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Wellfield

ORDINANCE GUIDEBOOK
FOR MARION COUNTY BUSINESSES



MARION COUNTY
PUBLIC
HEALTH
DEPARTMENT

Prevent. Promote. Protect.

WATER QUALITY & HAZARDOUS MATERIALS MANAGEMENT

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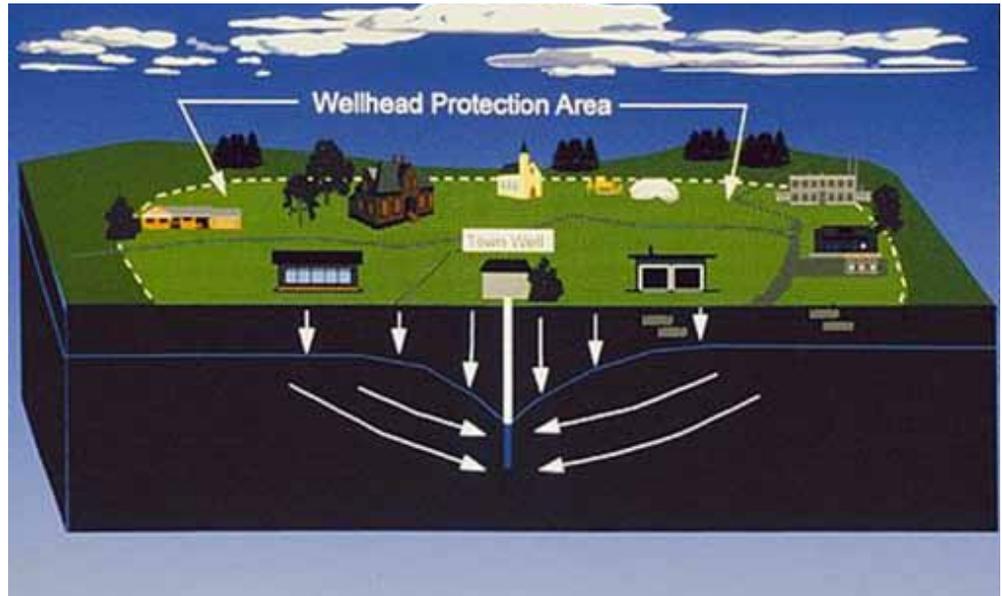
LEGAL DISCLAIMER

You have a legal responsibility to use, store, contain, handle, and dispose of hazardous materials in accordance with local, state and federal regulations. This guidebook is intended to provide general guidance for complying with the Wellfield Protection Standards Ordinance of the Health and Hospital Corporation of Marion County. It will help you understand requirements in the ordinance for the proper use, storage, containment, handling, transportation, and disposal of potential groundwater contaminants in Marion County's Wellfield Protection Areas. It will also help you develop good work practices for preventing releases, leaks, and spills of such materials into the environment. In addition, this guidebook explains the minimum requirements for an emergency response/spill prevention plan and for employee training. This guidebook is not intended to substitute for competent legal assistance with respect to your responsibilities.

WHAT IS A WELLFIELD?

Public water utilities drill wells into areas that have a plentiful supply of groundwater. These areas are called wellfields. Water utilities pump water from the wells into their treatment facilities, and then deliver the water to us to use for drinking, cooking, bathing and manufacturing. The water utilities want to protect the source of the water supply, so they define Wellfield Protection Areas (also called Wellhead Protection Areas).

The diagram shows that water, and pollution from the activities on the surface, can soak through the ground into the groundwater, where it is then drawn into one of the drinking water supply wells. The area nearest the public water wells is called the “one-year time of travel” or the W-1. This means the groundwater in that area can reach the water supply well within one year. If a spill happens in



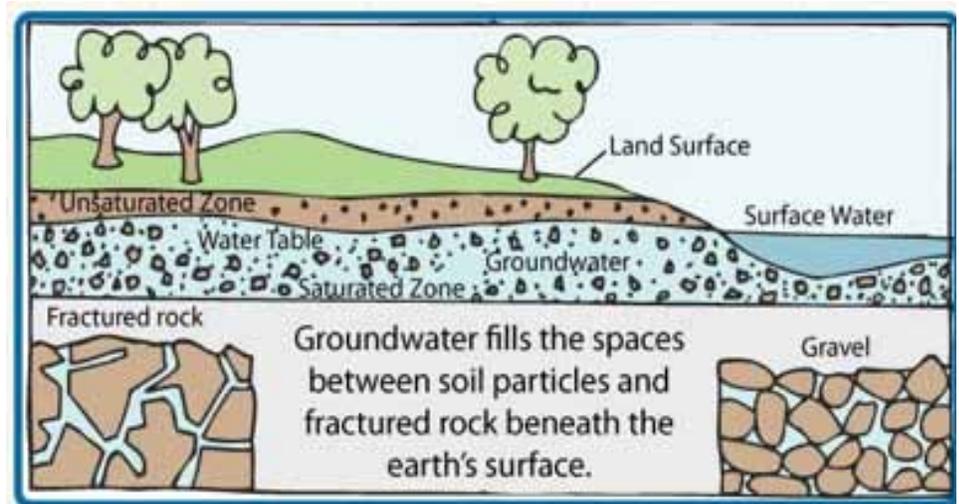
this area, there isn't much time to clean it up or stop it from reaching the water supply well. The water that can be pumped into the wells within 5 years is within the “five-year time of travel” or the W-5. Just as water can travel to a well in one or five years, the same is true

for any pollution that reaches the groundwater. The W-1 and W-5 are sensitive to contamination and it is important that businesses located within the W-1 or the W-5 use Best Management Practices.

WHAT IS GROUNDWATER?

Groundwater is the water that is found underground in the cracks and spaces in soil, sand, or rock. Rain and snow or precipitation falling onto the ground starts the groundwater cycle.

Some of the precipitation runs off into lakes and streams. Some water evaporates back into the air, and some soaks into the ground. Water the plants do not use collects in the soil and rock material beneath the plant roots. These layers of stored water can be very thick. It is in these thick layers of stored water where wells are constructed to pump the water to the surface for our use.

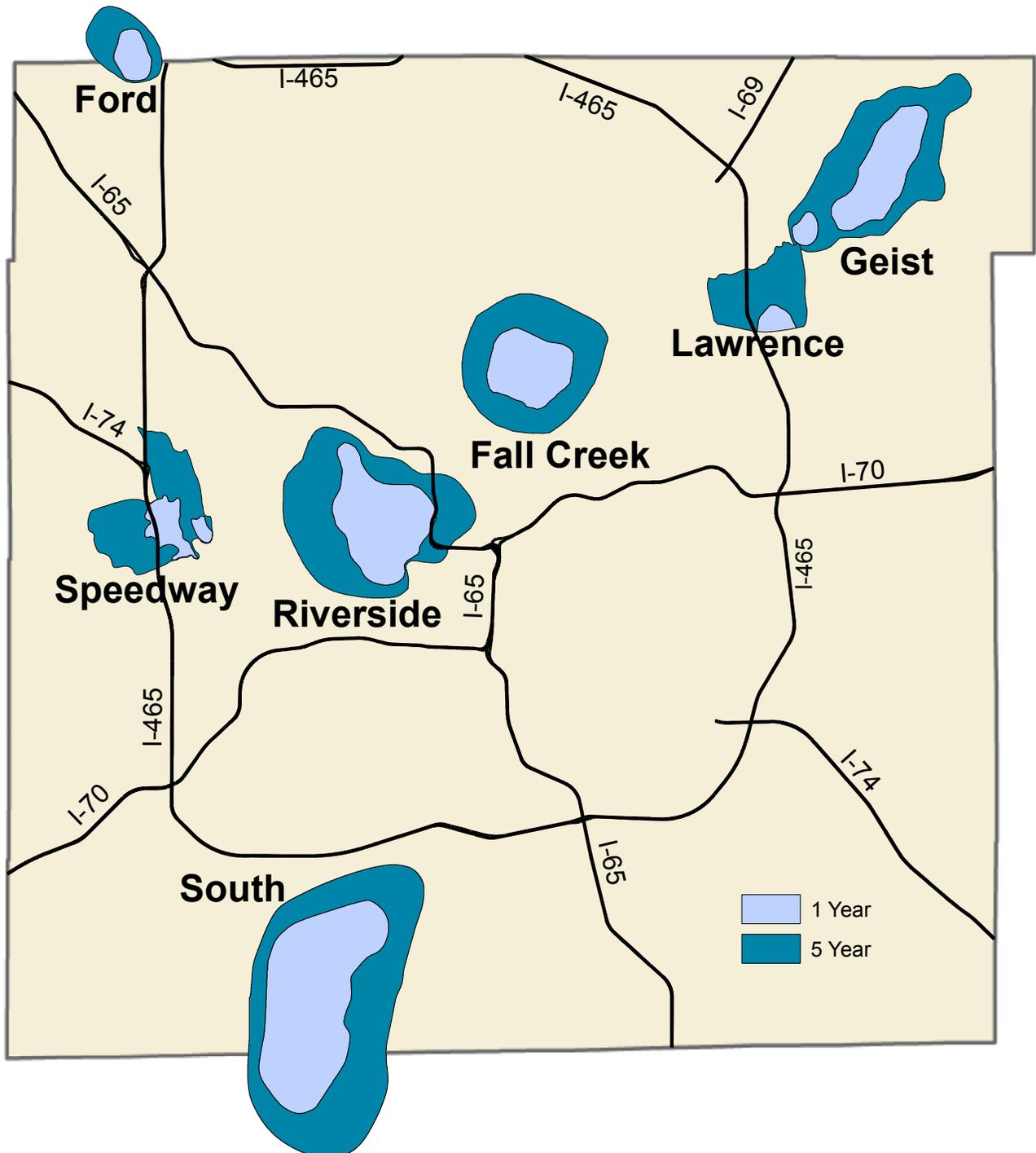


Source: California EPA - State Water Resources Control Board

WHERE ARE MARION COUNTY WELLFIELD PROTECTION AREAS?

HERE IS A MAP SHOWING WHERE OUR MARION COUNTY WELLFIELD PROTECTION AREAS ARE LOCATED. THESE AREAS ARE EVALUATED EVERY FEW YEARS TO MAKE SURE THEY ARE ACCURATE.

Marion County Wellfield Protection Areas



WHY PROTECT THE GROUNDWATER OR WELLFIELD AREAS?

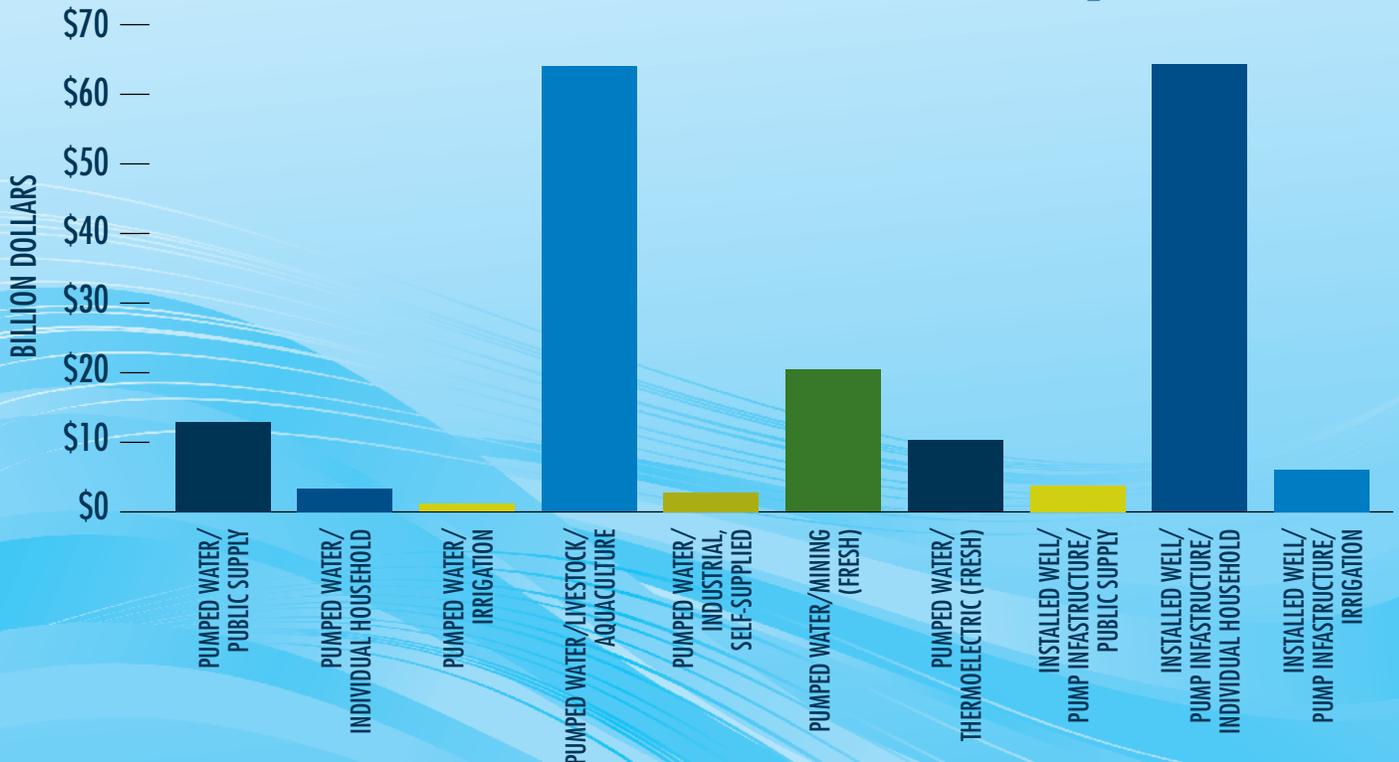
OBVIOUSLY, BECAUSE WE DRINK THE GROUNDWATER PUMPED FROM THE WELLFIELD AREAS!

Marion County public water utilities including Speedway Water Works, Lawrence Utilities, and Citizens Energy Group all use groundwater for our drinking water. Some of our drinking water is pumped out of White River, Fall Creek, and Eagle Creek, but there is not enough to supply all we need. Each day the water utilities use about 41 million gallons of groundwater, along with the surface water, to produce an average of 140 million gallons of water each day. All of the additional drinking water supply in the future will have to come from groundwater, which makes it very important for all of us to work together to protect it.

Groundwater can be contaminated when chemicals are spilled on the ground and soak through the layers of sand and rock. Some chemicals harm groundwater because even small amounts can contaminate groundwater so that it cannot be used without expensive treatment. Other chemicals are dangerous because they mix easily with water and can't be recovered. Still others are a threat to groundwater because they last for a long time in their toxic form, and are very difficult and expensive to treat. Sometimes, a spill or release into the groundwater is going on for a long time before someone realizes it's even happening.



Groundwater's Role in America's Economic Vitality

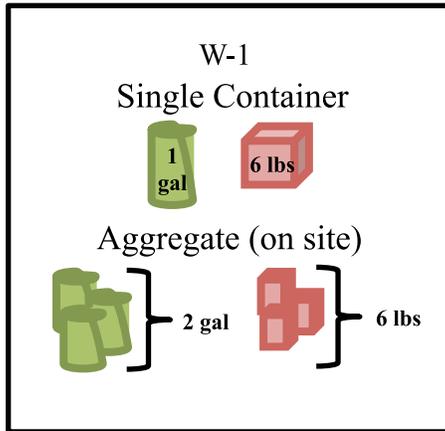


WHO'S COVERED AND WHO'S NOT?

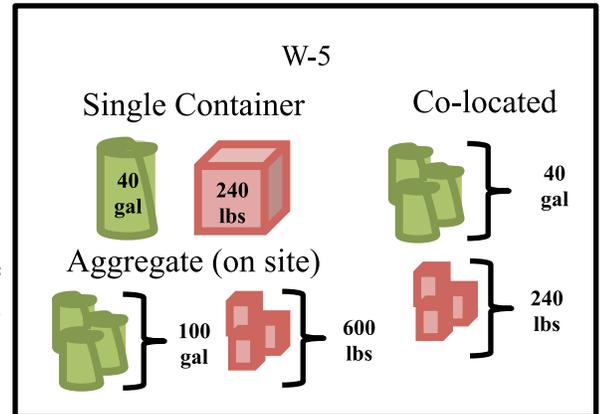
BUSINESSES LOCATED WITHIN THE BOUNDARIES OF THE PUBLIC WELLFIELDS THAT USE CHEMICALS OR HAVE CHEMICAL WASTES MAY BE REGULATED BY THE HEALTH CODE. CHAPTER 13 LISTS THE TYPES OF BUSINESSES THAT OFTEN USE CHEMICALS OR GENERATE CHEMICAL WASTES THAT MIGHT CONTAMINATE GROUNDWATER. EXAMPLES OF COVERED BUSINESSES OR ACCESSORY LAND USES INCLUDE:

Agricultural Chemical Storage	Large institutional uses: convalescent or nursing homes, correctional institutions, schools, colleges or universities	Oil or liquid materials pipelines
Animal feedlots or stockyards	Limestone, sand or gravel mining or quarrying	Painting or coating shops (<i>utilizing liquids or water soluble solids</i>)
Asphalt or tar production	Machine, tool or die shop	Pesticide or fertilizer application services
Automotive supplies distribution	Manufacture of:	Petroleum refining
Building cleaning or maintenance services company	<ul style="list-style-type: none">• Autos or trucks• Cement• Chemicals or gases• Colors, dye, paint or other coatings• Communication equipment• Detergents or soaps• Glass or glass products• Light portable household appliances; electric hand tools; electrical components or subassemblies; electric motors; electric or neon signs• Machinery, including electrical or electronic machinery; or equipment or supplies (circuits or batteries).• Major electric or gas household appliances• Office machinery, electrical or mechanical• Paper, paper box or paper products• Tools or implements, machinery or machinery components• Wood products	Photographic processing facilities
Building materials production	Materials transport or transfer operations (<i>truck terminals</i>)	Printing industries (<i>utilizing liquid inks</i>)
Car or truck wash	Metal mining	Recycling centers
Chemical or petroleum storage or sales	Mortuary or other embalming services	Road salt storage
Chemical, blending or distribution	Motor or body repair: auto, truck, lawnmower, airplane, boat, motorcycle	Rubber or plastics processing or production
Clay, ceramic or refractory minerals mining or quarrying	Municipal waste landfill or transfer station	Scrap or junk yards
Construction contractors' equipment or materials storage	Oil or gas production wells	Slaughterhouse or meat packing
Dry cleaning plants or commercial laundries		Sludge treatment or disposal
Educational, vocational shops or laboratories		Solid waste treatment, storage or disposal
Electroplating operations or metal finishers		Stamping or fabrication metal shops using press, brakes, or rolls
Equipment repair		Textile production
Food or beverage production (<i>excludes restaurants, caterers and other retail food establishments</i>)		Warehousing
Furniture or wood strippers, refinishers		Wastewater treatment facilities
Fuel dispensing locations		Wood preservers or treaters
Golf courses or driving ranges		Accessory Land Uses:
Hazardous waste treatment, storage or disposal		<ul style="list-style-type: none">• Car or truck wash• Motor or body repair: auto, truck, lawnmower, airplane, boat, motorcycle (if fifty-five (55) gallons or more in aggregate of petroleum or chlorinated solvents are used or stored on-site)• Fuel Dispensing facilities• Outdoor road salt storage (if over one (1) ton in bulk)• Generators• Above Ground Storage Tanks• Elevators utilizing hydraulics
Hospitals		
Laboratories		
Landscape, lawn installation or maintenance service		

YOU MAY ALSO BE COVERED IF....



Your business is not on the list, but you are located in the W-1 and have a single container of one gallon of liquid chemical or 6 pounds of a water soluble solid material or total amounts of 2 gallons of liquid chemical or 6 pounds of water soluble solid material, you may be regulated by the health code.



Your business is located in the W-5 and has a single container of 40 gallons or more or 100 gallons total of a liquid chemical, or one container of 240 pounds or 600 pounds total of a water soluble solid you may be regulated by the health code.

GUIDANCE FOR GENERAL BUSINESS OPERATIONS

Due to the nature of potential groundwater contaminants, you must ensure that the storage, use and handling of such materials are conducted to limit their quantities, minimize any potential risk of contamination, and make unintended, unexpected, or undesired releases less likely.

Protecting Marion County's groundwater resources begins with making sure that chemical products and wastes are properly handled to prevent spills and releases. Regulated fluids and solids must be properly contained and disposed. All potential groundwater contaminants and wastes must be kept in proper containers and have appropriate labeling.

Floors in areas with active maintenance or chemical product or waste handling or storage must



be maintained in good repair. Sinks in regulated areas need to have appropriate signs prohibiting chemical disposal or dumping. Unless otherwise permitted, chemical spills shall not be washed down into a facility sewer drain. All cleaning methods must be performed in ways that protect ground and surface water.

All drains and sump pumps/pits in regulated areas must be sealed or properly connected to an oil/water separator, holding tank, or public sanitary sewer, and must be

protected from spills or releases. Only sanitary sewage may be discharged to an onsite wastewater treatment system (septic system).

Vehicles and equipment must not be allowed to leak regulated fluids to the ground. If a leak does occur the fluid(s) must be cleaned up immediately. Chemical products, including wastes containing chemical products, or used oil filters must not be disposed of in a dumpster not intended for that purpose.

Indoor or outdoor chemical product transfers must be conducted in areas designed for that purpose. All product transfer areas must be maintained to prevent releases and to permit proper cleanup as spelled out in your spill plan.

GUIDANCE SPECIFIC FOR ABANDONED WELLS AND OUT-OF-SERVICE ABOVEGROUND STORAGE TANKS

Abandoned wells present special risks to groundwater resources, as they provide a direct pathway for surface contamination into aquifers used for drinking water. If you have a well that you have abandoned or no longer use, you must close the well in a way that will protect groundwater resources from contamination. For additional information regarding the permanent abandonment of wells, you should review the requirements in 312 IAC 13-10-2.

As stated earlier, proper storage of potential groundwater contaminants, especially outdoors, is critical to protect Marion County's underground drinking water sources. Of particular concern are large outdoor aboveground storage tanks that are no longer in service.



Even residual amounts of product in these tanks can pose a significant contamination risk. To minimize this risk, an outdoor aboveground storage tank in a W-1 area with a capacity greater than one thousand gallons,

that was used to store potential groundwater contaminants must be removed or permanently closed if it has been out of service for longer than one year.



Even small aboveground storage tanks (ASTs) can be sources of pollution. The photo shows an AST that is in approved secondary containment. This type of container can be very effective if used properly. In this case, the AST and its secondary container do not have a roof, which allows rainwater to collect in the secondary container. There is a drain plug on the side to allow collected rainwater to be drained in a controlled manner. Unfortunately, the facility staff decided to remove the plug so they wouldn't have to check the level of water. The area of dead grass spreading out from the tank indicates that fuel-contaminated rainwater has been released over time, seeping into the groundwater below.

SECONDARY CONTAINMENT

One of the most effective ways to prevent undesirable liquids and solids from accidentally entering the groundwater and contaminating it is to place these materials inside secondary containment.

What is secondary containment? To put it simply it's a container within a container.

In certain circumstances storing liquids and solids of concern in their original containers alone isn't enough to ensure Marion County groundwater is protected. Because certain liquids and solids present a special risk to our groundwater, you must ensure they can't leak into the groundwater by placing them in secondary containment.



Before placing any material in secondary containment you should first determine if it is a potential groundwater contaminant. This can be done by looking at the product's properties. Is the product a hazardous material, an extremely hazardous material, or an objectionable substance with properties that might damage



the groundwater? If you have the product's Safety Data Sheet (SDS), much of the information you need to determine its hazards to people and to the environment is listed there. If you need help to determine a product's hazards, or its proper secondary containment, the Marion County Public Health Department can assist you.

Once you determine that some or all of the liquids and solids you store are a threat to the groundwater, then the next step is to determine how much of each product you have.

Whether the material is stored inside or outside, if you store 40 gallons of liquids or 240 pounds of water-soluble solids in one place for more than 24 hours, it needs to be in secondary containment. This might mean you store it all together in one big container or you might store several small containers together. As long as it is more than 40 gallons or 240 pounds and is a potential groundwater contaminant it needs to be in secondary containment.

Protecting our groundwater can be accomplished in several ways. If the material of concern is a liquid and is stored in a tank, then the secondary containment can consist of a double-walled tank. This is a tank within a tank. The tank has an outer shell, and should have a way to monitor the space between the two tanks, known as the interstitial space.

Another way to protect groundwater with secondary containment is to place any items of concern, whether liquid or solid, into a larger container. The containment area could be constructed in several ways (plastic bins, concrete-walled area, or containment pallet). Whichever type you choose it must be large enough to contain 110% of the volume of the largest container in that area. This means if you store a 55-gallon drum and nothing larger, the containment area must be able to hold 60.5 gallons. If your largest container holds 100 gallons then the containment area must hold 110 gallons.

Regardless of what method you choose, the secondary containment area must be able to hold the spilled material for at least 72 hours before removal.

If you have a double-walled tank with a monitor, you must ensure the monitoring system is operational and inspected appropriately.

At all times you should be inspecting and maintaining your secondary containment area to ensure it is intact and functioning properly.

PAPERWORK, TRAINING, AND REPORTING

All facilities subject to the Wellfield Protection Ordinance must write an emergency response/spill prevention plan. The plan is required to have certain specific information in it. The Marion County Public Health Department will provide you with a free example template for a plan, both digital and hard copies. The plan must include the facility information (name, address, telephone number, owner, and owner's contact information); a list of emergency contacts; the nearest hospital and information; the location of the spill kit; a list of chemicals at the site; information about how to respond to a large spill; information about how to respond to a small spill; any health and safety information; and a copy of applicable Safety Data Sheets (SDS).

Facilities also need to either notify their chemical suppliers and waste haulers in writing, or they will need



to post signs stating the facility is within a Wellfield Protection Area.

Facilities need to maintain at their site an inventory of all chemicals and wastes that might be potential groundwater contaminants. This inventory needs to have the product name, quantity, type and location where each product is stored.

A facility needs to have a proper spill kit on site at all times, and they need to train their employees on how to use it. The facility must maintain records of this training.

You must post a sign at your facility with the name of the local water utility and its emergency phone number. This sign is provided for free from the health department and can also be found online (<http://marionhealth.org/water-quality-and-hazardous-materials-management/wellfield-protection-program/>).

If you are a landlord, you must provide all occupants of your leased spaces a Special Requirements Notice Agreement, which is a special form provided by the health department notifying tenants of their location in a Wellfield Protection Area.

All site managers for landlords must keep on file the signed copies of this Special Requirements Notice Agreement.

Within 60 days of a tenant leaving its space, or a tenant changing its business, all landlords must notify the health department using the form provided.

All landlords with 3 or more leased or sub-leased spaces are required to send a tenant roster to the health department annually, by September 1st of each year. The roster should have tenant names, business types, and their operations.



As a person associated with a business or property you are required to notify the health department within 60 days if you sell the property or change the operations of your business if it is listed in the Ordinance.

RESOURCES

Marion County Wellfield Education Corporation

www.indyh2o.org

The Marion County Wellfield Education Corporation (or MCWEC) is a not-for-profit corporation established in 1996 by the Marion County Wellfield Protection Zoning Ordinance to help support the prevention of contamination to the groundwater resources of Marion County through public awareness and education.

As part of that mission, MCWEC provides businesses with technical support to improve chemical and waste management practices to minimize the likelihood of releases into the aquifers supplying drinking water.

MCWEC is funded by the water utilities of Marion County (Citizens Energy Group, City of Lawrence, and Speedway Waterworks) through water use fees with additional support from the City-County Council of Marion County and Indianapolis.

IDEM Compliance Technical Assistance Program (CTAP) Compliance and Technical

www.in.gov/idem/ctap/index.htm

The Compliance Technical Assistance Program (CTAP) is IDEM's one-stop shop for environmental regulatory compliance needs. Staff with experience in all environmental programs are ready to provide technical and confidential compliance assistance on a wide array of environmental topics, including wellfield protection.

EPA Source Water Protection

www.epa.gov/sourcewaterprotection

Communities, citizen groups, and individuals can take an active role in protecting their drinking water sources from contamination. The EPA can provide information about source water protection and steps people can take at the local level to protect their water.

DNR Division of Water Water Rights & Use Section For information on well plugging

www.in.gov/dnr/water/3482.htm

Scroll to section: Water Well Abandonment and Plugging

To read the specific requirements in State Law:
www.in.gov/legislative/iac/pdf-iac/iac2006oldfmt/T03120/A00130.PDF?IACT=312

See Rule 10 of the well drilling regulations in the Indiana Administrative Code, 312 IAC 13.



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DEPARTMENT**

Prevent. Promote. Protect.

**Ground
WATER**
is Drinking Water.
PROTECT IT!