

ARTICLE 27

"WP" WELL FIELD PROTECTION OVERLAY DISTRICT

PREAMBLE

The "WP" Well Field Protection Overlay District is designed to safeguard the public health, safety and welfare of citizens and institutions that are customers of any "protected public water supply" by regulating the land use and the storage, handling, use and/or production of Regulated Substances. The areal extent of the zone is described as the land area within Harrison Township adjacent to existing and proposed protected public wells which lie within the one (1) year capture area, including a one thousand (1,000) foot strip of land outside of the direct recharge area in locations where the direct recharge area within the one (1) year capture area impinges on the aquifer boundary. The intent of this designation is to protect the region's potable water supply against contamination.

SECTION 2701 APPLICABILITY OF WELL FIELD PROTECTION OVERLAY DISTRICT TO UNDERLYING ZONING DISTRICTS

The provisions of this Article shall be applicable to all lands shown as being located within the boundaries of the "WP" Well Field Protection Overlay District on the Zoning Map and shall be supplemental to the regulations of the underlying zoning district. Where the requirements of this Article are in conflict with the regulations of the underlying district, the more restrictive regulations shall apply.

SECTION 2702 DETERMINATION OF APPLICABILITY

It shall be the responsibility of any person owning real property and/or owning or operating a business within Harrison Township to make a determination of the applicability of this Article as it pertains to the property and/or business under his/her ownership or operation and his/her failure to do so shall not excuse any violations of this Article.

SECTION 2703

DEFINITIONS:

- A. **Administrator** - Shall be the Planning/Zoning Director and such individuals or agencies authorized by the Township Trustees to assist in administration and enforcement of the provisions of this article.
- B. **Aquifer** - A glacial formation, group of glacial formations or part of a glacial formation that contains enough saturated permeable material to yield significant quantities of water.
- C. **Direct Recharge Area** - That portion of a drainage basin in which water infiltrating vertically from the surface will intercept the water table.
- D. **One Year Capture Area** - The area around the public water supply well fields delineated by the one year travel time contour.
- E. **Potable Water** - Water that is satisfactory for drinking, culinary and domestic purposes, meeting current drinking water standards.
- F. **Protected Public Water Supply** - A public water system which serves at least fifteen (15) service connections used by year-round residents or regularly services at least twenty-five (25) year-round residents, and having a one-year capture area defined through appropriate hydrologic study.
- G. **Recharge Lagoon** - A body of water designed and maintained by man to add water to the groundwater at a rate greater than that occurring naturally.
- H. **Regulated Substance(s)** - Substances to be regulated, hereinafter referred to as Regulated Substances, are chemicals and mixtures of chemicals which are health hazards. Regulated Substances include:
 - 1. Chemicals for which there is scientific evidence that acute or chronic health effects may result from exposure including carcinogens, toxic and highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic

system, and agents which damage the lungs, skin, eyes, or mucous membranes.

2. Mixtures of chemicals which have been tested as a whole and have been determined to be a health hazard.
 3. Mixtures of chemicals which have not been tested as a whole but which contain any chemical which has been determined to be a health hazard and which comprises one (1) percent or greater of the composition on a weight per unit weight basis, and mixtures of chemicals which include a carcinogen if the concentration of the carcinogen in the mixture is one tenth of one (0.1) percent or greater of the composition on a weight per unit weight basis.
 4. Ingredients of mixtures prepared within the "WP" Well Field Protection Overlay District in cases where such ingredients are health hazards but comprise less than one tenth of one (0.1) percent of the mixture (on a weight per unit weight basis) if carcinogenic, of less than one (1.0) percent of the mixture (on a weight per unit weight basis) if non-carcinogenic.
 5. Petroleum and non-solid petroleum derivatives (except non-PCB dielectric fluids).
- I. **Travel Time Contour** - A locus of points from which water takes an equal amount of time to reach a given destination such as a well or well field.
- J. **Underground Storage Tank** - Any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of Regulated Substances and the volume of which (including the volume of underground pipes connected thereto) is ten (10) percent or more beneath the surface of the ground. Flow-through process tanks and tanks situated in an underground area (such as basement, tunnel, or vault) upon or above the surface of a floor are excluded from the definition of underground storage tanks.

- K. **Well Field** - A tract of land that contains a number of wells for supplying water.
- L. **Zone of Influence** - A zone delineated by iso-travel time contours around well fields. The zone is calculated, based on the rate of movements of groundwaters in the vicinity of wells with an allowance for the dispersion of a pollutant entering into and moving with the groundwater.

SECTION 2704 PRINCIPAL PERMITTED USES

The principal permitted uses allowed within the "WP" Well Field Protection Overlay District shall be those of the underlying zoning district, provided they meet all requirements of this Article. Uses not specifically mentioned are not permitted.

SECTION 2705 ACCESSORY USES

The accessory uses allowed within the "WP" Well Field Protection Overlay District shall be those of the underlying zoning district, provided they meet all requirements of this Article. Uses not specifically mentioned are not permitted.

SECTION 2706 CONDITIONAL USES

The conditional uses allowed within the "WP" Well Field Protection Overlay District shall be those of the underlying zoning district, provided they meet all requirements of this Article in addition to any applicable requirements established under any other Article. In addition, specific conditional use provisions for the extraction of minerals and existing uses within the WP district shall be as follows:

- A. **Mineral Extraction:** The excavation, extraction, mining or processing of sand, gravel and limestone from the earth for resale shall remain as conditional uses in the "WP" Well Field Protection Overlay District subject to BZA approval of an excavation and facilities plan that includes, but is not limited to:

1. An existing site plan with topographic detail at two (2) foot contour intervals, all planimetric information, depth to ground water and flood plain characteristics where applicable.
2. The proposed extent and depth of excavations.
3. Slope angle of excavation walls (any final slopes shall be at the angle of repose for the remaining material).
4. Use and disposition of the soil and/or overburden materials from the excavations including a landscaping and vegetation plan to stabilize any disturbed material.
5. Surface Drainage Plan:
 - a. Drainage into on site excavations from proximate off site transportation facilities such as roadways and roadbeds and off site watercourses is prohibited unless the applicant provides a plan which otherwise protects the excavations from off site waterborne regulated substances.
 - b. The final on site grading shall minimize all surface drainage into the excavations.
6. A post-excavation and operation land use plan.
7. A security plan (unauthorized access shall be strictly prohibited as long as any excavations remain on site).

B. **Existing Businesses** - Existing legal businesses within the WP district as of the effective date of this article may make application to increase the maximum quantities of regulated substances maintained on site in response to changes in the market and/or need to increase production, provided that:

1. All other methods to respond to changes in the market or increase production without exceeding the maximum quantities or reported regulated substances have been exhausted.
2. There shall be no greater hazard and/or threat of hazard to the aquifer and/or ground water as a result of increasing the amount of regulated substances.

SECTION 2707 SPECIFIC PROHIBITED USES

Sanitary land fills, land fills composed of demolition debris and dry wells are prohibited uses in the "WP" Well Field Protection District.

SECTION 2708 GROUNDWATER PROTECTION STANDARDS

2708.01 REGULATED SUBSTANCES MAXIMUM QUANTITIES

Use, storage, handling and/or production of Regulated Substances in conjunction with permitted and conditional uses in this district shall be limited to or as follows:

A. **Aggregate of Regulated Substances:** The aggregate of Regulated Substances in use, storage, handling and/or production may not exceed twenty (20) gallons or one hundred and sixty (160) pounds at any time.

B. **Total Use of Regulated Substances:** The total use, storage, handling and/or production of Regulated Substances may not exceed fifty (50) gallons or four hundred (400) pounds in any twelve (12) month period.

2708.02 LIMITED EXCLUSIONS

Limited exclusions from the provisions of Section 2708.01 are authorized for:

A. **Non-Routine Maintenance or Repair of Property or Equipment:** The use, storage, handling and/or production of Regulated Substances under this exclusion shall be limited to:

1. The aggregate of Regulated Substances in use, storage, handling, and/or production may not exceed fifty (50) gallons or four hundred (400) pounds at any time.
 2. The total use, storage, handling and/or production of Regulated Substances may not exceed one hundred (100) gallons or eight hundred (800) pounds in any twelve (12) month period.
- B. **Medical & Research Laboratory Uses:** Excluded Regulated Substances shall be stored, handled or used in containers not to exceed five (5) gallons or forty (40) pounds of each substance and the aggregate inventory of Regulated Substances shall not exceed two hundred and fifty (250) gallons or two thousand (2,000) pounds.
- C. **Cleaning Agents:** Excluded Regulated Substances which are cleaning agents shall be packaged for personal or household use or be present in the same form and concentration as a product packaged for use by the general public. The aggregate inventory of such cleaning agents shall not exceed one hundred (100) gallons or eight hundred (800) pounds at any time. In no case shall Regulated Substances claimed under this exclusion include hydrocarbon or halogenated hydrocarbon solvents.
- D. **Construction Materials** - Regulated substances associated with construction for which a permit has been issued, paving or the pouring of concrete shall be excluded from regulation while present on the construction site provided such regulated substances do not pose a real and present danger of contaminating surface and/or ground water.
- E. **Office Supplies** - Office supplies that are used solely for the operation of on-site administrative offices, provided such supplies are prepackaged in a form ready for use.

2708.03 UNDERGROUND STORAGE OF FUEL AND LUBRICANTS

With the exception of residential use of heating fuels, the underground storage of fuel and lubricants for vehicle operations and fuel for building and/or process heating in conjunction with permitted and conditional uses in this district shall be secondarily contained and monitored. Such installations shall be subject to approval by the Administrator.

2708.04 NONCONFORMING USES

- A. **Underground Storage Tanks**: Notwithstanding other provisions in this Article, nonconforming uses in this district presently using underground storage tanks for fuel and lubricants for vehicle operations and fuel for building and/or processing heating shall be permitted to replace existing tanks with those constructed as per the specifications of Section 2708.03 above and not exceeding the capacity of existing tanks. Replacement of underground tanks for Regulated Substances other than the above noted fuels and lubricants is not permitted.
- B. **Substitutions of Nonconforming Uses**: As part of the findings required under Article 36, the Administrator shall use the Hazard Potential Ranking System, Section 2714 to assist in the determination of intensity of use within this district. Except as provided for in Section 2706(B), no substitutions of a non-conforming use shall be permitted which result in an increase in the capacity of Regulated Substances or that result in an increase of the Hazard Potential Ranking on a parcel within this district.

2708.05 EXEMPTION OF CERTAIN REGULATED SUBSTANCES

The Administrator is authorized to exclude certain regulated substances, that pose no threat to groundwater, from the provisions of this Article. Prior to authorizing the exemption of any regulated substance, the Administrator shall have such request for exemption reviewed by the City of Dayton's Environmental Advisory Board (E.A.B.). The

recommendation of the E.A.B. shall be binding on the Administrator.

2708.06 TECHNICAL CONSULTANTS

Upon application for a Zoning Permit and/or Occupancy Certificate and/or Conditional Use Permit for a use within the "WP" Well Field Protection Overlay District, the Administrator may employ such technical expertise as needed to ensure compliance with the provisions of this Article. All documented costs incurred in the compliance review process shall be passed through to the applicant and shall be in addition to those fees normally charged by the Township to review a Zoning Permit and/or Occupancy Certificate and/or Conditional Use Permit.

2708.07 EXISTING BUSINESS/NONCONFORMING USES

All legal uses located within the WP district, as of the effective date of this Article shall be "Grandfathered" in and have the maximum quantities (determined by peak business cycle) for each reportable regulated substance, "Grandfathered" in at the reported maximum quantity with no annual use limitation. Existing uses and maximum quantities, in combination with "Hazard Potential Rating" shall run with the land and be administered in conformance with all other applicable nonconforming provisions of this Zoning Resolution and the "Ohio Revised Code."

2708.08 REMOVAL OF REGULATED SUBSTANCES

Any nonresidential use of property that becomes unoccupied or has discontinued operation for a period of sixty (60) days or more shall remove all regulated substances from the property upon which it is located within thirty (30) days.

SECTION 2709 REPORTING REQUIREMENTS

2709.01 REGULATED SUBSTANCE ACTIVITY INVENTORY

A. **Applicability:**

1. Except as provided in Section 2709.01(B), any owner or occupant of any land in the Well Field Protection Overlay District at the effective date of this Article, shall file a Regulated Substance Activity Inventory Report with the Administrator.

Said report shall be filed within one hundred and eighty (180) days of the effective date of this Article and at twenty-four (24) month intervals thereafter.

2. Except as provided in Section 2709.01(B), any new owner or occupant of any land in the Well Field Protection Overlay District shall file a Regulated Substance Activity Inventory Report prior to receipt of a Certificate of Occupancy and at twenty-four (24) month intervals following the date of occupancy.
3. Where a person owns, operates or occupies more than one location, Regulated Substance Activity Reports shall be made for each location.

B. Exclusions to Activity Inventory Reporting:

1. Any exclusion set forth in this Paragraph shall apply provided that said exclusion does not substantially increase any risk or hazard to the public health, aquifer, water supply, wells or well fields; and provided further that any spill, leak, discharge or mishandling shall be subject to the provision of this Article. Any exclusions granted herein shall not remove or limit the liability and responsibility of any person or activity involved.
2. A limited exclusion from Regulated Substance Activity Inventory reporting is hereby authorized for incidental uses of Regulated Substances provided the uses are limited as follows:
 - a. The aggregate of Regulated Substances in use may not exceed twenty (20) gallons or one hundred and sixty (160) pounds at any time.
 - b. The total use of Regulated Substances may not exceed fifty (50) gallons or four hundred (400) pounds in any twelve (12) month period.
3. A limited exclusion from Regulated Substance Activity reporting is hereby authorized for non-routine maintenance or repair of property in the

Well Field Protection Overlay District provided the uses are limited as follows:

- a. The aggregate of Regulated Substances in use may not exceed fifty (50) gallons or four hundred (400) pounds at any time.
 - b. The total use of Regulated Substances may not exceed one hundred (100) gallons or eight hundred (800) pounds in any twelve (12) month period.
4. A limited exclusion from Regulated Substance Activity Inventory reporting is hereby authorized for Regulated Substances which are cleaning agents provided however, such cleaning agents are packaged for personal or household use or are present in the same form and concentration as a product packaged for use by the general public, and provided that aggregate inventory of such cleaning agents shall not exceed one hundred (100) gallons or eight hundred (800) pounds at any time. In no case shall Regulated Substances claimed under the exclusion include hydrocarbon or halogenated hydrocarbon solvents.
 5. A limited exclusion from Regulated Substance Activity Inventory Reporting is hereby authorized for medical and research laboratory uses in the Well Field Protection Overlay District, provided however, Regulated Substances shall be stored, handled or used in containers not to exceed five (5) gallons or forty (40) pounds of each substance and the aggregate inventory of Regulated Substances shall not exceed two hundred and fifty (250) gallons or two thousand (2,000) pounds.
 6. An exclusion from Regulated Substance Activity Inventory Reporting is hereby authorized for the transportation of Regulated Substances through the Well Field Protection Overlay District provided that the transporting vehicle is in compliance with applicable local, state and federal laws and regulations, and provided that the regulated substance is fueling the transporting vehicle or the transporting vehicle is in continuous transit, making

delivery, or is stopped for a period of time not to exceed seventy-two (72) hours.

7. A limited exclusion from Regulated Substance Activity Inventory Reporting is hereby authorized for owners and occupants of single or two-family residences provided, however, the storage and use of Regulated Substances as identified in Section 2714(B) "Table 2" are related to the maintenance of the residence or vehicles under control of the occupant and provided waste Regulated Substances are appropriately disposed of to a permitted solid waste facility or a permitted publicly owned wastewater treatment works.
8. Motor Vehicle Fuels - A limited exclusion from regulated substances activity inventory reporting is hereby authorized for regulated substances that are contained within tanks that are designed as an integral part of the motor vehicle, and used specifically and solely for the operation of the motor vehicle. Except as provided for in Section 2709.01(B,6), in no case shall the tanker portion of a tractor-trailer truck be included in this exclusion.

2709.02 SPILLS, LEAKS OR DISCHARGES

- A. **Notification:** Any person with direct knowledge of a spill, leak or discharge of a Regulated Substance within the Well Field Protection Overlay District shall, if such spill, leak or discharge escapes containment, contacts a non-impervious ground surface and is not immediately and completely remediated, give notice to the Harrison Township Fire Dispatcher, by telephone within thirty (30) minutes of such spill. The notification shall include at a minimum, the location of the incident, name and telephone number, date and time thereof, type of substance(s), concentration and volume, and control or corrective action taken. Such notification shall in no way alleviate other local, state, and federal reporting obligations as required by law.

- B. **Liability:** Any entity or person who spills, leaks or discharges said substance(s) shall be liable for any reasonable expense, loss or damages incurred by the Township in response to such an incident, in addition to the amount of any fines imposed on account thereof under Ohio and Federal law; said entity or person shall document and maintain sufficient records so as to reflect accurately the circumstances related to any such incident and develop and implement procedures to substantially eliminate the likelihood of recurrence of such spills, leaks or discharges as soon as practicable following the incident, but no later than one hundred and eighty (180) days after the incident.
- C. **Posting:** Harrison Township shall post signs in conspicuous places advising transporters of Regulated Substances of notification procedures in the event of a spill or accidental discharge.

SECTION 2710 UNDERGROUND STORAGE TANKS

With the exception of residential use of home fuel, no storage of Regulated Substances, other than for vehicle fuel and vehicle lubricants and fuel for building and/or process heating may occur in underground storage tank systems in the Well Field Protection Overlay District, five (5) years from the effective date of this Article. With the exception of residential use of home heating fuel, five (5) years from the effective date of this Article, underground storage tank systems for vehicle fuel and vehicle lubricants and fuel for building and/or process heating in the Well Field Protection Overlay District must be secondarily contained and monitored in accordance with plans submitted to and approved by the Administrator.

SECTION 2711 FALSIFYING INFORMATION

No person shall make any false statement, representation, or certification in any report or other document filed or required to be maintained pursuant to this Article.

SECTION 2712 RETENTION OF RECORDS

Any reports or records compiled or submitted pursuant to this Article shall be maintained by the user for a minimum of five (5) years or so long as enforcement or judicial proceedings are being pursued, whichever is longer.

SECTION 2713 ENFORCEMENT

A. **Application:** If any activity or use of Regulated Substance is deemed by the Administrator to be in violation of this Article or poses a real and present danger of contaminating surface and/or ground water which would normally enter the public water supply, in accordance with Section 519.24 (O.R.C.) or other applicable State Laws, the Administrator is authorized to:

1. Cause cessation of said activity or use of the Regulated Substance;
2. Require the provision of administrative controls and/or facilities sufficient to mitigate said danger; and/or
3. Cause the provision of pollution control and/or abatement activities.

B. **Considerations:** When considering the exercise of any of the above authorities or actions, the Administrator shall notify and consult with the Director or designated representative of the affected water supply to determine what measures need to be taken to ensure the public water supply is reasonably and adequately protected from contamination for the present and the future. The Administrator may take into consideration any evidence represented by the entity regarding cost effectiveness and the economic effectiveness and the economic impact imposed by the requirements or actions.

SECTION 2714 HAZARD POTENTIAL RANKING SYSTEM

In order to assess the risk for potential groundwater contamination, a hazard ranking has been developed for various activities categorized by their Standard Industrial Classification (SIC) code. This ranking is based on the kinds

of materials commonly associated with each use looking only at the most critical hydrologic factor.

A. **Table 1 - Hazard Potential by Land Use***: Table 1 lists the site hazard potential by land use activity on a scale of 1 - 9, with 1 being a low hazard and 9 a very high hazard. This rating is based on the intrinsic hazards posed by different land uses and is related to the materials commonly used or stored on the site or the types and amounts of wastes commonly discharged.

B. **Table 2 - Hazard Potential by Material***: Table 2 lists the hazard potential determined on the basis of materials known to be used, stored, or disposed of at a specific site.

*If the two tables referenced above indicate different site hazard potential ratings for the SIC-coded land use activity and the materials found on-site, the higher of the two scores is the rating for the site.

Table 1

Contaminant Hazard Potential Ranking Classified by Source

SIC No.	Description of Waste Source	Hazard Potential Initial Rating
01	Agricultural Production-Crops	1 - 2
02	Agricultural Production- Livestock	
021.....	Livestock, except Dairy, Poultry and Animal Specialties, Feedlots	3; 5 for
024.....	Dairy Farms.....	4
025.....	Poultry and Eggs.....	4
027.....	Animal Specialties.....	2 - 4
029.....	General Farms, Primarily Livestock.....	2

10	Metal Mining	
	101.....Iron Ores.....	4
	102.....Copper Ores.....	6
	103.....Lead and Zinc Ores.....	5
	104.....Gold and Silver Ores.....	6
	105.....Bauxite and Other Aluminum Ores.....	5
	106.....Ferroalloy Ores Except Vanadium.....	5
	108.....Metal Mining Services.....	4
	1092.....Mercury Ore.....	6
	1094.....Uranium-Radium-Vanadium Ores.....	7
	1099.....Metal Ores Not Elsewhere Classified....	5
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11	Anthracite Mining.....	7
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12.....	Bituminous Coal and Lignite Mining.....	7
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13	Oil and Gas Extraction	
	131 Crude Petroleum and Natural Gas.....	7
	132.....Natural Gas Liquids.....	7
	1381.....Drilling Oil and Gas Wells.....	6
	1382.....Oil & Gas Field Exploration Services...	1
	1389.....Oil & Gas Field Services Not.....	Variable,
	Elsewhere Classified	Depending on Activity
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14	Mining & Quarrying of Non-Metallic Minerals, Except Fuels	
	141.....Dimension Stone.....	2
	142.....Crushed & Broken Stone, Including..... Rip-Rap	2
	144.....Sand & Gravel.....	2
	145.....Clay, Ceramic & Refractory Minerals....	2 - 5
	147.....Chemical & Fertilizer Mineral Mining...	4 - 7
	148.....Nonmetallic Minerals Services.....	1 - 7
	149.....Miscellaneous Nonmetallic Minerals,.... Except Fuels	2 - 5
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16	Construction Other than Building Construction	
	1629....Heavy Construction, not Elsewhere..... Classified (Dredging, Especially in Salt Water)	4
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20	Food and Kindred Products	
	201.....Meat Products.....	3
	202.....Dairy Products.....	2
	203.....Canned & Preserved Fruits & Vegetables.	4
	204.....Grain Mill Products.....	2
	205.....Bakery Products.....	2
	206.....Sugar & Confectionery Products.....	2
	207.....Fats & Oils.....	3
	208.....Beverages.....	2 - 5
	209.....Miscellaneous Food Preparation &..... Kindred Products	2
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22	Textile Mill Products, All Except Listed Below	
	223.....Broad Woven Fabric Mills Wool..... (including dyeing & finishing)	6
	226.....Dyeing & Finishing Textiles, Except.... Wool Fabrics & Knit Goods	6
	2295.....Coated Fabrics, not Rubberized.....	6
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24	Lumber & Wood Products Except Furniture	
	241.....Logging Camps & Logging Contractors....	2
	242.....Sawmills & Planing Mills.....	2
	2435.....Hardwood Veneer & Plywood.....	4
	2436.....Softwood Veneer & Plywood.....	4
	2439.....Structural Wood Members not Elsewhere.. Classified (laminated wood-glue)	3
	2491.....Wood Preserving.....	5
	2492.....Particle Board.....	4
	2499.....Wood Products, not Elsewhere..... Classified	2 - 5
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26	Paper & Allied Product	

261.....Pulp Mills.....	6
262.....Paper Mills Except Building.....	6
Mills	
263.....Paperboard Mills.....	6

28 **Chemicals & Allied Products**

2812.....Alkalies & Chlorine.....	7 - 9
2813.....Industrial Gases.....	-
2816.....Inorganic Pigments.....	3 - 8
2819.....Industrial Inorganic Chemicals, not... Elsewhere Classified	3 - 9
2821.....Plastic Materials, Synthetic Resins.... & Nonvulcanizable Elastomers	6 - 8
2822.....Synthetic Rubber (Vulcanizable..... Elastomers)	6 - 8
2823.....Cellulose Man-Made Fibers.....	6 - 8
2824.....Synthetic Organic Fibers, Except..... Cellulosic	6 - 8
2831.....Biological Products.....	6 - 9
2833.....Medicinal Chemicals & Botanical..... Products	3 - 8
2834.....Pharmaceutical Preparations.....	6 - 9
2841.....Soap & Other Detergents, Except..... Specialty Cleaners	4 - 6
2842.....Specialty Cleaning, Polishing, &..... Sanitation Preparation	3 - 8
2843.....Surface Active Agents, Finishing..... Agents, Sulfonated Oils & Assistants	6 - 8
2844.....Perfumes, Cosmetics & Other Toilet..... Preparations	3 - 6
2851.....Paints, Varnishers, Lacquers, Enamels.. & Allied Products	5 - 8
2861.....Gum & Wood Chemicals.....	5 - 8
2865.....Cyclic (coal tar) Crudes, & Cyclic..... Intermediates, Dyes & Organic Pigments (Lakes and Toners)	6 - 9
2869.....Industrial Organic Chemicals not..... Elsewhere Listed	3 - 9
2873.....Nitrogenous Fertilizers.....	7 - 8
2874.....Phosphatic Fertilizers.....	7 - 8
2875.....Fertilizer Mixing Only.....	5
2879.....Pesticides & Agricultural Chemicals.... not Elsewhere Listed	5 - 9

2891.....Adhesives & Sealants.....	5 - 8
2892.....Explosives.....	6 - 9
2893.....Printing Ink.....	2 - 5
2895.....Carbon Black.....	1 - 3
2899.....Chemicals & Chemical Preparations,..... not Elsewhere Listed	3 - 9

29	Petroleum Refining & Related Industries	
291.....Petroleum Refining.....	8	
295.....Paving & Roofing Materials.....	7	
299.....Misc. Petroleum & Coal Products.....	7	

30	Rubber & Miscellaneous Plastics Products	
301.....Tires & Inner Tubes.....	6	
302.....Rubber & Plastic Footwear.....	6	
303.....Reclaimed Rubber.....	6	
304.....Rubber & Plastic Hose & Belting.....	4	
306.....Fabricated Rubber Products, not..... Elsewhere Classified	4	

31	Leather & Leather Products	
311		Leather Tanning & Finishing.....8
Remaining Three-Digit Codes.....	1 - 3	

32	Stone, Clay, Glass & Concrete Products	
321.....Flat Glass.....	4	
322.....Glass & Glassware Pressed or Blown.....	4	
324.....Cement, Hydraulic.....	3	
33274.....Lime.....	3	
3291.....Abrasives.....	3	
3292.....Asbestos.....	3	
3293.....Gaskets, Packing & Sealing Devices.....	3	

33	Primary Metal Industries (Except as.....3 Noted Below)	
3312.....Blast Furnaces, Steel Works, and.....	6	

	Rolling & Finishing Mills	
	333.....Primary Smelting & Refining of..... Nonferrous Metals	7
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34	Fabricated Metal Products, Except.....5 Machinery & Transportation Equipment (Except as Noted Below)	
	347.....Coating, Engraving & Allied Services...	8
	3482.....Small Arms Ammunition.....	7
	3483.....Ammunition, Except for Small Arms..... not Elsewhere Classified	7
	3489.....Ordnance and Accessories..... not Elsewhere Classified	7
	349.....Misc. Fabricated Metal Products.....	3 - 6
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35	Machinery, Except Electrical.....5 - 7	
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36	Electrical & Electronic Machinery, Equipment & Supplies (Except as Note Below)	
	3391.....Storage Batteries.	8
	3692.....Primary Batteries, Dry & Wet.	8
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37	Transportation Equipment.....	5 - 8
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38	Measuring, Analyzing, & Controlling..... Instruments; Photographic, Medical, & Optical Goods; Watches & Clocks (Except as Noted Below)	4 - 6
	386.....Photographic Equipment & Supplies.....	7
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39	Misc. Manufacturing Industries.....	3 - 7
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49	Electric, Gas & Sanitary Services	
	491.....Electric Services.....	3 - 5
	492.....Gas Production & Distribution.....	3

494.....Water Supply.....	2
4952.....Sewage Systems.....	2 - 5
4953.....Refuse Systems (Landfills).....	5 - 9
496.....Steam Supply.....	2 - 4

Table 2
Contaminant Hazard Potential Ranking Classified by Type

<u>Description</u>	<u>Hazard Potential</u> <u>ID</u> <u>Initial Reading</u> <u>No</u> *
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Solids

Ferrous Metals.....	1 - 4.....1100
Non-Ferrous Metals.....	1 - 7.....1200
Resins, Plastics, and Rubber.....	2 1300
Wood and Paper Materials (except as noted below)..	21400
Bark.....	41401
Textiles and Related Fibers.....	21500
Inert Materials (except as noted below).....	21600
Sulfide Mineral-Bearing Mine Tailings	61601
Slag and other Combustion Residues...	51602
Rubble, Construction, and Demolition Mixed Waste.	31603
Animal Processing Wastes (except as noted below)..	2 - 4.....1700
Processing Skins, Hides, and Leathers.	61701
Dairy Wastes....	41702
Live Animal Wastes-Raw Manures (Feedlots).	51703
Composts of Animal Waste.....	2 - 4.....1704
Dead Animals.....	51705
Edible Fruit and Vegetables Remains-Putrescables..	2 - 3.....1800

Liquids

Organic Chemicals (must be chemically classified)	2000
Aliphatic (Fatty) Acids.....	3 - 5.....2001
Aromatic (Benzene) Acids.....	7 - 8.....2002
Resin Acids.....	003
Alcohols.....	- 7.....2004
Aliphatic Hydrocarbons (petroleum.... derivatives)	- 6.....2005
Aromatic Hydrocarbons (benzene..... derivatives)	- 8.....2006

Sulfonated Hydrocarbons.....	7- 8.....2007
Halogenated Hydrocarbons.....	7- 9.....2008
Alkaloids.....	7 - 9.....2009
Aliphatic Amines & Their Salts.....	1 - 4.....2010
Anilines.....	6 - 8.....2011
Pyridines.....	2 - 6.....2012
Phenols.....	7 - 9.....2013
Aldehydes.....	6 - 8.....2014
Keytones.....	6 - 8.....2015
Organic Sulfur Compounds (Sulfides,.. Mercaptans)	7 - 9.....2016
Organometallic Compounds.....	7 - 9.....2017
Cyanides.....	7 - 9.....2018
Thiocyanides.....	2 - 6.....2019
Sterols.....	2020
Sugars & Cellulose.....	1 - 4.....2021
Esters.....	6 - 8.....2022

<u>Inorganic Chemicals (must be chemically classified)</u>	2100
Mineral & Metal Acids.....	5 - 8.....2101
Mineral & Metal Bases.....	5 - 8.....2102
Metal Salts, Including Heavy Metals..	6 - 9.....2103
Oxides.....	5 - 8.....2104
Sulfides.....	5 - 8.....2105
Carbon or Graphite.....	1 - 3.....2106

<u>Other Chemical Process Wastes Not Previously Listed</u>	2200
(must be chemically classified)	
Inks.....	2 - 5.....2201
Dyes.....	3 - 8.....2202
Paints.....	5 - 8.....2203
Adhesives.....	5 - 8.....2204
Pharmaceutical Wastes.....	6 - 9.....2205
Petrochemical Wastes.....	7 - 9.....2206
Metal Treatment Wastes.....	7 - 9.....2207
Solvents.....	6 - 9.....2208
Agricultural Chemicals (Pesticides,.. Herbicides, Fungicides, etc.)	7 - 9.....2209
Waxes & Tars.....	4 - 7.....2210
Fermentation & Culture Wastes.....	2 - 5.....2211
Oils, Including Gasoline, Fuel Oil, etc.	5 - 8.....2212
Soaps & Detergents.....	4 - 6.....2213
Other Organic or Inorganic Chemicals.	2 - 9.....2214

includes Radioactive Wastes.....	4 - 8.....2300
Conventional Treatment Process.....	4 - 8.....2301
County/Municipal Sludges from Biological Sewage Treatment From Water Treatment & Conditioning..	2 - 5.....2302
Plants (must be chemically classified)	

* ID Number is for identification of waste types in the Reporting Form.

1. Classification based on material in Environmental Protection Agency, Publication, 670-2-75-024, pp. 79-85, prepared by Arthur D. Little, Inc., and published in 1975.
2. For individual material ranking, refer to solubility-toxicity tables prepared by Versar, Inc., for the Environmental Protection Agency (source: MDNR, June 1980).

Source: WMSRDC. A Pollutant Nature Sampling Plan for Groundwater Contamination in Region 14 (Muskegon, Michigan: West Michigan Shoreline Development Commission, November, 1980).