

Michigan Department of Environment, Great Lakes, and Energy



**Results of the Fiscal Year 2019 Compliance Assistance and
Long-Term Monitoring of Institutional Controls Study**

Assessment of Local Ordinances that Limit or Prohibit the Use of Contaminated
Groundwater

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Background

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has approved the use of 45 local ordinances (Attachment 1) adopted in Michigan to reduce or restrict exposure to hazardous or regulated substances as part of remedial or corrective actions implemented under Michigan's environmental cleanup programs¹. Local ordinances that limit or prohibit the use of contaminated groundwater, prohibit the raising of livestock, prohibit development in certain locations, or restrict property to certain uses, may be considered for use as land or resource use restrictions². To explore the development of a regular and routine long-term monitoring program of local ordinances as part of an overall land or resource use restriction monitoring program, EGLE's Remediation and Redevelopment Division (RRD), developed a process and performed a review of the 45 local ordinances across 32 counties that limit or prohibit the use of contaminated groundwater across the state in 2019. Overall, the results showed no enforcement issues or violations of the ordinances. In addition, most local municipalities and local health departments were aware of the ordinances. Results of this assessment will be maintained and tracked for future routine monitoring of the effectiveness of groundwater use restriction ordinances enacted across Michigan.

Project Goal

Implementation and enforcement of local ordinances lies with the local government entity. The authority of government to exercise controls to protect the public's health, safety, and general welfare is referred to as "police power." In addition, local health departments administer well construction requirements and well permitting. As governmental staff turnover occurs, awareness and enforcement of local ordinances to limit or prohibit the use of contaminated groundwater is crucial to its protectiveness as a land or resource use restriction. Therefore, the 2019 project sought to assess and document governmental awareness of, and community compliance with, local ordinances.

Methodology

The project team developed a compliance checklist (Attachment 2) for each municipality that documented basic ordinance information including date of adoption and amendment(s) (if applicable), number of parcels subject to the ordinance, and whether a wellhead protection zone overlaps the restricted zone(s) of the ordinance. The checklist also documented contact with municipal offices and county health departments to gauge their awareness of the ordinance and whether any enforcement actions were taken regarding well installation. Finally, the checklist documented verification, by looking at EGLE's Wellogic database, of whether any wells were installed in one or more of the restricted zones after the ordinance was adopted or amended.

Results

Reviews of the individual ordinances was conducted by EGLE district project managers and enforcement coordinators between July 2019 and September 30, 2019. Generally, the results indicate that the ordinances are being complied with by the local units of government and are being used to appropriately prevent unauthorized use of groundwater within the existing zones. Specific results are summarized below:

- Awareness of Ordinance by local health department = 72 percent. In all but one instance the interviewer sent a copy of the ordinance to the local health department official.

¹ Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 201), and Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 213).

² Section 20121(8) of Part 201, and Section 21310a(3)(a) of Part 213.

- Awareness of Ordinance by local official/staff in charge of overseeing ordinance = 73 percent.
- Awareness of Ordinances by local officials and health departments after inquiry = 100 percent.
- Any enforcement actions taken regarding well installation = 0 percent. In no instance was any enforcement action needed to prevent well installation in prohibited areas.
- Identified abandoned wells that were properly plugged = 17 percent.
- Ordinances available on municipal website = 53 percent. Many communities did not have a web presence or did not include municipal ordinances on their web sites.
- Restricted zones in Wellhead Protection Areas (WHPAs) = 17 percent. Three of the seven WHPAs with restricted zones were evaluated for risks.
- There are 8,911.75 acres affected by the ordinances associated with the 57 zones, ranging in size from 1,654.9 acres to .67 acres. One ordinance includes the entire jurisdiction and therefore is not captured in the acreage calculation.
- 3,884 restricted parcels.

Recommendations

The study team determined that the local groundwater ordinances designed to limit or prohibit the use of contaminated groundwater are being followed. The project team recommends that RRD occasionally remind the local units of government and county health departments about the existence of the ordinance and its location on the Environmental Mapper. Finally, the study team intends to publish this report on the RRD Land or Resource Use Restriction website, along with a list of current local communities with groundwater ordinances relied on under Parts 201 and 213, and, in the near future, a model ordinance template and assessment checklist.

Attachments

Attachment 1 – List of Groundwater Use Restriction Ordinances

Attachment 2 – Groundwater Ordinance Compliance Monitoring Checklist

Exhibits

Exhibit 1 – Municipal Ordinances Location by RRD District

Exhibit 2 – List of Ordinances and Zones for Each Unit of Government by District

Exhibit 3 – Ordinances by County and Number of Restricted Areas by County

Exhibit 4 – Ordinance Filed by Year

Exhibit 5 – Ordinance Amendments Filed by Year

Exhibit 6 – Types of Land Uses Surrounding Restricted Zones/Ordinances

Attachment 1: List of Communities with Ordinances

There are currently 45 communities in 32 counties (including one county ordinance) in Michigan with groundwater use ordinances in place. Communities with filed ordinances related to one or more contaminated properties. This list is also published on the EGLE website at: https://www.michigan.gov/egle/0,9429,7-135-3311_4109_76351---,00.html

Specific ordinances can be found on EGLE's Environmental Mapper at: <https://www.mcgi.state.mi.us/environmentalmapper/>.

Attachment 2: Ordinance Compliance Monitoring Checklist



GROUNDWATER ORDINANCE COMPLIANCE MONITORING CHECKLIST

SECTION I. ORDINANCE INFORMATION

DEQ District Office: Choose an item.

DEQ Ordinance Reference Number(s):

Ordinance Title or Name:

Ordinance original Adoption or Enacted Date:

Has Ordinance Been Amended? YES NO
 If yes, please record date(s):

Was Ordinance or Amendment Recorded with the Register of Deeds (Part 213 Requirement)? YES NO
 If yes, please record liber and page:

Environmental Cleanup Program Addressed by Ordinance: Choose an item. Choose an item. Choose an item.

Number of Parcels Subject to Ordinance: _____ Total Acres Subject to Ordinance: _____

Number and name of Restricted Zone(s) listed in Ordinance:

Date each Restricted Zone adopted into Ordinance:

Presence of Restricted Zone(s) within a Wellhead Protection Area? YES NO
 If Yes, was Wellhead Protection Area evaluated for risk due to contamination left in place? YES NO
 Remarks:

Majority zoning/general land use for each Restricted Zone:

SECTION II. LOCAL UNIT OF GOVERNMENT AWARENESS OF ORDINANCE

City, Municipality, Township, or County Name:

Address: _____ Zip: _____ County: _____

City Staff Assigned to Oversee Ordinance (name and title):

Date Contacted:

Phone: _____ E-mail: _____

Is Person aware of Ordinance? YES NO
 If no, please send a copy of the Ordinance: Completed
 Remarks:

Were any enforcement actions taken regarding well installation? YES NO
 Remarks:

Is the Ordinance available on a City's web page? YES NO
 If yes, please insert web link:

SECTION III. LOCAL HEALTH DEPARTMENT AWARENESS OF ORDINANCE

Local Health Department Name:

Local Health Department County or Counties Represented:

Address: _____ Zip: _____

Environmental Health Director or Supervisor Contacted (name and title):

Date Contacted:

Phone: _____ E-mail: _____

Is Person aware of Ordinance? YES NO
 If no, please send a copy of the Ordinance: Completed
 Remarks:

Were any enforcement actions taken regarding well installation? YES NO
 Remarks:



GROUNDWATER ORDINANCE COMPLIANCE MONITORING CHECKLIST

SECTION IV. EVALUATION OF COMPLIANCE WITH ORDINANCE

Based on DEQ's Wellogic database, were any wells installed in one or more Restricted Zone(s) after Ordinance was Adopted or Amended? YES NO

If Yes, was it permitted in accordance with Ordinance or given an exception? YES NO

For identified Restricted Zone(s), were any identified abandoned wells properly plugged? YES NO

Remarks:

SECTION V: ADDITIONAL COMMENTS

- *Please include name(s) of the current DEQ project manager.*
- *Please include any DEQ site or facility ID number(s), SIGMA location code(s), and site or facility name(s) associated specific Restricted Zones in the Ordinance.*

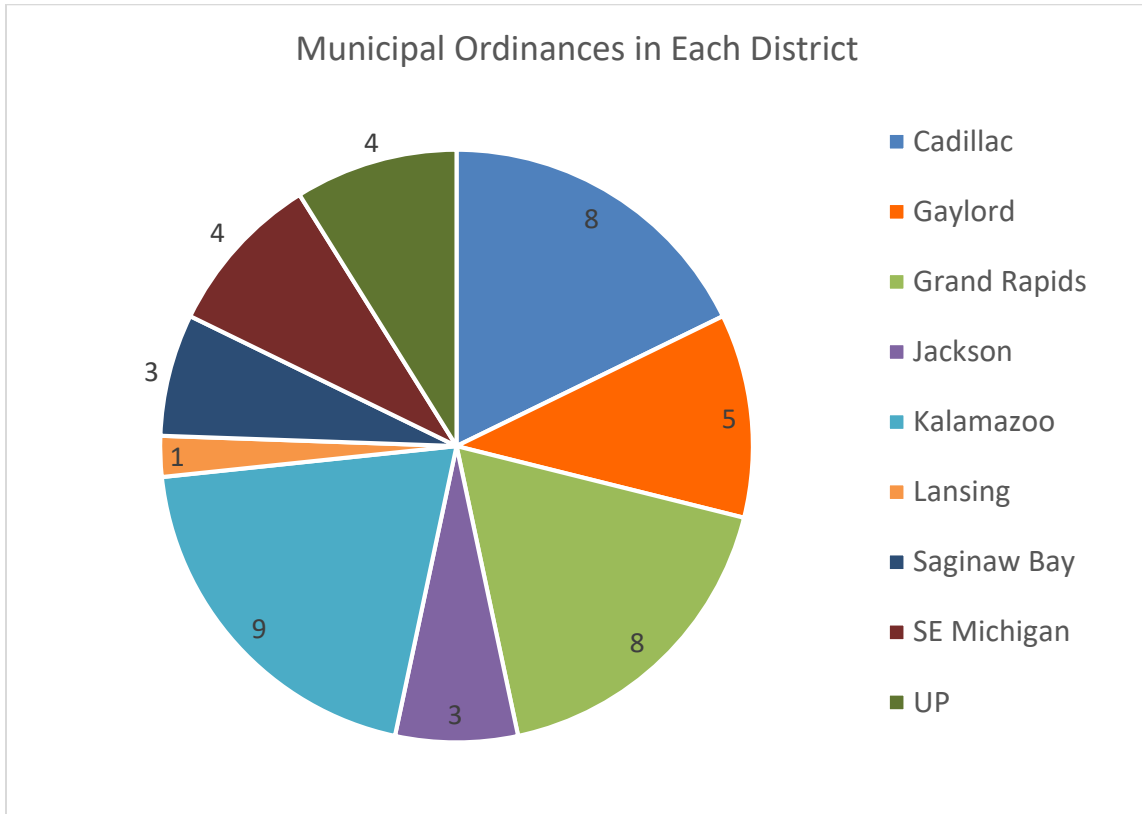
SECTION Vi: DEQ INFORMATION

DEQ STAFF:

EVALUATION COMPLETED DATE:

DEQ STAFF SIGNATURE:

Exhibit 1: Municipal Ordinances Locations by District



Ordinances are located in 45 communities in 32 different counties and include 57 different restricted zones (areas affiliated with specific facilities and or undefined areas of the community that are subject to the ordinance).

Exhibit 2: List of Ordinances and Zones for Each Unit of Government by District

List of Ordinances and Zones for Each Local Unit of Government by District

DEQ Reference Number	Facility Name	Local Unit of Government/Municipality	RRD District	Acreage	Zone or Local Unit of Government
ORD-RD-213-11-001	Ralphs Marathon	City of Evart	Cadillac	7.5977	Zone
ORD-RRD-201-05-001	Evart Products Co	City of Evart	Cadillac	153.5681	Zone
ORD-RRD-201-05-002	City of Evart	City of Evart	Cadillac		LUG
ORD-RRD-213-02-001	Bayview Party Store	City of Frankfort	Cadillac	9.8526	Zone
ORD-RRD-213-02-003	City of Frankfort	City of Frankfort	Cadillac		LUG
ORD-RRD-201-09-001	Industrial Plating Area	City of Ludington	Cadillac	218.3479	Zone
ORD-RRD-201-09-004	City of Ludington	City of Ludington	Cadillac		LUG
ORD-RRD-213-09-001	Wesco #28 - Blarney Castle Oil Company	City of Scottville	Cadillac	16.6962	Zone
ORD-RRD-213-17-001	Speedway LLC #6292	City of Scottville	Cadillac	26.1682	Zone
ORD-RRD-213-09-002	City of Scottville	City of Scottville	Cadillac		LUG
ORD-RRD-213-03-001	Crandall's Super Service	City of Traverse City	Cadillac	16.0322	Zone
ORD-RRD-201-03-001	Meach Cleaners	City of Traverse City	Cadillac	33.1189	Zone
ORD-RRD-213-03-003	City of Traverse City	City of Traverse City	Cadillac		LUG
ORD-RRD-201-15-004	Tublite Lagoon Property	Township of Richmond	Cadillac	1.4325	Zone
ORD-RRD-201-15-003	Township of Richmond	Township of Richmond	Cadillac		LUG
ORD-RRD-213-15-004	Novel Saco/Saco & Sons Inc.	Village of Kalkaska	Cadillac	30.1715	Zone
ORD-RRD-213-15-003	Village of Kalkaska	Village of Kalkaska	Cadillac		LUG
ORD-RRD-201-09-002	Texas Instruments Central Lake	Central Lake Township	Gaylord	31.0706	Zone
ORD-RRD-201-09-003	Central Lake Township	Central Lake Township	Gaylord		LUG
ORD-RRD-213-15-002	Sparkle Mart South	City of Alpena	Gaylord	5.4614	Zone
ORD-RRD-213-15-001	City of Alpena	City of Alpena	Gaylord		LUG
ORD-RRD-213-97-005	Cit of Charlevoix DPW Garage	City of Charlevoix	Gaylord	20.8011	Zone
ORD-RRD-213-08-001	Charlexvoix Municipal Well Field	City of Charlevoix	Gaylord	191.3887	Zone
ORD-ERD-213-02-001	Harbor Industries	City of Charlevoix	Gaylord	278.1678	Zone
ORD-RRD-213-04-005	Charlexvoix, City of	City of Charlevoix	Gaylord	298.969	Zone
ORD-RRD-213-02-004	City of Charlevoix	City of Charlevoix	Gaylord		LUG
ORD-RRD-213-97-001	Short Stop Inc.	Village of Bellaire	Gaylord	12.2458	Zone
ORD-RRD-213-97-004	Village of Bellaire	Village of Bellaire	Gaylord		LUG
ORD-RRD-213-00-001	The Sunny Spot	Village of Roscommon	Gaylord	4.1373	Zone
ORD-RRD-213-99-001	Village Roscommon	Village of Roscommon	Gaylord		LUG
ORD-RRD-201-07-001	Wexford Co Sanitary LF	Cedar Creek Township	Grand Rapids	1,294.41	Zone
ORD-RRD-201-07-003	Cedar Creek Township	Cedar Creek Township	Grand Rapids		LUG
ORD-RRD-201-02-004	North-End Redevelopment Area	City of Grand Haven	Grand Rapids	41.8337	Zone
ORD-RRD-201-01-001	City of Grand Haven	City of Grand Haven	Grand Rapids		LUG
ORD-RRD-201-02-001	City of Grand Rapids	City of Grand Rapids	Grand Rapids		LUG
ORD-RRD-201-14-004	Ionia City Landfill	City of Ionia	Grand Rapids	114.8192	Zone
ORD-RRD-201-14-003	City of Ionia	City of Ionia	Grand Rapids		LUG
ORD-RRD-201-15-002	Anderson Road	City of Montague	Grand Rapids	196.8678	Zone
ORD-RRD-201-15-001	City of Montague	City of Montague	Grand Rapids		LUG
ORD-RRD-201-97-001	Nordco Drum - Getty St	City of Muskegon	Grand Rapids	6.8479	Zone
ORD-RRD-201-16-001	Mobil Oil - Sisson & McCracken	City of Muskegon	Grand Rapids	14.1812	Zone
ORD-RRD-201-07-002	Shaw Walker	City of Muskegon	Grand Rapids	139.6231	Zone
ORD-RRD-201-17-002	Burgess-Norton Manufacturing	City of Muskegon	Grand Rapids	255.3001	Zone
ORD-RRD-201-17-001	Ambrosia Street GW Contamination	City of Muskegon	Grand Rapids	263.6868	Zone
ORD-RRD-201-07-004	City of Muskegon	City of Muskegon	Grand Rapids		LUG
ORD-ERD-201-97-002	Hitachi Magnetics	Home Township	Grand Rapids	171.2914	Zone

List of Ordinances and Zones for Each Local Unit of Government by District

ORD-ERD-201-97-001	Home Township	Home Township	Grand Rapids		LUG
ORD-RRD-201-09-006	Southwest Ottawa County Landfill	Ottawa County	Grand Rapids	1654.8678	Zone
ORD-RRD-201-09-005	Ottawa County Contaminated GW Use Ordinance	Ottawa County	Grand Rapids		LUG
ORD-RRD-201-06-002	Spring Lake Citgo	Village of Spring Lake	Grand Rapids	13.5094	Zone
ORD-RRD-201-06-001	Burnside Manufacturing	Village of Spring Lake	Grand Rapids	79.9288	Zone
ORD-RRD-201-06-003	Village of Spring Lake	Village of Spring Lake	Grand Rapids		LUG
ORD-OWMRP-111-14-002	Tecumseh Products	City of Tecumseh	Jackson	389.9677	Zone
ORD-OWMRP-111-14-001	City of Tecumseh	City of Tecumseh	Jackson		LUG
ORD-RD-213-12-002	Eastern Michigan University	City of Ypsilanti	Jackson	7.9571	Zone
ORD-RD-213-12-001	City of Ypsilanti	City of Ypsilanti	Jackson		LUG
ORD-RRD-213-03-002	Dexter Sunoco	Village of Dexter	Jackson	31.0427	Zone
ORD-RRD-213-03-004	Village of Dexter	Village of Dexter	Jackson		LUG
ORD-RRD-201-98-002	Bedford Township	Bedford Township	Kalamazoo	69.8776	Zone/LUG
ORD-RRD-213-07-001	Miller Brothers Service	City of Battle Creek	Kalamazoo	12.5326	Zone
ORD-RRD-201-98-001	Cereal City LF	City of Battle Creek	Kalamazoo	610.687	Zone
ORD-RRD-213-07-002	City of Battle Creek	City of Battle Creek	Kalamazoo		LUG
ORD-RRD-201-06-005	Electrovoice, Inc.	City of Buchanan	Kalamazoo	208.1799	Zone
ORD-RRD-201-06-004	City of Buchanan	City of Buchanan	Kalamazoo		LUG
ORD-OWMRP-111-16-002	National Copper Products	City of Dowagiac	Kalamazoo	96.7777	Zone
ORD-OWMRP-111-16-001	City of Dowagiac	City of Dowagiac	Kalamazoo		LUG
ORD-RRD-213-00-002	AUSCO Products Inc.	City of St. Joseph	Kalamazoo	No acreage	Zone
ORD-RRD-213-04-004	St. Joseph DPW	City of St. Joseph	Kalamazoo	No acreage	Zone
ORD-RRD-213-00-004	City of St. Joseph	City of St. Joseph	Kalamazoo		LUG
ORD-WRD-201-14-001	Abbott Laboratories, Ross Products Div.	Township of Sturgis	Kalamazoo	997.2825	Zone
ORD-WRD-201-14-002	Township of Sturgis	Township of Sturgis	Kalamazoo		LUG
ORD-RRD-213-02-002	Village of Schoolcraft	Village of Schoolcraft	Kalamazoo	0.6737	Zone/LUG
ORD-RRD-201-01-002	Village of Tekonsha	Village of Tekonsha	Kalamazoo		LUG
ORD-RRD-201-14-007	Brighton Twp Dump	Charter Township of Brighton	Lansing	11.7363	Zone
ORD-RRD-201-14-008	Charter Township of Brighton	Charter Township of Brighton	Lansing		LUG
ORD-RD-201-12-002	Hedblum Industries	AuSable Township	Saginaw Bay	20.1552	Zone
ORD-RD-201-12-001	AuSable Township	AuSable Township	Saginaw Bay		LUG
ORD-RRD-201-14-006	Clare Water Supply	City of Clare	Saginaw Bay	229.0458	Zone
ORD-RRD-201-14-005	City of Clare	City of Clare	Saginaw Bay		LUG
ORD-RRD-201-04-001	City of East Tawas	City of East Tawas	Saginaw Bay		LUG
ORD-RRD-201-95-001	City of Hamtramck	City of Hamtramck	Southeast MI		LUG
ORD-RRD-201-13-002	RACER - City of Pontiac	City of Pontiac	Southeast MI	92.1495	Zone
ORD-RRD-201-13-001	City of Pontiac	City of Pontiac	Southeast MI		LUG
ORD-RRD-201-02-002	ITT Automotive	City of Rochester	Southeast MI	17.4385	Zone
ORD-RRD-201-02-003	City of Rochester	City of Rochester	Southeast MI		LUG
ORD-RRD-201-97-002	City of Roseville	City of Roseville	Southeast MI		LUG
ORD-RRD-213-97-003	First National Bank - Iron Mountain	City of Iron Mountain	Upper Peninsula	66.8853	Zone
ORD-RRD-213-97-002	City Of Iron Mountain	City of Iron Mountain	Upper Peninsula		LUG
ORD-RRD-201-98-003	Res Wells Rock	Maple Ridge Township	Upper Peninsula	184.9737	Zone
ORD-RRD-201-98-004	Maple Ridge Township	Maple Ridge Township	Upper Peninsula		LUG
ORD-RRD-213-00-003	Village of Chatham	Village of Chatham	Upper Peninsula		LUG
ORD-RRD-201-99-002	UPPCO - Village of L'Anse	Village of L'Anse	Upper Peninsula	261.9981	Zone
ORD-RRD-201-99-004	Village of L'Anse	Village of L'Anse	Upper Peninsula		LUG
			Total Acreage	8911.7527	

Exhibit 3: Number of Ordinances by County and Number of Restricted Areas

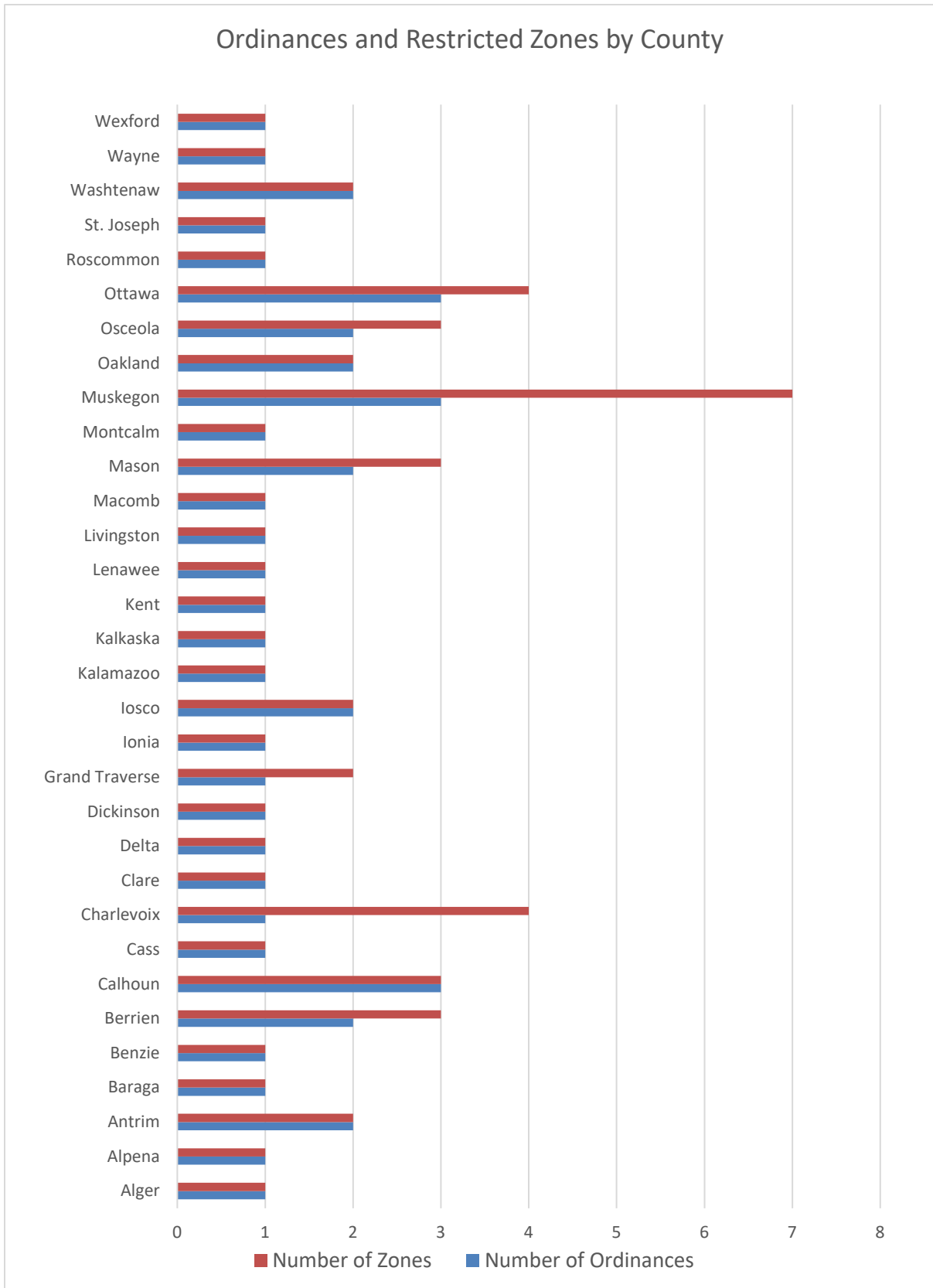


Exhibit 4: Ordinances Filed by Year

Ordinances filed by Year for Part 201, 213, and 111 Related Sites				
Year Filed	Part 201	Part 213	Other/Part 111	Total Number of Ordinances by Year
1994	0	1	0	1
1995	1	0	0	1
1996	1	0	0	1
1997	2	1	0	3
1998	2	2	0	4
1999	2	3	0	5
2000	0	1	0	1
2001	2	0	0	2
2002	2	1	0	3
2003	0	1	0	1
2004	3	0	0	3
2005	1	0	0	1
2007	2	1	0	3
2009	2	1	0	3
2012	1	1	0	2
2013	1	0	0	1
2014	3	0	1	4
2015	3	2	0	5
2016	0	0	1	1
Totals	28	15	2	45

Ordinances have been filed since 1994 for Part 213 Leaking Underground Storage Tank (LUST) sites, and since 1995 for Part 201 sites. Ordinances related to Part 111, Resource Management Division/Waste sites were filed in 2014 and 2016.

Exhibit 5: Ordinance Amendments Filed by Year

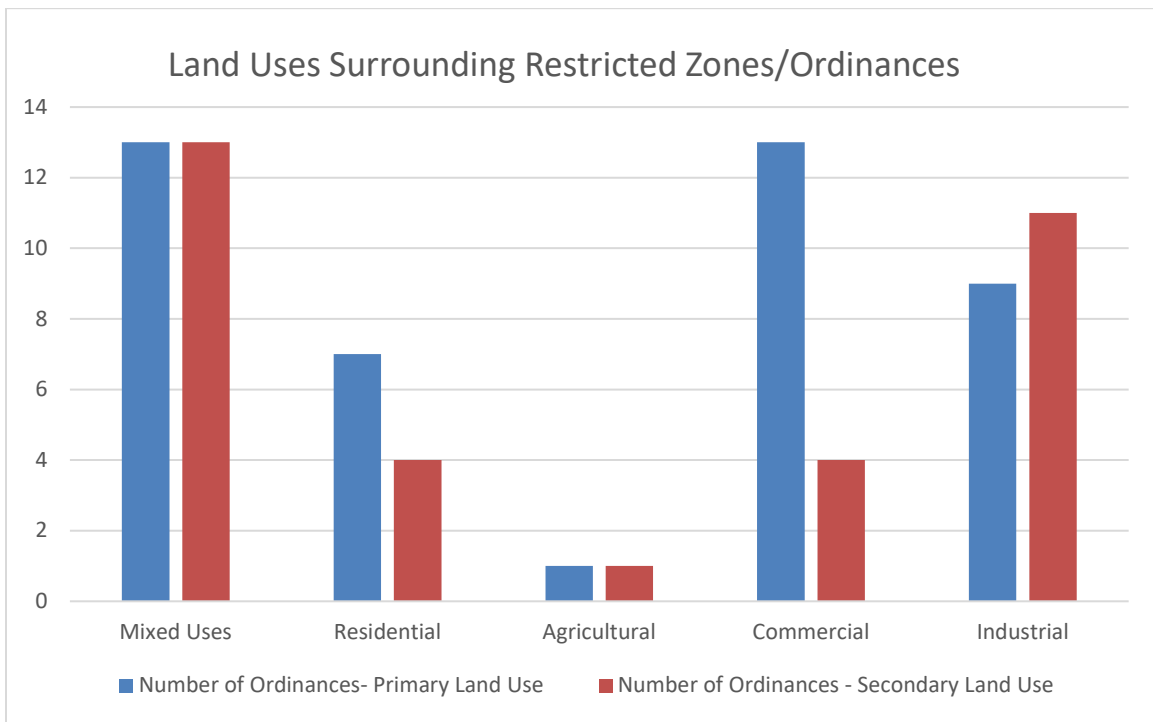
Amendments Filed per Year			
Year Filed	Part 201	Part 213	Total Number of Amendments by Year
1997	1	0	1
1999	1	0	1
2001	1	0	1
2002	0	1	1
2003	3	1	4
2006	1	0	1
2008	0	1	1
2011	0	1	1
2017	0	1	1
2019	1	0	1
Totals	8	5	13

Ordinance amendments adding new restrictive zones, have been filed since 1997, all of which included initial ordinances filed previously.

Exhibit 6: Land Uses Surrounding Restricted Zones/Ordinances

The primary land uses for the area surrounding the restricted zones/ordinances is as follows:

Primary Land Uses	Number of Ordinances	Secondary Land Uses	Number of Ordinances
Mixed uses	13	Mixed uses	13
Residential	7	Residential	4
Agricultural	1	Agricultural	1
Commercial	13	Commercial	4
Industrial	9	Industrial	11



Other Information on Ordinances and Restrictive Covenants

EGLE’s website has many resources to help communities determine the types of groundwater use restrictions that will work for their individual circumstances. The link will take you to those resources: https://www.michigan.gov/egle/0,9429,7-135-3311_4109_76351---,00.html.