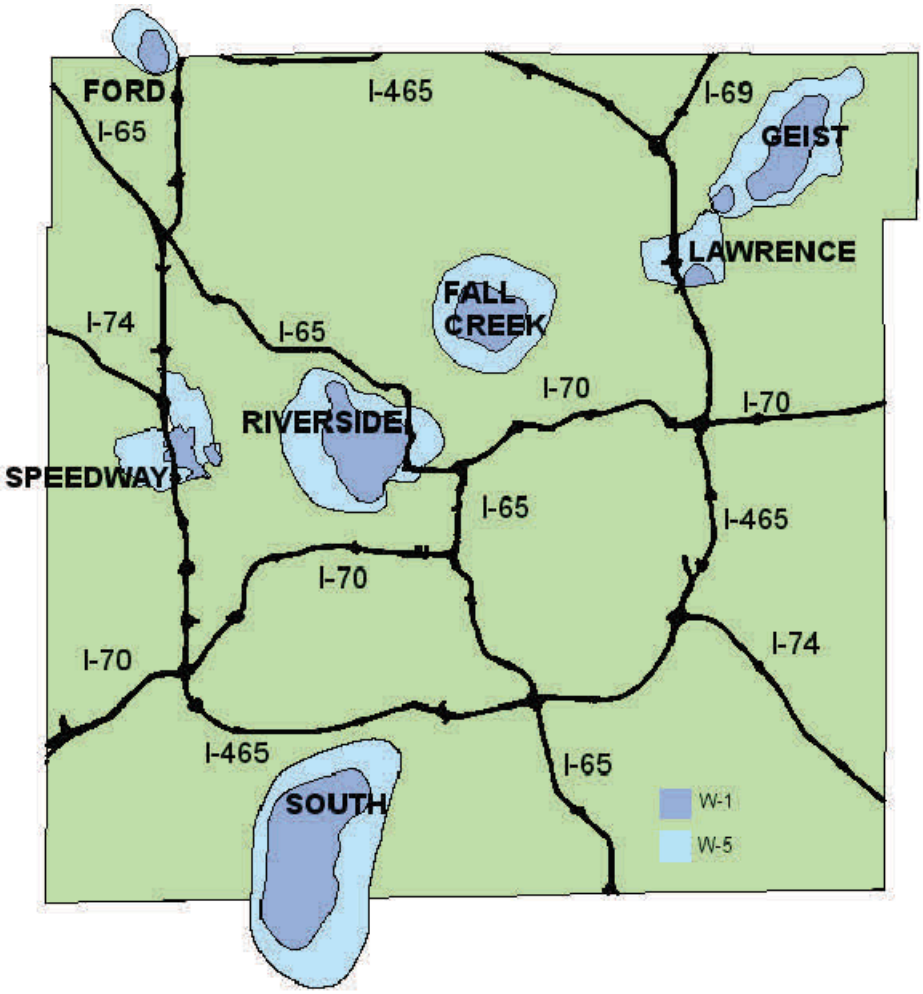
Marion County
Wellfield Education Corporation
www.indyH2O.org

2017 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)
2017 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 2017, and provides highlights of the various activities completed from January through December 2017 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) Wellfield Protection Areas currently 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).

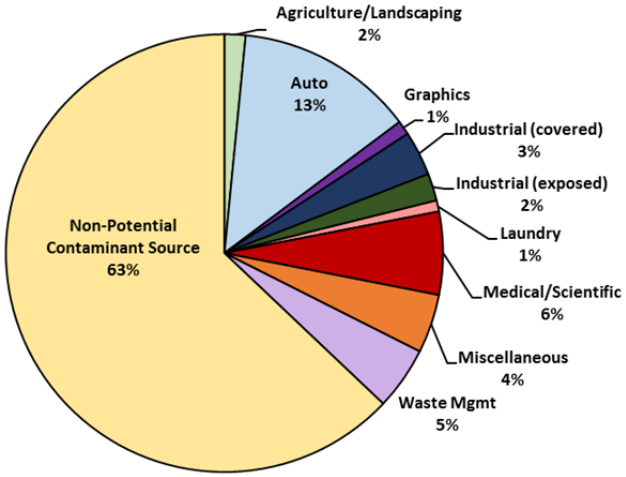
These wellfield protection areas are defined by the surface land surrounding the withdrawal supply wells where groundwater in the surrounding area could reach the pumping wells within five (5) years. Currently, about 45.6 square miles are a part of the wellfield protection areas. Based on land use data from the City of Indianapolis/Marion County, 47% of the well fields 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). As of 2016, over twelve billion gallons of groundwater were withdrawn from wells inside Marion County, with over nine billion gallons used for public water supply. Approximately 85 pumping wells are used to supply water to over 450,000 homes and businesses by Citizens Water, Speedway Water Works, and Lawrence Utilities, collectively.

Wellfield Commercial Use and Contaminant Sources

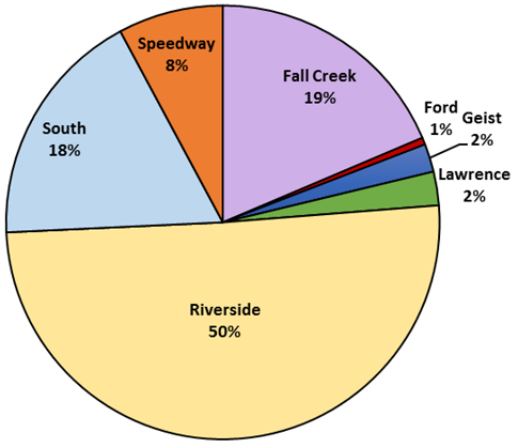
Within the seven Marion County wellfields, there are 2,579 active (non-historic and non-vacant) non-residential sites. Of these, 956 have been identified as potential contaminant sources, including: 40 agriculture/turf/landscaping source sites, 341 automobile-related source sites, 27 graphic production source sites, 85 covered industrial source sites, 52 exposed industrial source sites, 21 commercial laundry source sites, 158 medical or scientific source sites, and 112 miscellaneous source sites (including large institutions and food and beverage productions). The remaining 1,623 active non-residential sites are considered low to no risk as potential contaminant sources. The Riverside Wellfield contains one-half of all potential contaminant source sites, followed by the Fall Creek Wellfield (19%) and South Wellfield (18%).

Within the seven Marion County wellfields, there are 549 sites that appear in regulated databases. Many sites are listed in multiple regulated databases, with a total of 989 regulatory records noted for businesses in a wellfield. The Riverside Wellfield again contains almost one-half of all regulated business (46%), followed by the Fall Creek Wellfield (23%) and South Wellfield (20%). 185 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 193 sites with registered underground storage tanks (USTs), and 104 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.

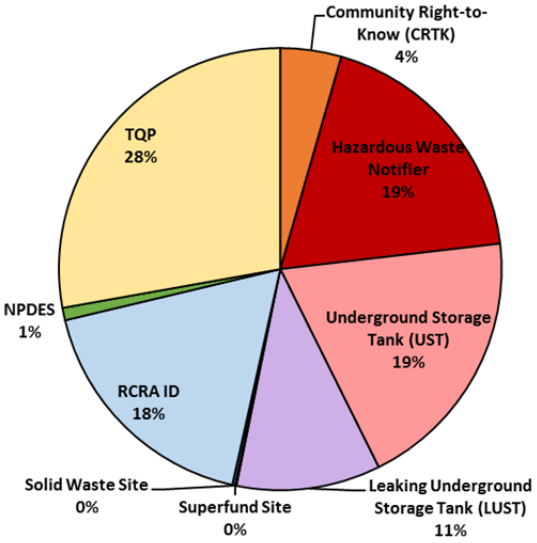
Business Types in All Wellfields



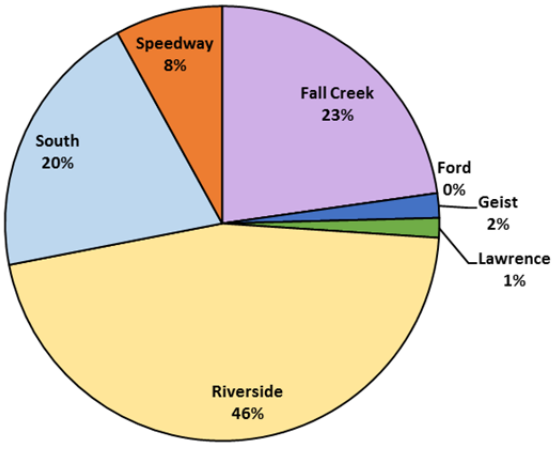
Potential Contaminant Sources by Wellfield



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 2016, about 275 sites have received TQP reviews (about 29% of all potential contaminant sources).

This data is presented in tabular form in **Tables 1** and **2**. Data regarding the status of USTs and LUSTS is presented in **Tables 3** and **4**. Detailed contaminant source summaries and maps of each wellfield are provided as **Attachments 1** through **7.**

Summary of 2017 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 2017, the focus of MCWEC outreach and education activities shifted from education regarding best management practices (BMPs) to raising awareness and providing technical support for the rollout of the Marion County Public Health Department's (MCPHD) Wellfield Protection Standards (http://www.hhcorp.org/hhc/images/HHCcode/chapter_13.pdf). The ordinance was passed in November 2016 with an effective date of January 2017. Enforcement of the standards will begin in January 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 or telephone, 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 conducted 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://indyh2o.org/).

During 2017, MUNDELL contacted nearly 100 businesses to provide information about the new MCPHD Wellfield Protection standards and offer assistance. MUNDELL conducted about fifteen (15) site assessments of businesses ranging from auto repair, landscaping, manufacturing, and large institutional uses.

MUNDELL also provided limited telephone/email based compliance assistance to approximately ten (10) businesses regarding wellfield protection. Generally, these businesses were interested in information about proper waste disposal and were referred to the City of Indianapolis ToxDrop program or needed assistance in accessing information regarding the new MCPHD Wellfield Protection Standards.

Current Educational Tools

The MCWEC business education program has developed a number of practical tools available to participating businesses. In 2017, MCPHD prepared educational tools to support the Wellfield Protection Standards. In cases where MCWEC had prepared a similar or equivalent product, the MCPHD document has been selected to be provided to businesses for clarity. The following support documents are currently being used as part of the educational program. These documents are also available on http://indyh2o.org/businesses/guides-forms/.

GUIDES:

1) *Are you Ready? Checklist* (updated June 2017)
   - 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.

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.

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.

Database and Mapping

MCWEC maintains a database of all businesses located within each of the seven wellfields. Currently, the database consists of approximately 2,900 total records which include all non-residential active, historic, or vacant sites within the wellfields. For some wellfields, sites near the W-5 border but outside of the wellfield are also included. 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;
- 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 CRTK database only provides information that is current as of 2014 and updated information will likely not be available as registration is now handled through the Department of Homeland Security. IDEM is currently conducting database upgrades to the hazardous waste notifiers database, so when the final dataset is available, the MCWEC database will be updated.

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. These maps allow for more efficient site visits and drive surveys. The maps will also 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. These locations are displayed by corresponding address in the attachments. The addresses in the database are converted to latitude and longitude data for mapping with the Indiana Open Geocoder Service (https://gis.in.gov/apps/isdh/geocode/) provided from the Indiana GIS Data Sharing Initiative. In some circumstances, accuracy of the geocoding service can be low due to the complexity of Indianapolis street naming and numbering schemes. MUNDELL has attempted to correct incorrectly mapped latitude and longitudes when possible. All sites categorized as within the wellfield have had their parcel boundaries confirmed with wellfield boundaries, but generally, the geocoder shows addresses as directly off of the street, not taking into account parcel size or shape. Due to this, on the attached maps, the symbols for some sites appear to not be located within the wellfield when in actuality some portion of the site parcel is located within the wellfield.

MCWEC Website

MUNDELL maintains the MCWEC website (found at http://indyh2o.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 2017, MUNDELL completed numerous updates to the website and added information, including:

- Updated wellfield facts and frequently asked questions (FAQs);
- Posted updated static wellfield maps produced by the MCPHD;
- Updated "Am I in a Wellfield?" page for businesses to easily determine whether their site is located within a wellfield;
- Produced 28 blog posts for the News section of the website throughout the year;
- Provided information regarding the new MCPHD Wellfield Protection Standards with links to download the full text;
- Updated resources and forms available to businesses including documents required as part of the new health code;
- Created a "Wellfield Business Spotlight" to spotlight groundwater protection promotion at Triton Brewing Company.
- Update industry specific BMP recommendations for several business types; and
- Reorganized 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. Website traffic has increased every year since the beginning of tracking in 2014. From 2016 to 2017, website traffic increased by nearly 40%. In 2017, approximately 1,939 new website users from Indiana viewed the website, totaling 2,976 pages visited. The continued increase in new users from Indiana indicates that MCWEC is able to provide new, relevant content that performs well in search engines. A significant portion of our web traffic is based around search engine results for hazardous waste disposal and spill kits.

In 2017, the amount of visitors returning to the website increased nearly 20% from 2016, indicating that the IndyH2O website is able to serve as a useful reference and is easy to remember by visitors. The business guides and assessment pages receive the most returning website traffic. Data regarding visitors to the website shows that many new users visit the website each year and a significant portion of users are not from Indiana. This indicates that the website provides general information about groundwater wellfield protection that is useful across the country.

About 62% of users to the site were first time visitors from Indiana, with only 7% identified as returning visitors from Indiana. Almost 32% of website users were not from Indiana. Of the users from Indiana, over 1,800 accessed the site via search engine and about 200 accessed the site by typing in the URL (likely from paper promotional materials). In Indiana, the website was accessed nearly equally via desktop or laptop computer (54%) and via mobile/tablet users (46%). In addition to search engines and directly typing in the website URL, visitors were directed to the site from links embedded in websites for Citizens Water, City of Lawrence, Indianatrails.com, Town of Speedway, MCPHD website, and the MUNDELL company website.

The most popular downloads from the website are the detailed printable maps for each wellfield, followed by the MCWEC informational brochure and then by various technical assistance documents.

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 2017, MUNDELL plans to increase the content available regarding spill kits, optimize the website for mobile/tablet viewing, and continue to post approximately two blog posts per month for search engine optimization.

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 nearly 170 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.

So far, the greatest challenge for the wellfield protection program has been the voluntary nature of the program. Historically, less than 10% of the identified potential chemical sources in the wellfields have engaged with MCWEC in a significant capacity. The new 2016 MCPHD Wellfield Protection Standards will address this challenge and require all businesses to engage in appropriate wellfield protection activities.

Another ongoing challenge to wellfield protection in Marion County is the rapid pace of constant and inevitable 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. Such turnover within Marion County's densely populated, urban wellfields necessitates rigorous data management and continuous wellfield business outreach to support a successful wellfield protection program.

2018 Wellfield Activities

With the adoption of new Marion County Wellfield Zoning Ordinances (Indy Rezone) and Marion County Public Health Department (MCPHD) ordinances in 2016, 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. As a supplement to these tasks, MUNDELL will provide secondary containment and spill protection materials as MCWEC donations allow.

2) Increase public awareness of MCWEC and general wellfield and groundwater protection. This will be achieved by identifying and collaborating with other stakeholders, such as breweries and other businesses that depend on clean public water supplies, and engaging in other opportunities for spreading awareness such as with the media, conferences, and other engagements.

3) Improve the accuracy and efficiency of the PSI/Education 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 site-visit observations and regulatory database merges.

4) Leverage the MCWEC internet website (www.INDYH2O.org) for broad distribution of free technical support, answers to frequently asked questions (FAQs), and 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 2018.

6) Begin strategic design of future MCWEC objectives and activities through interviews with MCWEC board members, key stakeholders, and wellfield representatives. This investigation will

culminate with a presentation and recommendations to be discussed with MCWEC board members.

TABLES

Table 1. 2017 Marion County Wellfield Business Types

WELLFIELD	Total Active Sites	*BUSINESS TYPE*									
		Agriculture/ Turf/Landscaping	*Auto*	*Waste Management/ Chemical Storage*	*Industrial (covered)*	*Industrial (exposed)*	*Laundry*	*Medical/Scientific*	*Graphics*	*Miscellaneous*	*Non-Potential Source*
Fall Creek	833	3	95	8	27	0	6	12	6	21	655
Ford	7	3	0	0	0	0	0	0	0	2	2
Geist	61	0	1	5	0	0	2	8	1	3	41
Lawrence	47	2	3	7	0	0	0	6	0	6	23
Riverside	1014	22	161	66	29	25	8	94	17	61	531
South	303	9	59	31	29	27	3	8	2	3	132
Speedway	314	1	22	3	0	0	2	30	1	16	239
Totals	**2,579**	**40**	**341**	**120**	**85**	**52**	**21**	**158**	**27**	**112**	**1,623**

Notes:

1. This table was prepared using the databases maintained for each wellfield excluding businesses noted as historic or vacant or outside of the current wellfield boundaries. Each site was assigned a single category.
2. This table is based primarily on drive survey information with regulatory data used when available.
3. The categorizations reflect the categories approved during the MCWEC April 18, 2016 board meeting.
4. This table is intended to illustrate the current state of businesses within the wellfield, and does not consider past businesses or prior site usage (example: a restaurant that was previously a gas station is listed as a non-potential source rather than under the automobile-related category).
5. Windshield surveys were conducted in the fall and winter of 2017.

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Table 2. 2017 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	125	3	48	53	29	1	0	48	2	53
Ford	0	0	0	0	0	0	0	0	0	0
Geist	10	0	4	0	0	0	0	4	0	8
Lawrence	8	0	1	3	3	0	0	1	0	5
Riverside	252	30	101	99	50	0	2	103	5	99
South	110	8	19	23	12	0	0	19	1	90
Speedway	44	3	12	15	10	0	0	1	1	20
Totals	**549**	**44**	**185**	**193**	**104**	**1**	**2**	**176**	**9**	**275**

Notes:

1. This table was prepared using the databases maintained for each wellfield excluding businesses noted as historic or vacant or outside of the current wellfield boundaries.
2. Most regulated sites exist in more than one regulatory database, so the Total Active Regulated Sites column is not a sum of the records shown in each regulatory database column.
3. CRTK data is current as of 2014 (most up-to date data available from IDEM).
4. Hazardous Waste Notifier current as of 10/03/2016 (IDEM is currently conducting database upgrades, data will be updated when available).
5. UST/LUST information is current as of 11/10/2017.
6. Superfund information is current as of 11/10/2017.
7. Solid Waste Sites are current as of 11/10/2017.
8. RCRA ID current as of 10/03/2016 (IDEM is currently conducting database upgrades, data will be updated when available).
9. NPDES current as of 11/10/2017.
10. Marion County TQP is current as of 12/22/2017

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Table 3. 2017 Underground Storage Tank (UST) Status

UST Status	Wellfield							Total
	Fall Creek	Ford	Geist	Lawrence	Riverside	South	Speedway	
Currently in Use	27	0	0	3	60	14	18	122
Permanently Out of Service	189	0	6	10	356	31	83	675
Temporarily Out of Use	0	0	0	0	2	0	0	2
Under Investigation	0	0	0	0	1	0	0	1
Unregulated	4	0	0	0	24	2	0	30
Total	220	0	6	13	443	47	101	**830**

Note: UST information sourced from IDEM's ULCER database as of 11/10/2017.

Table 4. 2017 Leaking Underground Storage Tank (LUST) Status

LUST Status	Wellfield							Total
	Fall Creek	Ford	Geist	Lawrence	Riverside	South	Speedway	
Active	5	0	0	0	4	2	3	14
Deactivated (no release confirmed)	3	0	0	0	6	0	2	11
Discontinued (active)	2	0	0	0	1	0	1	4
NFA	32	0	0	3	68	9	24	136
Referred to other IDEM Program	4	0	0	0	5	0	0	9
Total	46	0	0	3	84	11	30	**174**

Note: LUST information sourced from IDEM's ULCER database as of 11/10/2017.

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

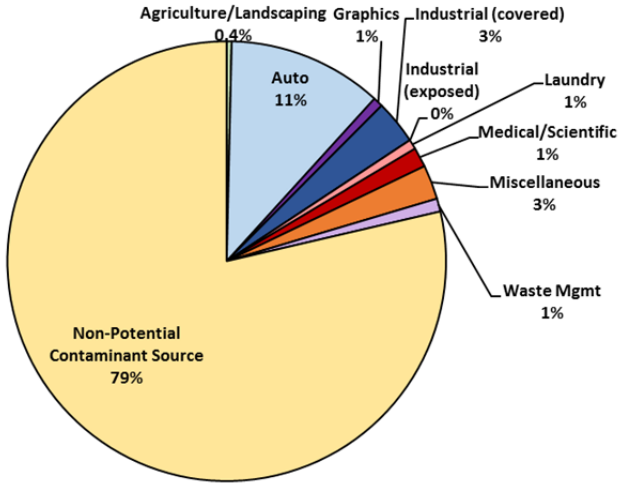
ATTACHMENT 1

Fall Creek Wellfield

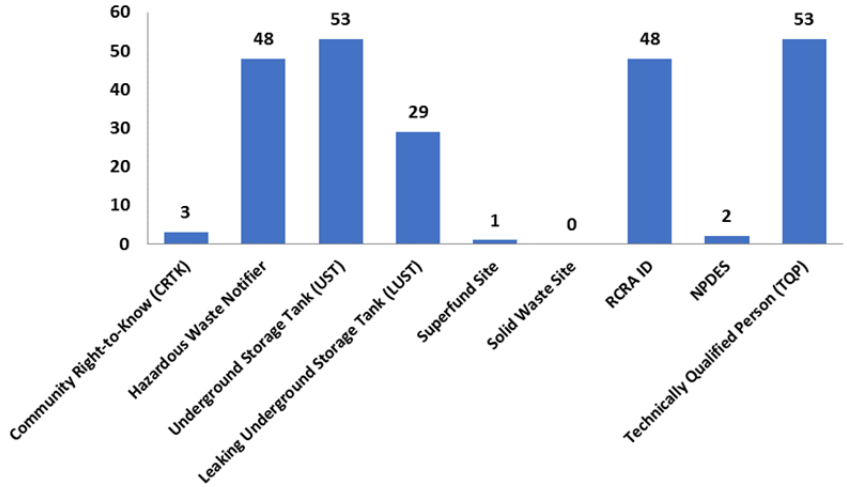
Within the Fall Creek Wellfield, there are 833 active (non-historic and non-vacant) nonresidential sites, of which 178 are potential contaminant sources and 655 are considered low to no risk of serving as potential sources of contamination. The potential sources include: 95 automobile-related sources, twelve (12) medical/scientific-related sources, six (6) commercial laundry sources, eight (8) waste management/chemical storage-related sources, six (6) graphic production-related sources, three (3) agriculture/turf/landscaping-related sources and 21 miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 125 regulated sites within this wellfield (with some sites noted within multiple databases). The regulated sites include three (3) sites within Community Right-to-Know (CRTK) databases, 48 sites noted as hazardous waste notifiers (with no distinction for sites no longer serving as hazardous waste notifiers), 53 sites within the underground storage tank (UST) database (including sites where tanks have been permanently removed), 29 sites within the Leaking UST (LUST) database (including sites where No Further Action (NFA) status has been achieved), one (1) Superfund site, 48 sites with Resource Conservation and Recovery Act (RCRA) identification numbers (with no distinction for sites no longer using their ID), two (2) sites with NPDES identification numbers, and 53 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** for additional information).

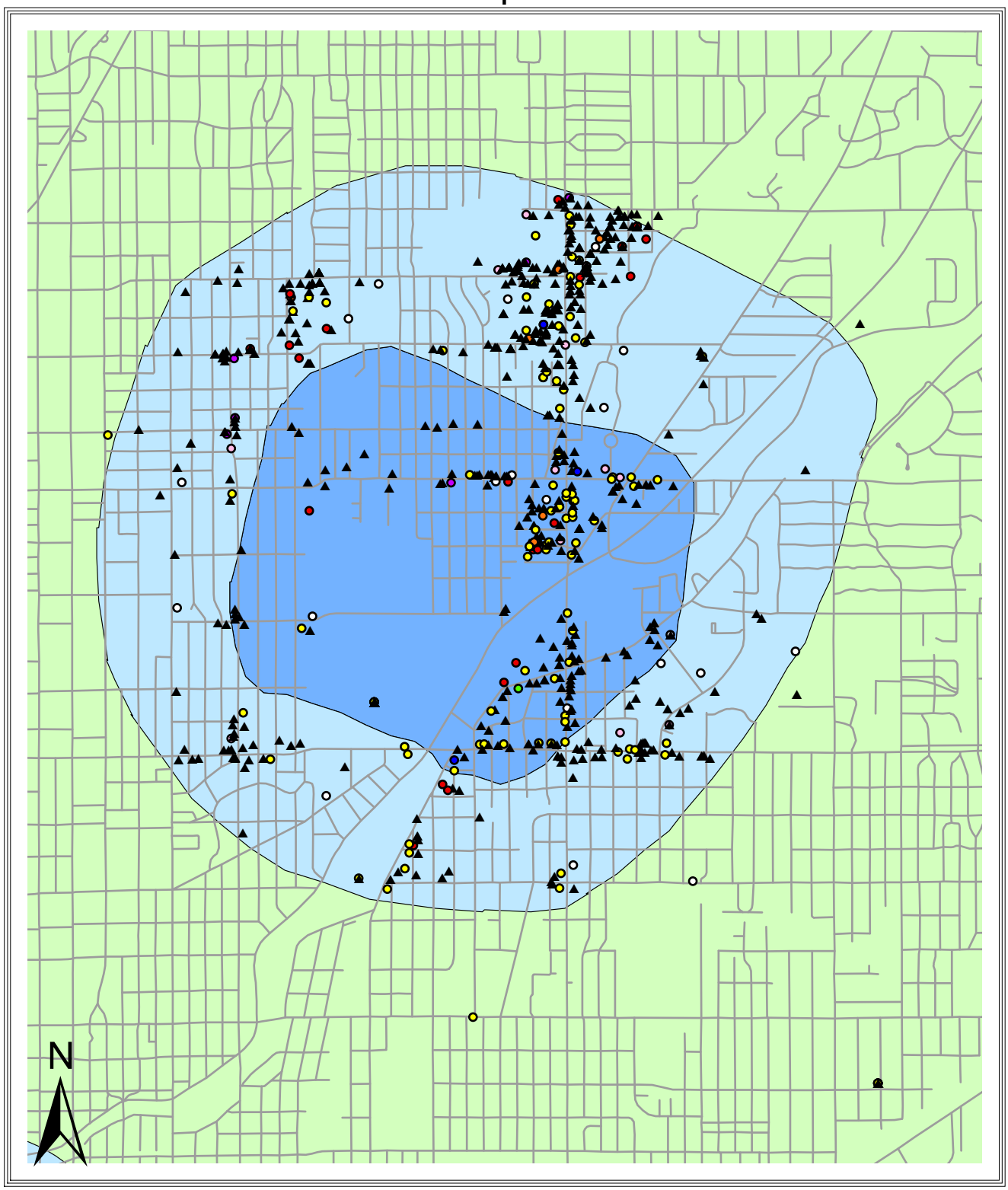
Business Types in the Fall Creek Wellfield



Regulated Businesses in the Fall Creek Wellfield



Fall Creek Wellfield - Business Types
Annual Report 2017



Legend

- W-1 (one year TOT) Wellfield
- W-5 (give year TOT) Wellfield
- Marion County
- Outside of Marion County
- Interstates
- Roads

Wellfield Business Type

Fall Creek Wellfield

- Agriculture/Turf/Landscaping
- Auto
- Graphics
- Industrial (covered)
- Laundry
- Medical/Scientific
- Miscellaneous
- Non-Potential Source
- Waste Management/Chemical Storage

0 0.25 0.5 1 Miles

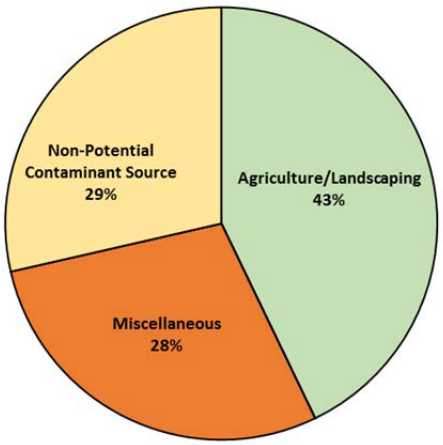
ATTACHMENT 2

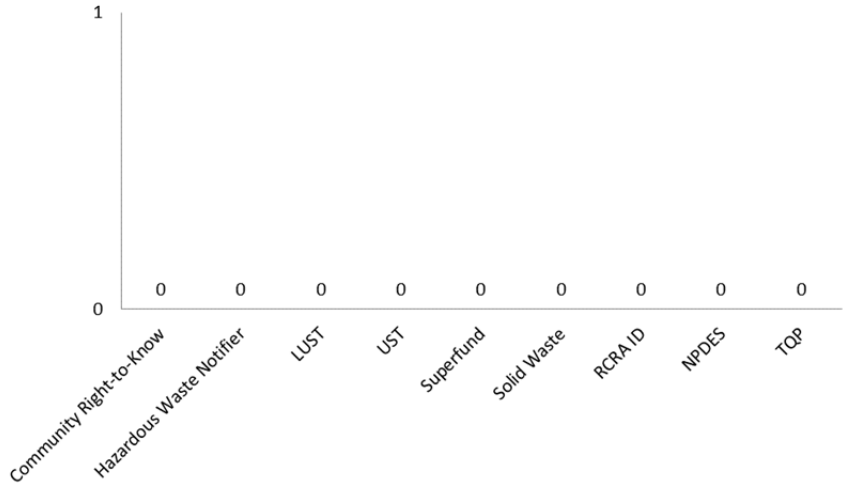
Ford Wellfield

Within the Ford Wellfield, there are seven (7) active (non-historic and non-vacant) nonresidential sites; of which five (5) are potential contaminant sources and two (2) are considered low to no risk of serving as potential sources of contamination. The potential sources include: three (3) agricultural/turf/landscaping sources and two (2) miscellaneous sources (see **Table 1** for additional information).

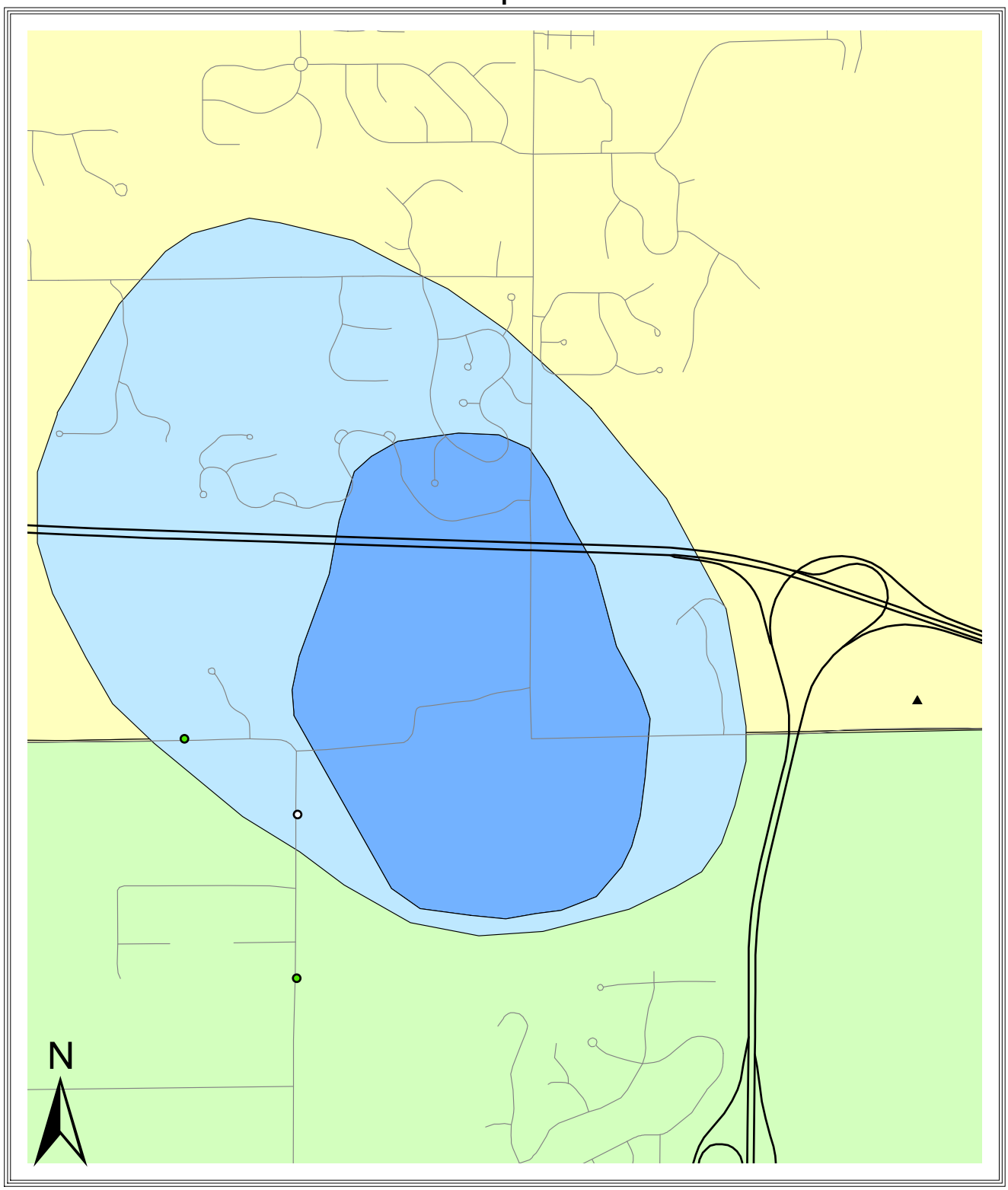
Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are no regulated sites noted within CRTK, hazardous waste notifier, UST, LUST, Superfund, solid waste, RCRA, NPDES, or Marion County TQP databases.

Business Types in the Ford Wellfield





Ford Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Types

Ford Wellfield

- Agricultural/Turf/Landscaping
- Miscellaneous
- Non-Potential Source

0 0.125 0.25 0.5 Miles

ATTACHMENT 3

Geist Wellfield

Within the Geist Wellfield, there are 61 active (non-historic and non-vacant) nonresidential sites, with 20 potential contaminant sources and 41 considered low to no risk of serving as potential sources of contamination. The potential sources include: eight (8) medical/scientific use sources, five (5) waste management/chemical storage sources, two (2) commercial laundry sources, one (1) automobile-related source, one (1) graphic production source, and three (3) 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).
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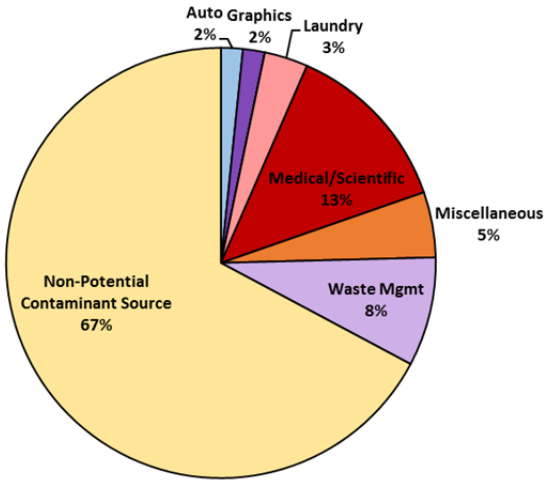
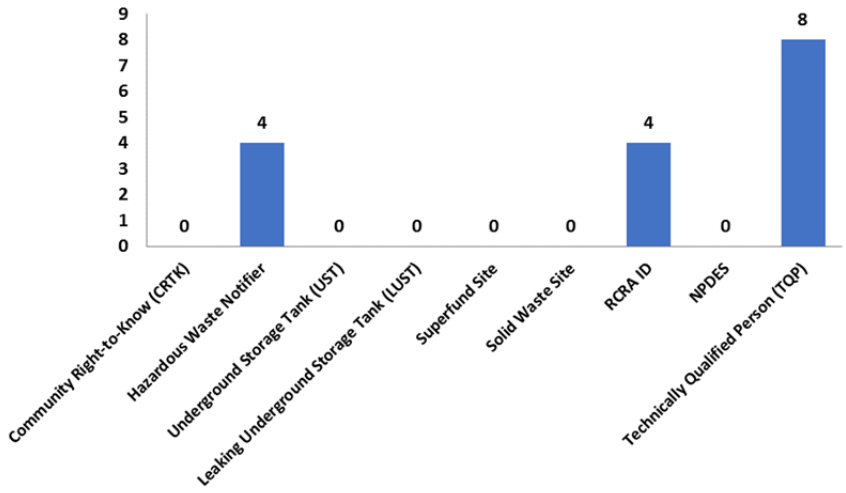
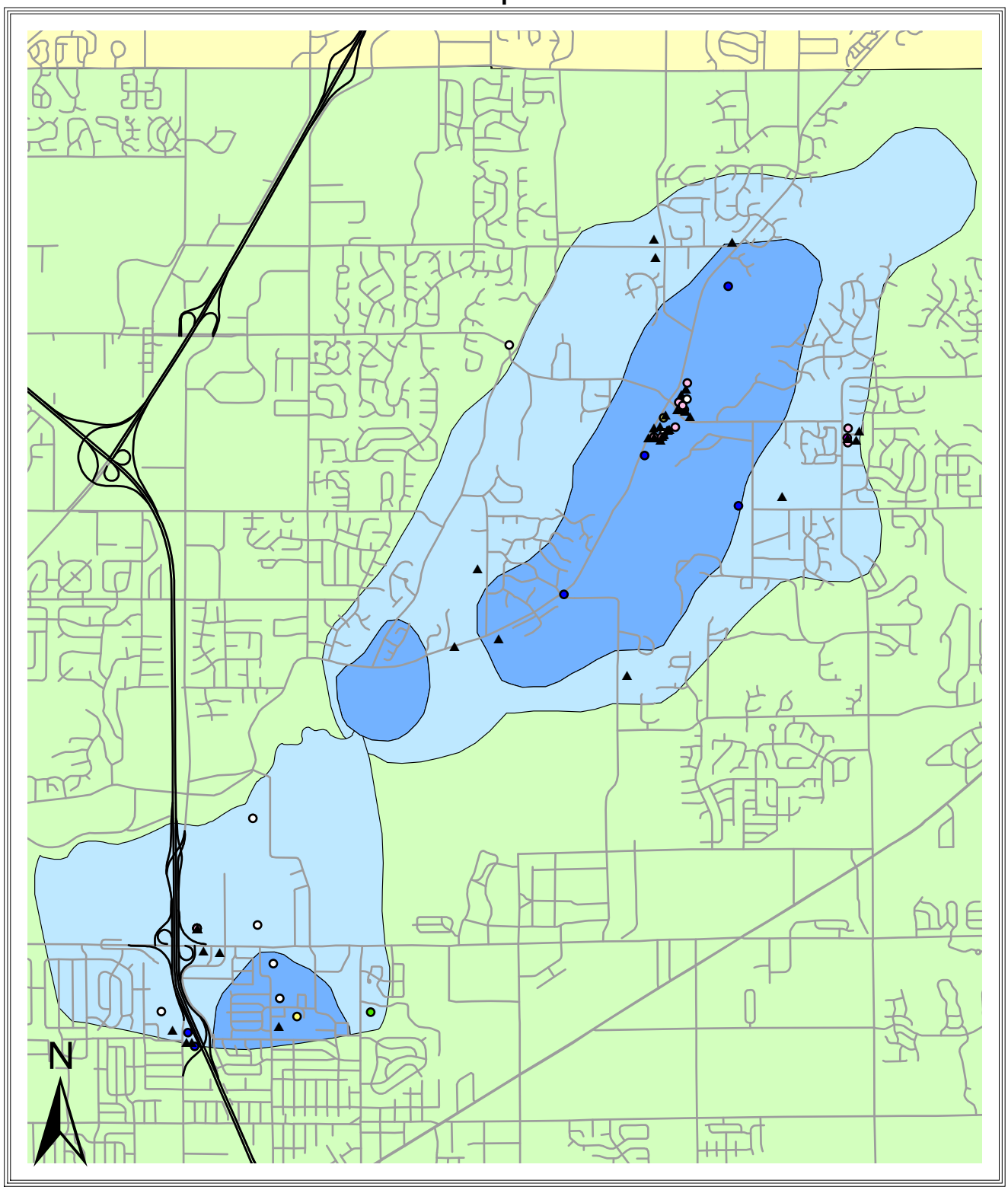
Business Types in the Geist Wellfield



Regulated Businesses in the Geist Wellfield



Geist and Lawrence Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Type

Geist and Lawrence Wellfields

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

0 0.375 0.75 1.5 Miles

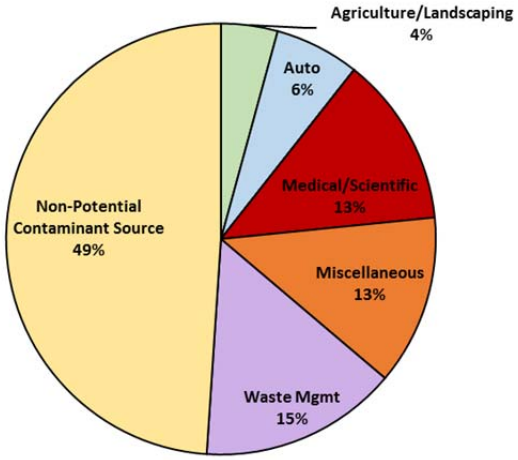
ATTACHMENT 4

Lawrence Wellfield

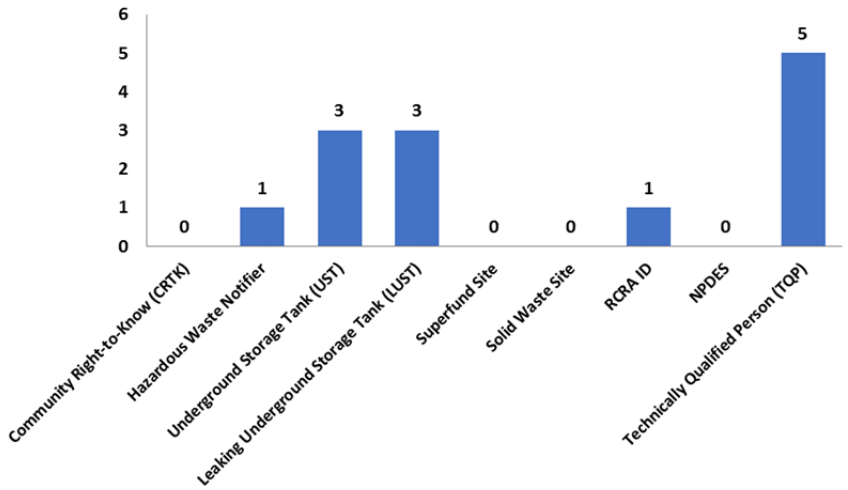
Within the Lawrence Wellfield, there are 47 active (non-historic and non-vacant) nonresidential sites, with 24 potential contaminant sources and 23 considered low to no risk of serving as potential sources of contamination. The potential sources include: seven (7) waste management/chemical storage sources, six (6) medical/scientific use source, three (3) automobile-related sources, two (2) agriculture/turf/landscaping sources, 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 eight (8) regulated sites (with some sites noted within multiple databases) within this wellfield, with one (1) site noted as a hazardous waste notifier, three (3) UST sites, three (3) LUST sites, one (1) sites holding RCRA ID numbers, and five (5) sites identified through the Marion County TQP program (see **Table 2** for additional information).

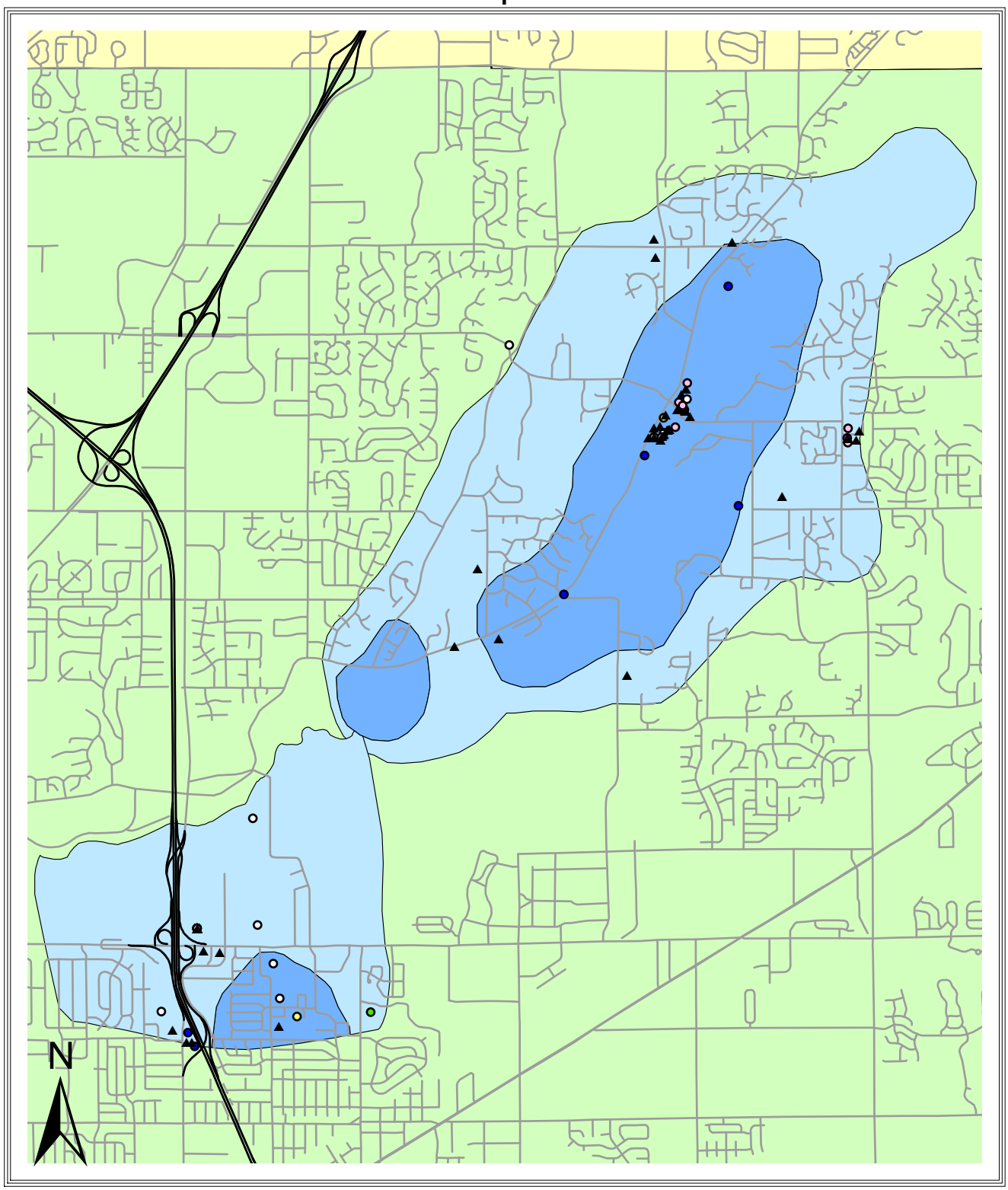
Business Types in the Lawrence Wellfield



Regulated Businesses in the Lawrence Wellfield



Geist and Lawrence Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Type

Geist and Lawrence Wellfields

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

0 0.375 0.75 1.5 Miles

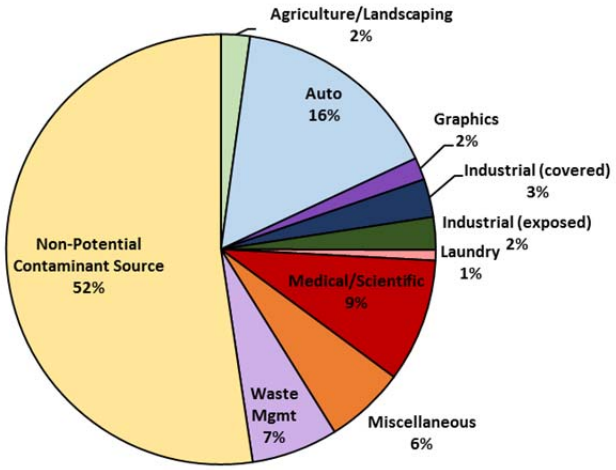
ATTACHMENT 5

Riverside Wellfield

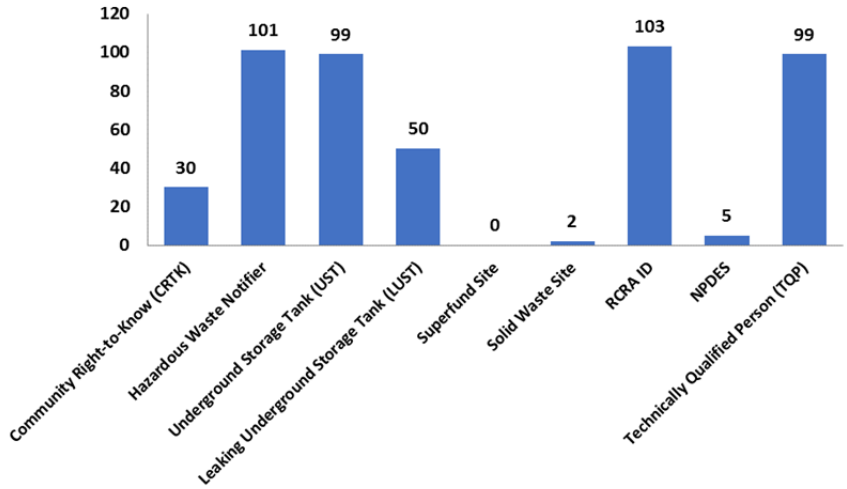
Within the Riverside Wellfield, there are 1,014 active (non-historic and non-vacant) nonresidential sites, with 483 of those identified as potential contaminant sources and 531 considered low to no risk of serving as potential sources of contamination. The potential source sites include: 161 automobile-related sources, 94 medical/scientific use sources, 66 waste management/chemical storage sources, 29 covered industrial sources, 25 exposed industrial sources, 22 agriculture/turf/landscaping sources, seventeen (17) graphic production sources, eight (8) commercial laundry sources and 61 miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 252 regulated sites (with some sites noted within multiple databases) within this wellfield, with 30 sites within the CRTK database, 101 sites noted as hazardous waste notifiers, 99 UST sites, 50 LUST sites, two (2) solid waste sites, 103 sites holding RCRA ID numbers, five (5) sites with NPDES permits, and 99 sites identified through the Marion County TQP program (see **Table 2** for additional information).

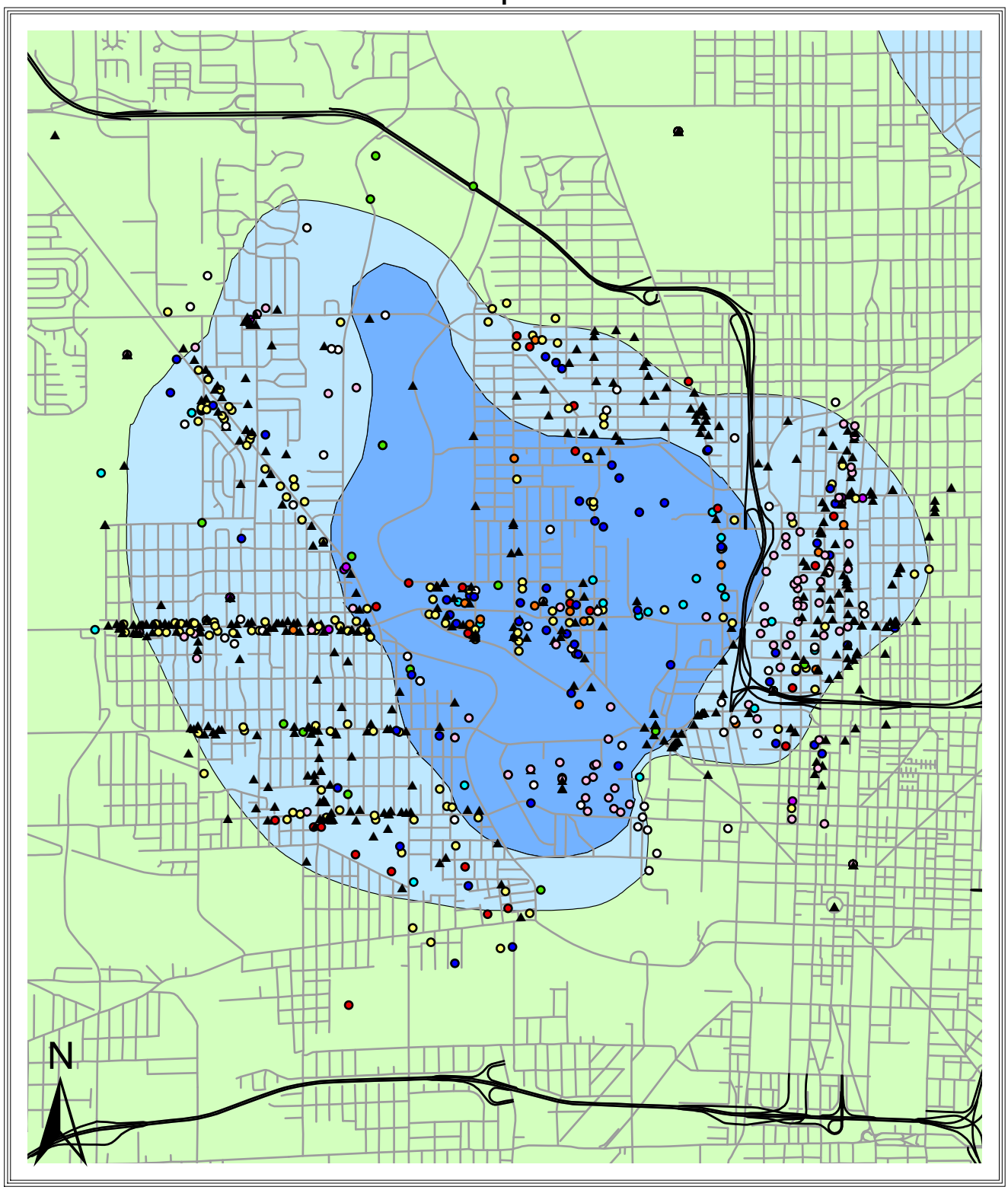
Business Types in the Riverside Wellfield



Regulated Businesses in the Riverside Wellfield



Riverside Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Type

Riverside Wellfield

- Agriculture/Turf/Landscaping
- Auto
- Graphics
- Industrial (covered)
- Industrial (exposed)
- Laundry
- Medical/Scientific
- Miscellaneous
- Non-Potential Source
- Waste Management/Chemical Storage

0 0.25 0.5 1 Miles

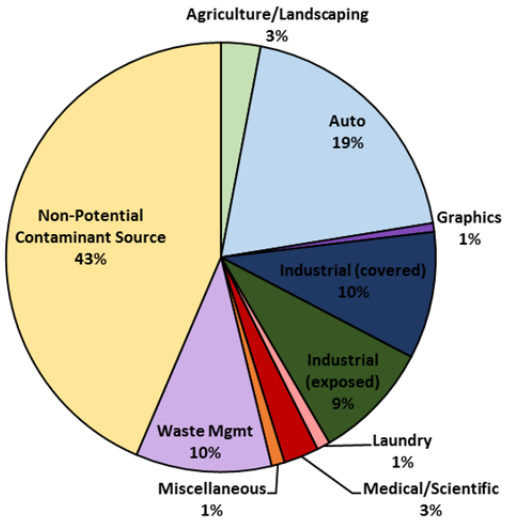
ATTACHMENT 6

South Wellfield

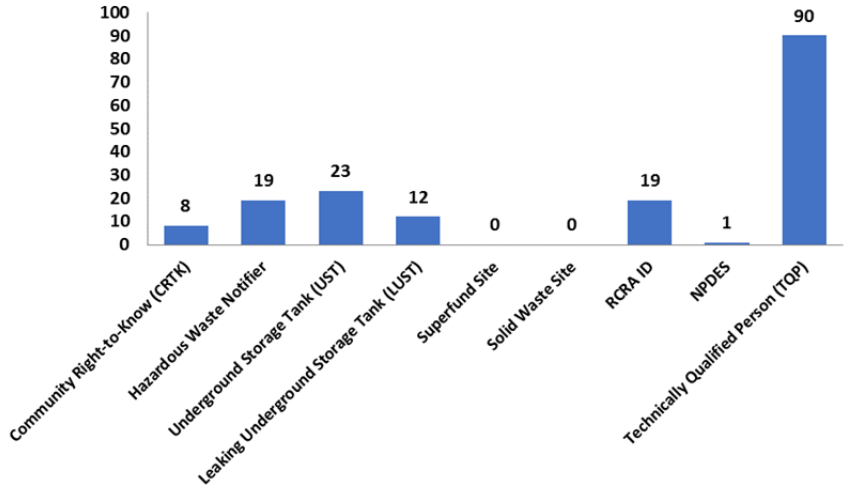
Within the South Wellfield, there are 303 active (non-historic and non-vacant) nonresidential sites, with 171 of those sites considered potential contaminant sources and 132 sites considered low to no risk of serving as potential sources of contamination. The potential sources include: 59 automobile-related sources, 31 waste management/chemical storage sources, 30 covered industrial sources, 23 exposed industrial sources, nine (9) agriculture/turf/landscaping sources, eight (8) medical/scientific use sources, three (3) commercial laundry sources, two (2) graphic production sources, and three (3) miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 110 regulated sites (with some sites noted within multiple databases) within this wellfield, with eight (8) sites within the CRTK database, 19 sites noted as hazardous waste notifiers, 23 UST sites, twelve (12) LUST sites, nineteen (19) sites holding a RCRA ID numbers, one (1) site with an NPDES permit, and 90 sites identified through the Marion County TQP program (see **Table 2** for additional information).

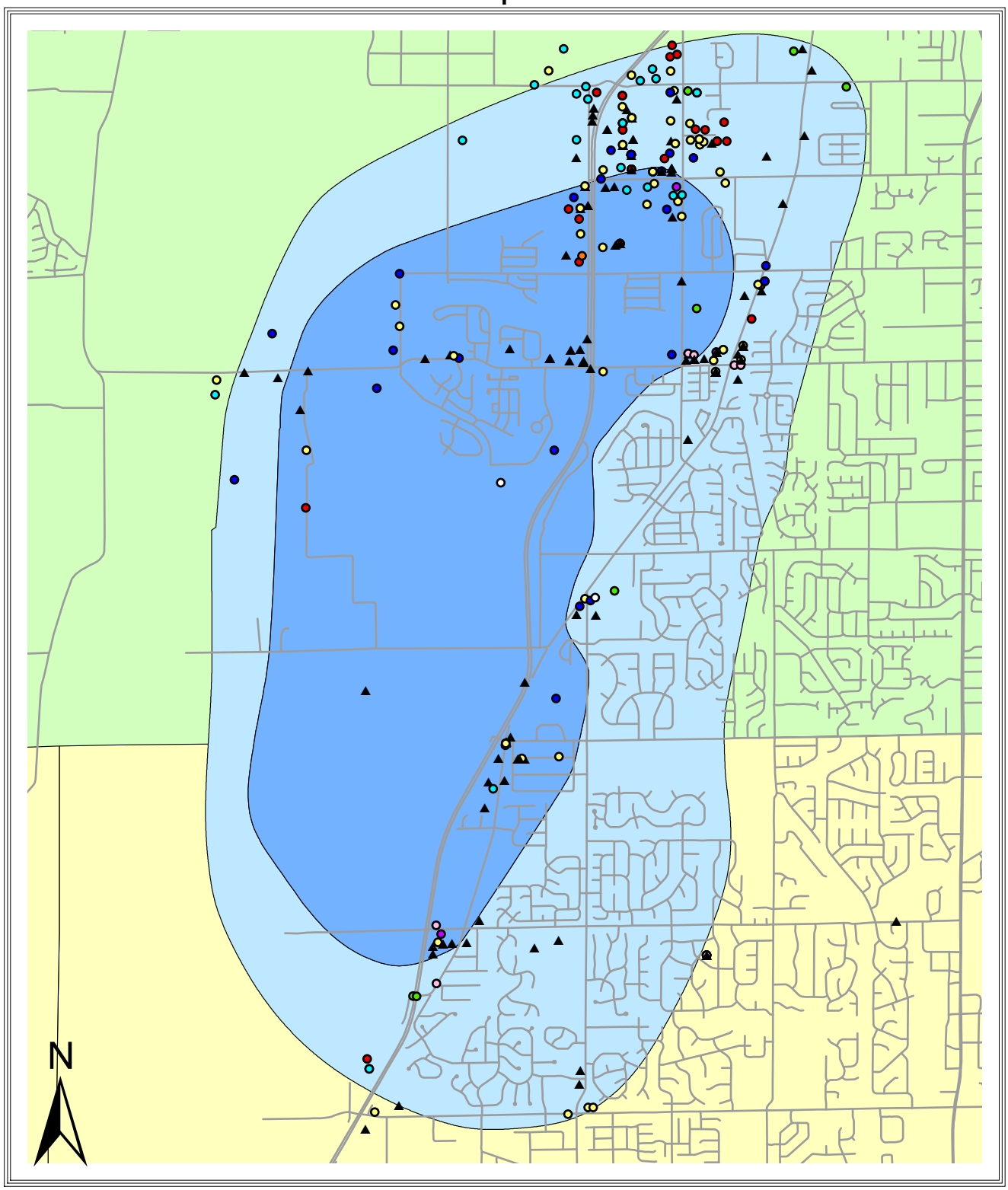
Business Types in the South Wellfield



Regulated Businesses in the South Wellfield



South Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Type

South Wellfield

- Agriculture/Turf/Landscaping
- Auto
- Graphics
- Industrial (covered)
- Industrial (exposed)
- Laundry
- Medical/Scientific
- Miscellaneous
- Non-Potential Source
- Waste Management/Chemical Storage

0 0.25 0.5 1 Miles

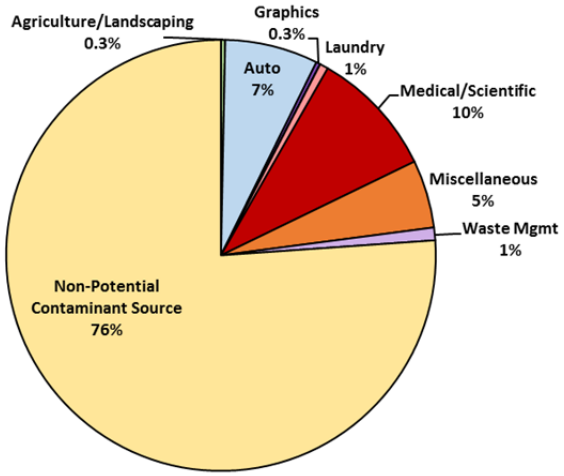
ATTACHMENT 7

Speedway Wellfield

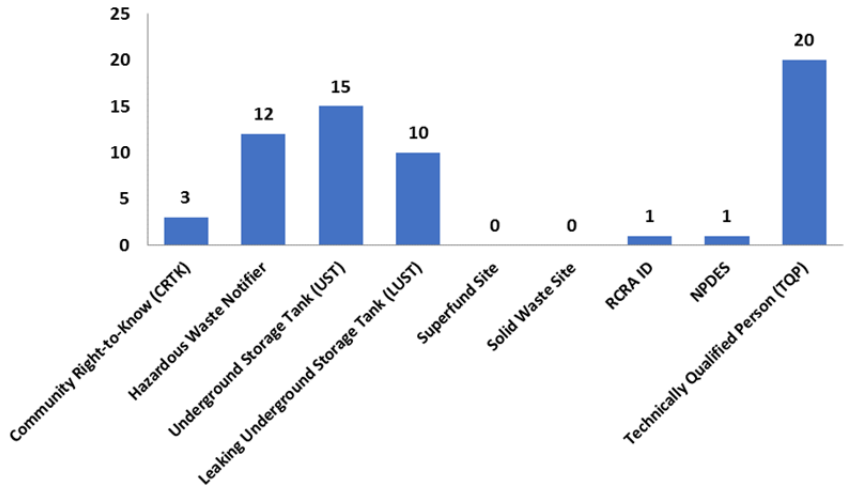
Within the Speedway Wellfield, there are 314 active (non-historic and non-vacant) nonresidential sites, with 75 sites considered potential contaminant sources and 239 considered low to no risk of serving as potential sources of contamination. The potential sources include: 30 medical/scientific use sources, 22 automobile-related sources, three (3) waste management/chemical storage sources, one (1) agriculture/turf/landscaping source, two (2) commercial laundry source, and sixteen (16) miscellaneous sources (see **Table 1** for additional information).

Based on the information maintained by IDEM, the U.S. EPA and MUNDELL, there are 44 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, fifteen (15) UST sites, ten (10) LUST sites, one (1) site holding a RCRA ID number, one (1) site with an NPDES permit, and 20 sites identified through the Marion County TQP program (see **Table 2** for additional information).

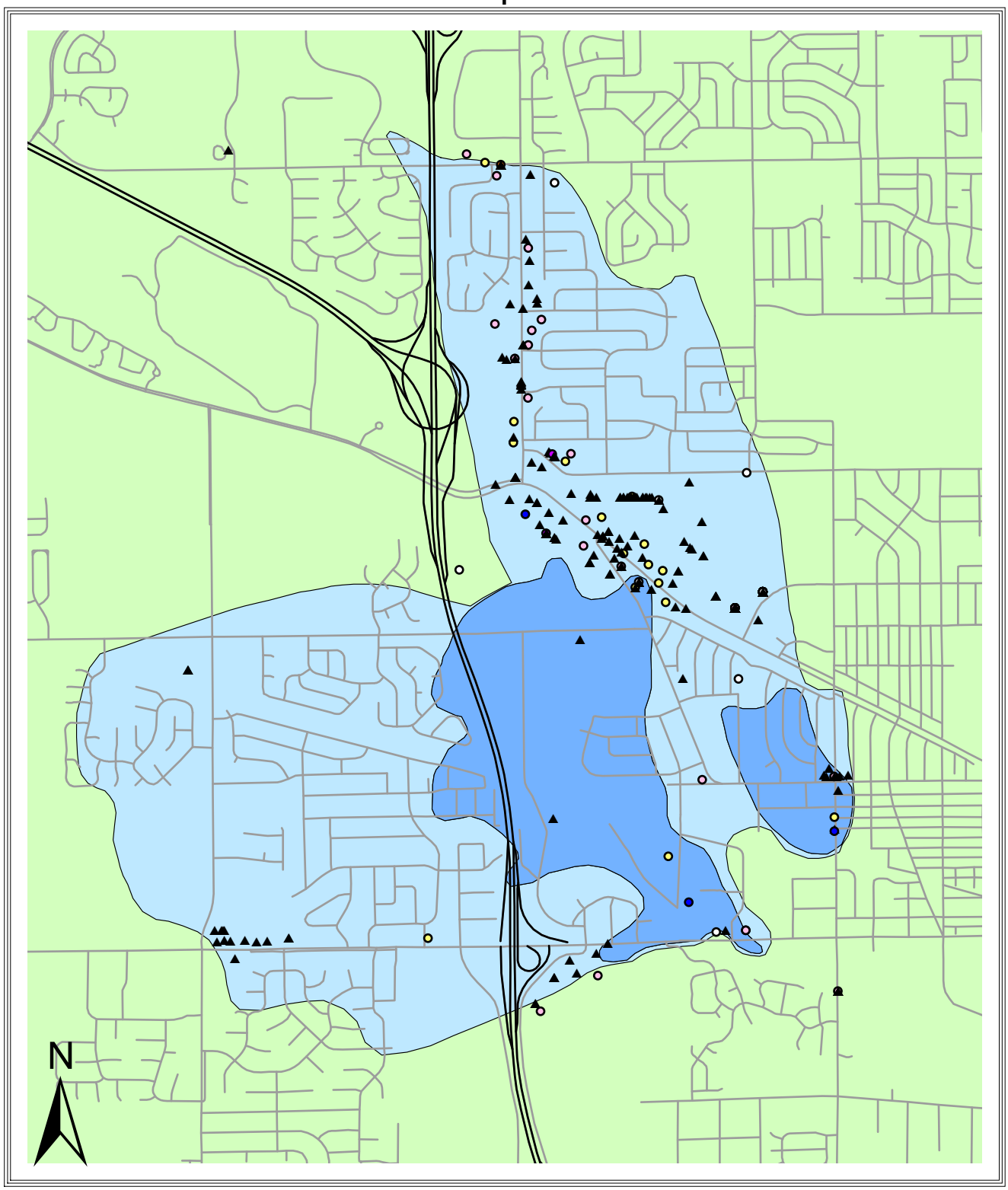
Business Types in the Speedway Wellfield



Regulated Businesses in the Speedway Wellfield



Speedway Wellfield - Business Types
Annual Report 2017



Legend

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

Wellfield Business Type

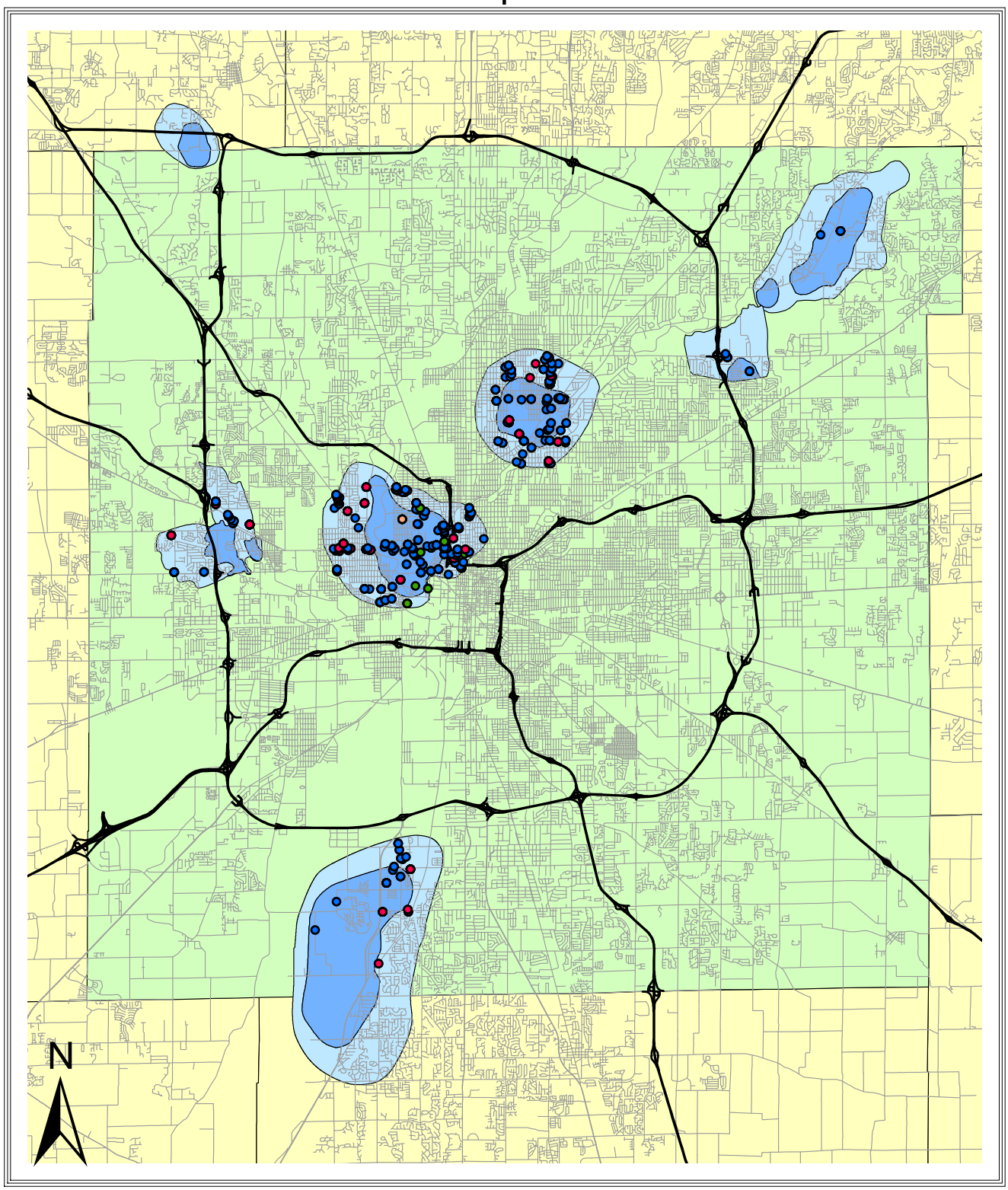
Speedway Wellfield

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

0 0.25 0.5 1 Miles

Attachment 9 – Underground Storage Tank (UST) Status Map

Underground Storage Tank (UST) Status
Annual Report 2017



Legend

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

Underground Storage Tanks

Status

- Currently In Use
- Permanently Out of Service
- Temporarily Out of Use
- Under Investigation
- Unregulated

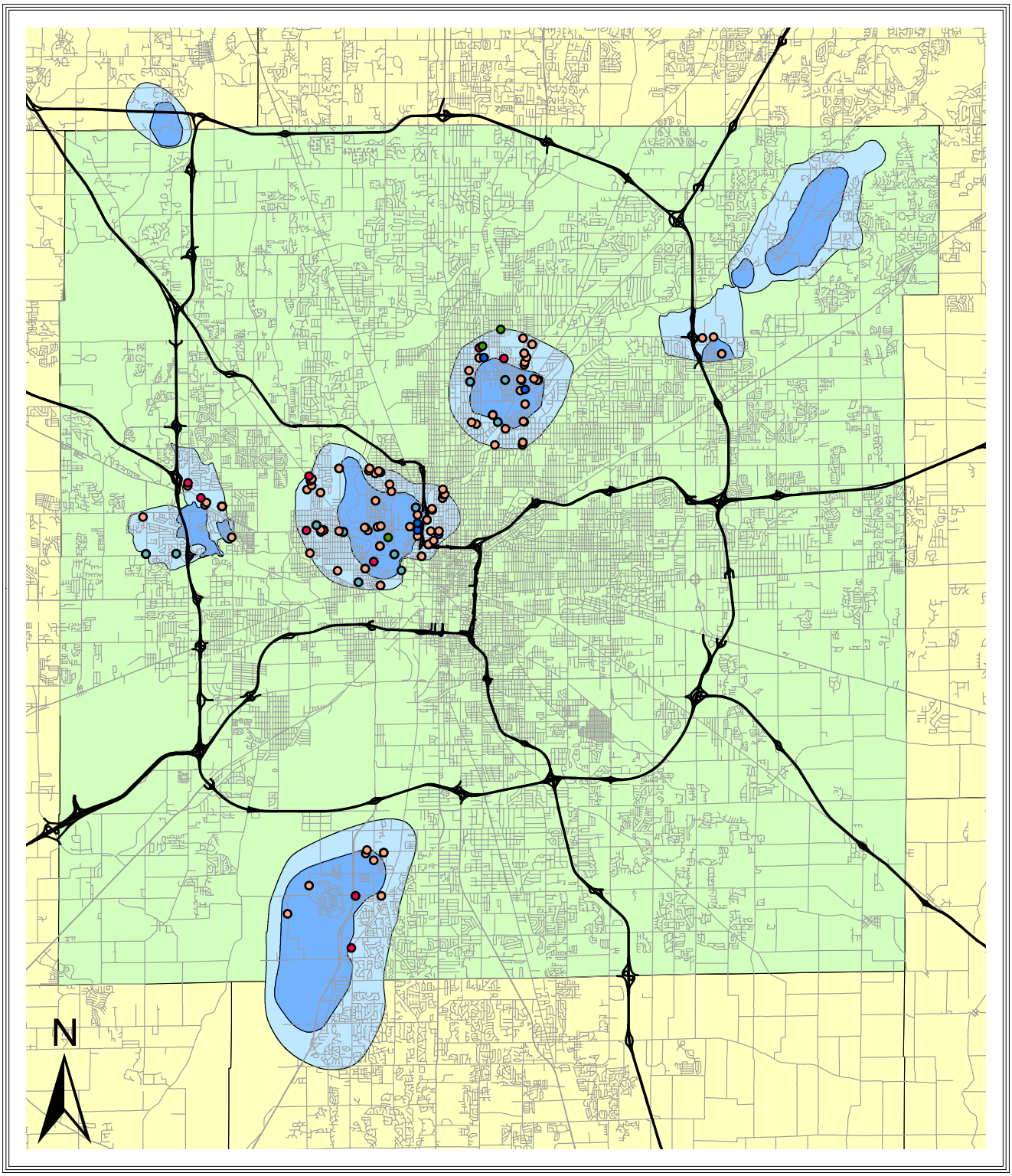
There are a total of 830 past and present USTs within Marion County's wellfields.

See Table 3 for more details.

0 1.25 2.5 5 Miles

Attachment 10 – Leaking Underground Storage Tank (LUST) Status Map

Leaking Underground Storage Tank (LUST) Status
Annual Report 2017



Legend

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

Leaking Underground Storage Tanks

Status

- Active
- Deactivated (no release confirmed)
- Discontinued (active)
- NFA
- Referred to another IDEM program

There are a total of 174 past and present LUSTs within Marion County's wellfields.

See Table 4 for more details.

0 1.25 2.5 5 Miles