient

(b) The bankfull flood is defined as the one and a half (1.5) year, twenty-four (24) hour storm runoff across the entire site. The volume of the bankfull flood storage is determined as follows:

V = 8170*A*C where,
V = volume (cf)
A = acreage
C = composite runoff coefficient

(c) The storage volume for each of these events is based on an allowable outflow of 0.15 cfs/acre and is determined in the table below *Detention Basin Storage Volume Designation.*

Table 24.2
Detention Basin Storage Volume Designation

Frequency of Storm	Rainfall Intensity I (In/Hr)	Storage Time Equation T (Min)	Storage Volume Equation V_s (Ft^3/(A×C))
100 Year	$I_{100} = 275/(T+25)$	$T_{100} = -25 + (10{,}312.5/Q_0)^{1/2}$	$V_{s100} = (16{,}500T / T+25) – 40Q_0T$

Note: Equations from Detention Basin Design Formulas for Oakland County, Michigan, Orifice Outlet Formulas dated January 1, 1990.

(d) Extended detention basins and wet detention basins are preferable over dry basins. Retention ponds are discouraged throughout the community.

(e) Extended detention basins should incorporate the following design components:

(1) Lower stage that functions as a shallow marsh or wetland, has an average water depth of six to twelve (6 –12) inches, and is designed to treat and store the first flush volume.
(2) Upper stage that is sized to handle the design storm event and is graded to remain dry except during large storms.

(f) Wet detention basins should incorporate the following design components:

(1) Minimum three (3) feet permanent pool of water.
(2) Minimum length to width ratio of three to one (3:1).
(3) Native vegetation fringe around at least fifty percent (50%) of the perimeter.

4. **Underground Storm Water Treatment Systems.** Any underground storm water treatment systems should meet a minimum eighty percent (80%) Total Suspended Solids (TSS) removal and eighty percent (80%) Oil/Grease removal criteria. Field data verifying removal efficiencies should be provided to City of Fenton's Storm Water Consultant for review and approval.

(a) Data and calculations supplied to the manufacturer should also be provided to City of Fenton's Storm Water Consultant.
(b) Data and sizing results from manufacturer should also be provided to City of Fenton's Storm Water Consultant.
(c) These systems must be inspected every six (6) months at a minimum to verify proper operation and identify any necessary maintenance.

5. **Outlet Structure**

(a) The storm water inlets and the outlet should be located at opposite ends of the basin.
(b) The outlet structure should be designed to release the first flush over a minimum of twenty-four (24) hours, the bankfull flood between thirty-six (36) and forty-eight (48) hours, and release the design storm event at no greater than 0.15 cfs/acre.
(c) An emergency spillway should be provided at the elevation of the maximum pond design volume.

d. **Vegetation in Storm Water Management Facilities.** Native vegetation is encouraged for all storm water management facilities, including native grasses for the detention basin side slopes along with native wetland vegetation in the bottom of the basin. Detention basins should be stabilized as soon as practical to minimize soil erosion potential.

e. **Exceptions**

1. **Special Assessment Districts.** The design storm event requirement may be less for those developments that outlet storm water to a storm sewer that has been sized to handle the developed runoff from the site. At a minimum, those sites must still address storm water quality for the smaller storm events. These situations are site specific and the design storm requirement will be determined on a case-by-case basis.

f. **Plan Review**

1. **Site Plan**

(a) Project location map.
(b) Scale not less than 1" = 50'.
(c) Proposed lot divisions and building footprints.
(d) Proposed storm sewer system with rim and invert elevations.
(e) Total drainage area and associated individual tributary drainage areas.
(f) Runoff coefficients associated with each tributary area.
(g) Storm water calculations.
(h) Storage provided by one (1) foot elevation increments.
(i) Proposed storm water management facilities (both plan and profile view).
(j) Overflow detail.
(k) Rip-rap detail.

2. **Grading Plan**

(a) Existing site topography at minimum two (2) foot elevation contour.
(b) Proposed elevations of storm sewer structures and storm water management facilities.
(c) Existing watercourses, lakes, wetlands and any offsite drainage areas contributing flow to the development.
(d) Permanent water elevation of any of the above.
(e) Natural feature buffer areas as applicable.
(f) Average GWT elevation in basin area.
(g) Soil hydraulic conductivity from bottom of basin to five (5) feet below bottom of basin.

3. **As-Built Certification.** A detention basin as-built certification should be provided to City of Fenton's Storm Water Consultant prior to final approval of the development. This certification should include the following items:

(a) A plan view of the detention basin detailing the proposed and final as-built elevation

contours. A few spot elevations should be provided on each side of the basin, the bottom of the basin, and along the emergency overflow area.

(b) Detention basin design calculations along with corresponding volumes associated with the as-built elevations should be detailed on this plan. The proposed volume and the final as-built volume should be indicated.

(c) Final as-built invert elevations for all inlet pipes and all associated outlet structure elevations, riser pipe hole sizes, and number of holes should be included. Invert elevations of the final outlet pipe to the receiving stream should also be provided. The elevation of the final overflow structure should also be shown.

(d) The side slopes should also be indicated on the detention basin plan on all sides of the basin and must meet minimum safety requirements.

(e) This certification should be signed and sealed by a licensed professional engineer.

g. **Maintenance Plans**. A maintenance plan that outlines tasks associated with maintenance of the storm water management facilities both during the construction process and once the property owner has assumed responsibility should be provided with the plans.

Sec. 24.05 Wellhead Protection Overlay Zone

a. Purpose

1. The City of Fenton has determined that:

   (a) Certain groundwater underlying the City currently is, or may be in the future, the sole source of the City's drinking water supply.

   (b) Groundwater aquifers are integrally connected with the surface water, lakes, and streams that constitute significant public health, recreational and economic resources of the City and surrounding area.

   (c) Spills and discharges of hazardous substances could threaten the quality of the groundwater supplies and other water related resources, posing potential public health and safety hazards and threatening economic losses.

2. Therefore, the City of Fenton has enacted a Wellhead Protection Overlay Zone to promote the following actions:

   (a) Preserve and maintain existing and potential groundwater supplies, aquifers, and groundwater recharge areas for the municipal water supply, and to protect them from adverse land use development or land use practices.

   (b) Preserve and protect sources of drinking water supply for public health and safety.

   (c) Conserve the natural resources of the City and the surrounding area.

   (d) Provide a level of protection for the financial investment that the City has in its drinking water supply.

   (e) Assure that State regulations, that help protect groundwater are implemented consistently when new or expanded development proposals are reviewed.

b. Applicability

1. The Wellhead Protection Overlay Zone shall overlay existing zoning districts delineated on the official Zoning Map of the City. The boundaries of the Wellhead Protection Overlay Zone are depicted on the Wellhead Protection Overlay Zone Map.

2. It shall be the responsibility of any person owning real property and/or owning and operating a business within the City corporate limits to make a determination of the applicability of this Section as it applies to the property and/or business under his or her ownership or operation. Failure to ascertain the applicability or requirements of this Section shall not excuse any violations of this Section.

c. **Use Regulations.** Permitted land uses in the Wellhead Protection Overlay Zone include all those permitted uses as allowed in the underlying zoning district, except for the following:

1. Petroleum product manufacturing, processing or refining, gasification, recycling, or other derivative activities (including coal).
2. Commercial salvage yards and/or scrap processing.
3. Oil and gas drilling, including oil or gas drilling contractors or operations.
4. Vehicle maintenance services, including public and private garages.
5. Chemical and paint manufacturing operations.
6. Laundry and dry cleaner operations.
7. Electronic equipment manufacturing operations.
8. Electro-plating and chemical coating operations.
9. Recycling operations involving any of the base processes described above.
10. Other similar uses utilizing chemicals on a commercial or industrial basis.

d. **General Provisions**. These provisions shall apply to all properties within the Wellhead Protection Overlay Zone, including private, commercial, industrial, residential and public properties, which use, store or generate hazardous substances, as defined in State or Federal law, in quantities greater than one hundred (100) kilograms (approximately two hundred and twenty (220) pounds or twenty five (25) gallons) per month, and which require site plan review under provisions of the City of Fenton Zoning Ordinance. The General Provisions apply to entire property parcels, providing parcel is at least partially included in the Wellhead Protection Overlay Zone.

1. **Groundwater Protection Standards**

(a) A use, development, or project and any related improvements shall be designed to protect the natural environment, including lakes, ponds, streams, wetlands, floodplains and groundwater, and to ensure the absence of an impairment, pollution, and/or destruction of water, natural resources, and the public trust therein.

(b) Storm water management and drainage facilities shall be designed to promote and continue the natural retention and storage capability of any wetland, water body, or watercourse, and shall not increase flooding or the potential for environmental contamination, on-site or off-site, and shall not result in loss of the use of property by any third party or adjacent property.

(c) Industrial facilities with a point source discharge of storm water shall maintain a Storm Water Pollution Prevention Plan in accordance with applicable State and Federal regulations.

(d) General purpose floor drains shall be connected to a public sewer system, an on-site holding tank, or a system authorized through a State surface or groundwater discharge permit. If connected to the public sewer system, the volumes and concentrations of waste discharged to a floor drain shall comply with the City's pretreatment requirements.

(e) Sites that at any time use, store or generate substances in quantities greater than one hundred (100) kilograms that include hazardous substances shall be designed to prevent spills and unpermitted discharges to air, surface of the ground, groundwater, lakes, streams, rivers or wetlands.

(f) State and Federal agency requirements for storage, spill prevention, record keeping, emergency response, transport and disposal of hazardous substances and polluting materials shall be met. No discharges to groundwater, including direct and indirect discharges, shall be allowed without applicable permits and approvals.

(g) Bulk storage of pesticides shall be in accordance with applicable County, State and Federal regulations.

2. **Above Ground Storage and Use Areas for Hazardous Substances**

(a) Primary containment of hazardous substances shall be product tight.

(b) Secondary containment shall be sufficient to store the substance for the maximum anticipated period of time necessary for the recovery of any released substance. Products held in containers with a volume of less than forty (40) gallons and packaged for retail use shall be exempt from this subsection (b).

(c) Outdoor storage of hazardous substances shall be prohibited except in product-tight containers that are protected from weather, leakage, accidental damage and vandalism, including an allowance for the expected accumulation of precipitation.

(d) Accessory buildings, storage rooms, sheds and pole barns that are utilized as secondary containment shall not have floor drains that outlet to soil, a public or private sewer system, groundwater, or nearby drains or natural water bodies unless a surface or groundwater discharge permit has been obtained pursuant to applicable County, State and Federal regulation.

(e) Areas and facilities for loading and unloading of hazardous substances as well as areas where such materials are handled and stored, shall be designed and constructed to prevent unpermitted discharges to floor drains, rivers, lakes, wetlands, groundwater, or soils.

3. **Underground Storage Tank Systems**

(a) Existing and new underground storage tanks shall be registered with the authorized State agency in accordance with applicable requirements of the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ).

(b) Installation, operation, maintenance, closure, and removal of underground storage tanks shall be in accordance with applicable requirements of MDEQ. Leak detection, secondary containment, corrosion protection, spill prevention and overfill protection requirements shall be met.

4. **Well Abandonment**. The owner of a parcel of land within the Wellhead Protection Overlay Zone shall determine whether or not any wells exist on the property, and, if wells do exist, they must be properly abandoned in accordance with applicable State requirements.

5. **Well Construction**

(a) Well drilling, construction and installation shall only be performed by State of Michigan Registered Well Drillers.

(b) Well construction shall be completed in accordance with Part 127 of Act 368 of the Public Acts of 1978, as amended, and any rules adopted pursuant to that Act.

(c) Well construction shall include fully grouting the entire length of the well casing in accordance with Part 127 of Act 368 of the Public Acts of 1978, as amended, and any rules adopted pursuant to that Act.

6. **Sites with Contaminated Soils and/or Groundwater**

(a) Site plans shall take into consideration the location and extent of any contaminated soils and/or groundwater on the site, and the need to protect public health and environment.
(b) Information must be provided regarding the type, concentration and extent of identified contamination, land use deed restrictions and any remedial action plans.
(c) Excavation, drilling, direct-push and other earth penetration shall be sealed with grout, or with soil material exhibiting lower hydraulic permeability than the native soil.

7. **Construction Standards**

(a) A general contractor, or if none, the property owner, shall be responsible for assuring that each contractor or subcontractor evaluates each site before any construction is initiated to determine if any site conditions may pose particular problems for handling any hazardous substances. For example, handling hazardous substances in proximity to water bodies or wetlands may be improper.
(b) Hazardous substances stored on a construction site during the construction process, shall be stored in a location and manner designed to prevent spills and unpermitted discharges to air, surface of the ground, groundwater, lakes, streams, rivers, or wetlands. Any storage container with a volume of over forty (40) gallons that contains hazardous substances shall have secondary containment.
(c) If a contractor stores or handles hazardous substances that require a Material Safety Data Sheet (MSDS), the contractor shall familiarize him/herself with the sheet, and shall be familiar with procedures required to contain and clean up any releases of any hazardous substance.
(d) Upon completion of construction, all hazardous substances and containment systems no longer used or not needed in the operation of the facility shall be removed from the construction site by the responsible contractor and shall be disposed of, recycled, or re-used in a proper manner as prescribed by applicable State and Federal law or regulations.
(e) Excavation, drilling, direct-push and other earth penetration shall be sealed with grout, or with soil material exhibiting lower hydraulic permeability than the native soil.

e. **Maintenance.** In areas where hazardous substances are handled, structural integrity of any building, containment facility, or storage must be maintained to avoid inadvertent discharge of hazardous substances to soil and groundwater. Cracks and holes in floors, foundations and walls must be repaired in areas where hazardous substances are handled or stored.

f. **Exclusions**

1. A limited exclusion from *Section 24.04.d. General Provisions* is hereby authorized for hazardous substances as follows:

(a) The hazardous substance is packaged for personal or household use or is present in the same form and concentration as a product packaged for use by the general public.
(b) The materials containing hazardous substances that are excluded under this subsection 1 may not exceed a combined total of fifty (50) gallons or four hundred (400) pounds at any time.

2. A limited exclusion from the *Section 24.04.d. General Provisions* is hereby authorized for non-routine maintenance or repair of property in the Wellhead Protection Overlay Zone provided the uses are limited as follows:

(a) The aggregate of hazardous substances may not exceed a combined total of fifty (50) gallons or four hundred (400) pounds at any time.
(b) The total use of materials containing hazardous substances may not exceed a combined total of one-hundred (100) gallons or eight hundred (800) pounds at any time.

g. **Site Plan Review Requirements.** In addition to the requirements of *ARTICLE 16 SITE PLAN REVIEW*, the following information shall be provided on a site plan submitted for review to the City:

1. The location and size of interior and exterior area(s) and structure(s) to be used for on-site storage, use, load/unloading, recycling, or disposal of hazardous substances.
2. The location of all underground and above ground storage tanks for such uses as fuel storage, waste oil holding tanks, hazardous substance storage, collection of contaminated stormwater or wash water, and all similar uses.
3. The location of existing and proposed wells, and the plans to properly abandon those wells before site work begins.
4. The location of exterior drains, dry wells, catch basins, retention/detention areas, sumps, and other facilities designed to collect, store or transport stormwater or wastewater. The point of discharge for all drains and pipes shall be specified on the site plan.
5. The areas on the site that the applicant has reason to believe are contaminated, together with a report on the status of any site remedial action plan and land use deed restrictions, if applicable.

h. **Exemptions.** The transportation of any hazardous substance shall be exempt from the provisions of this Ordinance provided the transporting motor vehicle or rail is in continuous transit, or that it is transporting substances to or from a State licensed hazardous waste treatment, storage, or disposal facility.

i. **Appeals.** The Planning Commission may grant a special permit if it finds by written decision that the proposed use:

1. Meets the intent of this section as well as its specific criteria,
2. Will not, during construction or thereafter, have an actual or potential adverse impact on any aquifer or recharge area in the district,
3. Will not actually or potentially adversely affect an existing or potential domestic or municipal water supply, and
4. Is consistent with existing and probable future development of surrounding areas.