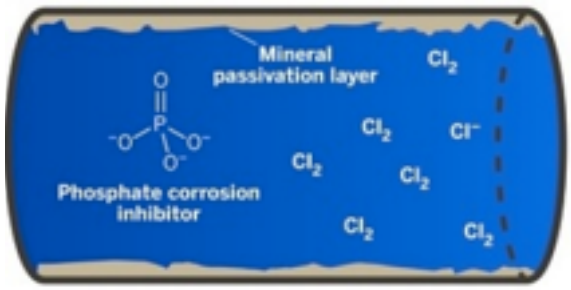
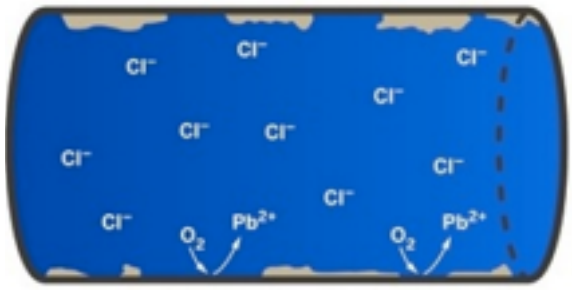
Before: Treated Detroit water

Phosphate corrosion inhibitor helps maintain a mineral passivation layer on the inside of Flint's pipes, protecting them from corrosion. With little corrosion, chlorine disinfectant levels remain stable.

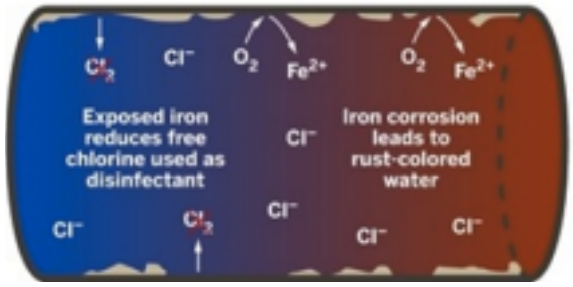


After: Treated Flint River water

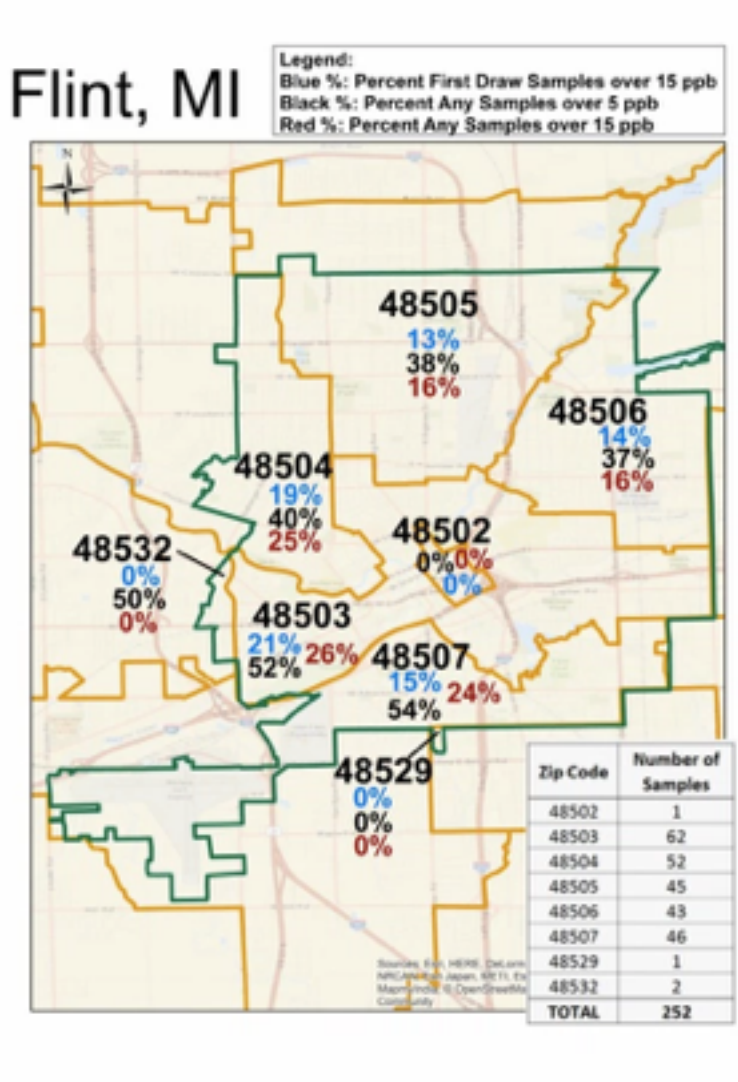
Lack of a corrosion inhibitor, high chloride levels, and other factors cause the passivation layer to dissolve and fall off, leading to increased corrosion in Flint's pipes. As the pipes corrode, chlorine disinfectant breaks down.



Oxidants such as dissolved O_2 corrode pipes and leach soluble metal.



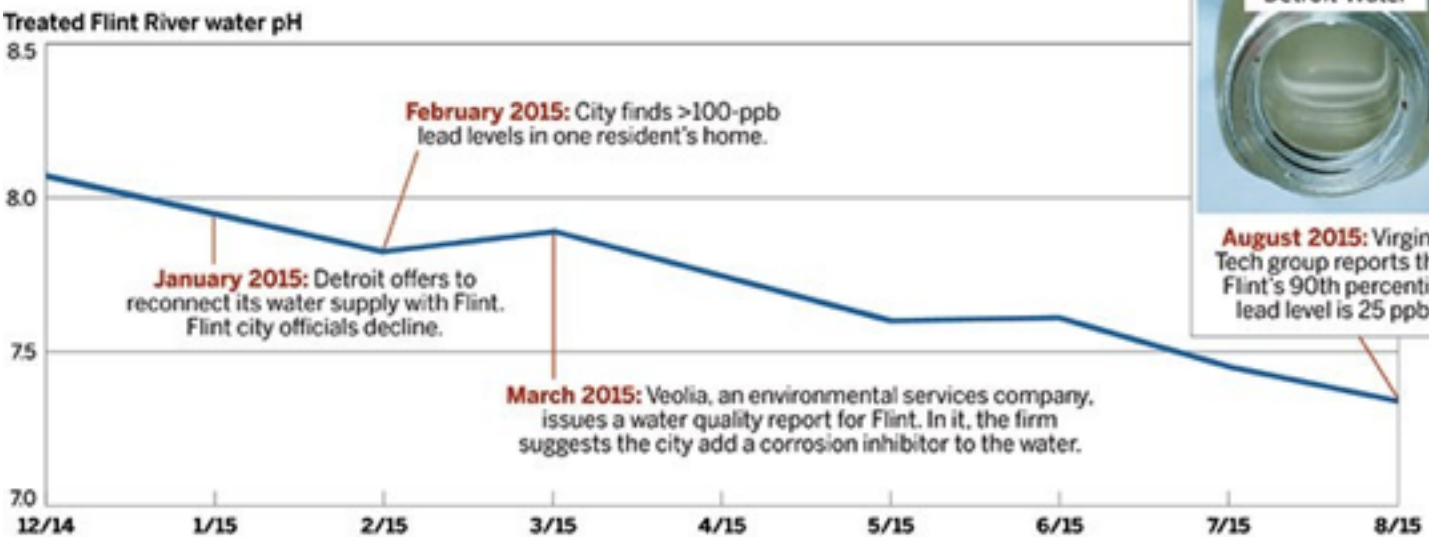
ARTIFACT A



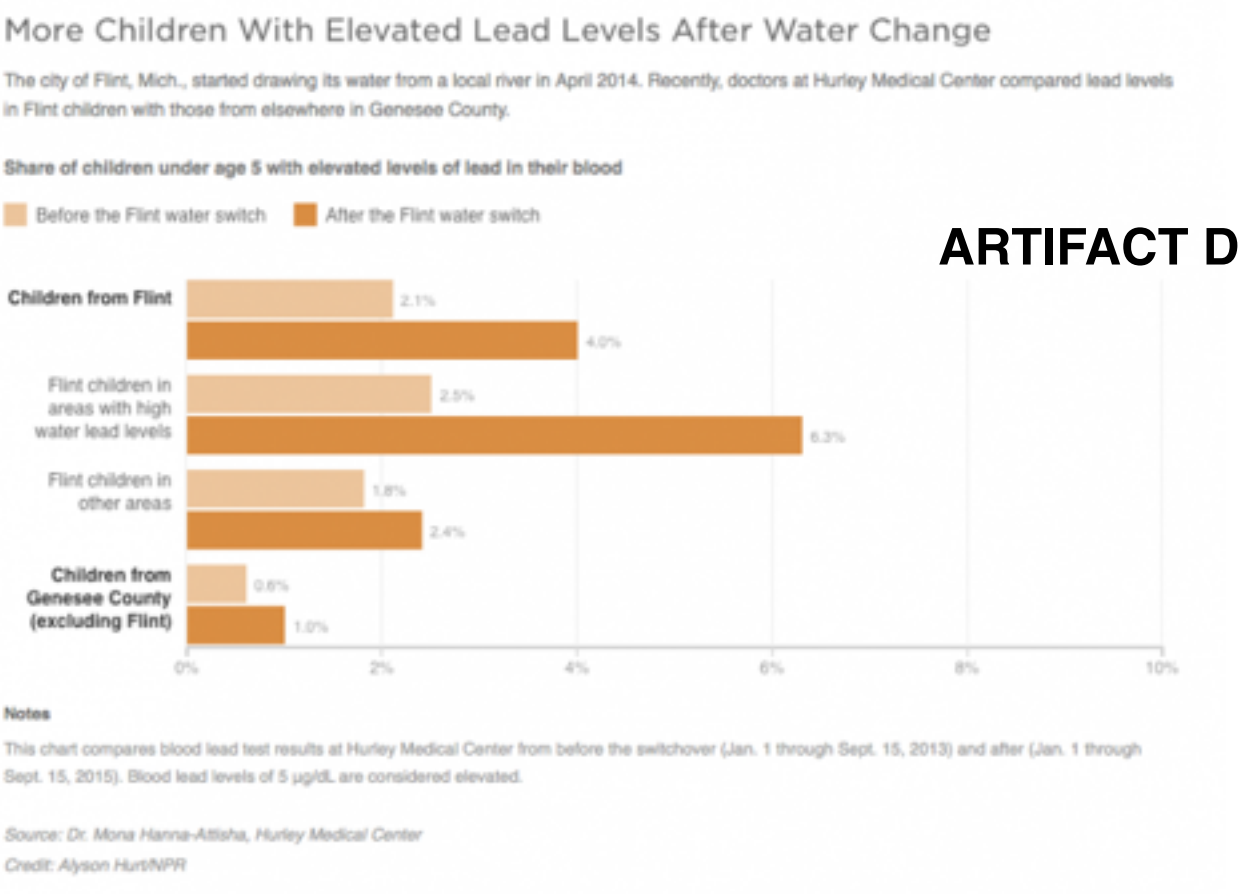
Zip Code	Number of Samples
48502	1
48503	62
48504	52
48505	45
48506	43
48507	46
48529	1
48532	2
TOTAL	252

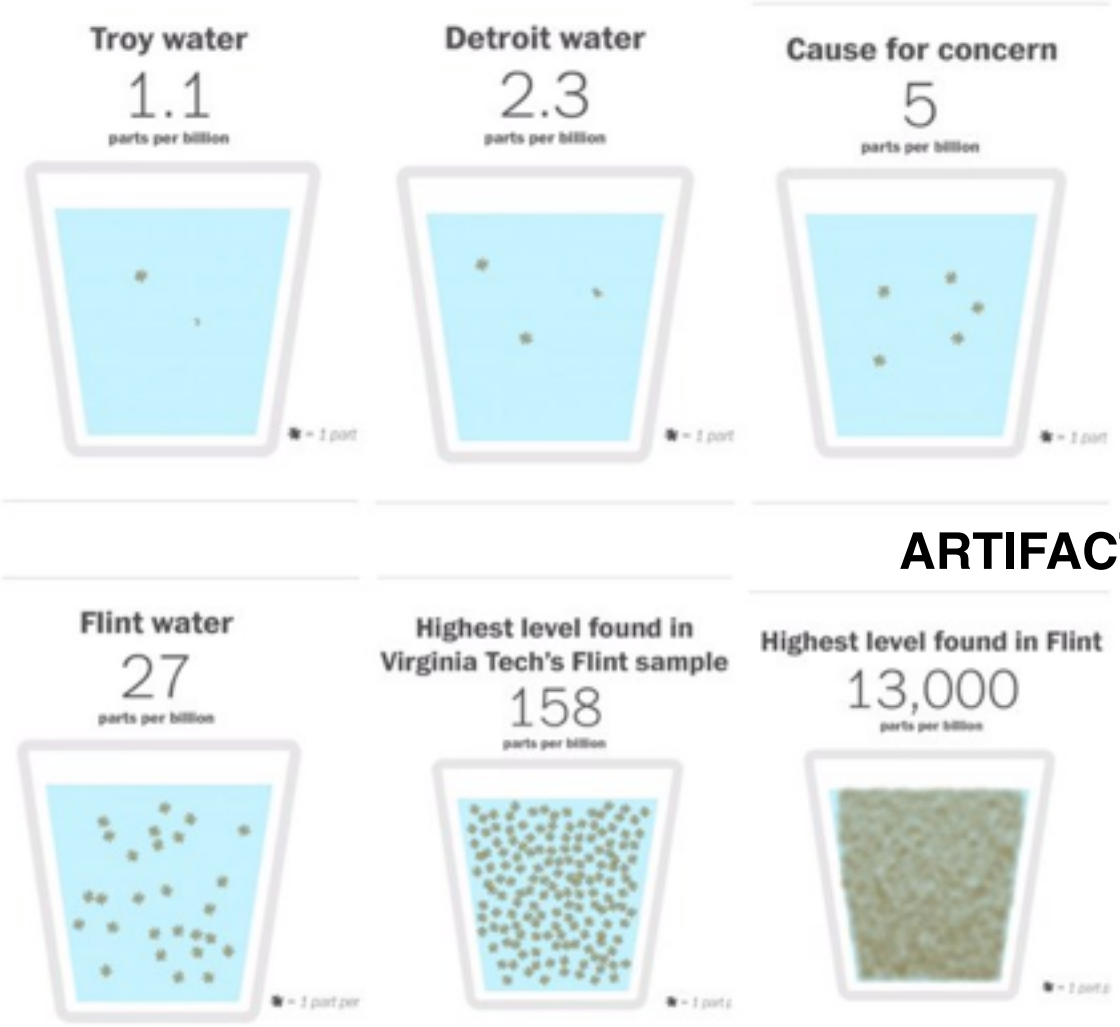
ARTIFACT B

ARTIFACT C



ARTIFACT D



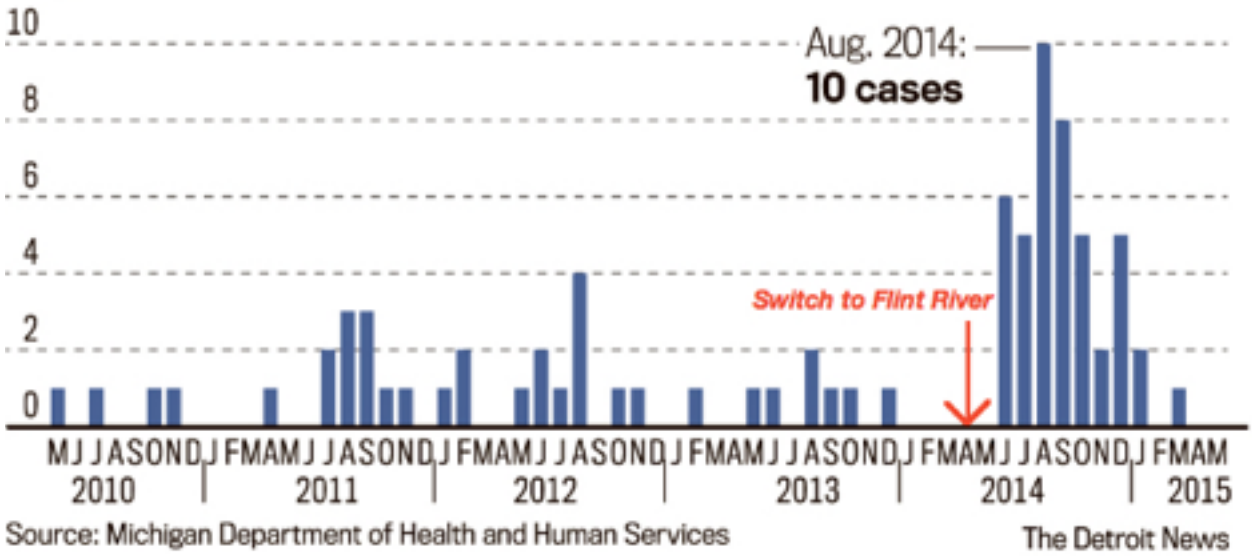


ARTIFACT E

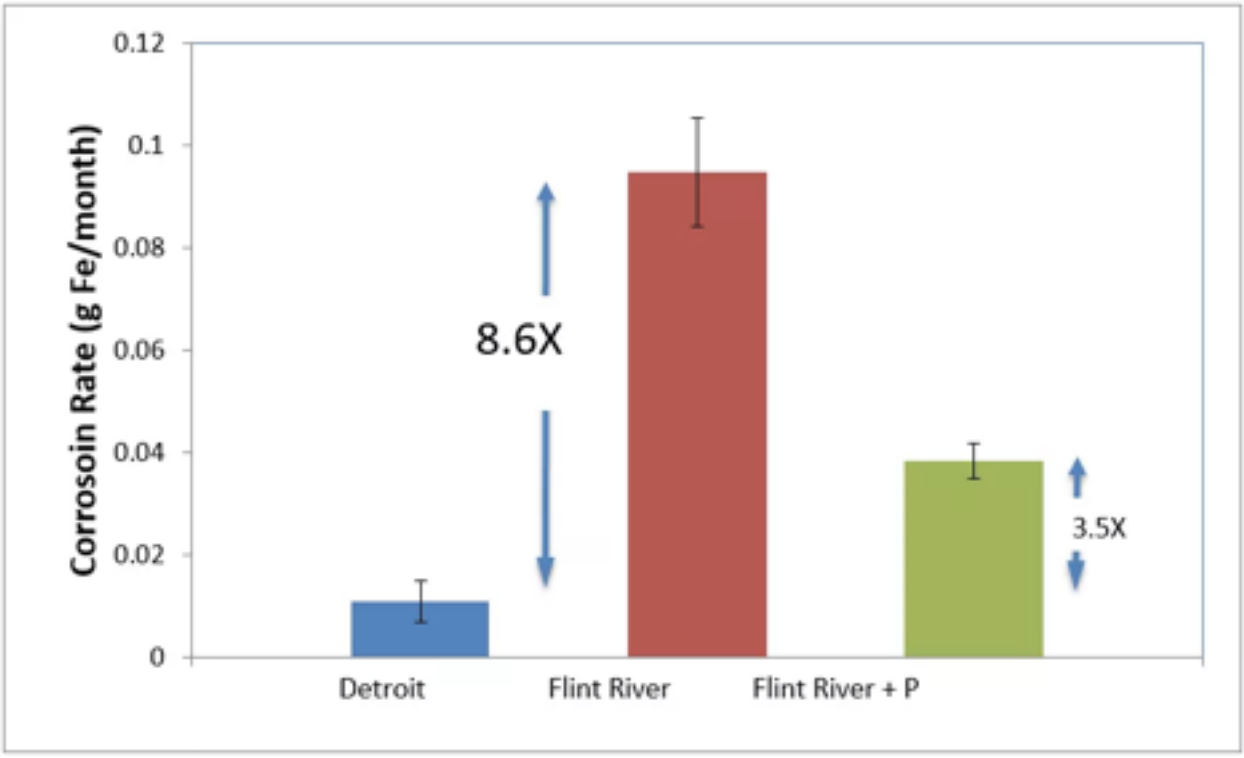
Legionnaires' disease cases spike

State officials reported a rise in cases of Legionnaires' disease over a year-and-a-half period that matches the time Flint was drawing its drinking water from the Flint River.

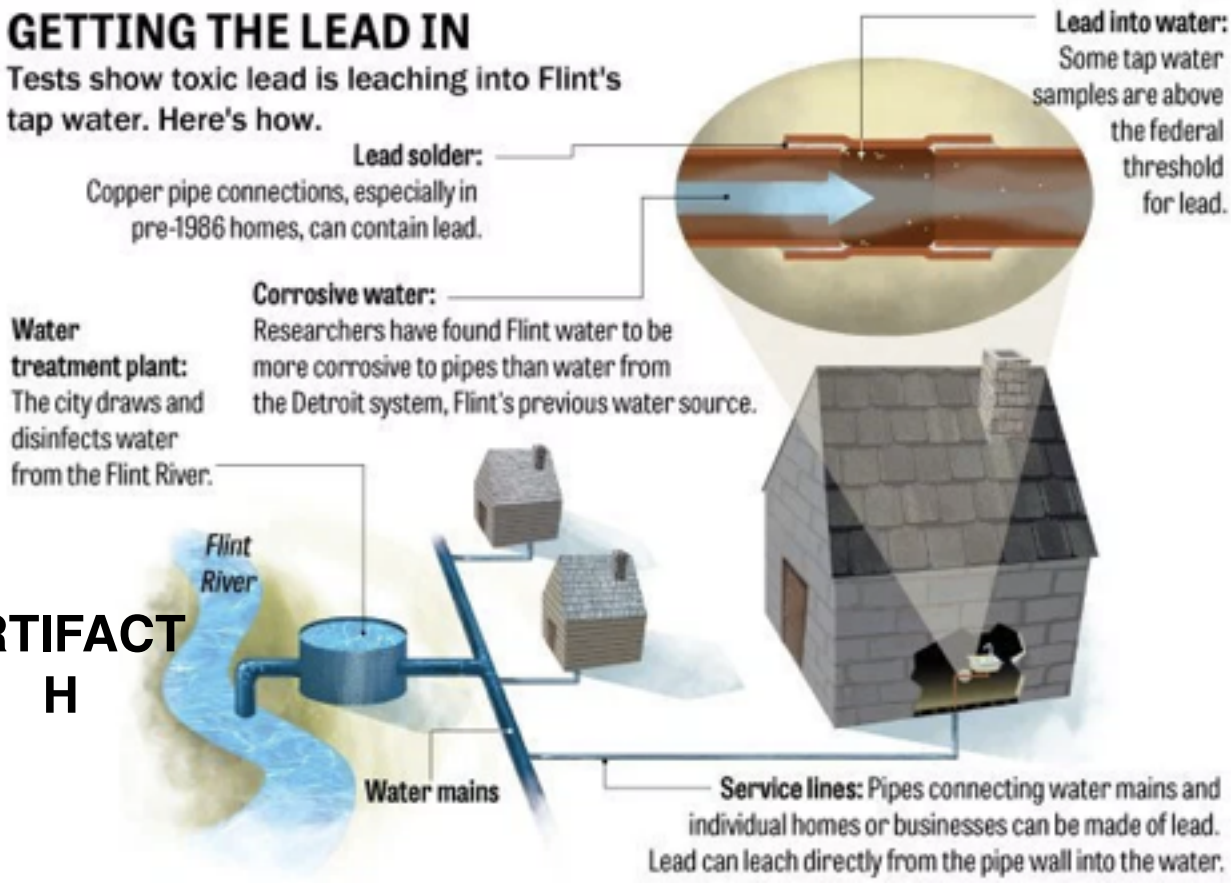
ARTIFACT F



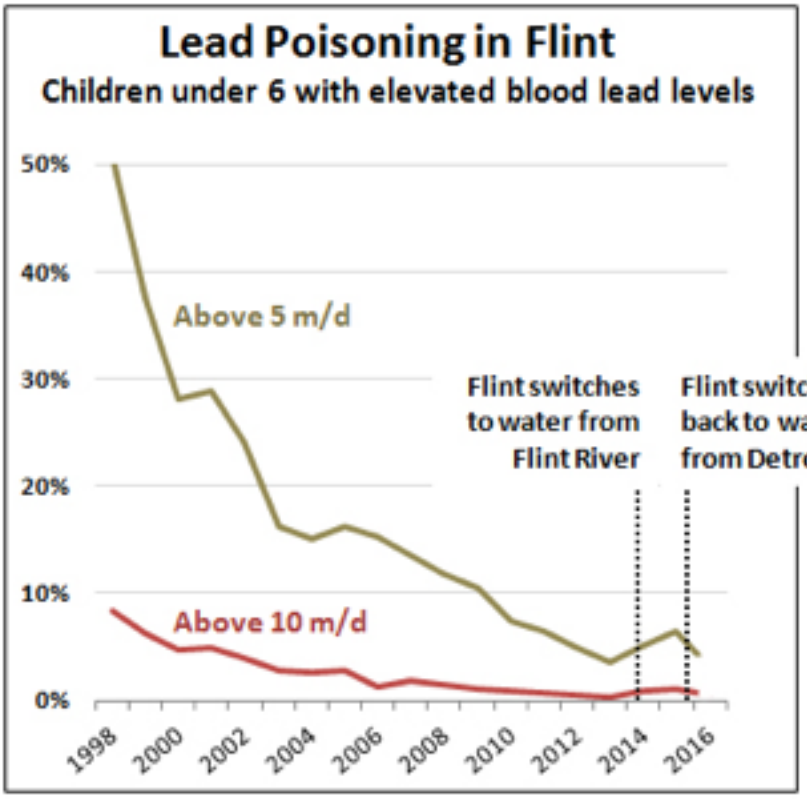
ARTIFACT G



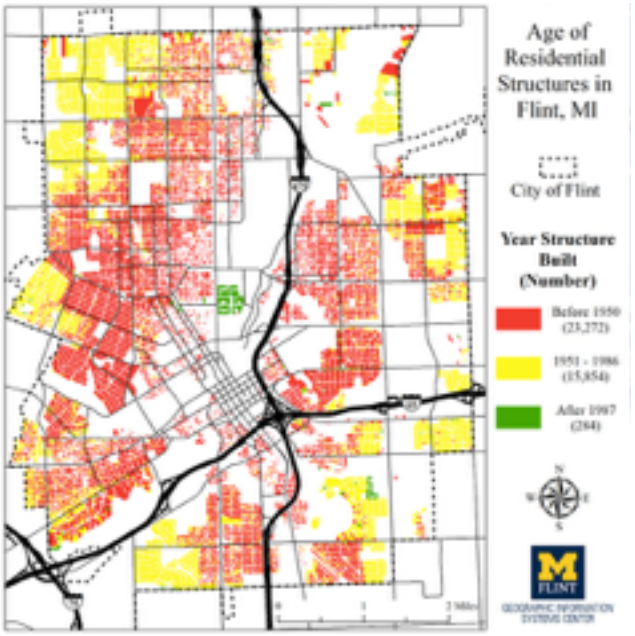
ARTIFACT H



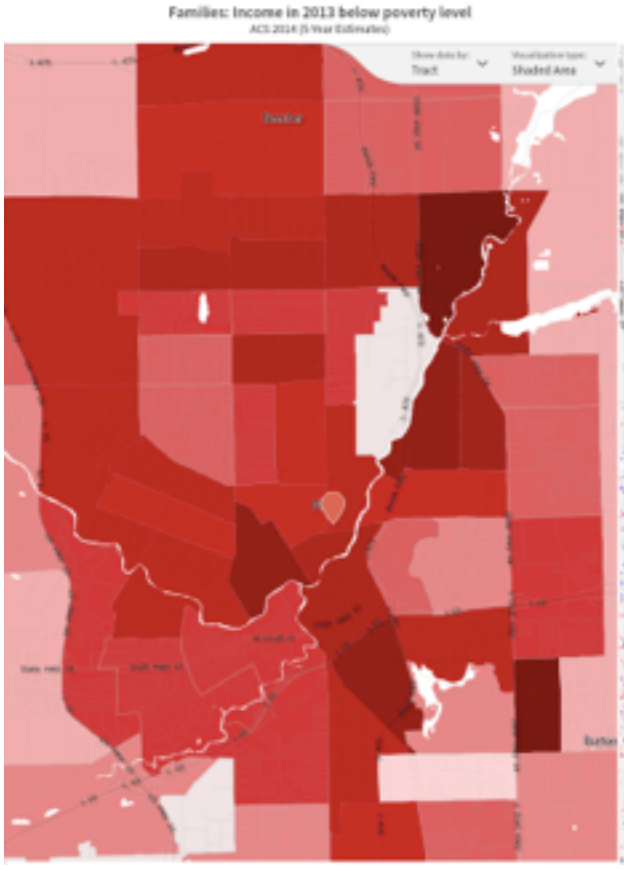
ARTIFACT I

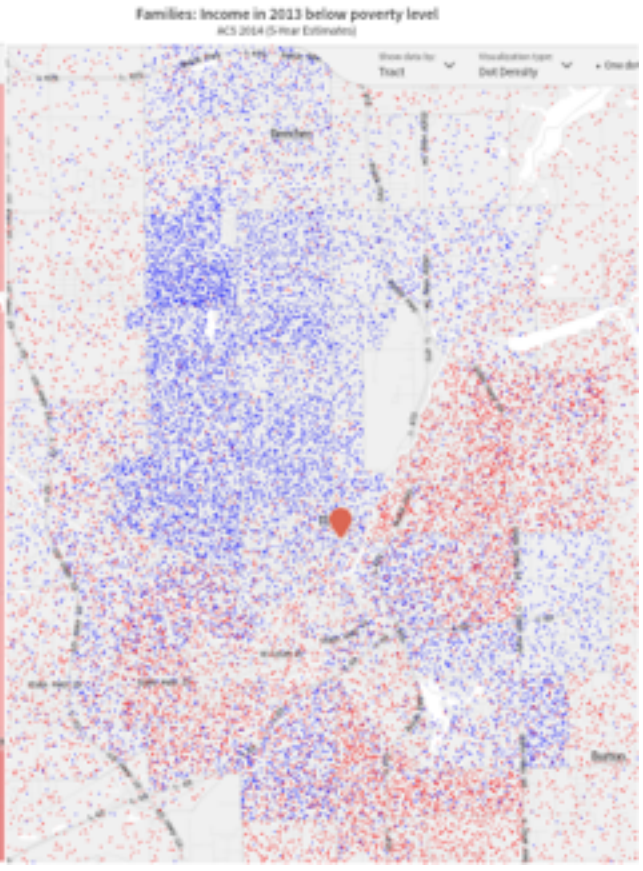


ARTIFACT K



ARTIFACT J



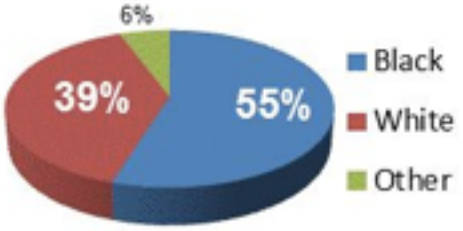


Flint, MI Demographics

Flint has deteriorated since the 1960s due to racial tension, factory closings (80,000 jobs lost), and depopulation. Flints remaining residents both Black and White suffer from high unemployment, high poverty, and low educational attainment compared to the rest of the country.

ARTIFACT L

Flint Population by Race

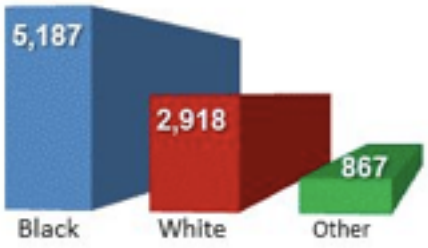


Total Flint Population

1990	2000	2014
140,761	124,943	98,990

Children under 6 years old

(most susceptible to lead poisoning)



City Statistics

	FLINT MICHIGAN BLACK	FLINT MICHIGAN WHITE	ALL USA
Government			
City Council members	7	1	NA
City Demographics			
Median Income	$21,987	$29,490	$53,482
Poverty	46%	35%	16%
Unemployment	31%	21%	6%
Married	22%	31%	50%
Batchelors degree or higher	10%	13%	29%
Homeowner	48%	65%	64%
Rent	52%	35%	36%

SOURCE: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Census 1990 & 2000 decennial census, & cityofflint.com

ARTIFACT M