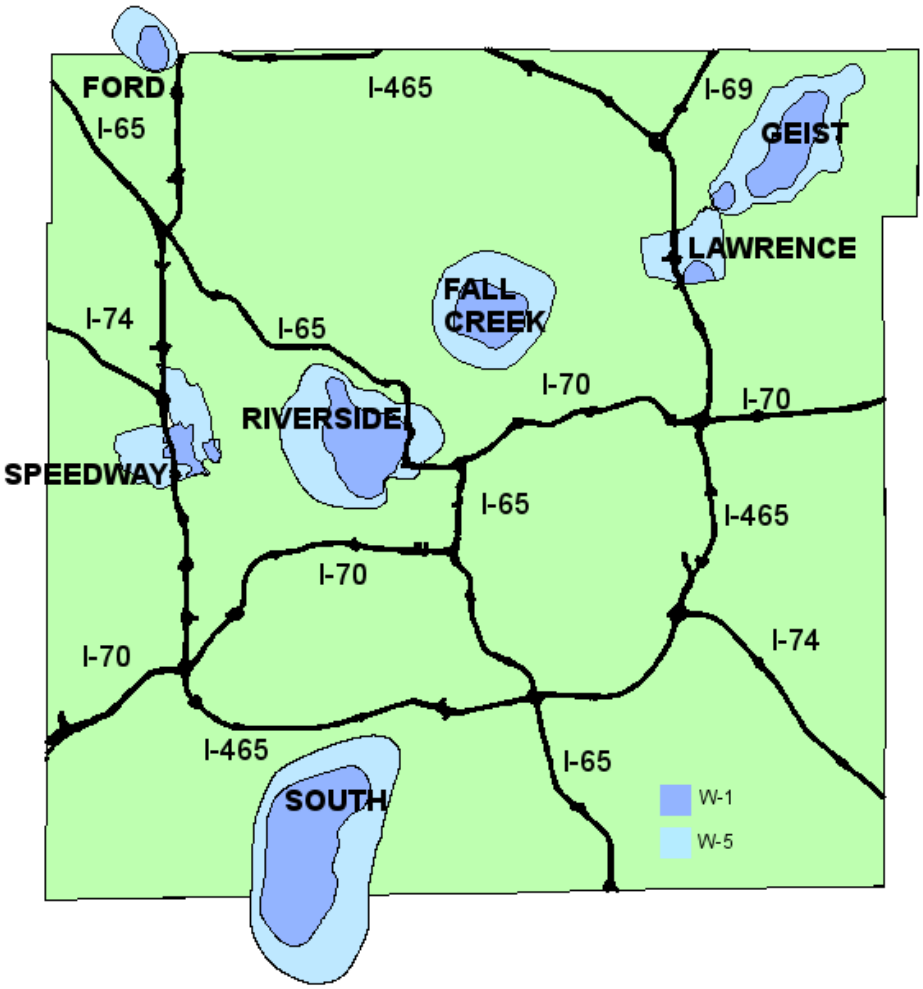
Marion County
Wellfield Education Corporation
www.mcwec.org

2018 Wellfield Protection Activities Report



Marion County Wellfield Protection Areas

Drafted by MUNDELL & ASSOCIATES, INC. on behalf of the Marion County Wellfield Education Corporation.

Marion County Wellfield Education Corporation (MCWEC)
2018 Wellfield Protection Activities Report

Introduction

Marion County's drinking water is provided to approximately 450,000 homes and businesses. Within the City of Indianapolis, drinking water is supplied by Citizens Water and consists of a continuous blend of surface water and groundwater. In the Town of Speedway, drinking water is provided either by surface or groundwater sources depending on the season. The City of Lawrence relies exclusively on groundwater for its drinking water.

Due to the importance of groundwater resources to Marion County, the Marion County Wellfield Education Corporation (MCWEC) was established as a 501(3)c non-profit corporation in 1996 by the Marion County Wellfield Protection Zoning Ordinance to support protection of groundwater and drinking water supplies in Indianapolis. Its mission is:

"To prevent contamination to the groundwater resource of Marion County through public awareness and education."

MCWEC's responsibilities include:

1) Educating the public about ground water concerns and wellfield protection;
2) Educating and providing technical assistance to businesses in Wellfield Protection Districts as to the proper use and storage of materials, as well as general wellfield education;
3) Overseeing the registration of potential business/commercial contaminant sources located within the Marion County wellfields to assist the water utilities in fulfilling their reporting requirements for the state wellhead protection program with the Indiana Department of Environmental Management (IDEM); and
4) Evaluating the effectiveness of wellfield protection program components.

This report summarizes the status of Marion County's wellfield protection program as of December 2018, and provides highlights of the various activities completed from January through December 2018 by MCWEC in support of groundwater protection. The MCWEC board of directors guides Mundell & Associates (MUNDELL), a local environmental consulting firm under contract with MCWEC, in the implementation of activities to be completed in support of its goals.

General Wellfield Information Summary

There are seven (7) active Wellfield Protection Areas delineated within Marion County. They are known as the Fall Creek Wellfield, Ford Wellfield, Geist Wellfield, Lawrence Wellfield, Riverside Wellfield, Speedway Wellfield and South Wellfield (see report cover page for labelled map illustrating the location of each wellfield).

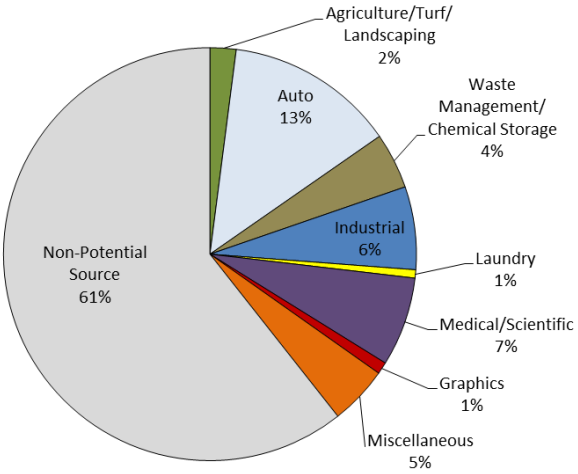
These wellfield protection areas are defined by the surface land surrounding the withdrawal supply wells where groundwater in the surrounding area could reach the pumping wells within five (5) years. Currently, the wellfield protection areas cover a total of approximately 45.6 square miles of land area. Based on land use data from the City of Indianapolis/Marion County, 47% of the wellfields are used for residential purposes, 14% for commercial and industrial purposes, and 39% used for other purposes (such as vacant land, agriculture, places of worship, and parks). Approximately 85 pumping wells are used by Citizens Water, Speedway Water Works, and Lawrence Utilities to supply water to over 450,000 homes and businesses. As of 2017, over thirteen billion gallons of groundwater were withdrawn from wells inside Marion County, with just under ten billion gallons of this amount used for public water supply.

Wellfield Commercial Use and Contaminant Sources

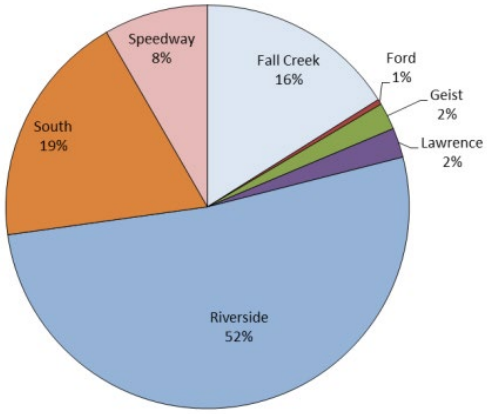
Within the seven Marion County wellfields, there are 2,690 active (non-historic and non-vacant) non-residential sites. Of these, 969 have been identified as potential contaminant sources, including: 48 agriculture/turf/landscaping source sites, 340 automobile-related source sites, 23 graphic production source sites, 161 industrial source sites, 17 commercial laundry source sites, 165 medical or scientific source sites, and 114 miscellaneous source sites (including large institutions and food and beverage productions). The remaining 1,721 active non-residential sites are considered low to no risk regarding potential contaminant sources. The Riverside Wellfield contains one-half of all potential contaminant source sites, followed by the South Wellfield (19%) and Fall Creek Wellfield (16%).

Within the seven Marion County wellfields, there are 609 sites that appear in regulated databases. Many sites are listed in multiple regulatory databases, with a total of 1,096 regulatory records noted for businesses in a wellfield. The Riverside Wellfield again contains almost one-half of all regulated business (47%), followed by the Fall Creek Wellfield (21%) and South Wellfield (20%). 178 sites are listed in the Hazardous Waste Notifiers database, which records operations that actively generate or temporarily accumulate hazardous waste as part of their normal operations. Of the regulated sites, there are 187 sites with registered underground storage tanks (USTs), and 138 sites with recorded incidents of leaking underground storage tanks (LUSTs). There is also currently one United States Environmental Protection Agency (U.S. EPA) Superfund Site (National Priority List) located within the Fall Creek Wellfield. In the Riverside Wellfield, Site 0153 qualified for Superfund status but is currently under IDEM management.

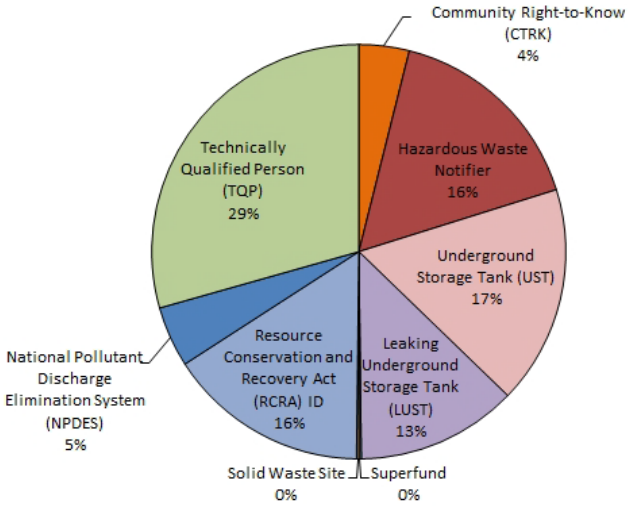
Business Types in All Wellfields



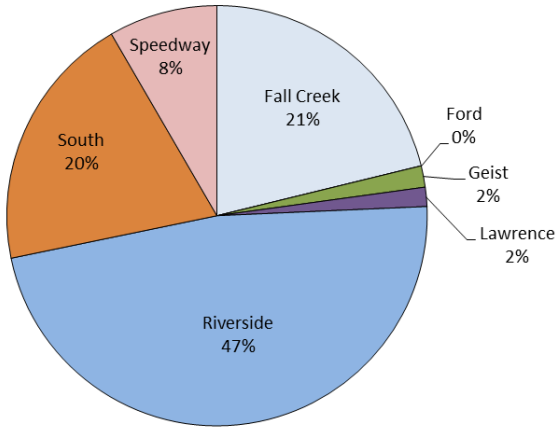
Potential Contaminant Sources by Wellfield



Regulated Sites in All Wellfields



Regulated Sites by Wellfield



Since the adoption of the 1996 Marion County Wellfield Ordinance, the construction of new facilities in wellfield protection areas has required development plan reviews by a Technically Qualified Person (TQP). As of 2018, 322 sites have received TQP reviews.

This data is also presented in tabular form in **Tables 1** and **2**. Detailed contaminant source summaries and maps of each wellfield are provided as **Attachments 1** through **7.** Please note that the potential contaminant sources data excludes historic and vacant properties, in order to provide a snapshot of active businesses in the wellfields. The totals of regulated sites excludes historic and vacant properties with the exception of Superfund and TQP counts, which do include historic and vacant properties, due to the persistent nature of these two regulatory categories.

A review of updated underground storage tank (UST) databases from IDEM show that Riverside Wellfield contains the largest number of in-use USTs, followed by Fall Creek, Speedway, South and Lawrence Wellfields. A total of 132 registered in-use USTs are present across all wellfields. For leaking underground storage tank (LUST) sites, Riverside and Fall Creek Wellfields had 5 active LUST sites each, while South and Speedway Wellfields had 2 active LUST sites each. Ford, Geist and Lawrence Wellfields had no active LUST sites. In terms of total LUST sites (including ones that were deactivated or had achieved closure), Riverside Wellfield had the most at 87, followed by 47 in Fall Creek, 21 in Speedway and 11 in South Wellfield. Detailed data regarding the status of USTs and LUST Sites is presented in **Tables 3** and **4**.

Summary of 2018 Program Activities

Outreach and Education

The MCWEC educational program focuses on direct contact and technical support for actively operating wellfield businesses identified as potential contaminant sources to prevent or minimize future chemical leaks or spills from impacting the drinking water supply. In 2018, the focus of MCWEC outreach and education activities shifted to providing assistance and education regarding best management practices (BMPs) to achieve compliance with the newly implemented Marion County Public Health Department's (MCPHD) Wellfield Protection Standards (http://www.hhcorp.org/hhc/images/HHCcode/chapter_13.pdf). The MCPHD code was passed in November 2016 with an effective date of January 2017. Enforcement inspections began in 2018.

Participation in the MCWEC outreach and education program is voluntary, confidential, and flexible in nature. In general, MCWEC connects with business owners and operators through referrals from the MCPHD, outreach by MCWEC through email, referrals through the MCWEC website, or in-person drop-offs of educational materials with MCWEC contact information. After establishing contact, MCWEC is able to connect with the business representative and determine what level of technical support is requested. In most cases, MUNDELL conducts an in-person site assessment to provide detailed, personalized recommendations regarding site improvements in order to achieve compliance with the MCPHD Wellfield Protection Standards. During site assessments, MUNDELL reviews facility chemical product storage and waste management procedures in order to recommend modifications that minimize the potential for groundwater contamination. In other cases, MUNDELL answers questions via telephone and email for businesses uninterested in site assessments or with simple questions. For businesses not interested in personal contact, many resources and answers to frequently asked questions are available on the MCWEC website (http://mcwec.org/).

During 2018, MUNDELL had contact with 42 businesses to provide compliance assistance concerning the MCPHD Wellfield Protection Standard. MUNDELL conducted 36 unique site assessments of businesses ranging from auto repair, landscaping, manufacturing, and large institutional uses. MUNDELL also provided telephone or email based compliance assistance to 6 businesses regarding wellfield protection, which typically took the form of providing copies of forms and guidance with filling out the forms.

Current Educational Tools

The MCWEC business education program has a number of practical tools available to participating businesses. In 2018, MCPHD provided educational tools to support the Wellfield Protection Standards. MCWEC utilizes MCPHD-produced documents, when available, as part of a document package provided to businesses during site visits. The following support documents are currently being used as part of the educational program. These documents are also available on http://mcwec.org/businesses/guides-forms/.

GUIDES:

1) Are You Ready to be Inspected Checklist?
   - Breaks down the MCPHD Wellfield Protection Standards into a one-page checklist for businesses to easily assess if they are in compliance with the new standards.

2) MCPHD's Wellfield Ordinance Guidebook for Marion County Businesses
   - Provides a guide to groundwater and wellfields in Marion County and provides easily digestible information regarding the MCPHD Wellfield Protection Standards.

3) Reportable Quantities and Your Facility's Emergency Response Spill Prevention Plan
   - Helpful breakdown of the reportable quantity concept and how to determine that quantity for a variety of chemicals.

FORMS & SIGNS:

1) MCPHD's Important Phone Numbers Chart
   - Provides a customizable form for business owners to fill-out to post important emergency phone numbers for their business.

2) Chemical Inventory Worksheet
   - Provides a simple template chemical inventory worksheet for business owners to customize for their business.

3) Notice Signs
   - Provides example notice signs as required by the MCPHD Wellfield Protection Standards that can be used as is or customized by businesses, as desired.
   - In 2018, these were split into three groups - one set for Citizens, one set for Speedway and one set for City of Lawrence, so that businesses can download a sign set with the relevant utility information on them.

4) MCPHD's Notification of Change of Occupant or Change of Occupant Operations Form
   - Provides a template form for businesses to submit to the MCPHD if a change of occupant or occupant operations occurs at their site.

5) MCPHD's Emergency Response/Spill Prevention Plan
   - Provides a template form to comply with the MCPHD Wellfield Protection Standards customizable by each business for all operations.

6) MCPHD's Documentation of Employee Training Emergency Response/Spill Prevention Plan
   - Provides a simple template for employers to log that their employees have received appropriate training with their site Emergency Response/Spill Prevention Plan.

7) MCPHD's Documentation of Employee Training Spill Kits
   - Provides a simple template for employers to log that their employees have received appropriate training with their site spill kits.

8) Drinking Water Protection Area Sign
   - Provides an example sign to inform others that the business is within a wellfield.

9) Sink Sign
   - Provides an example sign to post above sinks reminding that chemicals may not be discharged into the sink.

10) Notification to Chemical Product Suppliers, Chemical Transporters, and Waste Transporters
   - Provides the MCPHD required form for businesses receiving or transporting chemicals or liquid waste.

11) Special Requirements Notice Agreement
   - Provides the MCPHD required form for leased businesses.

12) Spill Kit Information
   - Provides general guidance regarding spill kits.

13) Spill Kit Use
   - Provides information about how to properly use a spill kit and clean up spills.

14) Floor Sealant Guidance
   - Provides general technical guidance regarding the importance of floor sealants and product options available.

Other Education Outreach

MUNDELL represented MCWEC in several professional and community educational outreach opportunities in 2018, including:

- Going Green in the Grove (Arbor Day, April 2018)
- Indiana Water Resources Association Forum (June 2018)
- Indiana Geologists Meeting (September 2018)
- Professional Geologists of Indiana Annual Education Seminar (November 2018)
- OneWater Forum (poster presentation, December 2018)

Attending these events fulfills one of MCWEC's main responsibilities: educating the public about groundwater concerns and wellfield protection.

MUNDELL nominated the MCWEC program for the 2018 White River Alliance Excellence in Watershed Protection Award. MCWEC was selected to receive the award which was presented to MCWEC Board members on September 29, 2018. A photograph of the award trophy – a carved wood water fowl – is included below.

Database and Mapping

MCWEC maintains a database of all businesses located within each of the seven wellfields. Currently, the database consists of approximately 2,690 total records which include all non-residential active, historic, or vacant sites within the wellfields. The database is currently maintained within Microsoft Excel. All business records within the database have been categorized with primary and secondary codes based on business activities. The categorizations used are summarized in **Attachment 8**. The uses of this database include analysis, outreach/education to businesses, and records of potential contaminant sources.

This database is populated with sites from the following data sources:

- IDEM's Community Right-to-Know (CRTK) database;
- IDEM's hazardous waste notifiers database;
- IDEM's underground storage tank (UST) and leaking underground storage tank (LUST) database (ULCERS);
- U.S. EPA's National Priority List/Superfund Sites (NPL) database;
- U.S. EPA's Envirofacts databases;
- IDEM's solid waste facilities database;
- IDEM's Resource Conservation and Recovery Act (RCRA) ID number database; and
- MUNDELL's Improvement Location Plan (ILP) Technically Qualified Person (TQP) program database.

The MCWEC database is generally updated during the fourth quarter of each year with the most updated data from each data source available. Notably, the Community Right-to-Know database only provides information that is current as of 2014. After that date, Tier II facility registration came under the purview of the Indiana Department of Homeland Security. Tier II reporting facilities are only required to provide information to fire departments and local emergency planning committees (LEPC) that have jurisdiction over the facilities, and as such, the information is not readily available to the general public.

Other limitations of the MCWEC database are due to the data sources collated. The permitting process that populates the associated regulatory databases does not always provide enough information to reliably determine an exact number of hazardous waste related facilities or number/status of USTs and LUSTs. As such, these totals represent conservative estimates based on the limitations of the source data.

Database entries are used to generate maps using ArcGIS to display the locations of wellfield businesses. The maps provide an effective visual representation of the registered potential wellhead contaminant sources in the event that unexpected impacts to the drinking water supply should occur. For the 2018 report, these locations were displayed by geocoding the street addresses using the geocoding functions within ArcGIS. This geocoding process provides a more robust location result than the Indiana Open Geocoder Service that was used in earlier editions of the MCWEC report. In some circumstances, location points will still appear outside the modeled wellfield boundaries due to a combination of parcel shape and the complexity of Indianapolis street naming and numbering. In 2019, MUNDELL will work on correcting erroneously mapped locations and incorporating the City's parcel system. Moving the mapping to a parcel-based system will allow for better accounting of locations along the edges of the wellfields, as any portion of a parcel that intersects the wellfield is functionally considered to be within the wellfield.

MCWEC Website

MUNDELL maintains the MCWEC website (found at http://mcwec.org/). The purpose of the website is to provide information about Marion County's wellfields, MCWEC, and the resources available for groundwater protection for business owners, the general public, and all other parties interested in wellfield protection. In 2018, MUNDELL completed numerous updates to the website and added information, including:

- Produced 38 blog posts for the News section of the website throughout the year;

- Updated resources and forms available to businesses including documents required as part of the new Marion County Public Health Department wellfield code;
- Updated waste disposal options list; and
- Minor reorganization of the front page of site for increased usability.

MUNDELL analyzed data from the website including page views, user information, and document download history in order to better understand how the website is used and how to improve it in the future. From 2016 to 2017, website traffic increased by nearly 40%. In 2018, there was a slight decrease in total website traffic. This is partly due to less traffic to the website regarding information about the City of Indianapolis ToxDrop; however, there was an increase in page hits related to searches for spill related items (kits, prevention, etc.) along with a better position on the search results page. A significant portion of the web traffic is based around search engine results for spill kits. This is an area that MUNDELL will work on developing further as it indicates people are searching for this information.

63.3% of users visiting the site in 2018 were not from Indiana. This indicates that the website provides information about groundwater wellfield protection that is useful across the country.

5.2% of 2018 visitors were returning visitors from Indiana, with 31.5% being new visitors from Indiana. Of the users from Indiana, 68% accessed the site via search engine and 21% accessed the site by typing in the URL (likely from paper materials provided during site visits). The remaining 11% came to the website via links from pages including the City of Lawrence and the MCPHD. In Indiana, the website was accessed via desktop or laptop computer 74% of the time and via mobile/tablet users 26% of the time.

New documents related to spills were top performers of documents downloaded, such as the "*Reportable Quantities and Your Facility's Emergency Response Spill Prevention Plan*", and the "*Emergency Response Spill Prevention Plan*". Other popular downloads were related to the ordinance such as guidebooks and the "*Are you ready to be inspected?*" checklist. Wellfield maps continued to be a popular download as well. Overall, site downloads more than quadrupled from 2017. This included both new content and existing content. MUNDELL will work on ensuring that these downloadable forms and information packets remain up-to-date for businesses.

MUNDELL will continue to analyze data from the website in order to improve it for the benefit of visitors. Based on the information gathered in 2019, MUNDELL will continue to increase the content available regarding best practices for containment and spill prevention, search out and add resources for businesses and increase the use of website blog posts to convey information and tips relevant to the protection of water resources.

Business Education Program Successes and Challenges

Since the initiation of the program in 2001, the education program has communicated with many of the wellfield businesses to increase wellhead protection awareness and encourage use of best management practices. The program has conducted approximately 210 site assessments, providing free and confidential waste management and chemical storage technical advice. In addition, when budgets have permitted, free spill prevention materials and secondary containment equipment have been provided to those facilities requesting support for controlling potential releases. In accordance with the original wellfield ordinance, the educational approach has been conducted in a voluntary, non-threatening, non-regulatory manner.

One of the greatest historical challenges for the wellfield protection program has been the voluntary nature of the program, which has, in the past, limited the number of businesses encountered, even with outreach. The 2016 MCPHD Wellfield Protection Standard, which requires all businesses present in the wellfields to engage in wellfield protection activities, has dramatically changed the rate and manner in which MCWEC interacts with businesses. For example, during 2017, while MCWEC contacted nearly 100 businesses to provide information regarding the upcoming MCPHD Wellfield Protection Standard, only 15

businesses requested site assessments, with another 10 businesses requesting assistance via phone or email.

However, in 2018, MCWEC conducted 36 business site assessment visits and provided phone or email based assistance to an additional 6 businesses. All of these assessments came via referrals from the MCPHD as their inspectors visited businesses in the wellfields. Most of the businesses required only one site visit. However, a small number required two or more visits to complete compliance assistance. In addition, MCWEC provided technical assistance to the MCPHD in terms of business assessment letters, along with assessments of specific chemicals with reference to whether they posed a potential threat to groundwater. This increase in business contact illustrates the synergistic nature of working with the MCPHD on their Wellfield Protection Standard.

Additionally, MCWEC spent over $11,000 in purchasing and donating spill containment equipment to businesses in 2018, four times what was spent in 2017. Donation of spill materials remains a concrete method of ensuring and encouraging compliance with the Wellfield Protection Standard.

A major ongoing challenge to wellfield protection in Marion County is the rapid pace of turnover in property ownership, leased space, business operations, and personnel, all of which result in loss of institutional awareness and knowledge of wellfield protection requirements and practices. This turnover within Marion County's densely populated urban wellfields necessitates rigorous data management and continuous wellfield business assessment to support a successful wellfield protection program.

2019 Wellfield Activities

With the 2018 initiation of enforcement of the relatively new MCPHD Wellfield Protection code, additional efforts will be required to educate impacted businesses about changes in the requirements for operating in the wellfields. As such, MCWEC, MCPHD and MUNDELL will continue to work together to:

1) Provide outreach, education, and compliance assistance to wellfield businesses. MUNDELL will remain available at all times for compliance assistance referrals from the MCPHD. These activities will be achieved by distributing information and visiting wellfield businesses to conduct site assessments. MUNDELL will provide secondary containment and spill protection materials to businesses as the MCWEC budget allows.

2) Continue to promote public awareness of MCWEC and wellfield and groundwater protection. This can be achieved by collaborating with businesses that depend on clean public water supplies as an integral part of their product. Opportunities to present and learn from other professionals involved in groundwater protection will be sought out, as will educational events aimed at the general public.

3) Improve the accuracy and efficiency of the MCWEC database and continue to make it available to the water utilities to fulfill the utilities' reporting requirements for the state wellhead protection program under IDEM. Updated or new business operation information will be added to the database via drive surveys and regulatory database merges.

4) Continue to work on the MCWEC website (www.mcwec.org) as a distribution point of free technical support, answers to frequently asked questions (FAQs), relevant links and guidance documents. MUNDELL will continue to generate content for the news section of the website with relevant and timely information.

5) Produce a report summarizing annual activities conducted during 2019.

6) Designing future MCWEC objectives and activities in light of the Marion County Public Health Department Wellfield Code and its impact on MCWEC's focus, purpose and utilization.

TABLES

Table 1 – 2019 Marion County Wellfield Business Types
Table 2 – 2019 Regulated Marion County Wellfield Businesses
Table 3 – 2019 Wellfield Underground Storage Tank (UST) Status
Table 4 – 2019 Wellfield Leaking UST (LUST) Status

Table 1. 2018 Marion County Wellfield Business Types

WELLFIELD	Total Active Sites	*BUSINESS TYPE*								
		Agriculture/ Turf/Landscaping	***Auto (Trucks & Cars)***	***Waste Management/ Chemical Storage***	***Industrial***	***Laundry***	***Medical/Scientific***	***Graphics***	***Miscellaneous***	***Non-Potential Source***
Fall Creek	847	3	85	5	28	3	11	3	18	691
Ford	4	2	0	0	1	0	0	0	1	0
Geist	63	0	1	3	3	2	7	1	4	42
Lawrence	49	2	3	6	1	0	5	0	6	26
Riverside	1,071	25	165	62	63	8	100	17	62	569
South	308	13	65	24	61	2	9	1	8	125
Speedway	349	3	21	2	4	2	33	1	15	268
Totals	**2,690**	**48**	**340**	**102**	**161**	**17**	**165**	**23**	**114**	**1,721**

Notes:

1. This table was prepared using the databases maintained for each wellfield. Each site was assigned to a single category.
2. This table is based primarily on drive survey information with regulatory data used when available. Drive surveys were conducted in late December 2018/early January 2019.
3. The Industrial category incorporates both the former Industrial (covered) and Industrial (exposed) categories.
4. This table is intended to illustrate the state of businesses within the wellfield at the time of the drive surveys and does not consider prior site usage.

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Table 2. 2018 Regulated Marion County Wellfield Businesses

WELLFIELD	Total Active Regulated Sites	*REGULATORY DATABASE*								
		Community Right-to-Know (CRTK)	***Hazardous Waste Notifier***	***Underground Storage Tank (UST)***	***Leaking Underground Storage Tank (LUST)***	***Superfund***	***Solid Waste***	***RCRA ID***	***NPDES***	***Marion County TQP***
Fall Creek	129	2	42	45	39	1	0	42	9	65
Ford	0	0	0	0	0	0	0	0	0	0
Geist	10	0	4	0	0	0	0	4	0	8
Lawrence	9	0	1	3	3	0	0	1	2	6
Riverside	289	31	100	99	75	1*	2	103	24	118
South	121	7	19	22	10	0	0	19	9	101
Speedway	51	3	12	18	11	0	0	3	8	24
Totals	**609**	**43**	**178**	**187**	**138**	**2***	**2**	**172**	**52**	**322**

Notes:

1. * = this includes Site 0153 which qualified for Superfund status but is currently under IDEM management.
2. This table was prepared using the database for each wellfield, excluding sites noted as historic or vacant with the exception of LUST, Superfund and TQP where historic/vacant are included.
3. Many regulated sites are in more than one regulatory database. Total Active Regulated Sites is not a sum of each regulatory column but an indication of total number of unique sites.
4. CRTK data is current as of 2014 (most up-to-date data available).
5. Hazardous Waste Notifier current as of 12/21/2018.
6. UST/LUST information is current as of 12/21/2018.
7. Superfund information is current as of 12/21/2018.
8. Solid Waste Sites are current as of 12/21/2018.
9. RCRA ID current as of 12/21/2018.
10. NPDES current as of 12/21/2018.
11. Marion County TQP is current as of 12/31/2018

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Table 3. 2018 Underground Storage Tank (UST) Status

UST Status	Wellfield							Total
	Fall Creek	Ford	Geist	Lawrence	Riverside	South	Speedway	
Currently in Use	27	0	0	3	61	14	24	129
Permanently Out of Service	199	0	0	10	379	27	52	667
Temporarily Out of Use	0	0	0	0	2	0	0	2
Under Investigation	0	0	0	0	0	0	0	0
Unregulated	5	0	0	0	25	2	0	32
Total	231	0	0	13	467	43	76	**830**

Note: UST information sourced from IDEM's ULCER database as of 12/22/2018.

Table 4. 2018 Leaking Underground Storage Tank (LUST) Status

LUST Status	Wellfield							Total
	Fall Creek	Ford	Geist	Lawrence	Riverside	South	Speedway	
Active	5	0	0	0	5	2	2	14
Deactivated (no release confirmed)	3	0	0	0	5	0	2	10
Discontinued (active)	2	0	0	0	2	0	0	4
NFA	33	0	0	3	70	9	17	132
Referred to other IDEM Program	4	0	0	0	4	0	0	8
Total	47	0	0	3	86	11	21	**168**

Note: LUST information sourced from IDEM's ULCER database as of 12/22/2018.

ATTACHMENTS

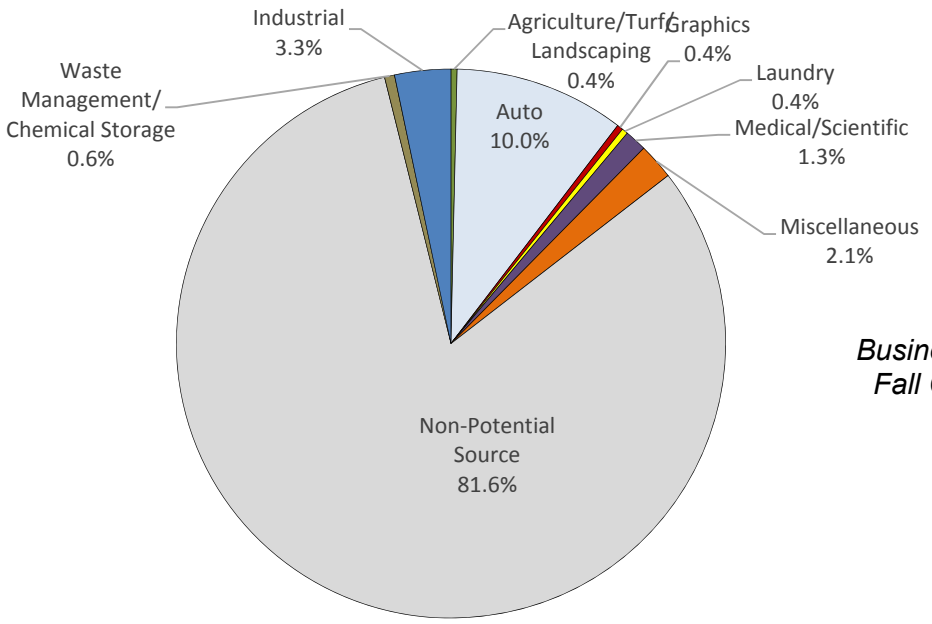
Attachment 1 – Fall Creek Wellfield Summary
Attachment 2 – Ford Wellfield Summary
Attachment 3 – Geist Wellfield Summary
Attachment 4 – Lawrence Wellfield Summary
Attachment 5 – Riverside Wellfield Summary
Attachment 6 – South Wellfield Summary
Attachment 7 – Speedway Wellfield Summary
Attachment 8 – Potential Contaminant Source Business Categories
Attachment 9 – Underground Storage Tank (UST) Status Map
Attachment 10 – Leaking Underground Storage Tank (LUST) Status Map

ATTACHMENT 1

Fall Creek Wellfield

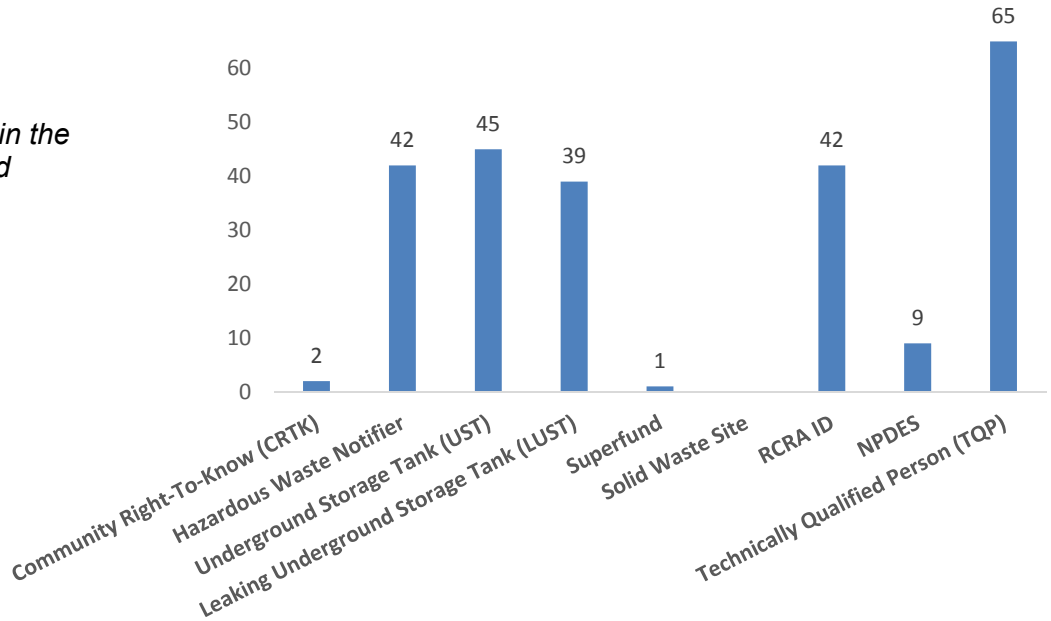
Within the Fall Creek Wellfield, there are 847 active (non-historic and non-vacant) nonresidential sites, of which 156 are potential contaminant sources and 691 are considered low to no risk as potential sources of contamination. The potential sources include: 85 auto-related sources, 28 industrial sources, eleven (11) medical/scientific-related sources, three (3) commercial laundry sources, five (5) waste management/chemical storage-related sources, three (3) graphic production-related sources, three (3) agriculture/turf/landscaping-related sources and 18 miscellaneous sources (see **Table 1**).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 129 regulated sites within this wellfield (including active, historic and vacant; with some sites noted within multiple databases). The regulated sites include two (2) sites within Community Right-to-Know (CRTK) databases, 42 sites noted as hazardous waste notifiers, 45 sites within the underground storage tank (UST) database, 39 sites within the Leaking UST (LUST) database, one (1) Superfund site, 42 sites with Resource Conservation and Recovery Act (RCRA) identification numbers, nine (9) sites with NPDES identification numbers, and 65 sites identified through the Marion County Improvement Location Plan Technically Qualified Person (TQP) program that imposes design requirements on the development of new building within the wellfields (see **Table 2**).

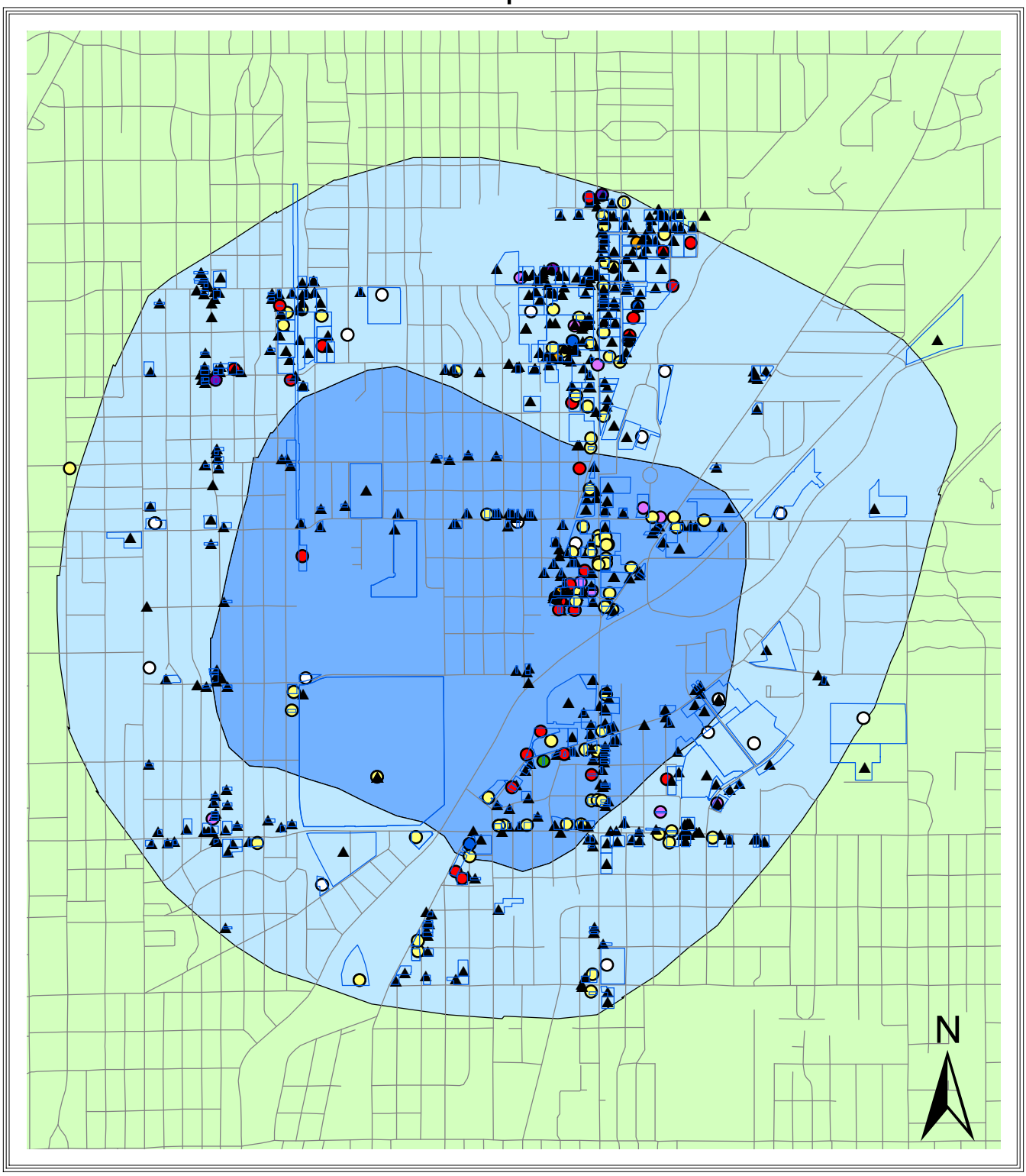


Business Types in the Fall Creek Wellfield

Regulated Businesses in the Fall Creek Wellfield



Fall Creek Wellfield - Business Types
Annual Report 2018



Legend

- Fall Creek Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

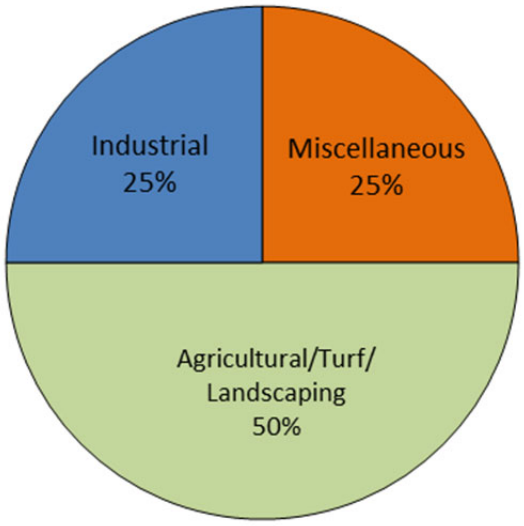
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 2

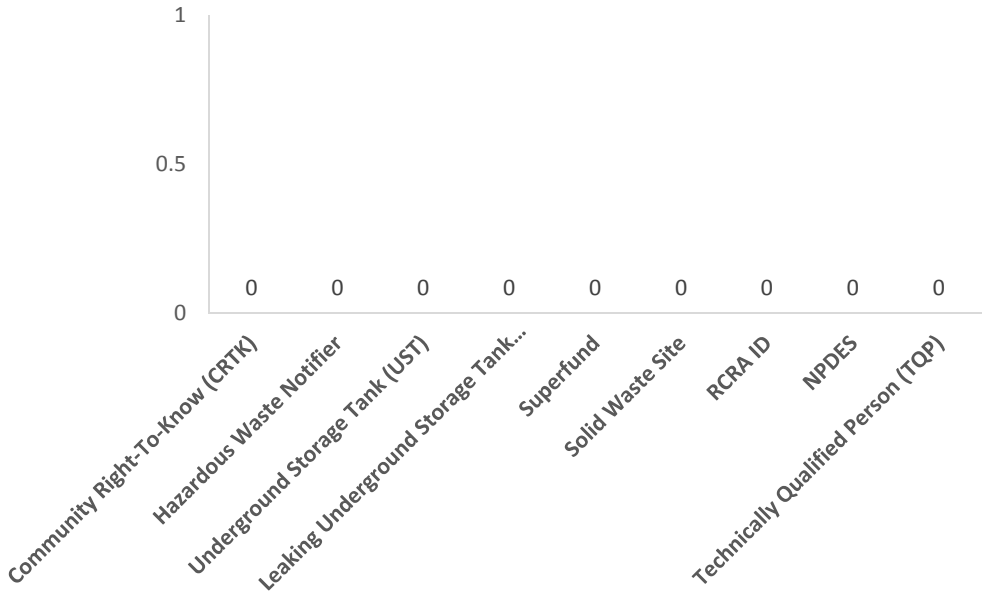
Ford Wellfield

Within the Ford Wellfield, there are four (4) active (non-historic and non-vacant) nonresidential sites; all four (4) of which are potential contaminant sources. The potential sources include: two (2) agricultural/turf/landscaping sources, one (1) industrial source and one (1) miscellaneous source (see **Table 1**).

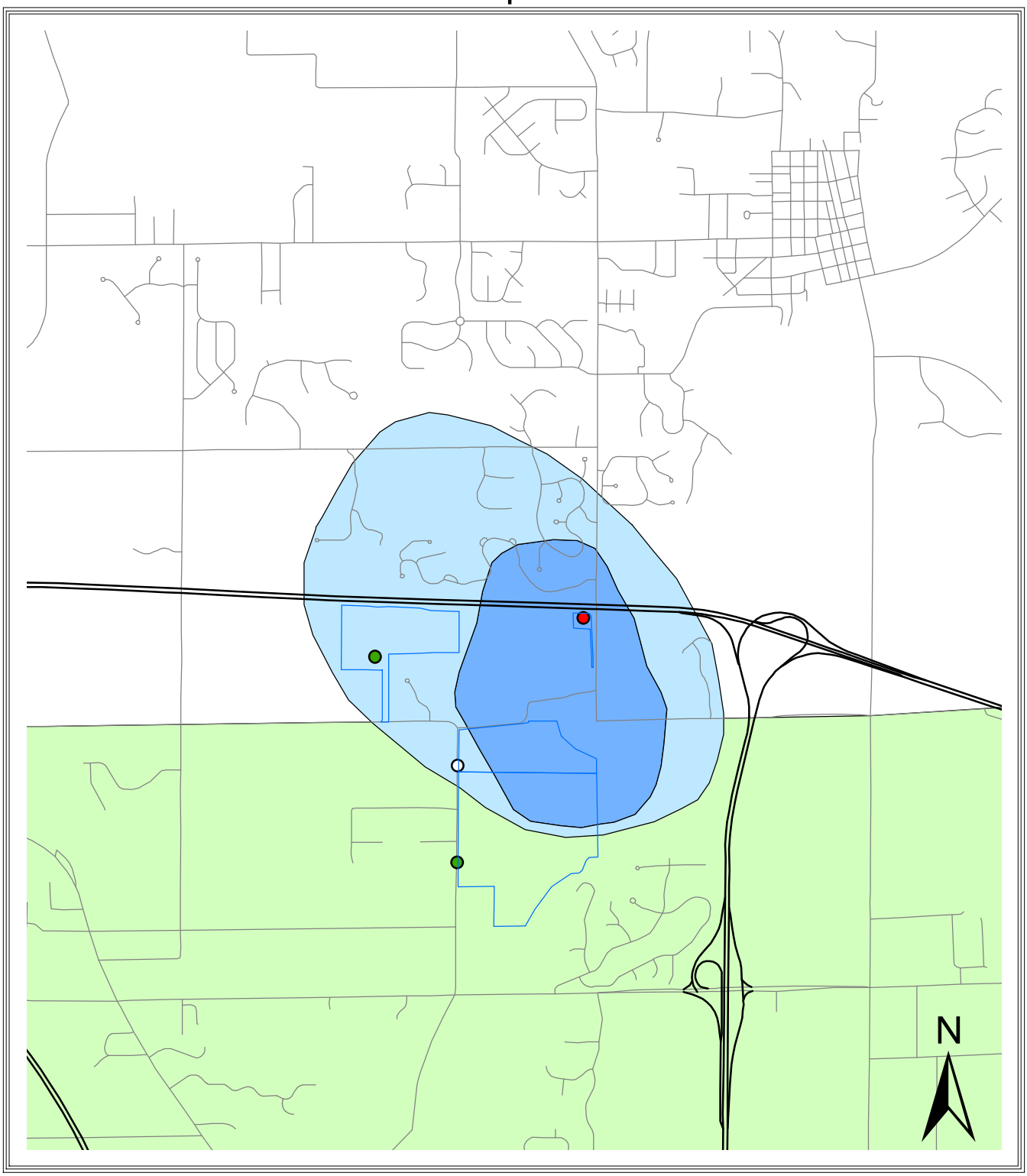
Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are no regulated sites noted within CRTK, hazardous waste notifier, UST, LUST, Superfund, solid waste, RCRA, NPDES, or Marion County TQP databases.



Regulated Businesses in the Ford Wellfield



Ford Wellfield - Business Types
Annual Report 2018



Legend

- Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

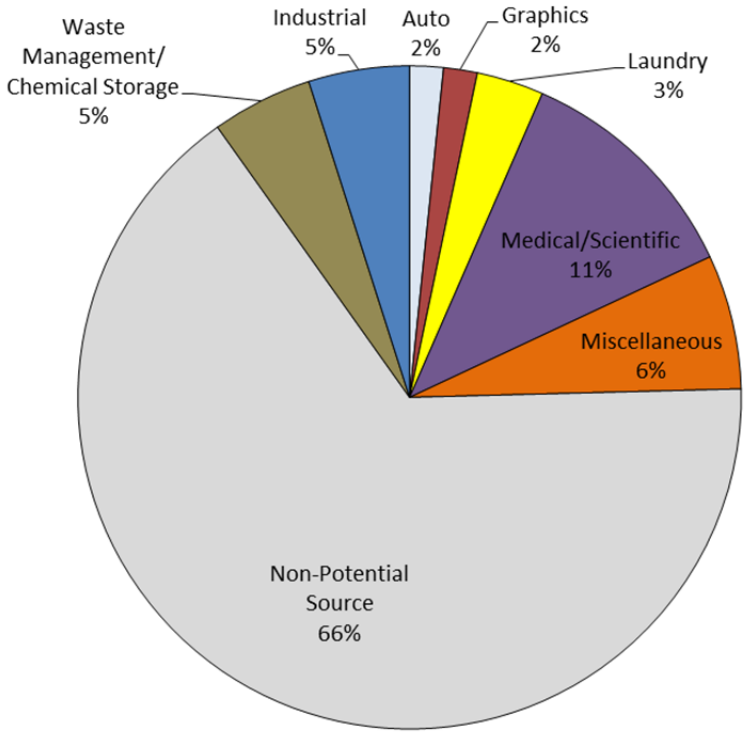
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 3

Geist Wellfield

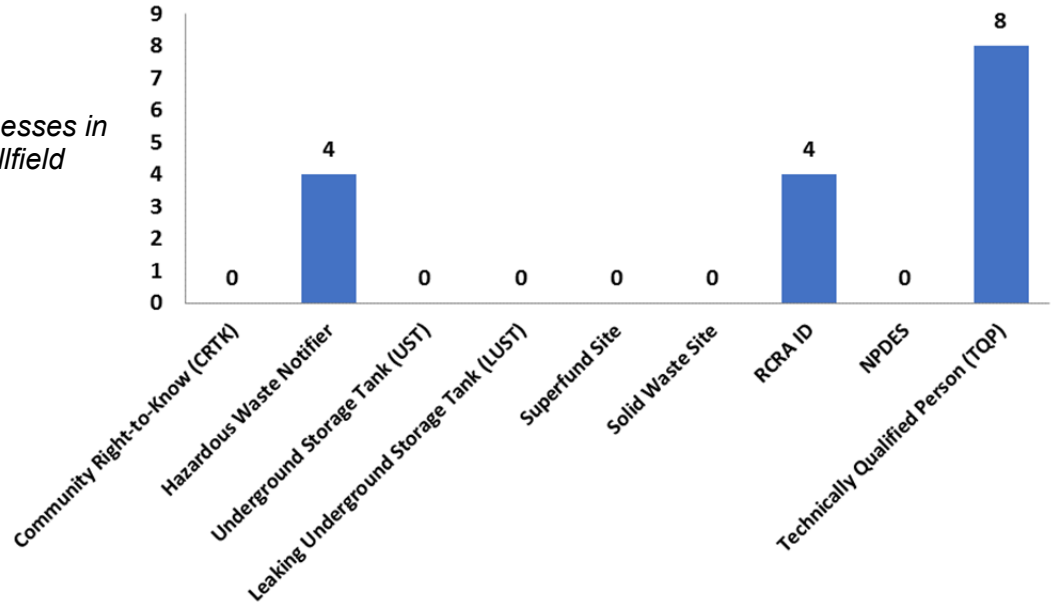
Within the Geist Wellfield, there are 63 active (non-historic and non-vacant) nonresidential sites, with 21 potential contaminant sources and 42 considered low to no risk of potential sources of contamination. The potential sources include: seven (7) medical/scientific use sources, three (3) waste management/chemical storage sources, two (2) commercial laundry sources, one (1) industrial source, one (1) auto-related source, one (1) graphic production source, and four (4) miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are ten (10) regulated sites (with some sites noted within multiple databases) within this wellfield, with four (4) sites noted as hazardous waste notifiers, four (4) sites holding RCRA ID numbers, and eight (8) sites identified through the Marion County TQP program (see **Table 2** for additional information).

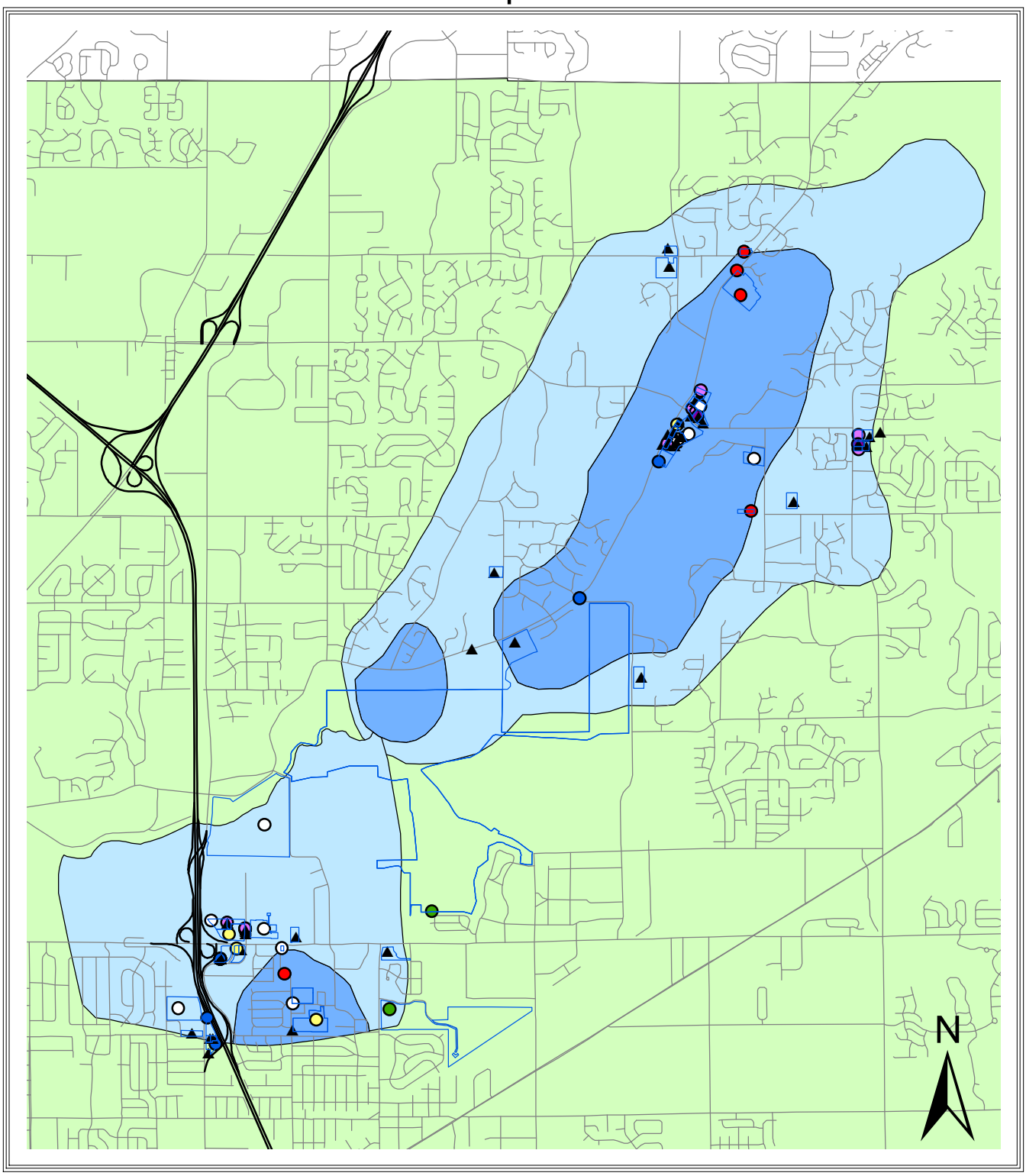


Business Types in the Geist Wellfield

Regulated Businesses in the Geist Wellfield



Geist and Lawrence Wellfield - Business Types
Annual Report 2018



Legend

- Geist Larwrence Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

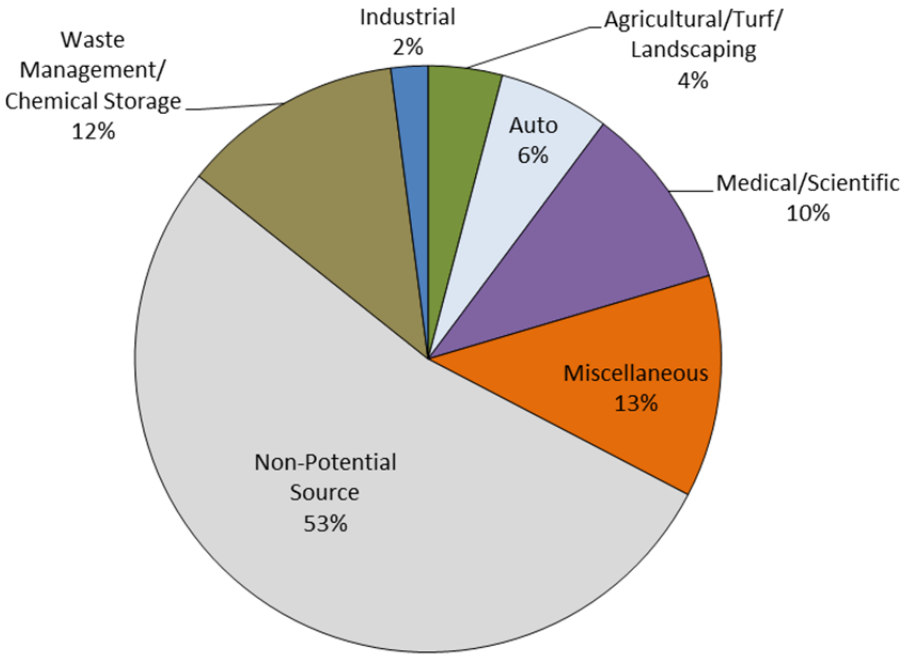
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 4

Lawrence Wellfield

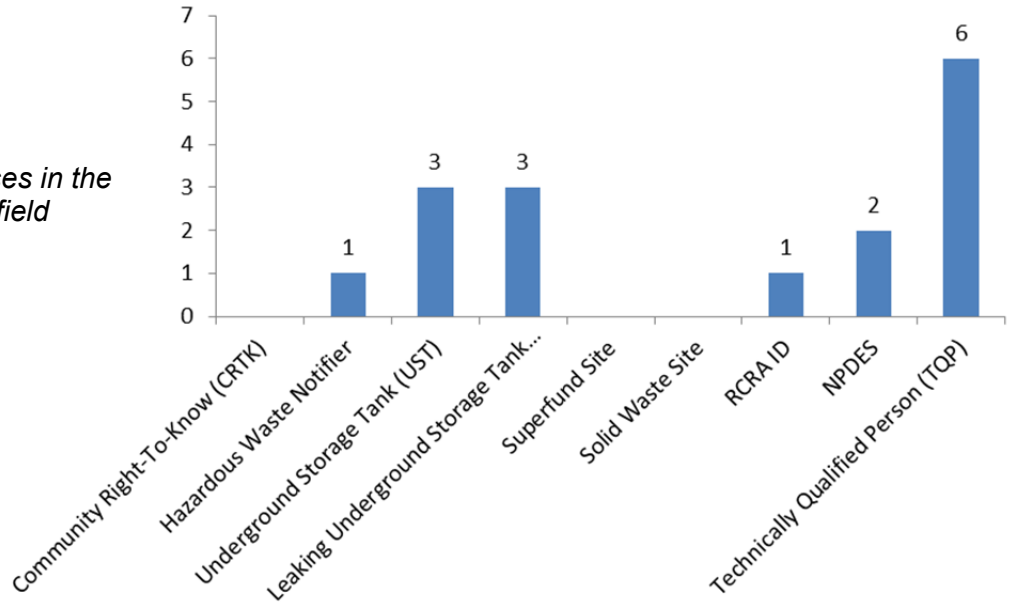
Within the Lawrence Wellfield, there are 49 active (non-historic and non-vacant) nonresidential sites, with 23 potential contaminant sources and 26 considered low to no risk as potential sources of contamination. The potential sources include: six (6) waste management/chemical storage sources, five (5) medical/scientific use sources, three (3) auto-related sources, two (2) agriculture/turf/landscaping sources, one (1) industrial source and six (6) miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are nine (9) regulated sites (with some sites noted within multiple databases) within this wellfield, with one (1) site a hazardous waste notifier, three (3) UST sites, three (3) LUST sites, two (2) sites with NPDES, one (1) site holding RCRA ID numbers, and six (6) sites identified through the Marion County TQP program (see **Table 2** for additional information).

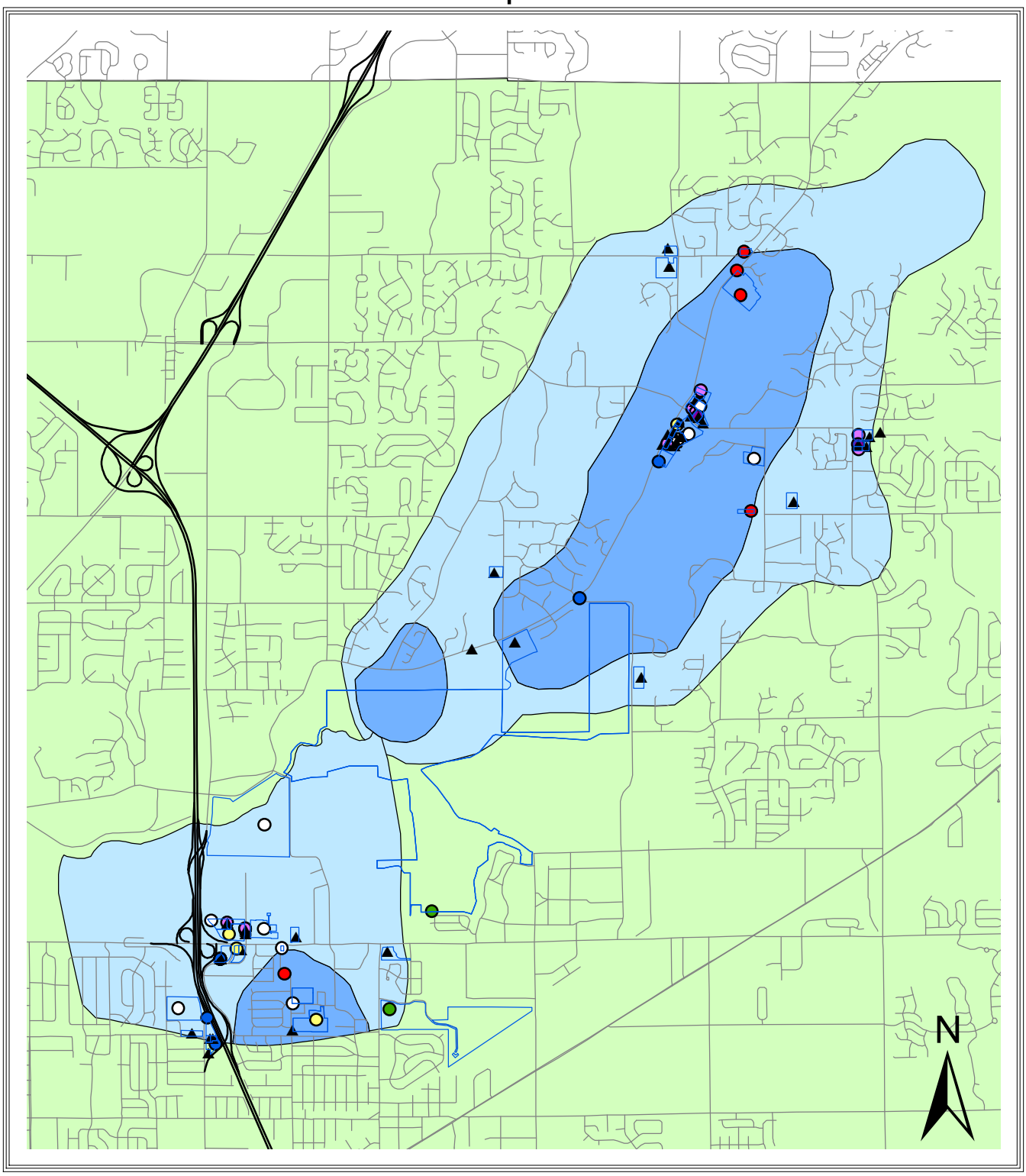


Business Types in the Lawrence Wellfield

Regulated Businesses in the Lawrence Wellfield



Geist and Lawrence Wellfield - Business Types
Annual Report 2018



Legend

- Geist Larwrence Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

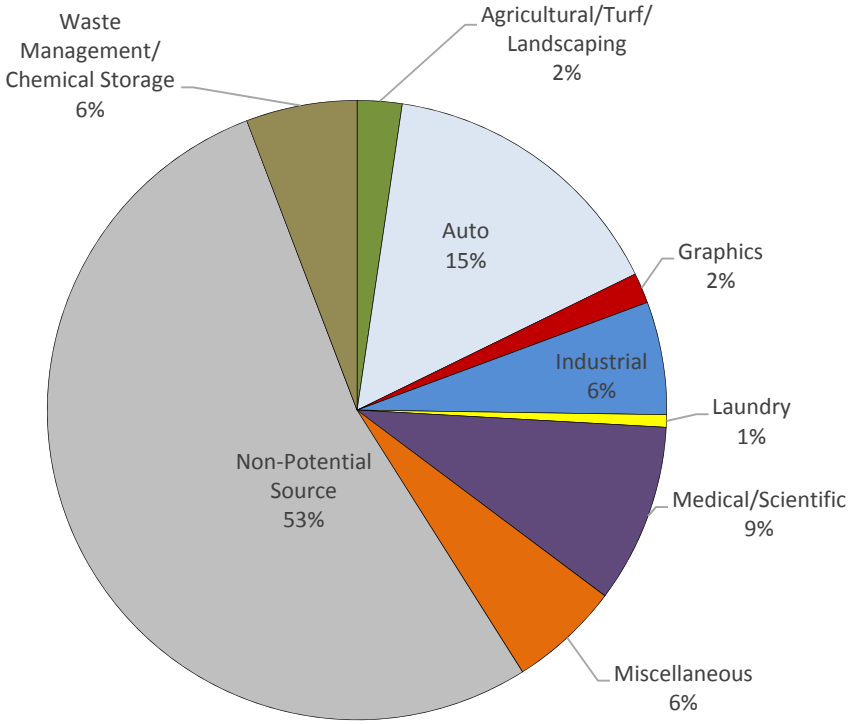
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 5

Riverside Wellfield

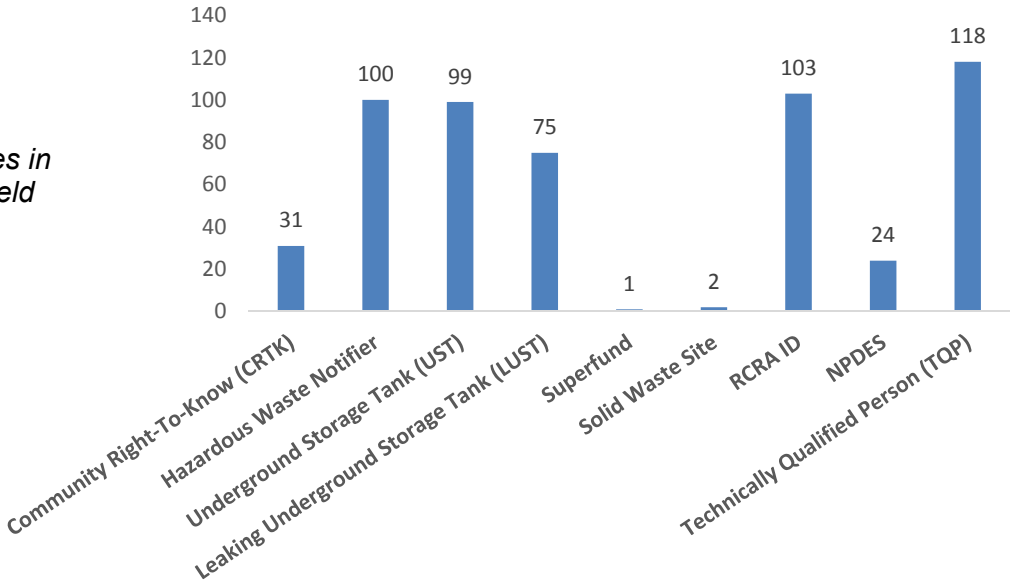
Within the Riverside Wellfield, there are 1,071 active (non-historic and non-vacant) nonresidential sites, with 502 of those identified as potential contaminant sources and 569 considered low to no risk as potential sources of contamination. The potential source sites include: 165 automobile-related sources, 100 medical/scientific use sources, 62 waste management/chemical storage sources, 63 industrial sources, 25 agriculture/turf/landscaping sources, seventeen (17) graphic production sources, eight (8) commercial laundry sources and 62 miscellaneous sources (see **Table 1**).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 289 regulated sites (with some sites noted within multiple databases) within this wellfield, with 31 sites within the CRTK database, 100 sites noted as hazardous waste notifiers, 99 UST sites, 75 LUST sites, two (2) solid waste sites, 103 sites holding RCRA ID numbers, 24 sites with NPDES permits, and 118 sites identified through the Marion County TQP program (see **Table 2**). Additionally, Site 0153 is located within the Riverside Wellfield. This site qualified for Superfund status but is currently under IDEM management.

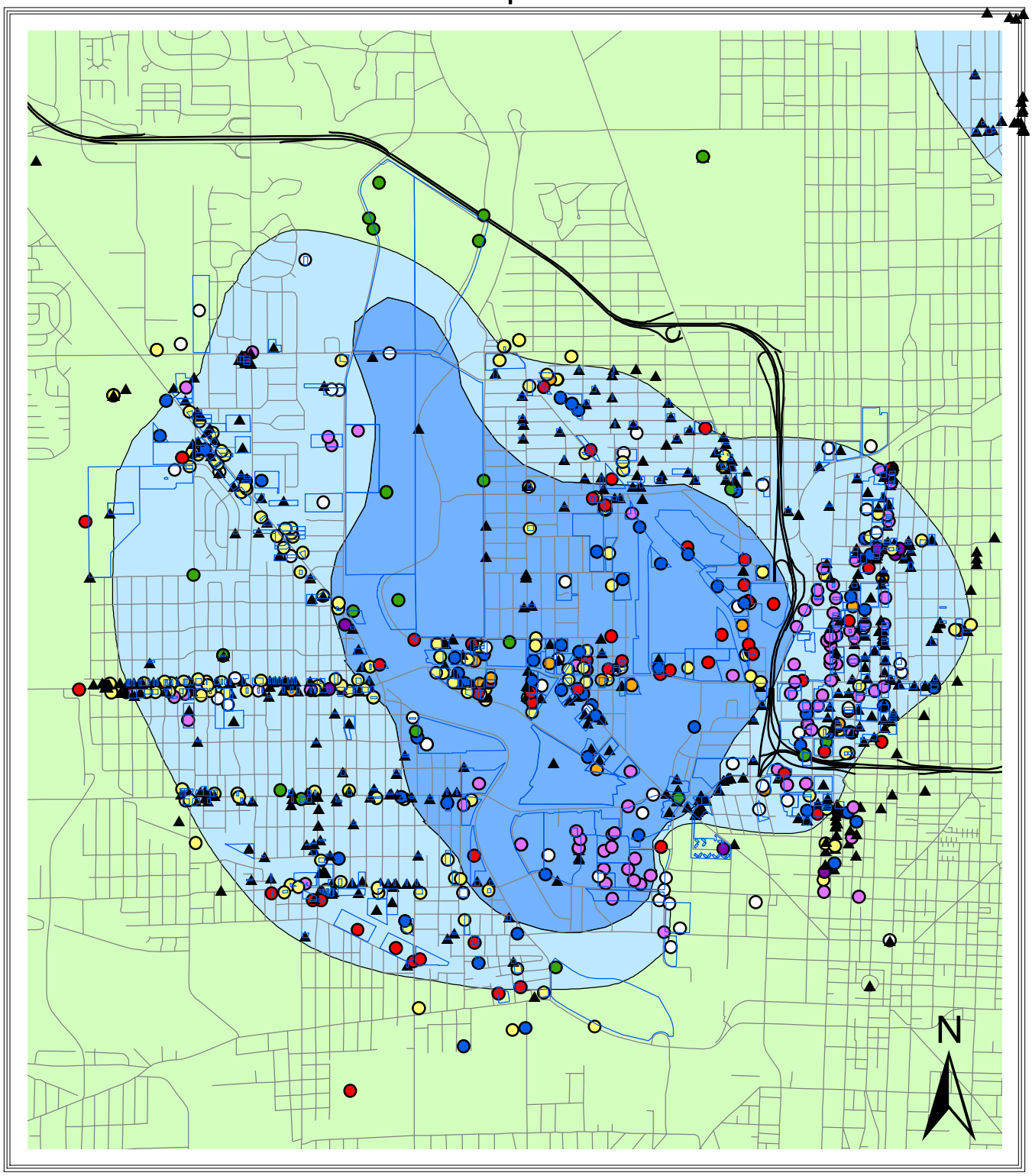


Business Types in the Riverside Wellfield

Regulated Businesses in the Riverside Wellfield



Riverside Wellfield - Business Types
Annual Report 2018



Legend

- Riverside Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

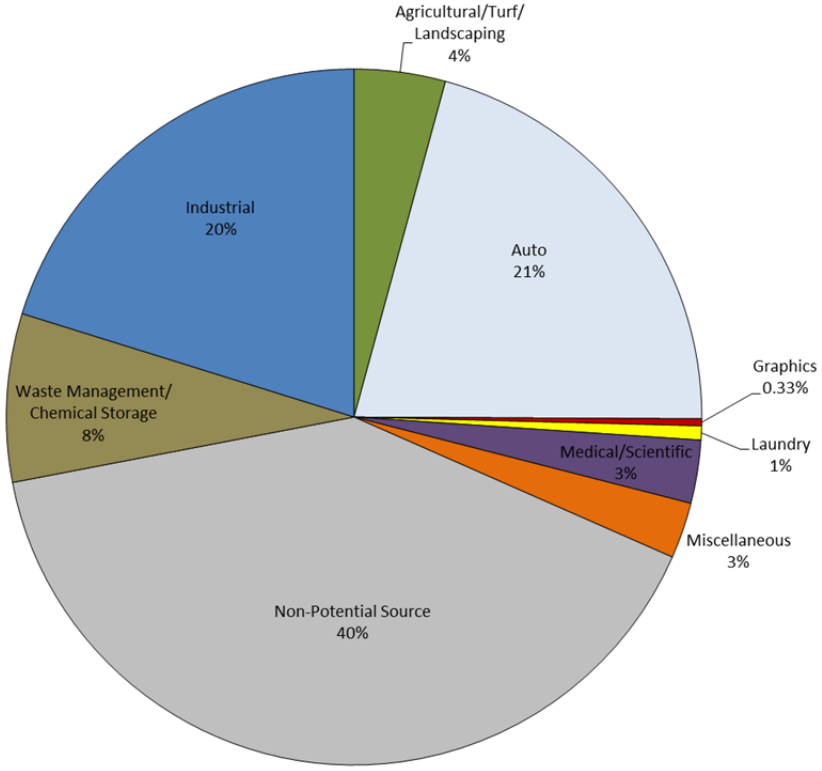
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 6

South Wellfield

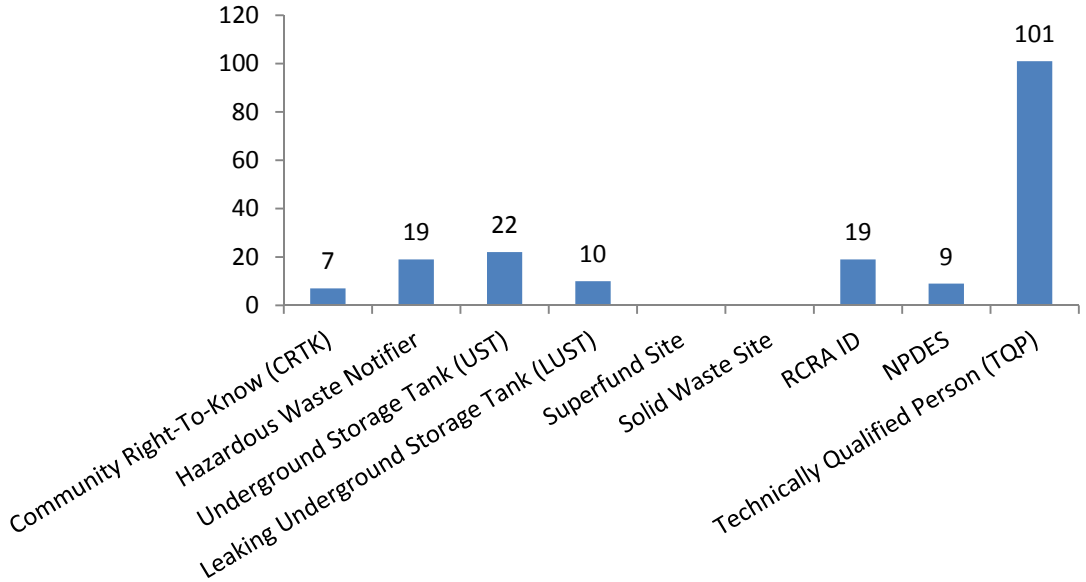
Within the South Wellfield, there are 308 active (non-historic and non-vacant) nonresidential sites, with 183 of those sites considered potential contaminant sources and 125 sites considered low to no risk as potential sources of contamination. The potential sources include: 65 auto-related sources, 24 waste management/chemical storage sources, 62 industrial sources, 13 agriculture/turf/landscaping sources, nine (9) medical/scientific use sources, two (2) commercial laundry sources, one (1) graphic production source, and eight (8) miscellaneous sources (see **Table 1**).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 121 regulated sites (with some sites noted within multiple databases) within this wellfield, with seven (7) sites within the CRTK database, 19 sites noted as hazardous waste notifiers, 19 sites holding RCRA ID numbers, 22 UST sites, ten (10) LUST sites, nine (9) site with NPDES permits, and 101 sites that have been through the Marion County TQP program (see **Table 2**).

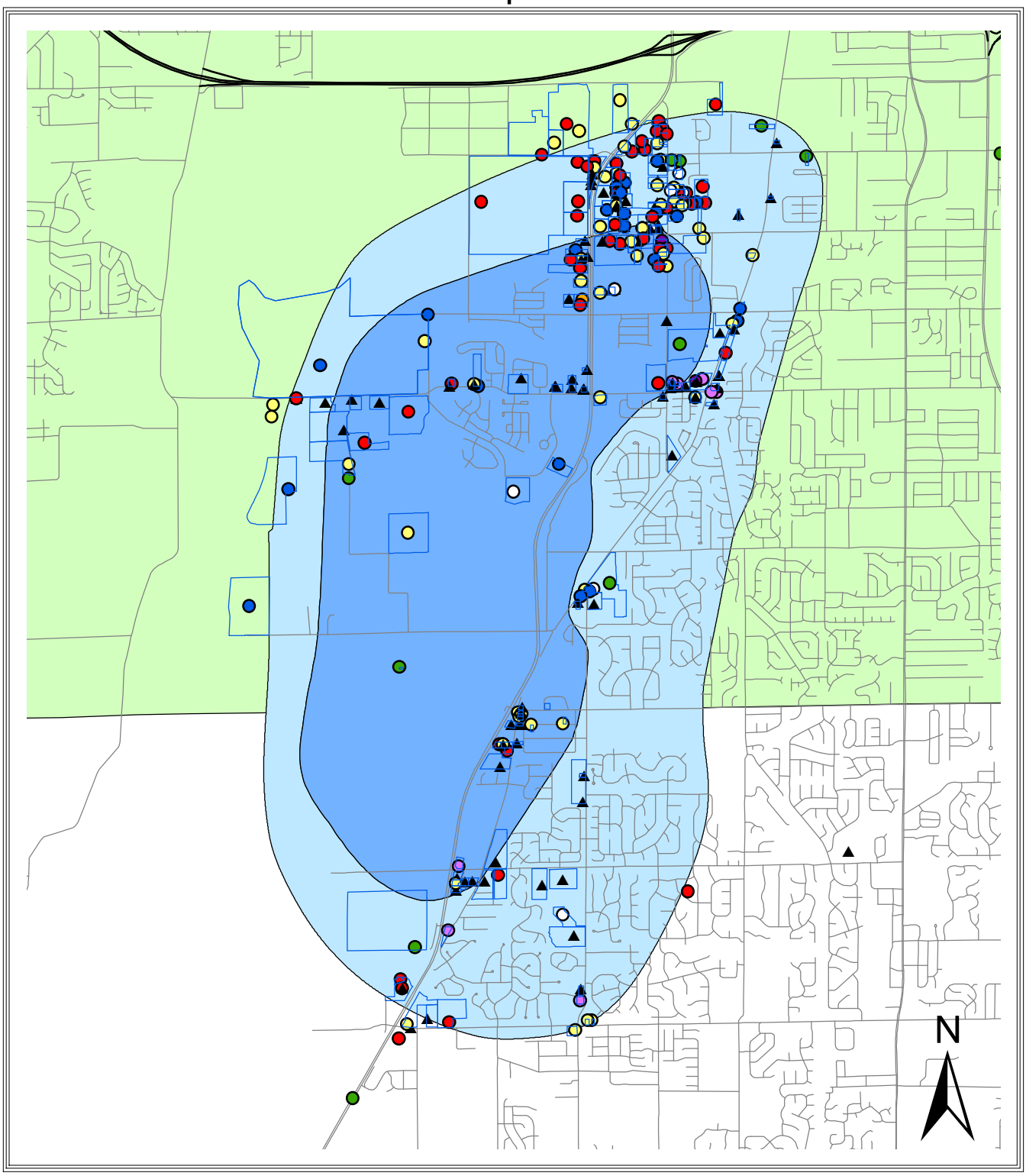


Business Types in the South Wellfield

Regulated Businesses in the South Wellfield



South Wellfield - Business Types
Annual Report 2018



Legend

- South Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

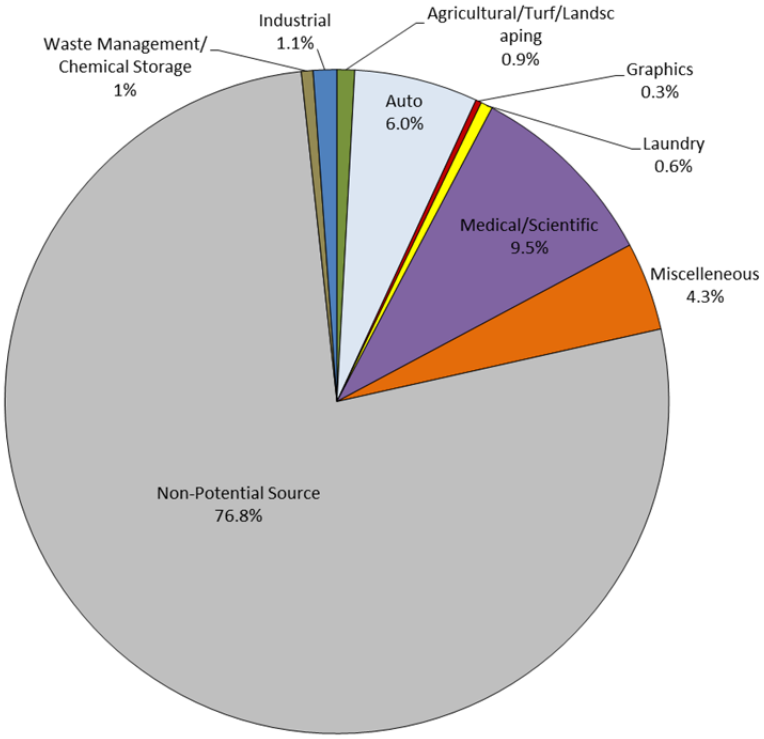
- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

ATTACHMENT 7

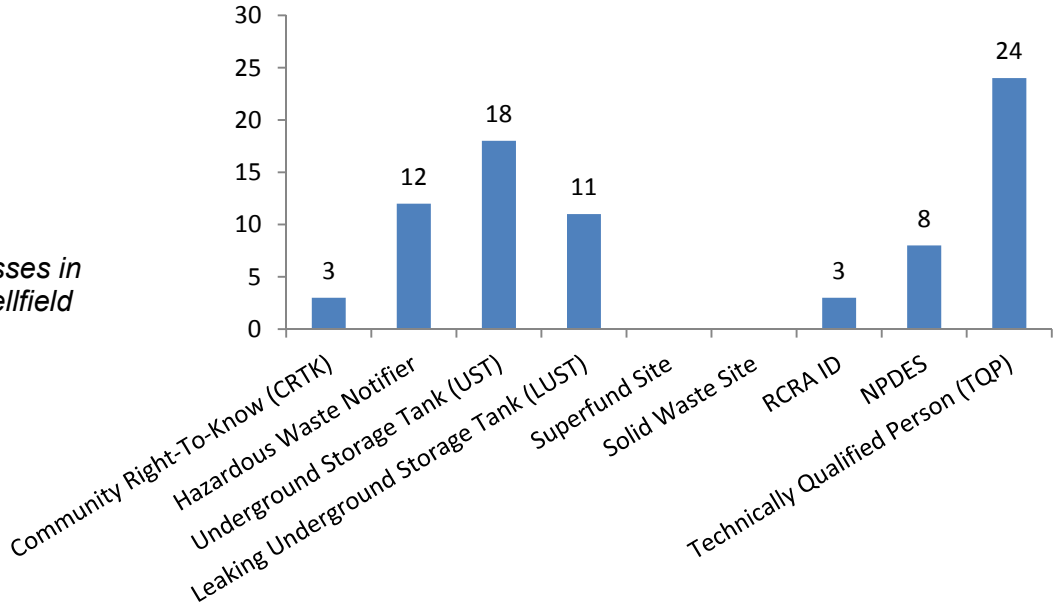
Speedway Wellfield

Within the Speedway Wellfield, there are 349 active (non-historic and non-vacant) nonresidential sites, with 81 sites considered potential contaminant sources and 268 considered low to no risk as potential sources of contamination. The potential sources include: 33 medical/scientific use sources, 21 auto-related sources, two (2) waste management/chemical storage sources, one (1) graphics/printing related source, four (4) industrial related sources, three (3) agriculture/turf/landscaping sources, two (2) commercial laundry sources, and fifteen (15) miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 51 regulated sites (with some sites noted within multiple databases) within this wellfield, with three (3) sites within the CRTK database, 12 sites noted as hazardous waste notifiers, eighteen (18) UST sites, eleven (11) LUST sites, three (3) sites holding a RCRA ID number, eight (8) sites with an NPDES permit, and 24 sites identified through the Marion County TQP program (see **Table 2**).

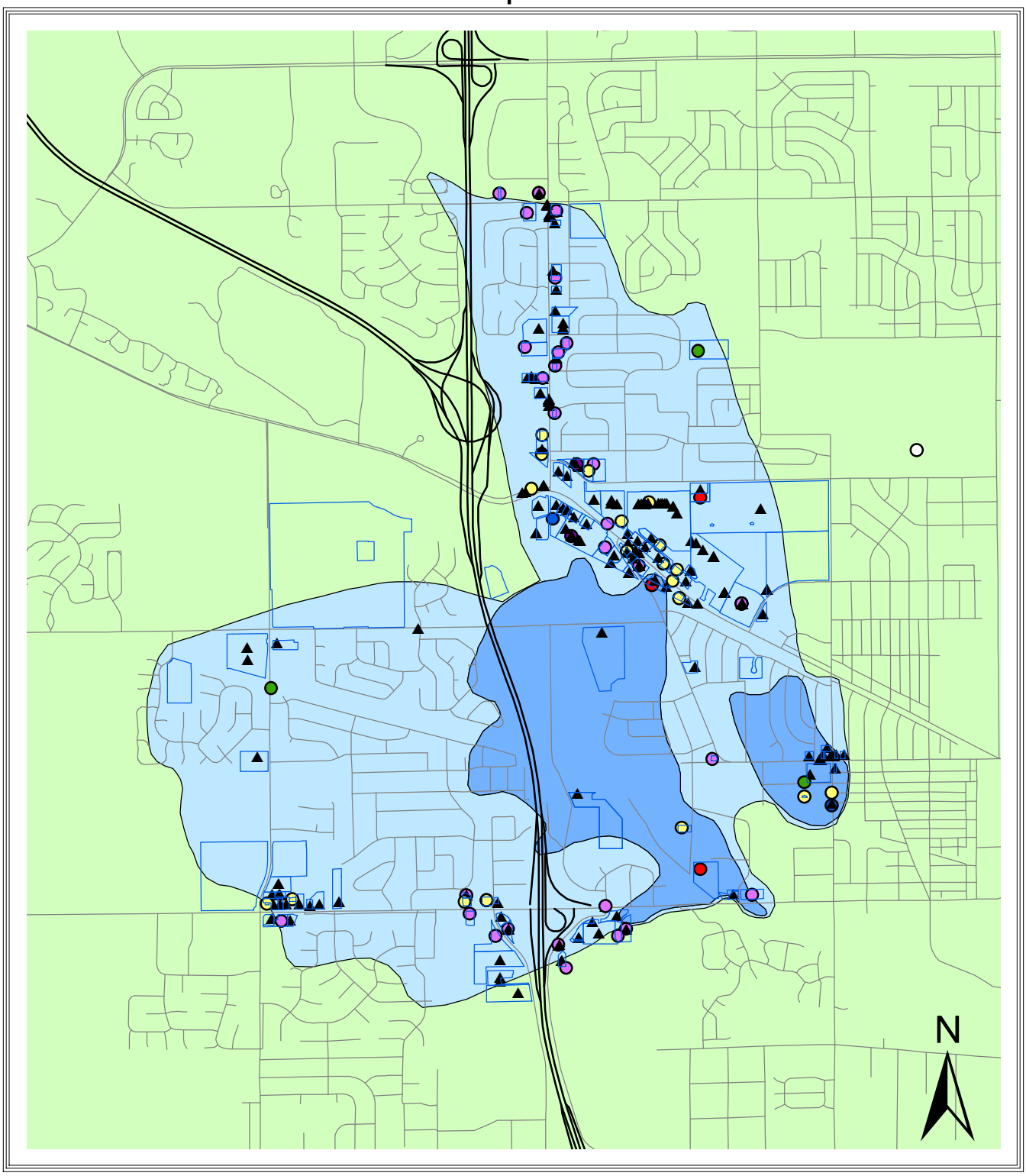


Business Types in the Speedway Wellfield



Regulated Businesses in the Speedway Wellfield

Speedway Wellfield - Business Types
Annual Report 2018



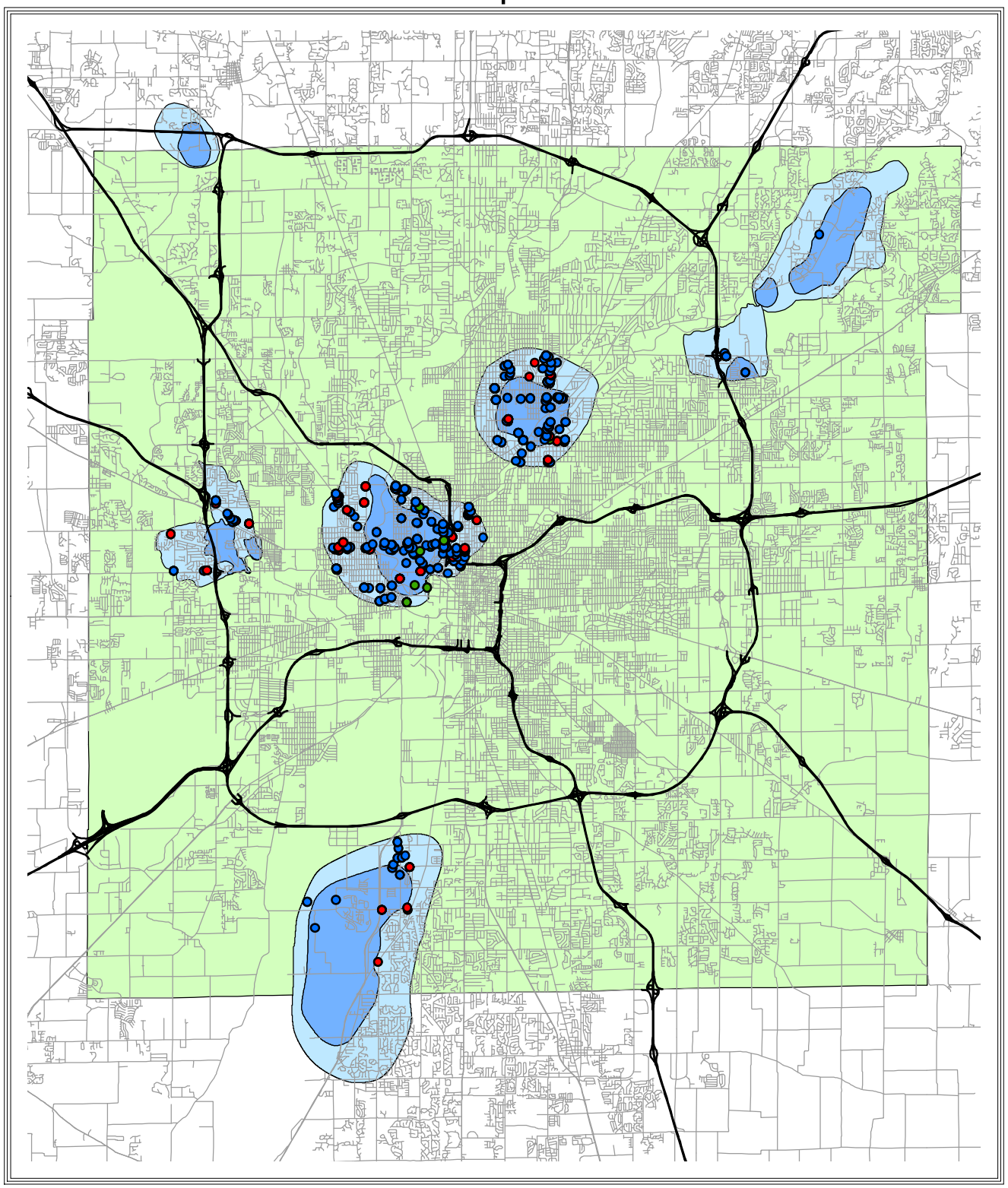
Legend

- Speedway Parcels
- W-1 Wellfield
- W-5 Wellfield
- Marion County
- Interstates
- Roads

Business Type

- Auto
- Graphics
- Industrial
- Laundry
- Medical/Scientific
- Agricultural/Turf/Landscaping
- Waste Management/Chemical Storage
- Miscellaneous
- Non-Potential Source

Underground Storage Tank (UST) Status
Annual Report 2018



Legend

- W-1 (one year TOT) Wellfield
- W-5 (five year TOT) Wellfield
- Marion County
- Interstates
- Roads

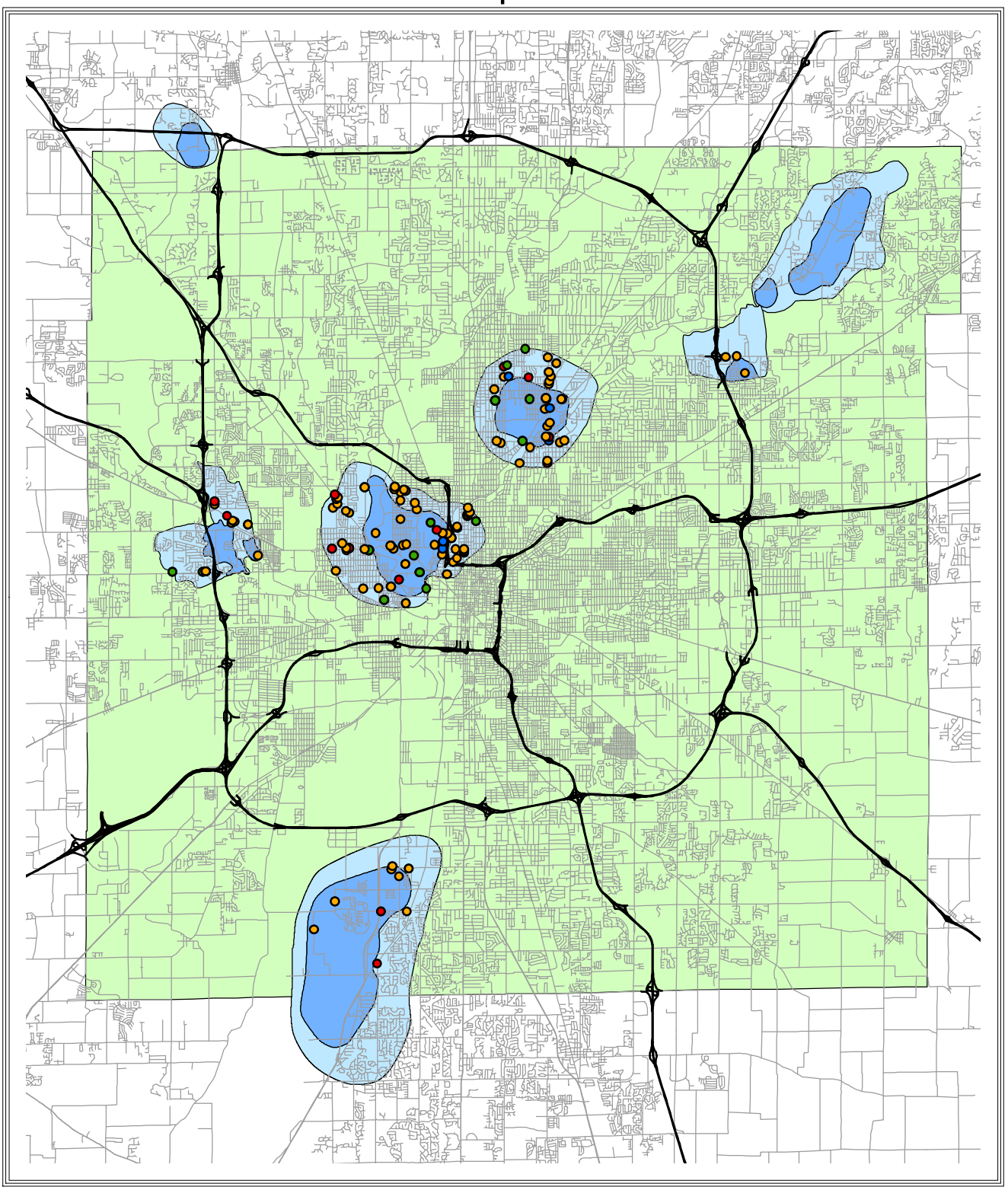
Tank Status

- Currently in use
- Permanently Out of Service
- Temporarily out of use
- Unregulated (not billed)

N

0 1 2 4 Miles

Leaking Underground Storage Tank (LUST) Status
Annual Report 2018



Legend

- W-1 (one year TOT) Wellfield
- W-5 (five year TOT) Wellfield
- Marion County
- Interstates
- Roads

LUST Status

- Active
- Deactivated / Discontinued
- NFA
- Referred to another IDEM program

N

0 1 2 4 Miles