

Business Guidebook

for Wellfield Protection



**Groundwater
is your
drinking water!
Protect it!**

Marion County Wellfield Education Corporation

MCWEC

www.indyH2O.org



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What is the Marion County Wellfield Education Corporation (MCWEC)?

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, City of Lawrence, and Speedway Waterworks) through water use fees with additional support from the City-County Council of Marion County and Indianapolis.

What is Groundwater?

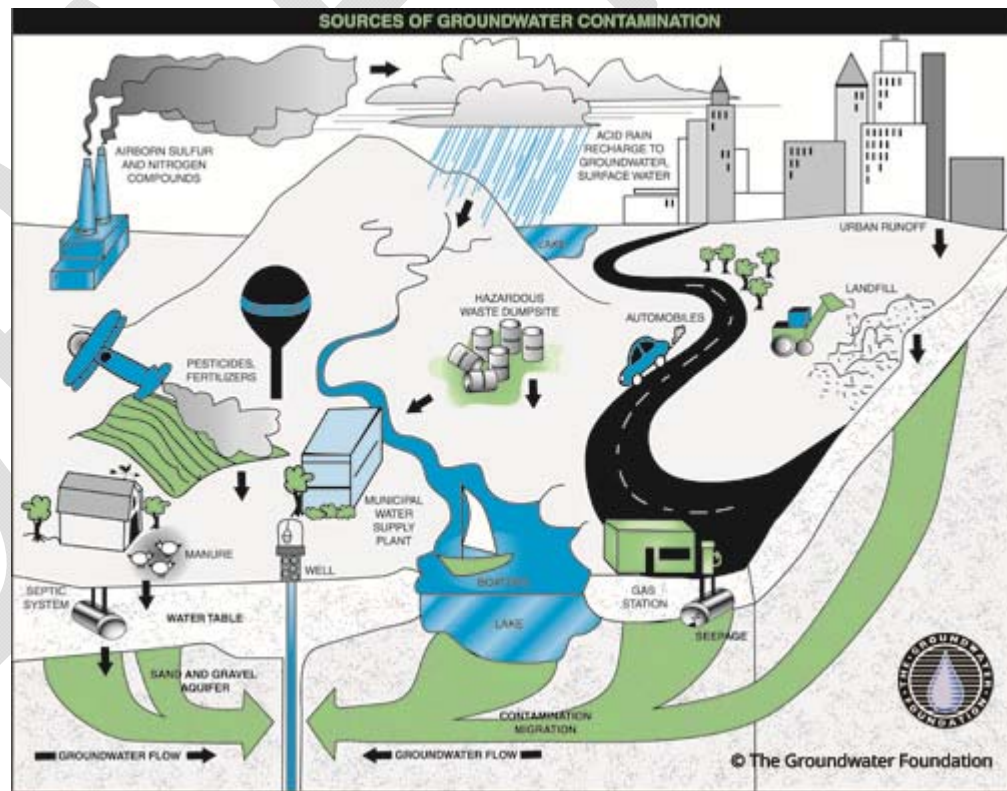
Groundwater starts as rain and melted snow. It seeps through the surface into deeper layers of soil, sand, gravel and rocks. Water collects in small pockets between grains of sand and gravel (or "pores") underground.

What is an Aquifer?

Underground layers of sand, gravel and rock that are saturated with groundwater that can be brought to the surface by a well.

What is a Wellfield?

The ground surface above and surrounding a well drilled into an aquifer. Also known as a Well Head Protection Area (WHPA). Surface water seeps into the ground and turns into groundwater in these areas.



What Is Changing for Businesses?

Indy Rezone

Indy Rezone is Indianapolis' first new zoning ordinance in over 40 years! It is revamping the previous zoning ordinances to prepare Indianapolis for new growth and to encourage sustainability. It deals with NEW businesses in regards to land use and land planning.

Changes within Wellfield Protection Areas

- Prohibits new underground storage tanks (USTs)
- Prohibits bulk storage of chemicals including petroleum
- Sets new limits on land uses

Check out Article II, Section 4 and Article VIII: Improvement Location Permits, Section 3 for more information!

The ordinance is available online at <http://www.indyrezone.org/>.

Marion County Public Health Department Wellfield Business Code

The Marion County Public Health Department (MCPHD) has created a Wellfield Business Code under the Marion County Health Code to regulate ALL businesses in the wellfields. The code applies to ongoing business operations based on location, business type, and amount of chemicals on site.

Why have things changed?

Zoning ordinances are not designed or intended to address detailed operational issues. Enforcement only occurs at the time permits are granted or if complaints are received. Relying on the zoning ordinances means that an established business in the wellfield was under very little regulation because only new businesses and new construction were subject to the regulations. The MCPHD Wellfield Business Code will standardize expectations for all businesses in a wellfield, and most importantly, protect our groundwater from contamination.

Do the MCPHD Wellfield Business Code requirements apply to my business?

Is your business located in a wellfield?

Check out <http://indyh2o.org> for detailed maps and instructions for using the Indy Map website to find out!

W-1 vs. W-5

There are two parts of the wellfields that have different requirements, so it's important to find out what part you are in!

W-1 means that you are very close to a wellhead. There's a 1-year travel time between groundwater at your site and the water that will come out of our wells for drinking water. This means that if a chemical at your facility was spilled or entered the soil in another way, it will show up in our drinking water in a year or less. Requirements are stricter in these areas.

W-5 means that you are a little further away from a wellhead. There's a 5-year travel time between groundwater at your site and the water that will come out of our wells for drinking water. This means that if a chemical at your facility was spilled or entered the soil in another way, it will show up in our drinking water in five years or less. There are still requirements if you are in this area, but they are not as strict as the W-1 because there is more time to act.

If you answered no to this question, the new code doesn't apply to your business but we encourage you take steps to protect groundwater and the environment!

What kind of business do you have?

The code provides a list of businesses that are specifically regulated in Chapter 13, Article 4, Sec. 13-401. This shown as **Table 1** on the next page. If your business isn't one of these types, the code will likely only apply to you if your businesses use chemical quantities above the threshold amounts discussed below and on the next page. If your business is one of these types, the code does apply to your business and will affect you. Please keep reading to learn what you need to do!

Table 1. List of Businesses Regulated Under the New Indianapolis Code

<p>Agricultural Chemical Storage Animal feedlots or stockyards Asphalt or tar production Automotive supplies distribution Blast furnaces, steel works, rolling or finishing mills Building cleaning or maintenance services company Building materials production Car or truck wash Chemical or petroleum storage or sales Chemical, blending or distribution Clay, ceramic or refractory minerals mining or quarrying Construction contractors' equipment or materials storage Creosote manufacturing or treatment Dry cleaning plants or commercial laundries Educational, engineering or vocational shops or laboratories Electroplating operations or metal finishers Equipment repair Fat rendering Food or beverage production (excluding restaurants, catering and other retail food establishments) Furniture or wood strippers, refinishers Fuel dispensing locations Golf courses or driving ranges Hazardous waste treatment, storage or disposal Hospitals Laboratories: medical, biological, bacteriological, chemical Landscape or lawn installation or maintenance service (commercial) Large institutional uses: convalescent or nursing homes, correctional or penal institutions, schools, colleges or universities</p>	<p>Leather tanning or finishing Limestone, sand or gravel mining or quarrying Machine, tool or die shop Manufacture of: Autos or trucks Cement Chemicals or gases Colors, dye, paint or other coatings Communication equipment Detergents or soaps Explosives, matches, or fireworks 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 Marine equipment Musical instruments Office machinery, electrical or mechanical Paper, paper box or paper products Recording instruments Tools or implements, machinery or machinery components Wood products Materials transport or transfer operations (truck terminals) Metal mining Mortuary or other embalming services Motor or body repair: auto, truck, lawnmower, airplane, boat, motorcycle Municipal waste landfill or transfer station</p>	<p>Oil or gas production wells Oil or liquid materials pipelines Painting or coating shops (utilizing liquids or water soluble solids) Pesticide or fertilizer application services Petroleum refining Photographic processing facilities Printing industries (utilizing liquid inks) Radioactive waste handling or storage Recycling centers Road salt storage Rubber or plastics processing or production Scrap or junk yards Slaughterhouse or meat packing Sludge treatment or disposal Solid waste treatment, storage or disposal Stamping or fabrication metal shops using press, brakes, or rolls Textile production Warehousing Wastewater treatment facilities Wood preservers or treaters</p> <p>Accessory land uses: Car or truck wash Dry cleaning plants (if forty (40) gallons or more of petroleum or chlorinated solvents are used or stored in a single container on-site) 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</p>
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Do you have chemicals?

What counts as a chemical?

Anything liquid other than water or food/drink and any solid that can be dissolved into water other than food/drink.

Examples: solvents, petroleum, printing ink, cleaners, and many others!

What amounts?

The thresholds for triggering regulation by the code are different depending on which part of the wellfield you are in (W-1 or W-5).

- W-1
 - 1 gallon in a single container
 - 6 lbs of dissolvable solids
 - 2 gallons of aggregate liquids
 - 250 lbs of dissolvable solids in total
- W-5
 - 40 gallons of liquids in a single container
 - 240 lbs of dissolvable solids in a single container
 - 100 gallons of liquids in total
 - 600 lbs of dissolvable solids in total

If your business doesn't meet the threshold value of chemicals and isn't one of the designated land uses, you are likely exempt but we encourage you to take steps to protect groundwater and the environment. If you do have greater than these amounts, you may be regulated. Read below to determine if your business may meet criteria to be exempted from the code.

Exemptions:

- Single and multi-family residential land uses
- Routine building and yard maintenance chemicals (stored indoors)
- Operating fluids inside a motor vehicle
- Bulk deliveries in a truck
- Food and Beverages for restaurants and retail grocers
- Public water supply or chemicals used to provide public water supply
- Pre-sealed packages at retail stores

If your business is one of the specified types, or you meet the threshold chemical amounts and are not exempted, the MCPHD code likely applies and you will be required to comply with the regulations to ensure your business is protecting the groundwater.

MCPHD will be inspecting facilities to ensure compliance. Penalties for non-compliance will be similar to other MCPHD health code violations, including fines, citations, and civil penalties. Review Chapter 22, Article 1 through 4 for further information.

Where can I get help understanding and complying with these requirements?

The Marion County Wellfield Education Corporation partners with environmental consulting firm Mundell & Associates, Inc. Mundell & Associates is a small, local environmental consulting firm contracted by MCWEC to provide free assessments, education and technical assistance to businesses located within the wellfields. Their expertise in environmental business practices, facility design, spill prevention and response, and environmental control for groundwater protection has helped hundreds of businesses to reduce their liabilities associated with operations. More information is available on <http://indyh2o.org>!

Free Assessments:

Mundell & Associates is available to any businesses in the wellfield requesting assistance! One way we can help is coming to your business and learning more about your business. During the assessment, a representative from Mundell helps your business identify site specific ways to limit potential for groundwater contamination. In addition to protecting our drinking water, an assessment can help maintain the value of your property by addressing potential sources of contamination and avoiding future cleanup costs. Your business may receive free spill containment supplies in return for participating in an assessment.

Mundell & Associates, Inc. is a private firm and does not report any site specific observations from these assessments to any regulatory agencies. These confidential assessments are free and are intended to help ensure that businesses are operating responsibly and are complying with all groundwater protection ordinances.

You may also contact the Marion County Public Health Department for more information about the health codes or for assistance.

Other certified environmental professions (such as professional engineers, licensed professional geologist, industrial hygienist, hazardous materials manager, or environmental health specialist) may also be able to assist your business.

What should I do now?

We suggest completing the businesses self-assessment to understand what at your site may be a threat to groundwater and therefore regulated by the health code.

Check out what is required for your business as a result of the code. You can read the basics in this business guide, but be sure to read the parts of the code that apply to your business.

Then, contact Mundell & Associates to schedule a free businesses assessment to receive feedback and suggestions of how to proceed. You may need to make changes to your operations or to purchase equipment. We want to help you protect groundwater through simple and cost-effective methods!

Self-Assessment

You can complete this self-assessment to better understand what aspects of your operations may threaten groundwater and what parts of the health code may apply to you. If you have any questions, please feel free to contact Mundell & Associates and they will help you complete the self-assessment and can come to your site to complete a more thorough business assessment.

1. Does your facility use or store liquids or chemicals?
Check out **page 11 & 12** and Sec 13-602, Sec 13-604, Sec. 13-606, Sec. 13-607, Sec. 13-609, Sec. 13-610, Sec. 13-623, Sec. 13-626, Sec. 13-628
2. Does your facility generate liquid wastes or wastewater?
Check out **page 11, 12, 13** and Sec 13-602, Sec 13-604, Sec. 13-606, Sec. 13-607, Sec. 13-618, Sec. 13-620
3. Does your facility use or store liquids, chemicals or wastes on site indoors?
Check out **page 11** and Sec 13-602, Sec 13-604, Sec. 13-606, Sec. 13-607, Sec. 13-610
4. Does your facility use or store liquids, chemicals, or wastes on site outdoors?
Check out **page 12** and Sec. 13-603, Sec. 13-605, Sec. 13-606, Sec. 13-607
5. Is equipment or vehicle maintenance of any kind performed on site?
Check out **page 13** and Sec. 13-609, Sec. 13-610, Sec. 13-611
6. Do you receive deliveries of chemicals from an outside vendor?
Check out **page 13** and Sec. 13-608
7. Does your facility have any floor drains, sump pits, or below-ground piping?
Check out **page 13** and Sec. 13-619
8. Does your facility discharge any wastewaters or cleaning waters to floor drains, sump pits, or below-ground piping?
Check out **page 13** and Sec. 13-619, Sec. 13-620
9. Does your facility have a septic system or onsite water treatment system?
Check out **page 13 & 14** and Sec. 13-620
10. Is your facility regularly cleaned by hosing the floor down or wet mopping?
Check out **page 14** and Sec. 13-615, Sec. 13-616
11. Does your facility have tenants that occupy the site for business purposes?
Check out **page 14** and Sec. 13-625
12. Are there underground or aboveground storage tanks?
Check out **page 15** and Sec. 13-601.a,

What do ALL businesses need to have or do?

Spill Kits

Your business is required to have a properly supplied spill kit at all times. Employees must be trained on use of the spill kit. Employees must be trained when hired and annually afterwards. Documentation of training records must be kept on site and be available for inspection.

Check out <http://indyh2o.org> for resources to make or buy a spill kit. Sample training materials and an example of spill training documentation are also available for FREE download.

Emergency Response/Spill Prevention Plan

Your business is required to have an approved emergency response/spill prevention plan on site and updated annually. Employees must be trained when hired and annually afterwards. Documentation of training records must be kept on site and be available for inspection.

Check out <http://indyh2o.org> for resources to find an environmental professional qualified to write an emergency response/spill prevention plan. Sample training documentation is available for FREE download.

Emergency Phone Numbers for Water Utilities

Your business is required to post the emergency telephone number for the appropriate water utility in your area. For most of Indianapolis, the appropriate utility is Citizens Energy. For the City of Lawrence, the appropriate utility is Lawrence Utilities. For Speedway, the appropriate utility is Speedway Water Works.

Citizens Energy emergency telephone number: (317) 924-3311

Lawrence Utilities emergency telephone number: (317) 260-0220

Speedway Water Works emergency telephone number: (317) 241-9766

Check out <http://indyh2o.org> for signs available for FREE download.

No Chemical Disposal/Dumping Signs

Your business is required to post signs indicating that no chemical disposal or dumping may occur at each accessible sink, near chemical storage, and near areas used to transport, handle, mix, and transfer chemical products or waste.

Check out <http://indyh2o.org> for signs available for FREE download.

Notify the Marion County Public Health Department (MCPHD) About Changes

Your business is required to notify the MCPHD within 30 days when there are changes in ownership or operation.

Maintain a Chemical Inventory

Your business is required to keep and maintain an inventory of the types and quantities of chemicals stored and wastes generated. This inventory must be available for inspection.

Check out <http://indyh2o.org> for an example form available for FREE download.

What do I need to do if I use or store chemicals indoors?

Storage Requirements

If your business has over 40 gallons of liquids or 240 pounds of more of water soluble solids in one container or collocated at your facility for more than 24 hours, they must be stored in a containment area. The containment area must be capable of containing 110% of the capacity of the largest tank, receptacle, or container.

Containment Area Requirements

If you are required to have a containment area at your facility, your containment area must meet one of the following requirements:

1. A secondary containment structure designed to prevent and control the escape or movement of potential groundwater contaminants for a minimum period of seventy-two (72) hours before removal; or
2. A storage tank designed and built with an outer shell and a space between the tank wall and the outer shell that allows and includes interstitial monitoring.

You must also maintain the secondary containment area to be free of vegetation, cracks, open seams, siphons, or other openings that would jeopardize the integrity of the structure.

Floor Requirements

Your business is required to ensure that floors within active maintenance or chemical handling/use areas are adequately maintained and in good repair. Check for cracks and floor sealant.

Floor Drains

Your business is required to ensure that chemicals are not washed down or spilled into facility sewer or floor drains. If a spill or release is to occur, you must properly mitigate them according to your facility's spill plan.

Your business is required to ensure that drains, sump pumps, sump pump bits in areas where chemicals or chemical waste is handled or stored are sealed or properly connected to an oil/water separator, holding tank, or public sanitary sewer and are properly maintained to protect from spills or releases.

Chemical Transfers

Your business is required to conduct chemical transfers in areas designed for this purposes and these areas must be maintained to prevent release and ensure proper clean up.

What do I need to do if I use or store chemicals outdoors?

Storage Requirements

If your business has over 40 gallons of liquids or 240 pounds of more of water soluble solids in one container or collocated at your facility for more than 24 hours, you are required to store it on pavement or other impervious surface that is properly drained or covered from weather and be in a location or containment area that can prevent release. The containment area must be capable of containing 110% of the capacity of the largest tank, receptacle, or container.

Containment Area Requirements

If you are required to have a containment area at your facility, your containment area must meet one of the following requirements:

1. A secondary containment structure designed to prevent and control the escape or movement of potential groundwater contaminants for a minimum period of seventy-two (72) hours before removal; or
2. A storage tank designed and built with an outer shell and a space between the tank wall and the outer shell that allows and includes interstitial monitoring.

You must also maintain the secondary containment area to be free of vegetation, cracks, open seams, siphons, or other openings that would jeopardize the integrity of the structure.

Chemical Transfers

Your business is required to conduct chemical transfers in areas designed for this purposes and these areas must be maintained to prevent release and ensure proper clean up.

What if I use hazardous materials?

Hazardous Materials and Objectionable Substances

Your business is required to

1. Limit the quantities of hazardous materials and objectionable substances
2. Minimize any potential risk of contamination
3. Address any unintended, unexpected, or undesired release so as to offer sufficient protection of groundwater

Containerizing and Labeling

Your business is required to properly containerize and label all hazardous materials and objectionable substances and wastes.

What if I perform equipment or vehicle maintenance of any kind on site?

Maintenance Activities

Your business is required to conduct all activities in a manner to ensure fluids are properly contained and disposed.

Vehicles & Equipment

Your business is required to ensure that all vehicles and equipment at your facility doesn't leak any fluids.

What if I receive deliveries of chemicals from an outside vendor?

Notify Suppliers of Chemical Products

Your business is required to notify suppliers of chemical products, including the transporter(s) to the site and waste handling services, in writing that the facility is within the Wellfield Protection District. Records must be kept on site and be available for inspection.

Check out <http://indyh2o.org> for an example notification and example records available for FREE download.

What my facility has floor drains, sump pits, or below-ground piping?

Floor Drains

Your business is required to ensure that chemicals are not washed down or spilled into facility sewer or floor drains. If a spill or release is to occur, you must properly mitigate them according to your facility's spill plan.

Discharges

Your business is required to ensure that drains, sump pumps, sump pump bits in areas where chemicals or chemical waste is handled or stored are sealed or properly connected to an oil/water separator, holding tank, or public sanitary sewer and are properly maintained to protect from spills or releases.

What if my facility has a septic system or onsite sewage treatment system?

Discharges

Your business is required to ensure no material other than sanitary sewage is discharged to the onsite wastewater treatment system.

What if my facility is regularly cleaned by hosing the floor down or wet mopping?

Cleaning methods

Your business is required to ensure that cleaning methods are performed in a manner that protects ground and surface water.

What if my facility has tenants?

Requirements

If your facility has tenants, you are required to

1. Provide tenants/occupants with a copy of the Special Requirements Notice Agreement for handling or storing materials onsite that represent potential groundwater contaminants

Check out <http://indyh2o.org> for a copy of this document!

2. The site manager must keep on file a signed copy of the Special Requirements Notice Agreement for all active tenants or occupants
3. Notify the Marion County Public Health Department (MCPHD) of all changes of tenants or operations within 30 days

Please call _____ or send a letter to

4. Provide a current roster of tenants to MCPHD for locations with three or more leased or sub-leased spaces by September 1 of each year.

What if my facility has aboveground (AST) or underground storage tanks (UST)?

Underground and Aboveground Storage Tanks

If your business is in a W-1 area and has a storage tank of greater than 1,000 gallons that has been out of service for greater than one year it must be removed.

Details about Good Facility Practices

Secondary Containment

Secondary containment is the appropriate way to protect against spills at your facility to prevent the contamination of the environment. (Having trouble finding a good definition)

Check out <http://indyh2o.org> for more examples of appropriate secondary containment and information about where to purchase this equipment.

Secondary Containment for Large Chemical Storage Areas

The most cost-effective method for large chemical storage areas or those with large chemical volumes is berm containment. The volume of the storage area must be able to contain 110% of the volume of the largest drum or container in the area. Different chemical resistant sealers or liners can be placed within the containment area that are resistant to the type of chemicals stored within. Specialists in liner and sealant design should be consulted to assure that the proper sealant is used.



Secondary Containment for Medium Chemical Storage Areas

Good methods for secondary containment for drums or process chemicals include secondary containment pallets or basins. The secondary containment method must be able to contain 110% of the volume of the largest contained stored on or within it.



Secondary Containment for Small Chemical Storage Areas



Secondary containment for small containers of chemicals (less than one gallon) used in daily operations may be stored in containers during active use or in cabinets with secondary containment for long-term storage.

Floor Sealant

Concrete floors within any chemical handling, storage, or use areas should be properly sealed to resist the movement of spilled chemicals or process water through the paved surface.

Check out <http://indyh2o.org> for more examples of appropriate floor sealant and information about where to purchase.



Degrading floor sealant



Properly maintained floor sealant

Drains, Sump Pumps, and Piping Systems

Discharges to floor drains or below-floor sump pumps in older facilities are one of the largest sources of groundwater contamination from active facilities. Many older drains connect to short onsite discharge lines that release wastewater directly into the subsurface below the drainage entry point (dry well discharge), connect directly to a storm sewer line that discharges into an onsite or offsite surface waterbody, or connect to a sanitary sewer line that leads to a city wastewater treatment plant.

Check out <http://indyh2o.org> for more details about drains, sump pumps, and piping systems and information about where to purchase.

How to prevent releases from drains, sump pumps, and piping systems

- Inspect all below-floor pit structures and drains to determine their condition
- Seal pits with chemically resistant liners
- Any dewatering pumping sump pits in basement areas should be protected with a raised berm so any spills cannot flow into the pit
- Determine where your piping lines lead by smoke testing the line or reviewing building/construction drawings that show the locations of site sanitary or storm sewers and septic fields
- If you determine the drain is no longer needed from the operation of your business, or the drain feeds in a disposal dry well or a storm sewer, immediately plug the drain
- If drains are in active use or needed for the elimination of wastewater or cleaning water, considering performing a tightness test to determine if the drain is water-tight or replacing the drain and piping with a double-walled system with pressure fittings
- If the drain system is used to receive wastewater from vehicle maintenance operations, consider a double-walled oil/water separator with cathodic protection and high-level alarms within the drainage system to effectively remove an separate phase (pure product) petroleum hydrocarbons



Underground Storage Tanks (USTs)

The concern about USTs contaminating groundwater is so high that new businesses and construction within the W-1 district that they are not allowed.

If your business has USTs used for fuel dispensing, they must already meet the requirements imposed federally and given in 40 CFR Part 280.

How to prevent groundwater contamination from USTs

- If no longer needed, tanks should be taken out of service and properly closed
- Consider replacing old tanks with new double-walled tanks
- Three methods of release detection should be used:
 - 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 (between tank walls) of a double walled, approved UST as defined in 40 CFR 280.43 (g)
- Automated monitoring systems that provide:
 - 24 hour continuous leak detection with audible and visual alarms
 - Continuous inventory controls
 - Tank interstitial, piping sump, and dispenser sump sensors

- Piping connected to the UST should also be double-walled, with the use of three simultaneous methods of release detection
 - Continuous inventory controls
 - Continuous detection for a three gallon per hour line leak, as specified in 40 CFR 280.44(a), except that automatic shutoff be required at 95% of tank capacity
 - Continuously monitoring of the double-walled line to detect the presence of liquid in the interstitial space with alarm as specified in 40 CFR 280.44 (c) via 280.43(g).

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