

# Toxic City

**Barbara Laker, Wendy Ruderman and Dylan Purcell**

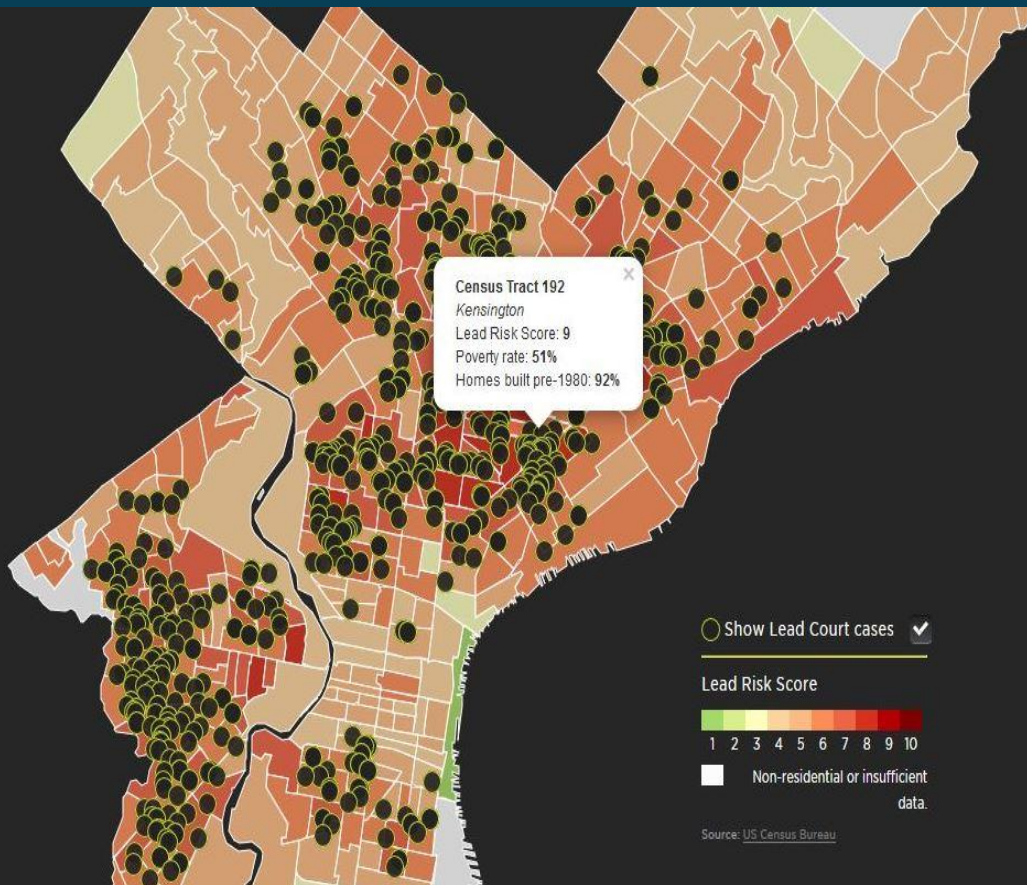
**Edited by Jim Neff; photos by Jessica Griffin**

The Philadelphia Inquirer & Daily News



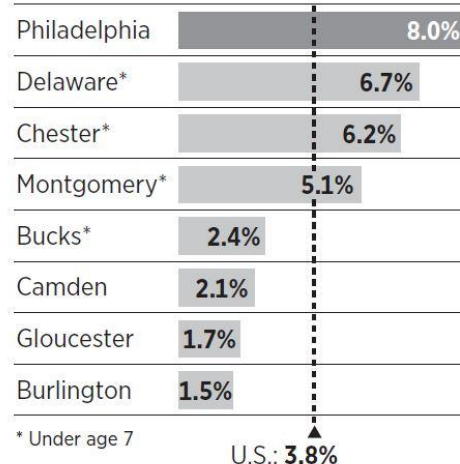
Supported by grants from USC Center for Health Journalism, the Dennis A. Hunt Fund for Health Journalism, and the Lenfest Institute for Journalism.

# Poorest big city + old housing meant more lead poisoning



The city's lead-exposure rate in 2014 was **higher than any of its surrounding suburban counties**, and twice the national average.

*Percentage of children under age 6 with a blood lead level of 5 or higher*



SOURCES: Philadelphia Department of Health; Pa. Department of Health; N.J. Department of Health; Centers for Disease Control and Prevention

A woman with curly hair and glasses is sitting on the floor, holding a small red card with the word "not" written on it. She is looking at the card and then at a young boy sitting next to her. The boy is looking up at her with a curious expression. They are in a room with white walls and a light switch is visible in the background.

**Philly's shame:  
City ignores  
thousands of  
poisoned kids**





**These twin boys, age 2, were poisoned by lead in their rental home. One boy's blood lead level was 46! Their landlord? NFL Hall of Famer Marvin Harrison, a millionaire with 80 properties.**





**Landlords ignored the law. This landlord was ordered in lead court to remove toxic paint. He used a blowtorch and made it worse.**







Toxic City: Tainted Soil

# Children at risk in their yard

- Philly industrial past still haunts
- No database of toxic soil existed so we dug up the dirt and made one
- 500 samples from 114 locations. Three quarters of properties had hazardous lead







**WE DUG A LOT OF DIRT:  
500 bags in all**

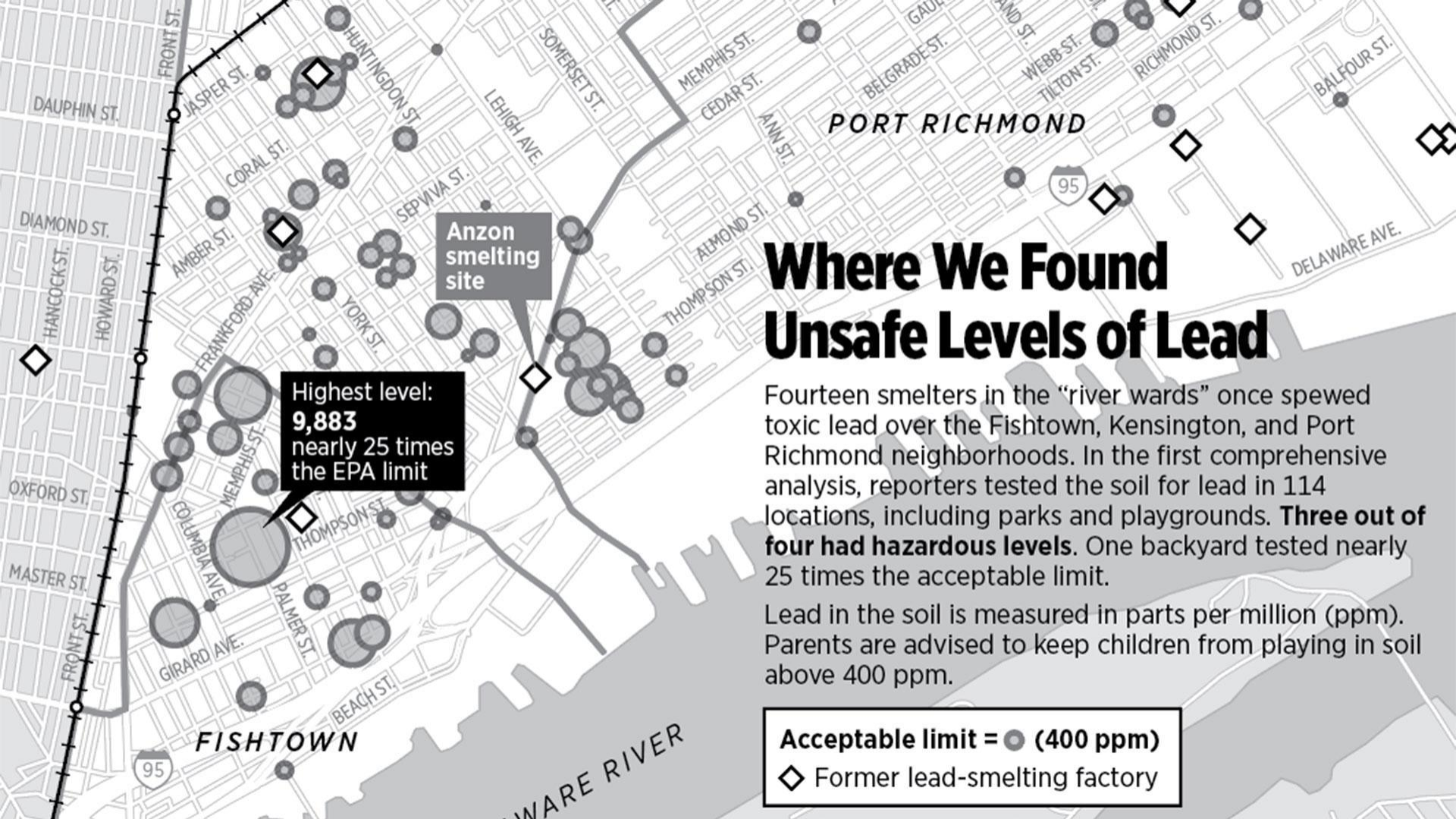






Dirt,  
Dirt,  
And  
More  
Dirt!!  
OFF  
TO  
THE  
LAB!





## Where We Found Unsafe Levels of Lead

Fourteen smelters in the “river wards” once spewed toxic lead over the Fishtown, Kensington, and Port Richmond neighborhoods. In the first comprehensive analysis, reporters tested the soil for lead in 114 locations, including parks and playgrounds. **Three out of four had hazardous levels.** One backyard tested nearly 25 times the acceptable limit.

Lead in the soil is measured in parts per million (ppm). Parents are advised to keep children from playing in soil above 400 ppm.

Acceptable limit = ● (400 ppm)

◆ Former lead-smelting factory

Toxic City: Tainted Soil

## **Boom in housing stirred up dirt**

- **Dust samples on playgrounds showed high lead**
- **Construction workers were not taking basic steps like watering down the dirt**
- **Permit database can identify hot spots for risk. Violations were few.**



We spent a day at a lab learning how to take dust-wipe samples.









Jana's daughter got lead poisoning from dirt in her backyard. At 18 months, she spoke only two words.







Breakneck construction unearthed a toxic legacy, coating playgrounds, yards and front steps with lead dust. Simple dust-control measures would have prevented that. Mina's BLL was a 9 at a year old.



# DANGER: LEARN AT YOUR OWN RISK



Day after day last September, toxic lead-paint chips fluttered from the ceiling of a first-grade classroom and landed on the desk of 6-year-old Dean Pagan.

Toxic City: Schools

## **Children at risk in their classroom**

- **Most of 200 city public schools built during lead paint and asbestos era**
- **Schools are awash in flaking paint**
- **Over 100 schools had 'high priority' asbestos damage at last major checkup**









Lead paint (right)  
and mold growth  
(below)









**6-year-old Dean Pagan  
landed in the hospital  
with a 46 blood lead  
level.**

**He has lost his ability to do  
simple math, like adding  
three plus three in his head.**





SEARCH A SCHOOL

THE HAZARDS ▼

ABOUT THE TOOL

## School Checkup

Find detailed reports on hazards inside Philadelphia classrooms.

Select a school to see its report

Search for a school...

GO

MAP: Search by location >

Search by type (Elementary, Middle, High) >

Many of Philadelphia's 130,000 public-school students spend their school days inside buildings that can make them sick and miss school and even send them to the hospital. Children are at higher risk from school hazards as lead dust, damaged asbestos and asthma triggers such as mold, mouse feces and urine, and cockroach parts - all found in far too many Philadelphia classrooms.

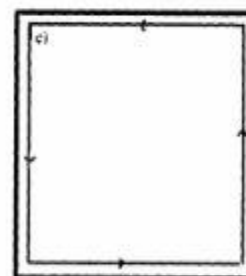
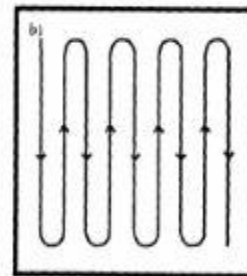
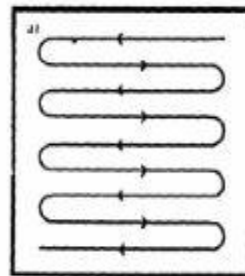
*(Updated April 2018)*



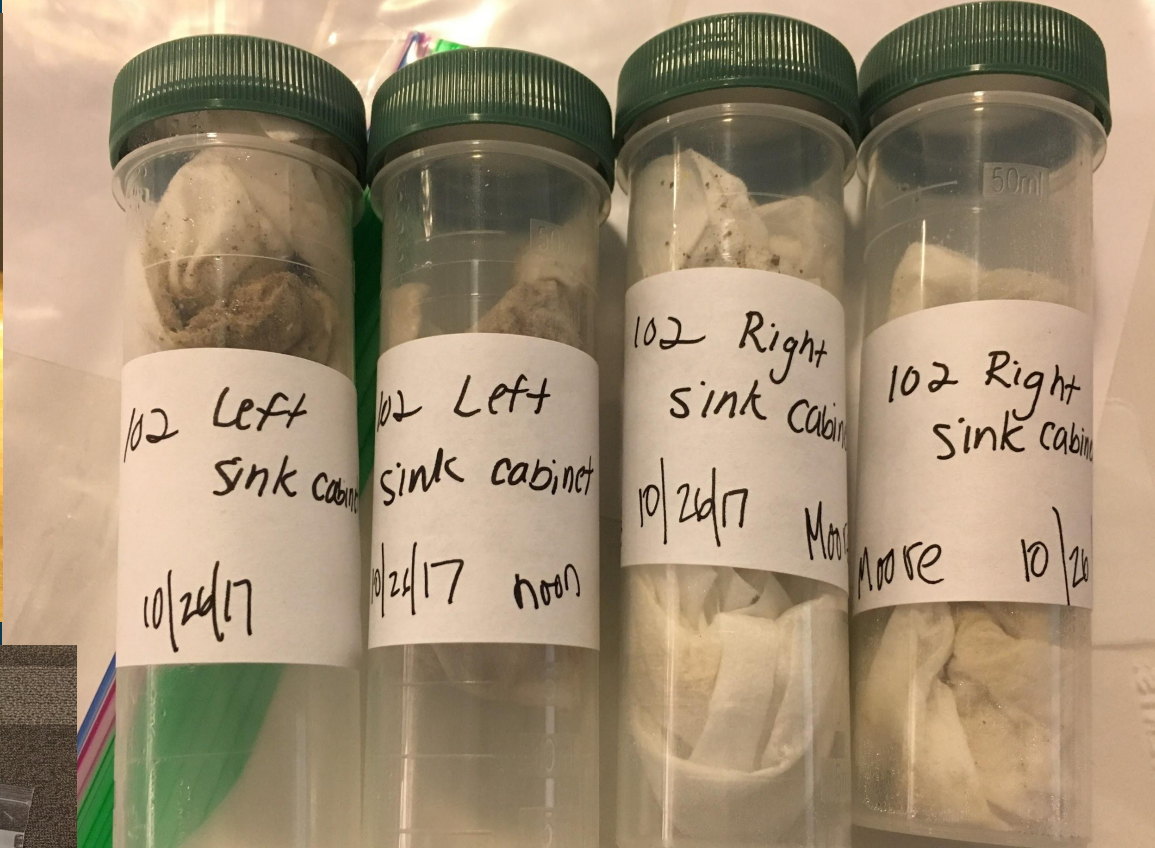
## SAMPLING FOR ASBESTOS FIBERS WITH A DUST WIPE

Thank you for assisting our research project looking at the potential for asbestos fibers in settled dust. Follow these easy steps to complete this test:

1. Find a place on the floor, a shelf, a desk top, a windowsill, a cubbyhole, or another area that appears to have dust or is located near and deteriorated asbestos and is accessible to small children and teachers. (You're looking for damaged or chipped floor tiles, pipe insulation, ceiling tile, plaster, spackle.) If you can, take a photo of the area prior to wiping.
2. Put on a pair of disposable gloves. Open the dust wipe sample packet and unfold the wipe.
3. In a square area that is about 4 by 4 inches (or 10 by 10 centimeters), make as many S-like motions as needed to wipe the entire sample area, moving from side to side and top to bottom of the 4 by 4-inch square. Apply firm pressure on the wipe.
4. Fold the wipe in half, keeping the dirty side in, and repeat the wiping procedure. (see below). Flip the wipe and repeat.
5. Now fold the wipe into an even smaller square (roughly the size of the wipe packaging) and repeat again, concentrating on collecting dust from the edges and corners of the sample area.
6. Stuff the wipe into the sample tube. Put the cap tightly on the container. On the label, write the school name, time and date, room number and specific area from which the sample was taken (such as Rm. 101, floor tile, under window ledge).









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**8.5 million  
cancer-causing  
asbestos fibers  
in settled dust**






CERTIFICATE OF ANALYSIS

Client: Philadelphia Media Network 801 Market Street, Ste 300 Philadelphia PA 19107	Report Date: 6/7/2018 Report No.: 564984 - TEM Dust Wipe Project: TOXIC CITY: A.S. Jenks Project No.:
Client: PHI001	

TEM WIPE SAMPLE ANALYSIS SUMMARY

Lab No.: 6522683 Client No.: 1	Location: 106 Closet Floor Near Pipe Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 942	Concentration (s/cm <sup>3</sup> ): 4530000 Asbestos Type(s): Chrysotile
Lab No.: 6522684 Client No.: 2	Location: Floor 106 With Scratch Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 3920	Concentration (s/cm <sup>3</sup> ): 1890000 Asbestos Type(s): Chrysotile
Lab No.: 6522685 Client No.: 3	Location: Closet Tile Near Pipe Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 4310	Concentration (s/cm <sup>3</sup> ): 4140000 Asbestos Type(s): Chrysotile Amosite
Lab No.: 6522686 Client No.: 4	Location: 106 Closet Near Pipe In Front Of Locker Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 885	Concentration (s/cm <sup>3</sup> ): 567000 Asbestos Type(s): Chrysotile
Lab No.: 6522687 Client No.: 5	Location: Missing Tile 106 Closet Near Pipe Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 590	Concentration (s/cm <sup>3</sup> ): 2840000 Asbestos Type(s): Chrysotile Amosite
Lab No.: 6522688 Client No.: 6	Location: Tile Next To Back Pipe Closet 106 Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 654	Concentration (s/cm <sup>3</sup> ): 3150000 Asbestos Type(s): Chrysotile
Lab No.: 6522689 Client No.: 7	Location: Back Tile 106 Closet Near Pipe Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 1460	Concentration (s/cm <sup>3</sup> ): 1410000 Asbestos Type(s): Chrysotile
Lab No.: 6522690 Client No.: 8	Location: Scratch Floor 106 Room (Classroom) Area (cm <sup>2</sup> ): 100 Density (s/mm <sup>3</sup> ): 154	Concentration (s/cm <sup>3</sup> ): 74000 Asbestos Type(s): Chrysotile

Please refer to the Preface of this report for further information regarding your analysis.

Date Received: 6/1/2018  
Date Analyzed: 06/07/2018  
Signature:   
Analyst: Mark Stewart

Approved By:   
Frank E. Ehrenfeld, III  
Laboratory Director

These are asbestos results from an elementary school in South Philly.

Scary amounts of asbestos fibers:

- 4.5 million
- 1.89 million
- 4.1 million
- 567,000
- 2.8 million
- 3.2 million

OVER 100,000 is DANGER LIMIT



**This mom was upset that her 10-year-old daughter, who suffers from developmental delays and autistic spectrum disorder, regularly drank from a water fountain at her school that tested at 44.6 ppb.**











We got the crazy idea to test for silica. I'm not kidding. And we did.....

## By the numbers:

- 5 years worth of internal maintenance records
- 120 interviews with teachers, parents, nurses, students, experts
- 9,000 environmental hazards, dating back to 2015
- 24 teachers tested for lead, asbestos, mold in 19 schools
- 9,800 micrograms per square foot of lead in dust on floor of 2nd grade classroom. The highest lab result for lead. (federal hazard level is 40 micrograms for residential floors).
- 250 square feet. The amount of peeling paint on ceiling of Dean's classroom
- 10.7 million asbestos fibers - the highest lab result
- 44 days. The # of school days 9-year-old Ashley Garner missed because of her asthma



Kids get Sick

2

Mon 11/11/17  
Sick  
Kids

Mon 11/11/17  
Sick  
Kids

Mon 11/11/17  
Sick  
Kids

Mon 11/11/17  
Sick  
Kids

Mon 11/11/17  
Sick  
Kids

Parents in dark,  
downplay

3

Let's  
nearly  
trust  
downplay

Water -  
nearly  
nearly  
nearly

Parents  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

When do fix,  
they mess it up

4

On 11/11/17  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
nearly  
nearly

Let's  
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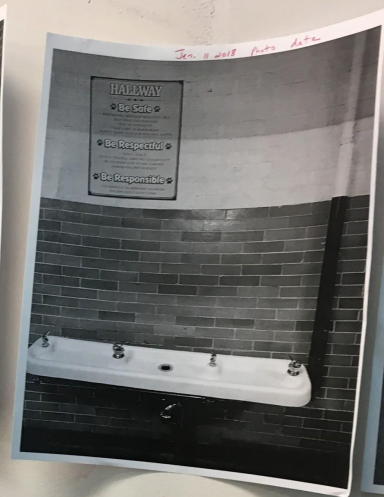
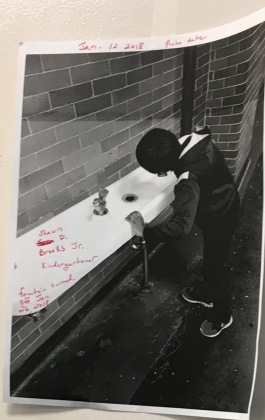
Let's  
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Let's  
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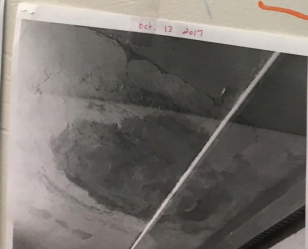
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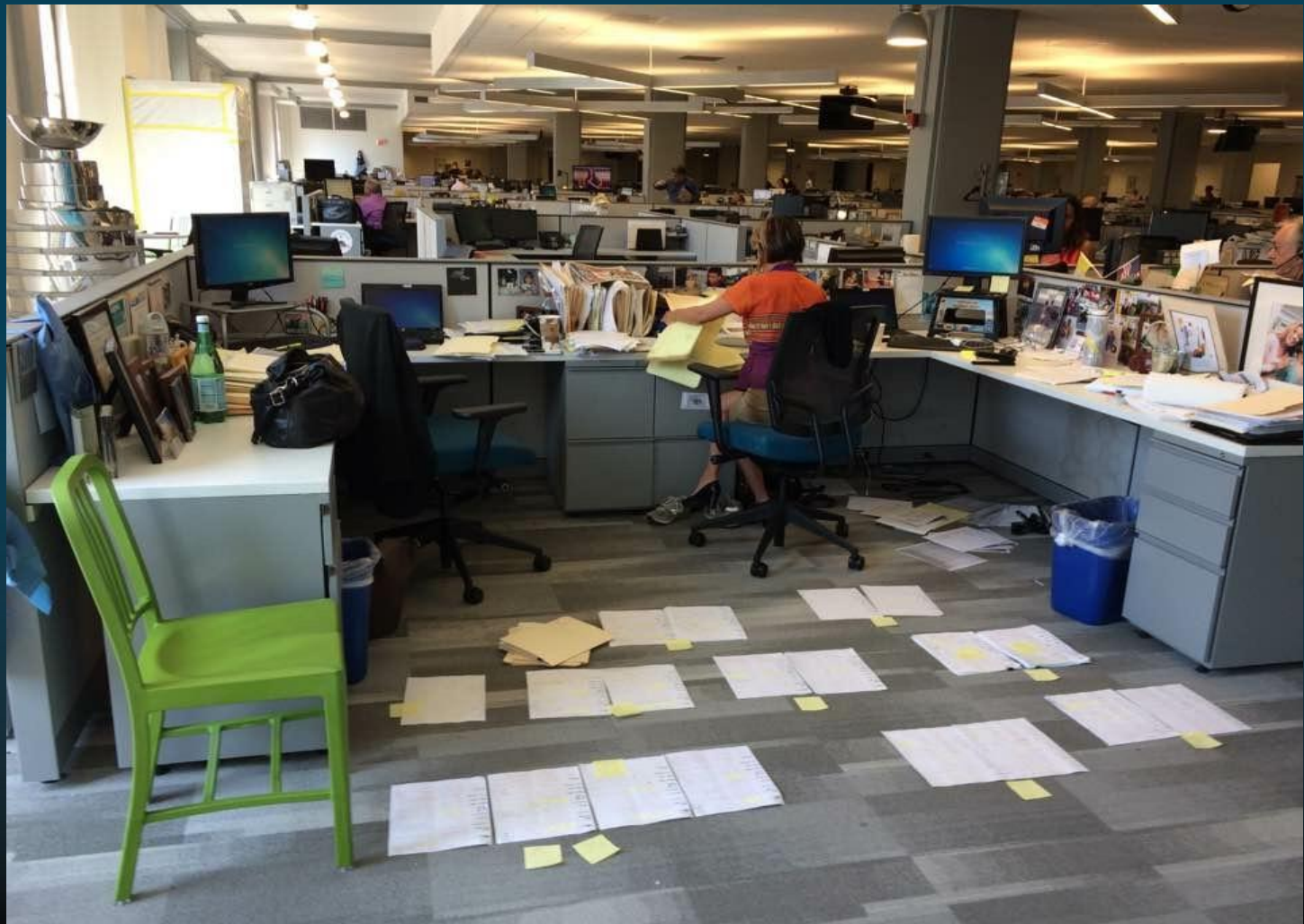
Cassidy



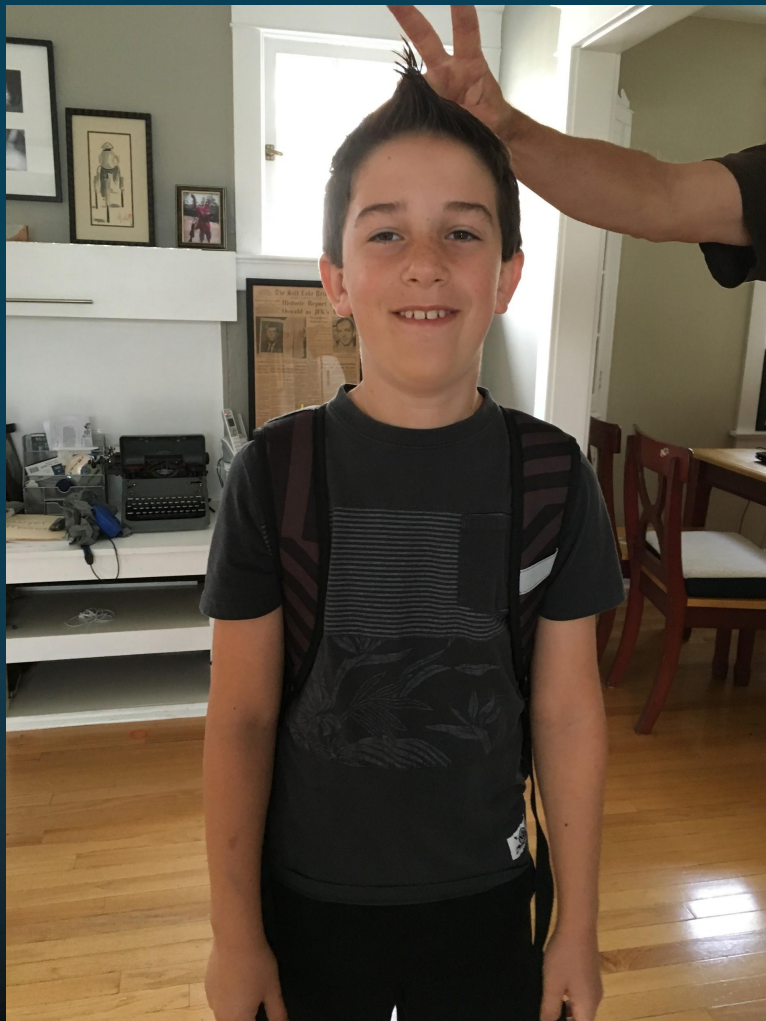
TOXIC  
HELL



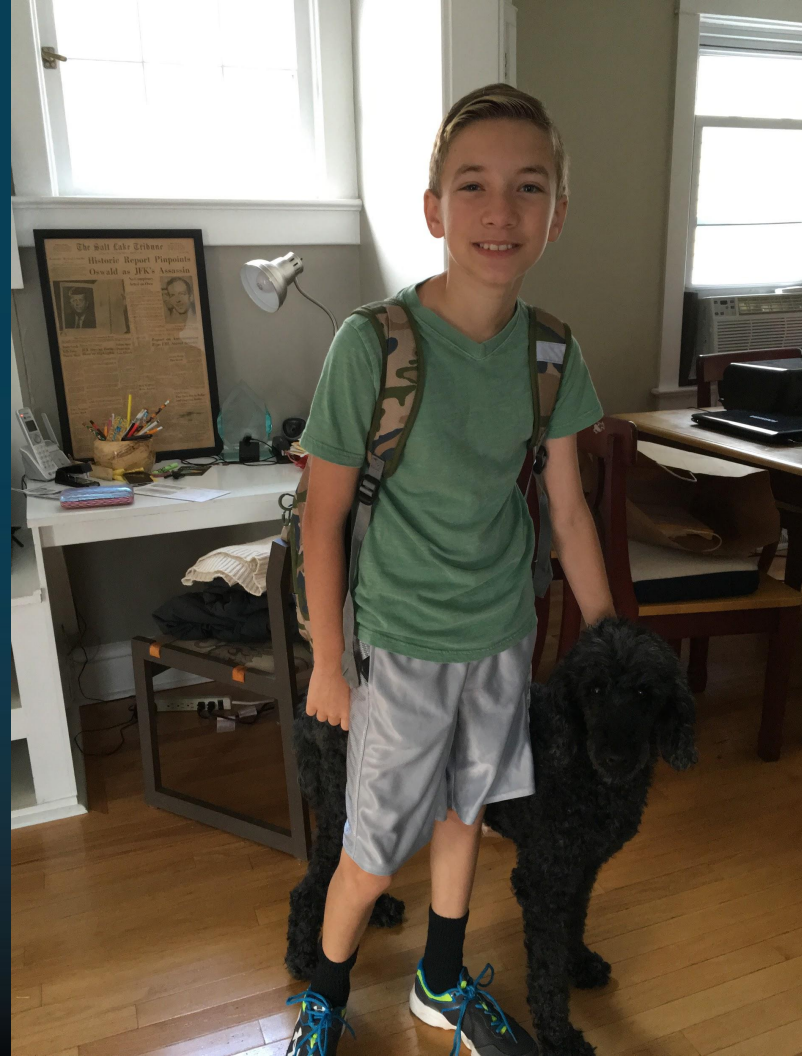
J. HAM  
LEAD







**JULY  
2016**



July 2018







**And we  
got a  
puppy!**

Questions?