



GISday 2016

Geo-enable to Bring Data to Life for Justice

Self-Represented Litigation Network
www.srln.org

WELCOME

Alison will lead the Webinar and present a SRLN story map that is providing demographic and technology data on the communities served by civil courts.



ALISON DAVIS-HOLLAND
GIS/Data Manager
Self-Represented Litigation Network
(SRLN)

ABOUT SRLN

- A nonprofit connecting professionals who champion justice system reforms for self-represented litigants
- Part of the Esri's Nonprofit Organization Program
- Hosting this Webinar as part of GIS Day and National Geographic's Geography Awareness Week
- New working group connecting professionals and supporting GIS/Data efforts for justice



JUSTICE

- Distributive justice (fair share)
- Procedural justice (fair play)
- Restorative justice (putting things back as they should be)
- Retributive (punishment)

Civil justice is intertwined with criminal justice, community health, environmental justice, health equity, and more.



WHY GIS FOR JUSTICE?

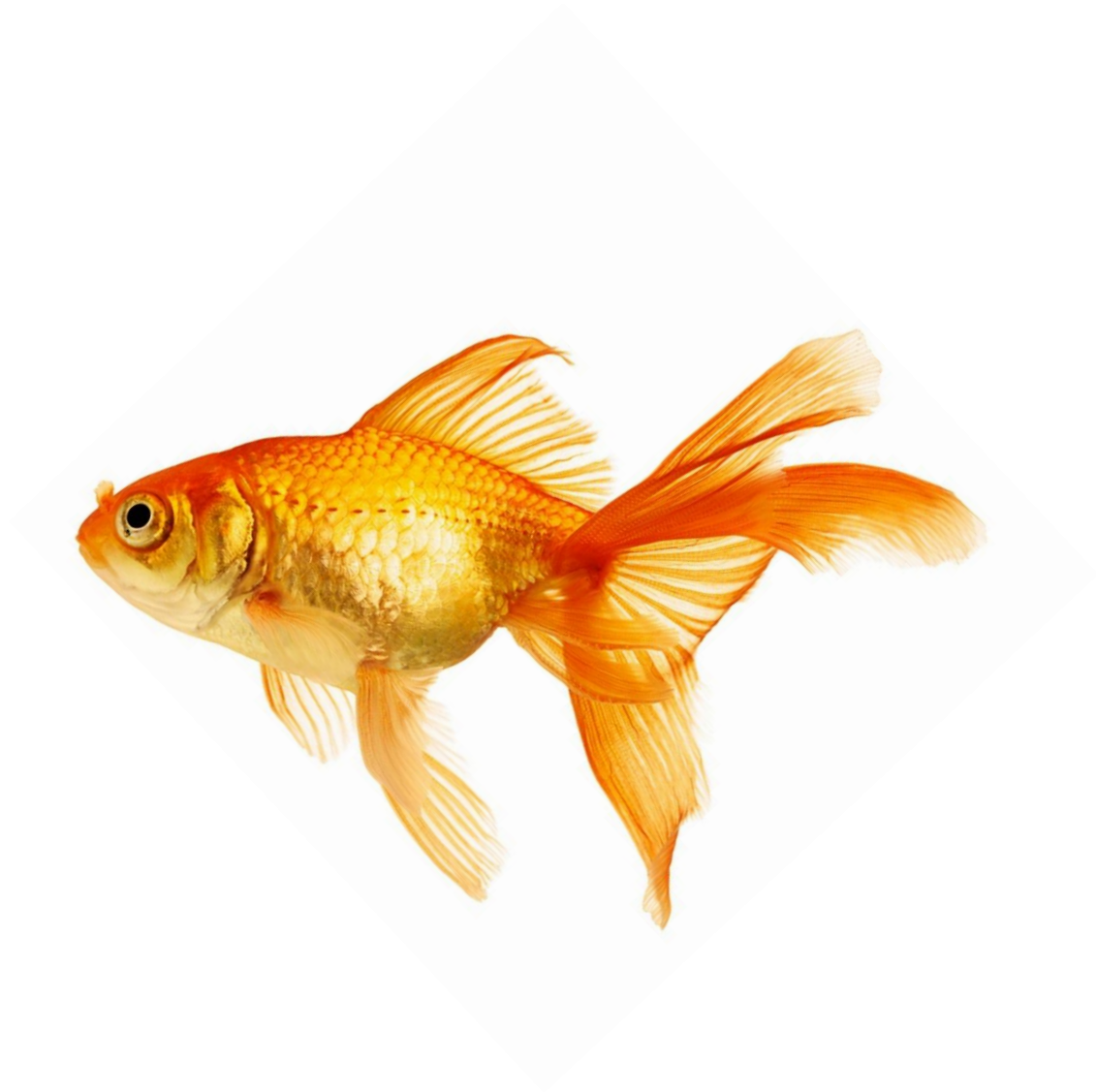
“It is no accident that access to justice pioneers have always been the leaders in GIS within our community. It is because we believe in context, in data, in transparency, and in efficient and effective use of resources guided by data.”

-Richard Zorza

Access to Justice Advocate
accesstojustice.net

Spatial thinking has the power to inform decision making, to influence public opinion, and to communicate complicated data more simply.

SCARCE COMMODITY



GOALS OF THIS WEBINAR

Introduce Geographic Information Systems

What is this “system” exactly?
And how can it help advance justice?



Reveal how simple it can be to geo-enable your data

So that you can start thinking about what data to collect and use



Provide real world examples of GIS in action

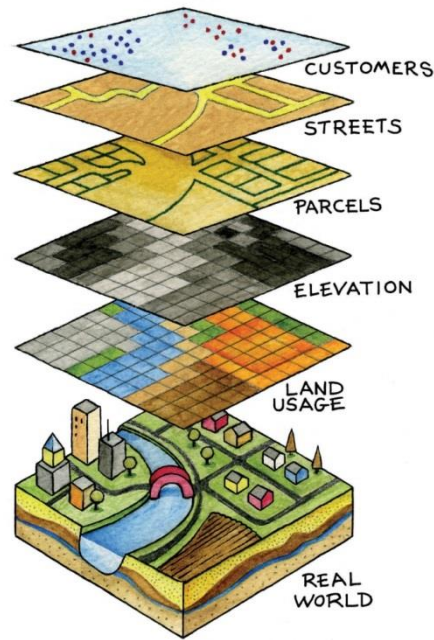
So that you can see practical applications of GIS



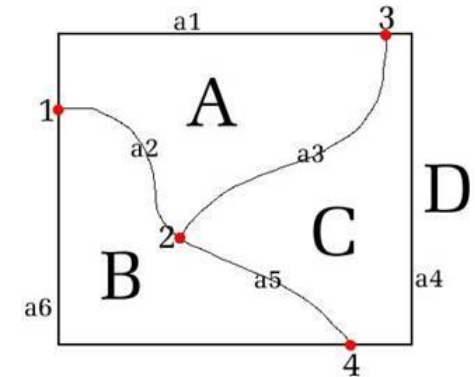
GIS IS A THINKING MAP

Connects map features to data and uses topology to analyze space:

- Location
- Overlays
- Distance
- Adjacent areas
- Connections
- Comparisons
- Distribution
- Patterns
- Scarcity
- Relationships
- Correlations
- Change over time



	A	B	C
1			
2			
3			
4			
5			
6			
7			



Map features

+

Data

+

Geometry/Topology



HOW IT WORKS...

MAP FEATURES AND DATA

■ Points



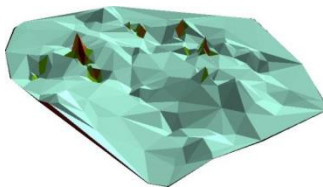
■ Lines



■ Polygons



■ Surfaces



WHY IS MAPPING SO EFFECTIVE?

Our brains are wired for it

Our hippocampus is the center of spatial memory. Unlike other portions of the brain that filter out information that is inconsistent with one's world view, the hippocampus wants context to re-orient the mind to changing environment. Visual data and maps gives the viewer that opportunity.



Visual/spatial information

Picture is worth 1,000 words

Easy to assimilate

More compelling than text alone



75% of people

think visual/spatially

45% uses both visual/spatial thinking and thinking in the form of words

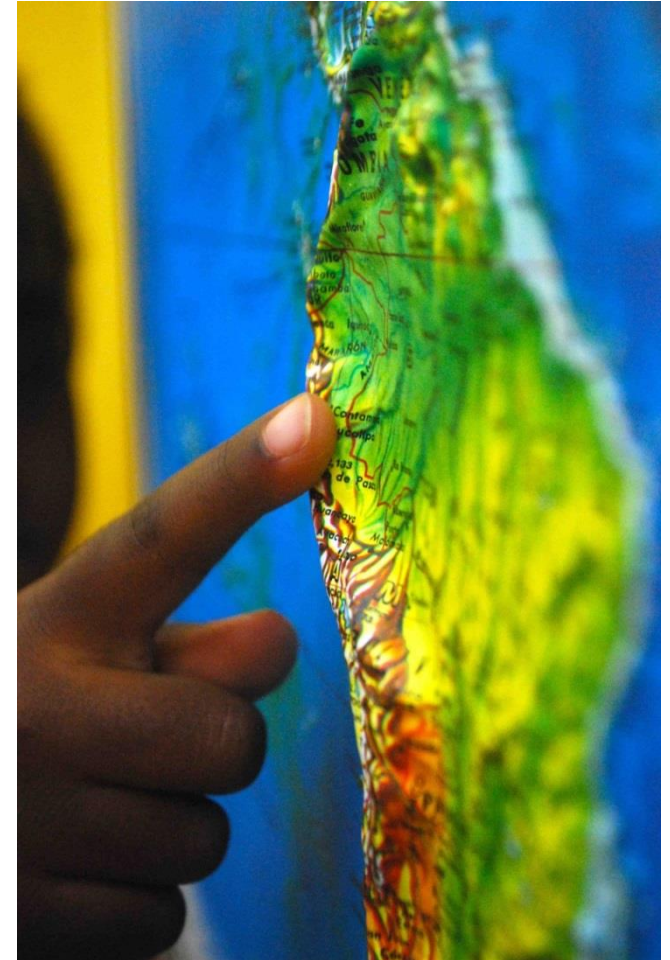
30% of the population strongly uses visual/spatial thinking

25% thinks exclusively in words.



POWER OF MAPPING AND GIS

- Enhanced visualization
- Distills complex data
- Effective communication
- Increased efficiency
- More informed decision making
- Cost savings
- Better management of resources
- Democratization of data



GOT GIS DATA?

80%
of all government information has a
geospatial component



125,000+
is the number of geospatial datasets
currently available on Data.gov to
download for free



Growing

U.S. Bureau of Labor report that the
geospatial sector has been growing by
about 35% per year, with the
commercial side growing at 100% per
year.



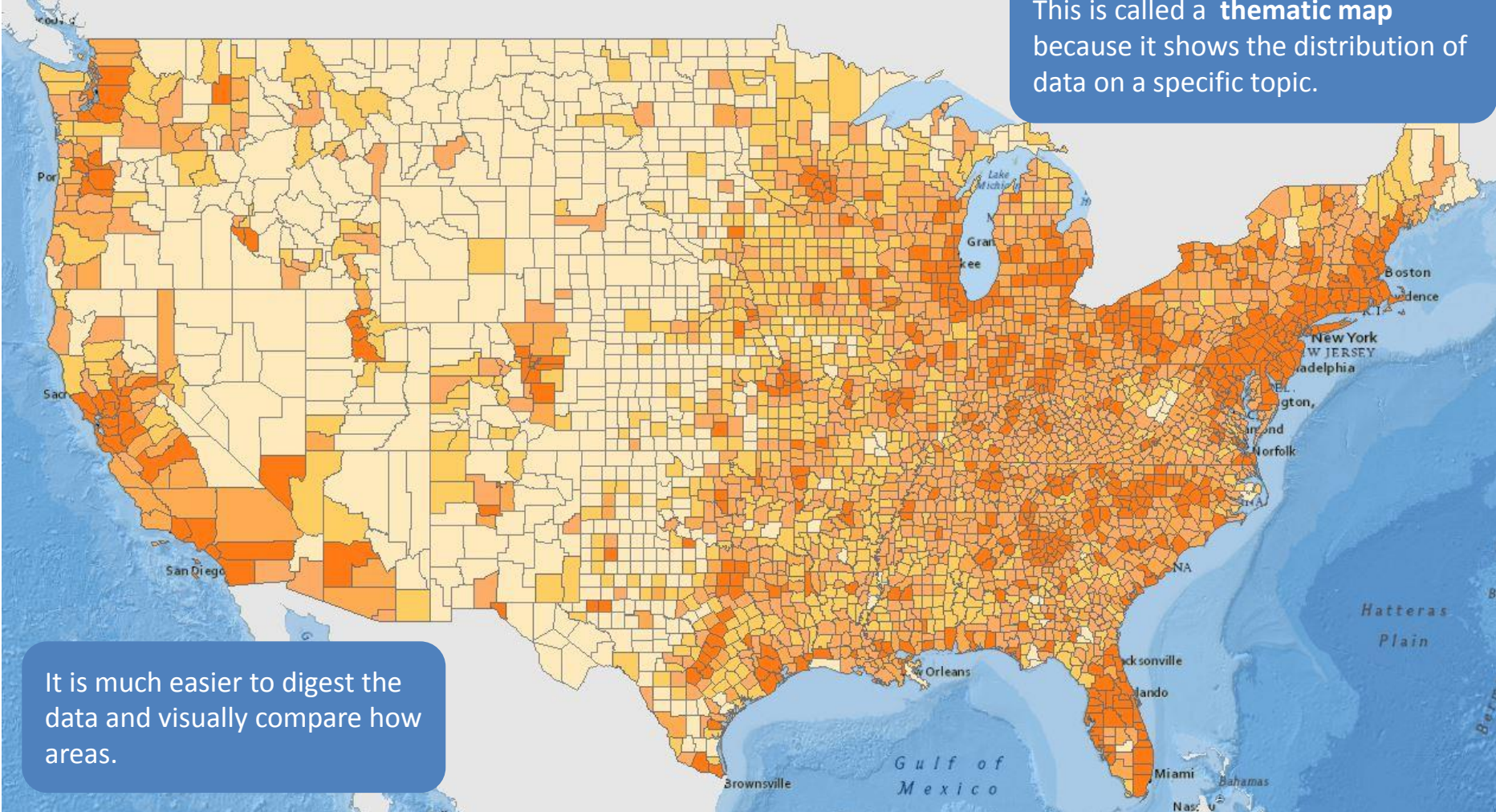
VISUALIZE DATA: TABULAR (BEFORE)

NAME	STATE_NAME	STATE_FIPS	CNTY_FIPS	FIPS	POP2000	POP00_SQMI	WHITE	BLACK	AMERI_ES	ASIAN	HAWN_PI	OTHER	MULT_RACE	HISPANIC	MALES	FEMALES	AGE_UNDR5
Lake of the Woods	Minnesota	27	077	27077	4522	2.5	4396	13	51	11	0	5	46	29	2272	2250	188
Ferry	Washington	53	019	53019	7260	3.2	5480	15	1327	21	4	162	251	205	3764	3496	394
Stevens	Washington	53	065	53065	40066	15.8	36078	111	2266	193	66	271	1081	739	19940	20126	2425
Okanogan	Washington	53	047	53047	39564	7.4	29799	109	4537	176	28	3791	1124	5688	19706	19858	2493
Pend Oreille	Washington	53	051	53051	11732	8.2	10973	17	338	74	24	67	239	241	5881	5851	637
Boundary	Idaho	16	021	16021	9871	7.7	9401	16	199	57	7	85	106	335	4971	4900	687
Lincoln	Montana	30	053	30053	18837	5.1	18100	21	226	59	7	74	350	271	9542	9295	937
Flathead	Montana	30	029	30029	74471	14.2	71689	113	856	346	44	305	1118	1061	36911	37560	4415
Glacier	Montana	30	035	30035	13247	4.4	4693	11	8186	9	7	24	317	159	6553	6694	1075
Toole	Montana	30	101	30101	5267	2.7	4945	8	168	16	1	17	112	61	2716	2551	282
Liberty	Montana	30	051	30051	2158	1.5	2141	0	2	7	0	2	6	4	1063	1095	109
Hill	Montana	30	041	30041	16673	5.7	13263	15	2884	62	3	59	387	208	8306	8367	1190
Sheridan	Montana	30	091	30091	4105	2.4	3982	4	50	12	1	8	48	44	2039	2066	183
Divide	North Dakota	38	023	38023	2283	1.8	2260	0	3	12	0	4	4	14	1146	1137	70
Burke	North Dakota	38	013	38013	2242	2	2225	3	5	3	0	1	5	8	1130	1112	82
Renville	North Dakota	38	075	38075	2610	2.9	2551	6	17	12	0	3	21	19	1307	1303	113
Bottineau	North Dakota	38	009	38009	7149	4.2	6950	16	104	13	1	8	57	35	3600	3549	280
Rolette	North Dakota	38	079	38079	13674	14.6	3435	10	9983	10	0	16	220	110	6741	6933	1208
Towner	North Dakota	38	095	38095	2876	2.8	2799	2	59	2	0	1	13	5	1416	1460	137
Cavalier	North Dakota	38	019	38019	4831	3.2	4739	7	25	5	0	5	50	31	2402	2429	208
Pembina	North Dakota	38	067	38067	8585	7.7	8198	13	123	18	0	109	124	264	4305	4280	432
Kittson	Minnesota	27	069	27069	5285	4.8	5184	8	14	13	0	20	46	67	2621	2664	336
Roseau	Minnesota	27	135	27135	16338	9.7	15671	21	232	283	3	13	115	71	8367	7971	1185
Blaine	Montana	30	005	30005	7009	1.7	3685	12	3180	6	2	16	108	70	3460	3549	569
Phillips	Montana	30	071	30071	4601	0.9	4115	7	350	15	1	17	96	53	2305	2296	227
Valley	Montana	30	105	30105	7675	1.5	6765	10	723	19	1	20	137	60	3802	3873	422
Daniels	Montana	30	019	30019	2017	1.4	1937	0	26	5	2	12	35	32	988	1029	87
Whatcom	Washington	53	073	53073	166814	66.6	147485	1150	4709	4637	235	4159	4439	8687	82188	84626	10210
Bonner	Idaho	16	017	16017	36835	19.2	35574	40	322	101	17	155	626	604	18449	18386	2100
Ward	North Dakota	38	101	38101	58795	28.6	54327	1305	1215	483	36	428	1001	1125	29284	29511	4348
Koochiching	Minnesota	27	071	27071	14355	4.6	13798	27	309	25	9	11	176	81	7123	7232	779
Skagit	Washington	53	057	53057	102979	53.6	89070	450	1909	1538	163	7381	2468	11536	50982	51997	6718
Williams	North Dakota	38	105	38105	19761	9.2	18367	24	869	36	2	27	436	185	9687	10074	1135
McHenry	North Dakota	38	049	38049	5987	3.1	5911	5	24	2	0	3	42	24	3051	2936	294
St. Louis	Minnesota	27	137	27137	200528	29.7	190211	1704	4074	1333	54	451	2701	1597	98629	101899	10455
San Juan	Washington	53	055	53055	14077	22.7	13372	36	117	125	12	128	287	338	6860	7217	525
Roosevelt	Montana	30	085	30085	10620	4.5	4347	5	5921	46	5	27	269	131	5264	5356	858
Mountrail	North Dakota	38	061	38061	6631	3.4	4376	6	1988	14	3	17	227	87	3262	3369	431
Marshall	Minnesota	27	089	27089	10155	5.6	9873	10	29	17	0	165	61	298	5157	4998	583
Ramsey	North Dakota	38	071	38071	12066	9.3	11138	25	651	31	3	20	198	63	5954	6112	682
Walsh	North Dakota	38	099	38099	12389	9.6	11752	41	126	24	2	311	133	700	6196	6193	711
Beltrami	Minnesota	27	007	27007	39650	13	30394	142	8071	225	8	82	728	394	19557	20093	2825
Pierce	North Dakota	38	069	38069	4675	4.3	4605	5	32	12	0	2	19	28	2297	2378	246
Chelan	Washington	53	007	53007	66616	22.3	55711	172	661	451	77	8121	1423	12831	33158	33458	4750
Pondera	Montana	30	073	30073	6424	3.9	5374	6	929	9	3	8	95	54	3169	3255	398
Ciallam	Washington	53	009	53009	64525	24.2	57505	545	3303	731	104	761	1576	2203	32054	32471	3313

VISUALIZE DATA: NOW ON A MAP

Population per square mile

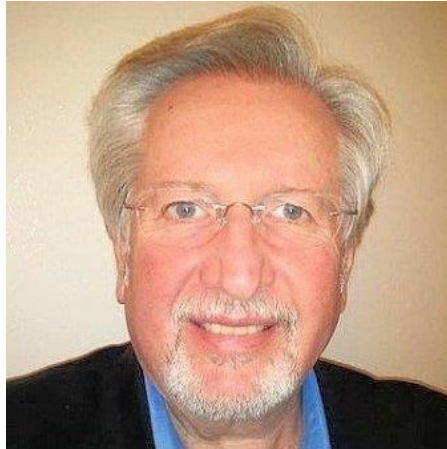
This is called a **thematic map** because it shows the distribution of data on a specific topic.



It is much easier to digest the data and visually compare how areas.

GIS FOR JUSTICE REAL-WORLD EXAMPLE

Bob will discuss how GIS helped them identify who was at-risk for lead poisoning in Toledo, Ohio, and advocate for lead-safe environments for our children and families.



BOB COLE

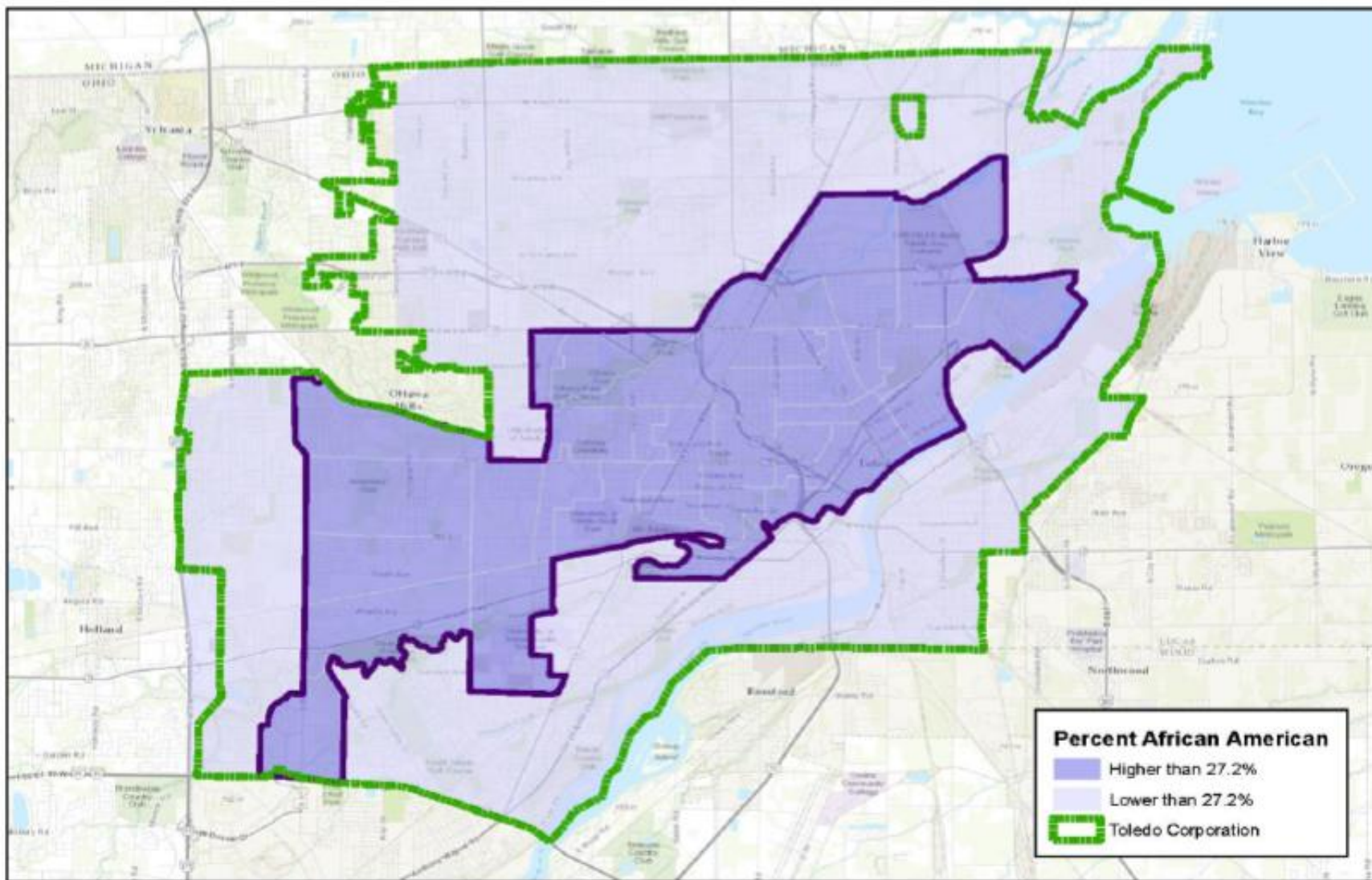
Managing Attorney - Meaningful and Appropriate Education Practice Group at Advocates for Basic Legal Equality, Inc. (ABLE)

The Effects of
Lead Poisoning
on African-American and
Low-Income Families
in Toledo, Ohio

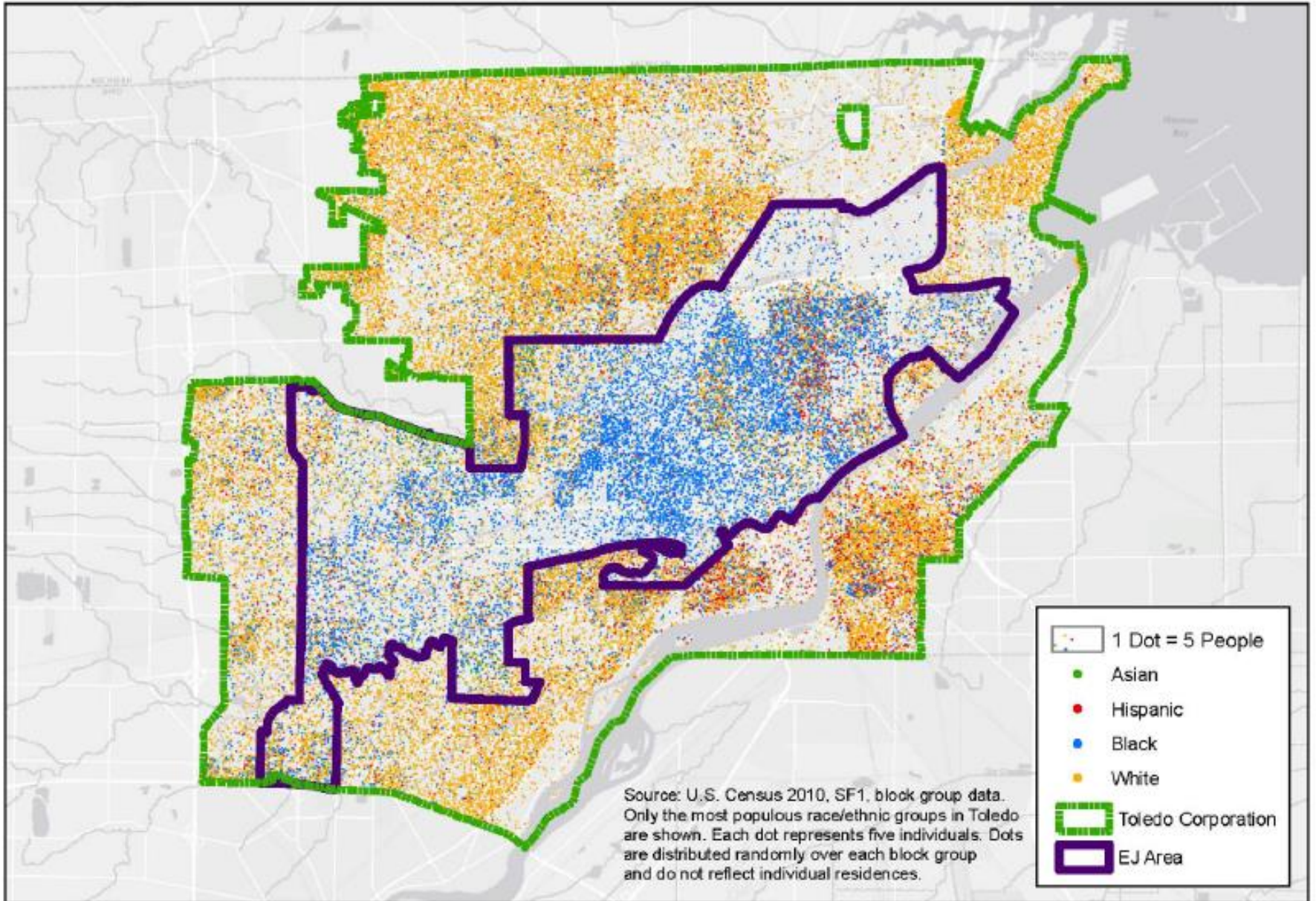
March 2016

This report was prepared on behalf of the
Toledo Lead Poisoning Prevention Coalition

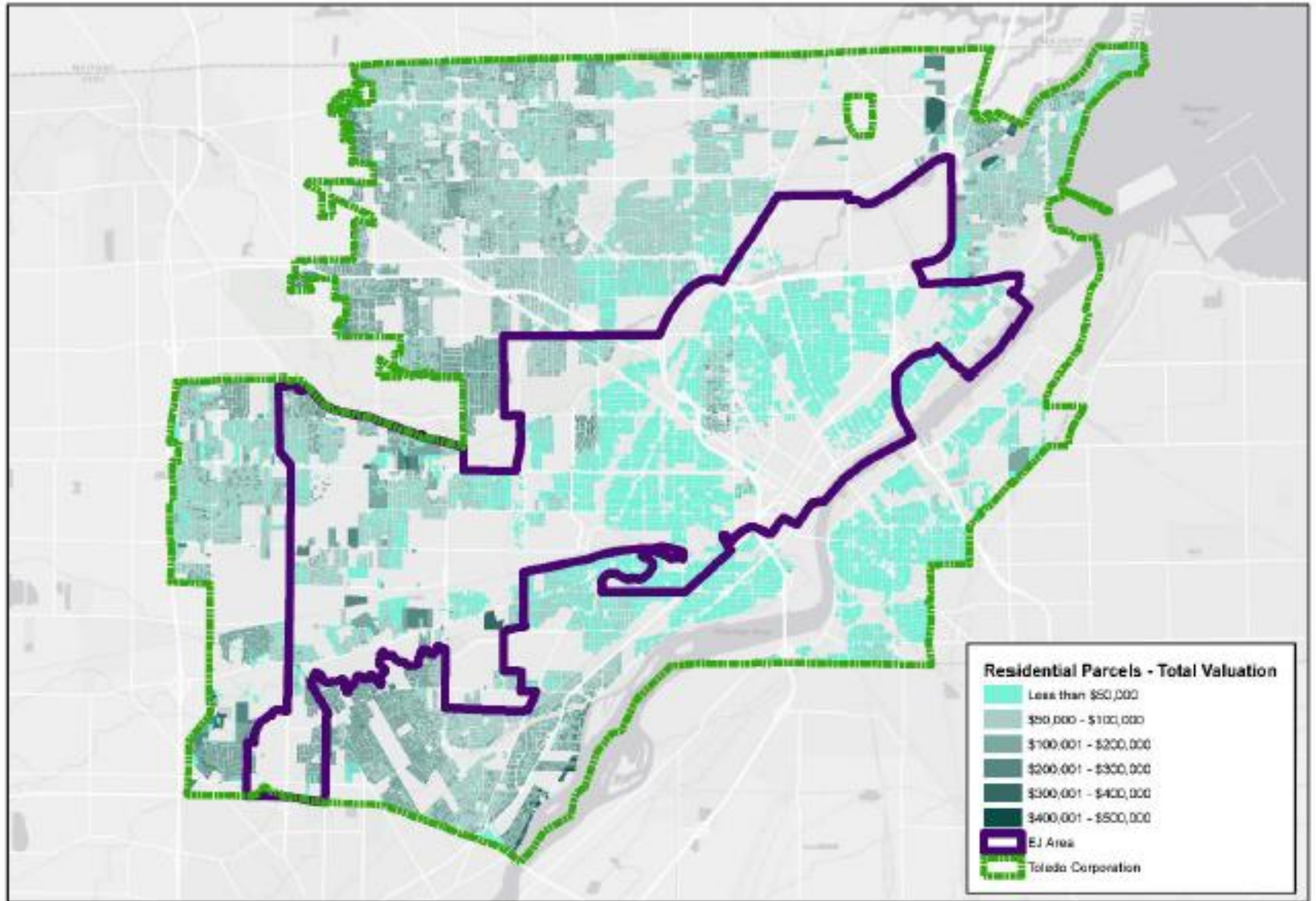
Environmental Justice Population: Census Tracts with a Higher Percentage of African Americans than Toledo City Overall (27.2%)



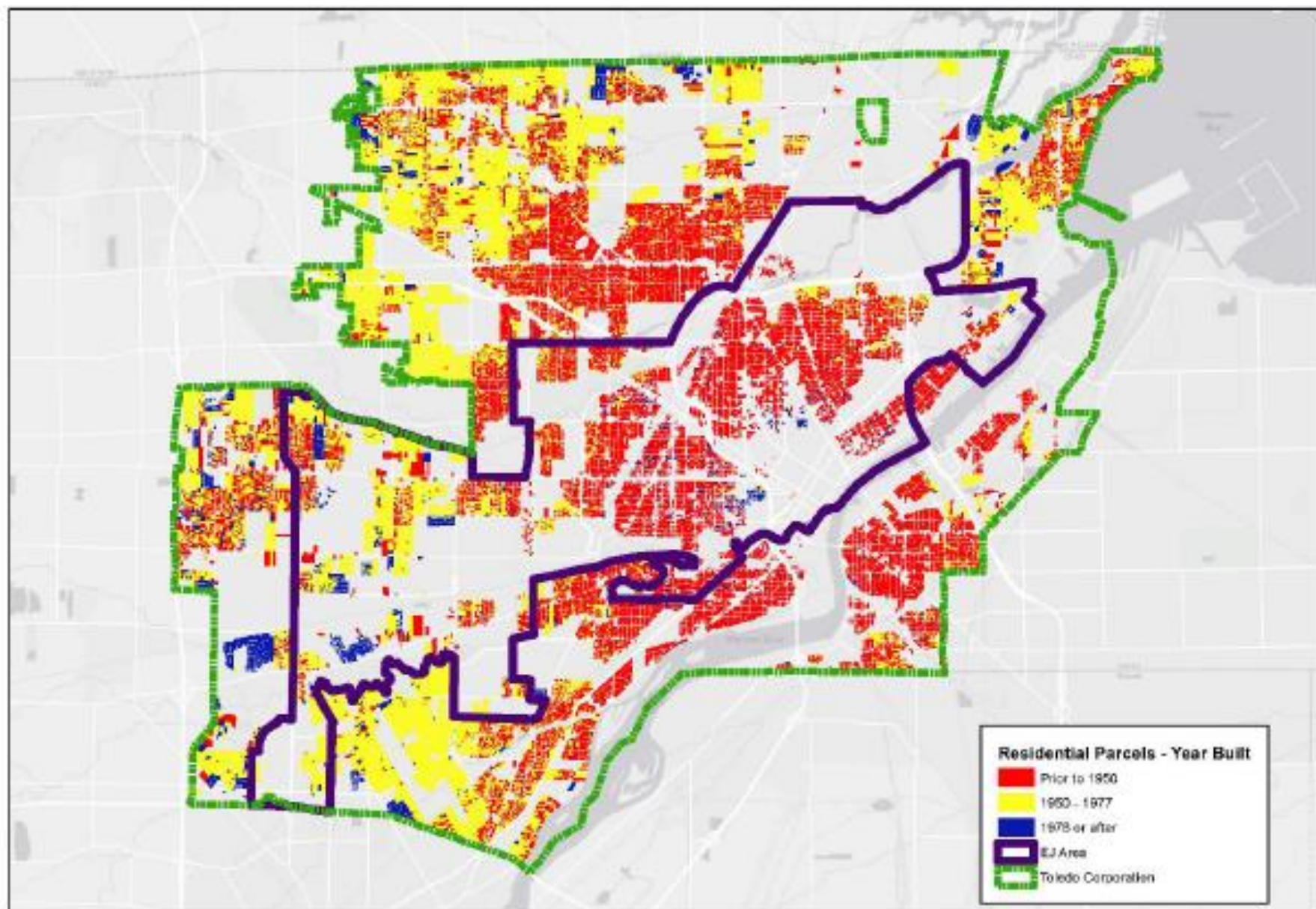
Toledo Population Density by Race and Ethnicity



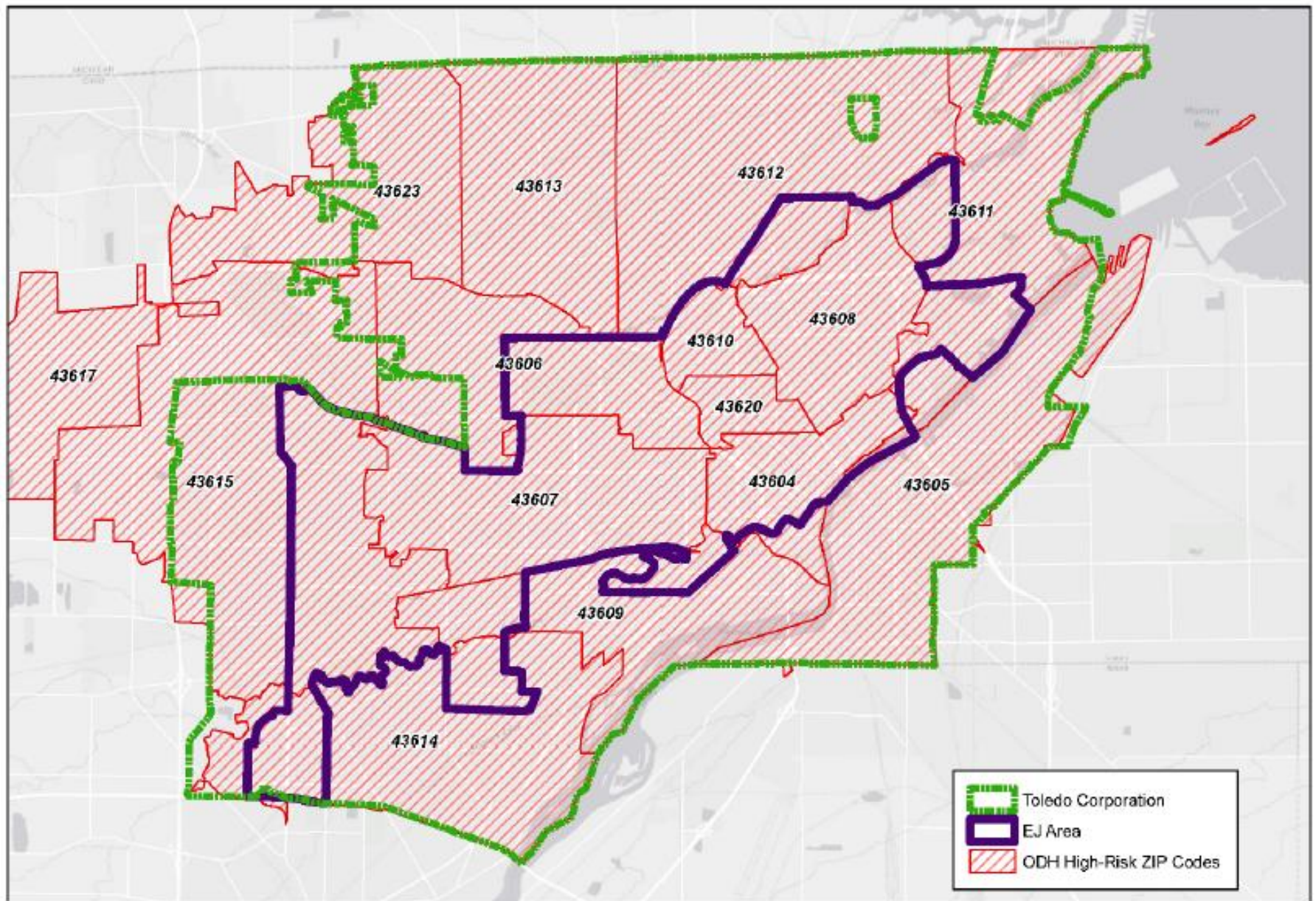
Assessed Value of Toledo Residential Properties, by Parcel



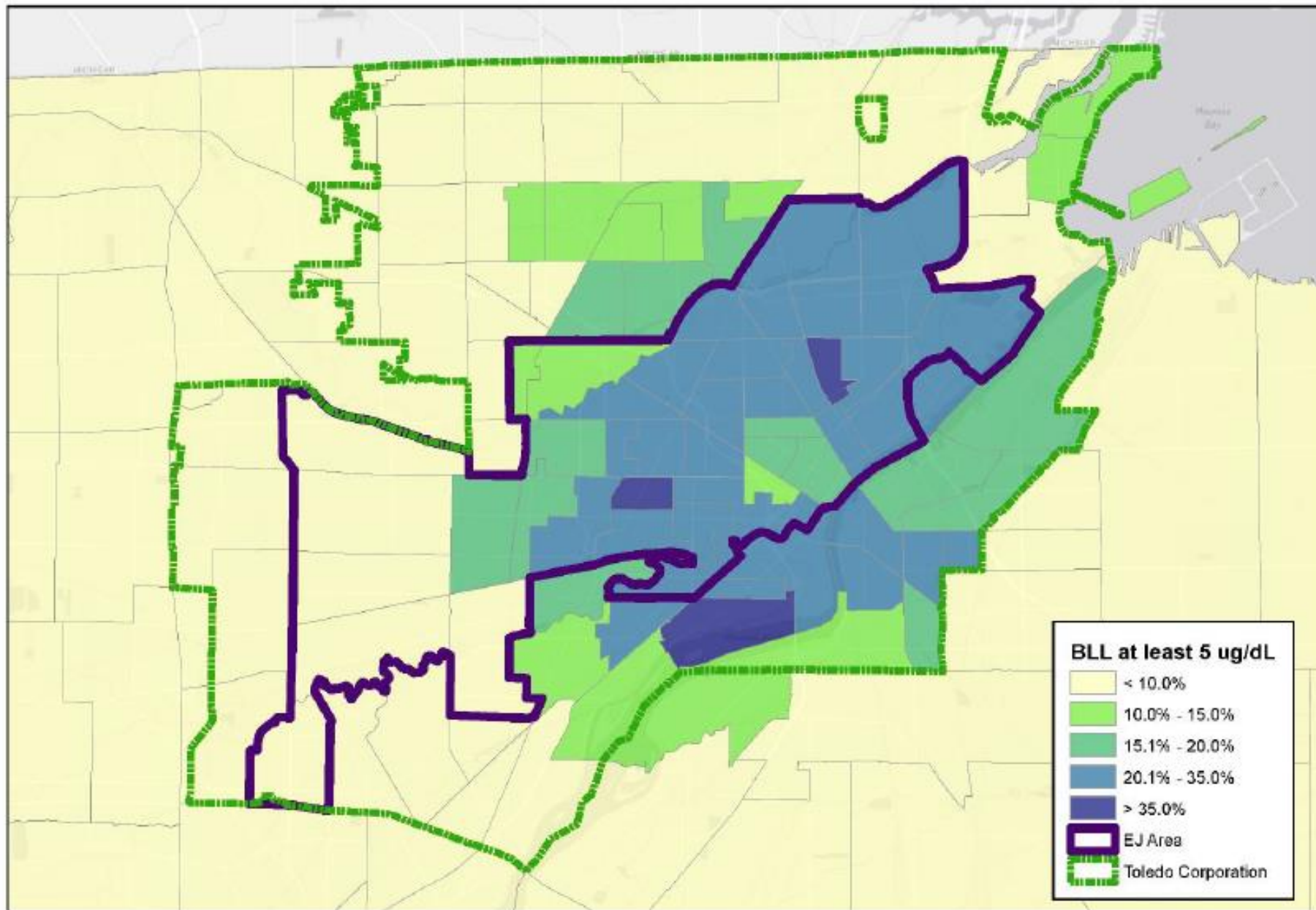
Age of Structures on Toledo Residential Properties, by Parcel



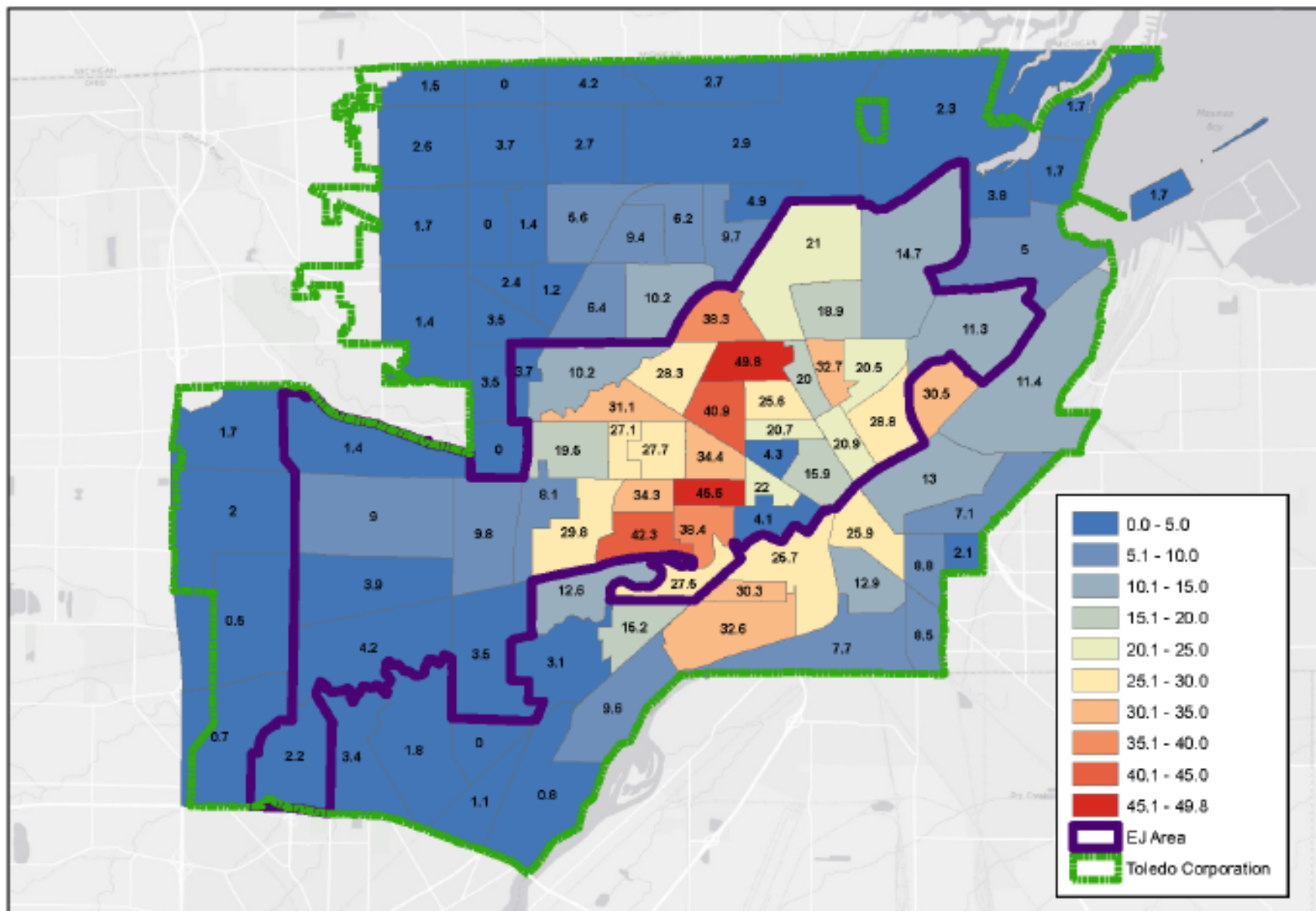
Ohio Department of Health High-Risk ZIP Codes



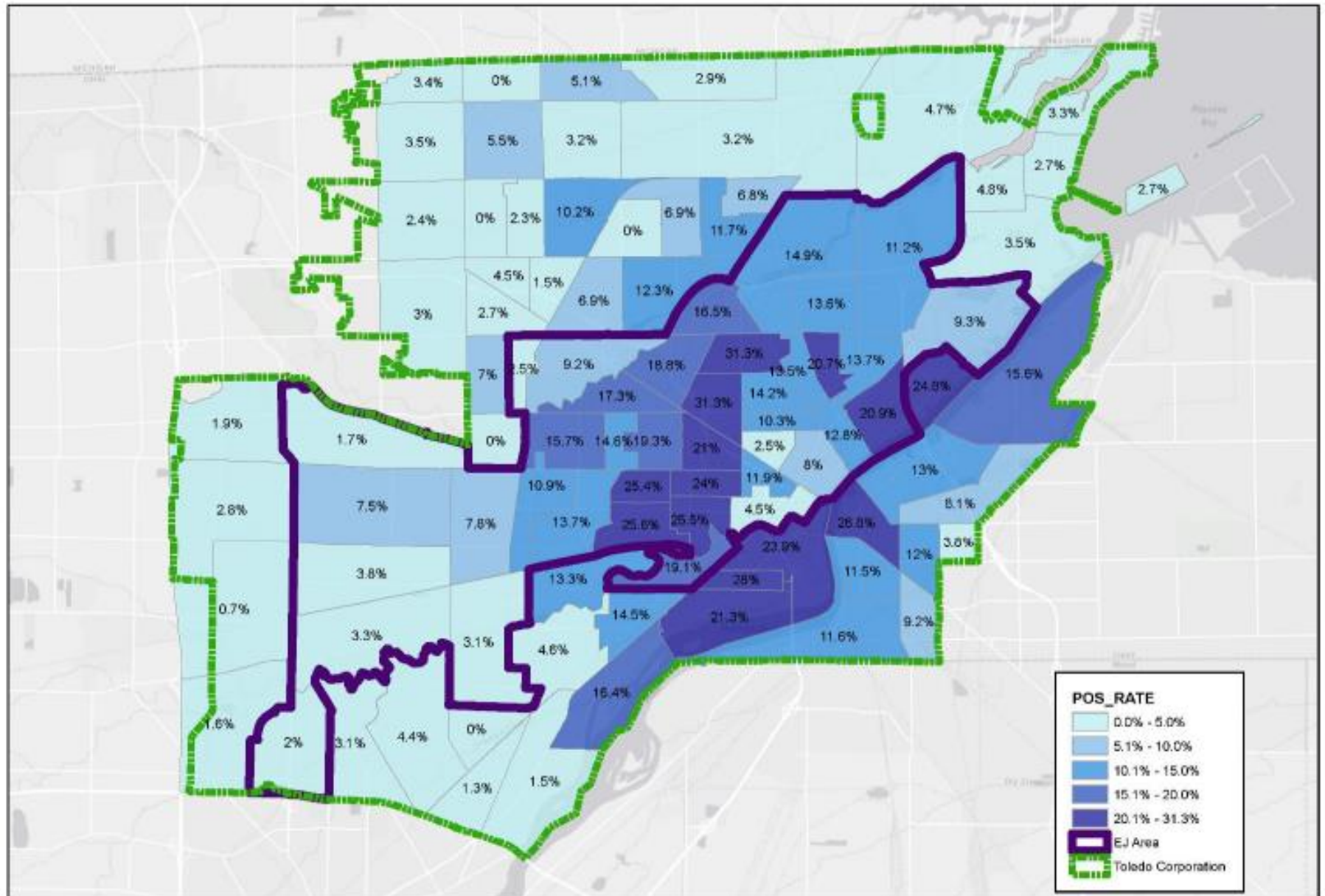
Ohio Department of Health Probabilities that a Child Is Lead Poisoned, by Census Tract

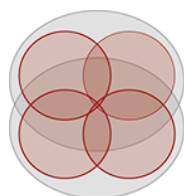


Lead Poisoning and Environmental Justice Population: Confirmed Venous Puncture BLLs per 1,000 Children under 6



Percentage of Venous Tests Administered That Had BLL of 5 ug/dL or Greater





KIRWAN INSTITUTE
for the Study of Race and Ethnicity



Advocates for Basic
Legal Equality, Inc.

This report has been prepared jointly by:

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Link to download this PDF:

<http://goo.gl/Wuqyki>

America's Civil Courts: Whom Do We Serve?

Every year in America, tens of millions of people find themselves in court, without a lawyer, lost in a system built for lawyers.

The Justice for All Project has called on Access to Justice Commissions and coalitions around the country to develop consumer-oriented, comprehensive strategic plans. These plans will support 100% access to effective assistance for essential civil legal needs through court simplification and offering a continuum of services to include information, advice and appropriate levels of representation.

Consumer-oriented solutions require a deep and accurate understanding of the people being served. Each country is different, with unique



GIS FOR JUSTICE TAKEAWAYS

- GIS can help think through any problem where location matters.
- GIS can help compare different areas.
- GIS can integrate tabular data with geography/location to make data become more visual, digestible, and meaningful.
- GIS can help model a larger population, infer, predict, and explain.
- GIS can affect people's perceptions and public policy.

FUTURE ENGAGEMENT IN GIS FOR JUSTICE

- Working Group
- Google Group List
- GIS and Data Analysis



Katherine Altener
Executive Director
Self-Represented Litigation Network
(SRLN)

THANK YOU!



Alison Davis-Holland
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