

ORDINANCE NO. 04-28-03-A

AN ORDINANCE TO AMEND THE HAMILTON COUNTY ZONING ORDINANCES AND MAP OF HAMILTON COUNTY, INDIANA, 05-14-90 AS AMENDED, TO CREATE AND ESTABLISH LAND USE REGULATIONS FOR WELLHEAD PROTECTION OVERLAY ZONING DISTRICT(S). AMENDING THE OFFICIAL ZONING DISTRICT MAP OF HAMILTON COUNTY TO MAP THE WELLFIELD PROTECTION OVERLAY DISTRICT(S).

Article 23. Wellhead Protection Districts

A. Findings and Purpose

An Ordinance to Create and Establish Regulations and a map for Wellfield Protection Zones.

WHEREAS, the safety and potability of the community's water supply requires that lands near wellfields used to supply water for public purposes be subject to land use controls designed to prevent site development that is injurious to the public water supply; and

WHEREAS, commercial and industrial uses, if unregulated, have an immediate probability of permitting the introduction of toxic substances into the water supply; and

WHEREAS, local water utilities, in compliance with Indiana Department of Environmental Management mandates for community public water systems, are presently establishing wellfield protection programs as a first step towards protecting their public water supply wellfields; and

WHEREAS, all public water supplies in Hamilton County are totally dependent on groundwater as the source for public water supplies; and

WHEREAS, existing and future development in Hamilton County is dependent on the availability of a safe and dependable supply of drinking water;

NOW, THEREFORE, BE IT ORDAINED BY THE HAMILTON COUNTY BOARD OF COMMISSIONERS.

That this Code to read as follows:

B. Applicability

The following requirements apply to all land within the Wellfield Protection Zones, as defined in subparagraph C, with the exceptions of all uses existing at the time of passage of this ordinance, all agricultural uses (including agricultural confinement feeding and agricultural chemical uses and the storage of petroleum products) and of single and multi-family residential land uses connected to municipal sanitary and storm sewers. After the effective date of this ordinance:

No building, structure, premises, or part thereof shall be constructed, erected, enlarged, extended, or relocated except in conformity with these regulations and for uses permitted by this ordinance and until the proposed site and land use description has been filed with and approved by the Hamilton County Surveyor's Office.

C. Establishment of Wellfield Protection Zones

For purposes of this ordinance, the following areas are designated as Wellfield Protection Zones:

Zone 1

The area contained within a one (1) year time-of-travel to a public water supply well or wellfield, as defined by a modeled delineation performed in compliance with 327 IAC 8-4.1; or

The areas within one thousand (1,000) feet of a public water supply well.

Zone 2

The area contained within a five (5) year time-of-travel to a public water supply well or wellfield, as defined by a modeled delineation performed in compliance with 327 IAC 8-4.1; or

The areas within three thousand (3,000) feet of a public water supply well.

D. Site and Plan Review

1. **Development Plans Required** – Unless otherwise exempted under subsection (D)(2), any proposed land use within a Wellfield Protection Zone must submit a Site and Development Plan, as described in subsection (D)(4)
2. **Exemptions** – The following are not required to submit Site and development Plans:
 - (a) Zone 1 district -- Any land use, in the ordinary course of their business, that has, or will have, less than the threshold amount of one (1) gallon of liquids in the aggregate or six (6) pounds of water soluble solids; and
 - (b) Zone 2 district -- Any land use, in the ordinary course of their business, that has, or will have, less than the threshold amount of one hundred (100) gallons of liquid in the aggregate or six hundred (600) pounds of water soluble solids in the aggregate.
 - (c) In determining thresholds, the following substances shall be exempted:
 - i. Reasonable quantities of substances used for routine building and yard maintenance stored inside a facility;
 - ii. Liquids required for normal operation of a motor vehicle in use in that vehicle;
 - iii. Substances contained within vehicles for bulk deliveries to the site;
 - iv. Beverages and food at restaurants, supermarkets, convenience stores, and other retail food establishments;
 - v. Uncontaminated public water supply water, groundwater and/or surface water;
 - vi. Substances, which are packaged in pre-sealed containers, sold at retail establishments;
 - vii. Substances utilized for the production and treatment of public water supply; and
 - viii. Substances, which due to their inherent chemical or physical properties, that are determined to pose no significant threat to groundwater quality.
3. **Plan Review** -- Property located within Zones 1 and 2 proposed for new construction or expansion of existing facilities shall prepare and submit a description of said construction or expansion and the new or expanded use of the property. The site description shall be submitted to the Hamilton County Surveyor's Office for review and either approval, disapproval, or approval with conditions. The Hamilton County Surveyor's Office may solicit comments from the Hamilton County Health Department and the applicable water utility on the site and development plan.

In reviewing the site and land use description, the Hamilton County Surveyor's Office shall assess whether the site and proposed land use:

- (a) Will prevent potential ground water contaminants associated with human activity from interfering with each community public water supply system's ability to produce drinking water that meets all applicable federal and State drinking water standards after undergoing conventional ground water

treatment, as employed by the public water supply system. These treatment processes include, but are not limited to aeration, detention, pressure filtration, and disinfection;

- (b) Will not unreasonably endanger the quality of groundwater in a designated wellhead protection area. An unreasonable risk includes, but is not limited to, the inappropriate storage, handling, use and/or production of metals, inorganic compounds, volatile organic compounds, semi-volatile organic compounds or other substances listed at 40 CFR Part 355, or defined at Chapter 4 of the Hamilton County Code, "Hazardous Material Emergencies" (10-4-4-1) within a wellhead protection area; and
- (c) The site complies with the standards and prohibitions listed in Section E.

4. Plan Documentation and Supporting Information – Said Site and Development Plans shall include the following:

- i. A narrative report of the proposed site, including:
 - i. A narrative description of the site including any existing uses, setbacks, available sewage disposal facilities, and a brief history of the site (including any former uses, historical environmental concerns, abandoned wells, underground storage tanks, septic systems, etc.);
 - ii. Description of the proposed operations, including chemical/products used or generated, chemical/product storage area descriptions, waste generation quantities, equipment cleaning/maintenance procedures
 - iii. Methods and locations of receiving, handling, storing and shipping chemicals/products and wastes
 - iv. Spill or release response measures and reporting
 - v. Description of slopes near containment vessels and waste storage areas
- ii. A Site Plan including:
 - i. A Vicinity Map (USGS quadrangle preferred);
 - ii. A site Map (drawn to scale) depicting:
 - All existing and proposed structures
 - Paved and non-paved areas
 - Utility lines (inside and outside structures) including sanitary sewers, storm sewers, storm retention ditches/basins/french drains/dry wells, etc. (both proposed and existing)
 - Floor drain locations and outlets
 - Chemical/product storage locations
 - Waste storage locations
 - Liquid transfer areas
 - Site surface water bodies (streams, rivers, ponds)
 - Underground Storage Tanks (and associated piping)
 - Aboveground Storage Tanks (and associated piping)

- Slope and contours of finished grade at 2-foot intervals
 - Regulated Drains
 - Any and all easements
- iii. Proposed containment area detail drawings, including area, heights, materials, specifications, if applicable.

E. Development Standards and Prohibitions

1. Except for single-family residences (with sewage flows under 750 gallons per day), all development shall be connected to municipal sanitary sewers or combined sewers. Floor drains, if present, must be connected to sanitary sewers or combined sewers or routed to a temporary holding area for removal;
2. No surface impoundments, pits, ponds or lagoons shall be established except for:
 - Storm water detention and retention ponds; and
 - Recreation, landscaping, or public water supply purposes
3. In Zone 1, detention and retention ponds shall be constructed in a manner that provides an effective barrier to the migration of potential ground water contaminants into ground water, as demonstrated by sealing the bottom of the structure with clay or other approved low permeability material.
4. The following restrictions apply to new storage areas in Zone 1:
 - (a) No above ground storage of liquid and/or petroleum of greater than one thousand (1000) gallons in aggregate;
 - (b) No storage of water-soluble solids of more than six thousand (6000) pounds per container in any one (1) containment area;
 - (c) No new underground storage tanks (USTs) are permitted
5. All above ground storage of liquids in excess of 40 gallons for more than 24 hours within Zones 1 and 2 must provide secondary containment which meets the following requirements:
 - Containment must be capable of containing one-hundred and ten percent (110%) of the volume of the tank or tanks;
 - Constructed to meet one of the following:
 - Designed to prevent and control the escape of the contaminant(s) into ground water for a minimum of 72 hours before removal; or
 - Designed and built with an outer shell and a space between the tank wall and outer shell that allows and includes interstitial monitoring

- The secondary containment structure shall be properly maintained and shall be free of vegetation, cracks, open seams, open drains, siphons, or other openings that jeopardize the integrity of the structure; and
 - Secondary containment systems shall be designed so that the intrusion of precipitation is inhibited or that stormwater is removed to maintain system capacity.
6. In Zone 1, the following requirements apply to existing fuel dispensing facilities and associated underground storage tanks (USTs) which are to be replaced or upgraded:
- (a) All USTs shall be double walled;
 - (b) All USTs shall include the following three methods of release detection:
 - Inventory control as defined in 40 CFR 280.43(a)
 - Monthly 0.2 in-tank leak test as defined in 40 CFR 280.43(d)
 - Interstitial monitoring of a double walled approved UST as defined by 40 CFR 280.43(g)
 - (c) Connected piping must include the following three methods of release detection:
 - Inventory control;
 - Continuous detection for 3 gallon per hour line leak, as specified in 40 CFR 280.44(a) except that automatic shutoff is required at 95% tank capacity; and
 - Double walled line which is continuously monitored to detect the presence of liquid in the interstitial space and provided an alarm as specified in 40 CFR 280.44c via 40 CFR 280.43g
7. In Zone 2, the requirements of 40 CFR Part 280 apply to all existing, registered USTs that are replaced or upgraded and USTs installed at new fuel dispensing facilities. In addition, the construction standards of 40 CFR Part 280, applicable to non-petroleum USTs, shall be applicable to the following in Zone 2:
- (a) Such a tank that is covered by State or federal hazardous waste regulations; and
 - (b) Heating oil tanks for on-site use.
8. All Class V Injection Wells (including but not limited to dry wells, large-capacity cesspools, motor vehicle waste disposal wells, or other injection wells as defined at 40 CFR 146) shall be prohibited with the exception of the following:
- (a) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump, if non-contact;

- (b) Cooling water return flow wells used to inject water previously used for cooling, if non-contact;
 - (c) Barrier recharge wells used to replenish the water in an aquifer or to improve ground water quality, provided the injected fluid does not contain potential ground water contaminants; and
 - (d) Wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power, if non-contact.
9. The transfer area for bulk delivery of liquids shall be required to accommodate and contain a release that occurs during loading and unloading of a tank as follows:
- (a) The liquid transfer area shall be constructed in a manner to prevent a release in the transfer area from reaching the ground water; and
 - (b) The portion of the liquid transfer area intended to contain releases shall be maintained so that it is free of vegetation, cracks, open seams, open drains, siphons, or other openings that jeopardizes the integrity of the area.
10. No disposal of Solid Waste, as defined at 329 IAC 10-2-174, or other hazardous materials as defined at 40 CFR Part 355, or defined at Chapter 4 of the Hamilton County Code, "Hazardous Material Emergencies" (10-4-4-1) shall be permitted in either Zone 1 or Zone 2.
11. The following requirements apply to all excavation activities associated with the removal of sand and gravel materials:
- (a) If the extraction of sand and gravel involves the removal of materials below the normal groundwater level, the work shall be performed by means of a dragline, floating dredge, or an alternative "wet" excavation method.
 - (b) There shall be no de-watering of sites utilized for sand and gravel extraction
 - (c) No form of solid waste (as defined at 329 IAC 10-2-174) or any other form of waste material of any kind, including but not limited to construction/demolition debris, shall be used on the site. Clean natural earth fill materials may be used without restriction as to origin or placement on-site.
 - (d) All fuels, oils, lubricants, hydraulic fluids, petroleum products, or other similar materials on site shall have appropriate secondary containment, as specified in subsection E. 5.

F. Establishment of New Wellfield

Any person who wishes to establish a new wellfield for a public water supply system must first apply to the Hamilton County Plan Commission, which shall

hold a public hearing and make recommendations to the Hamilton County Board of Commissioners as to whether or not to approve the application. Notice of the hearing shall be given as follows:

1. By publication pursuant to I.C. 5-3-1-6, and
2. By certified mail, return receipt requested to all owners of real estate, as certified by the Hamilton County Auditor's office, whose real estate lies, in whole or part, within the proposed Zone 2 of the wellfield.

Table 1
**Cross-reference of Development Standards and Prohibitions
 by Land Use Wellfield Protection Zones**

Land Use	Zoning District	
	Zone 1 (One Year TOT)	Zone 2 (Five Year TOT)
Sanitary land fills	Prohibited	Prohibited
On-Site Sewage Disposal (Commercial Facilities)	Prohibited	Prohibited
Sand and Gravel Mining	Allowed <ul style="list-style-type: none"> • Must use "wet" excavation" • Excavation can be filled only with clean fill 	Allowed <ul style="list-style-type: none"> • Must use "wet" excavation" • Excavation can be filled only with clean fill
Surface Impoundments (e.g., pits, ponds & lagoons)	Prohibited <ul style="list-style-type: none"> • Exceptions for stormwater, recreation, etc. 	Prohibited <ul style="list-style-type: none"> • Exceptions for stormwater, recreation, etc.
Detention and Retention Basins	Allowed <ul style="list-style-type: none"> • Must be lined 	No Restrictions
New ASTs (>1,000 gallons)	Prohibited	Allowed <ul style="list-style-type: none"> • Must have secondary containment at 110% of volume
New ASTs (<1,000 gallons)	Allowed <ul style="list-style-type: none"> • Must have secondary containment at 110% of volume 	Allowed <ul style="list-style-type: none"> • Must have secondary containment at 110% of volume
Existing ASTs	Allowed <ul style="list-style-type: none"> • Must have secondary containment at 110% of volume 	Allowed <ul style="list-style-type: none"> • Must have secondary containment at 110% of volume
Storage of Water Soluble Solids	Prohibited (In Excess of 6,000 lbs)	Allowed <ul style="list-style-type: none"> • must prevent release to ground, and • be appropriately maintained
New USTs	Prohibited	Allowed <ul style="list-style-type: none"> • Must meet all requirements of 40 CFR Part 280
Existing USTs	Allowed <ul style="list-style-type: none"> • Must be double-walled • Must include leak detection (40 CFR 280.43) • Must have release detection on connection piping (40 CFR 240.44) 	Allowed <ul style="list-style-type: none"> • Must meet all requirements of 40 CFR Part 280
Class 5 Injection Wells (e.g., dry wells)	Prohibited	Prohibited
Liquid Transfer Areas	Allowed <ul style="list-style-type: none"> • Must prevent release to ground, and • Must be appropriately maintained 	Allowed <ul style="list-style-type: none"> • Must prevent release to ground, and • Must be appropriately maintained