

# Hot Topic: Lead in Drinking Water

Monica Wurtz  
Kansas Rural Water Association

Governor's Conference on the Future of Water in Kansas  
November 15, 2016  
Manhattan, KS

# Flint, Michigan

- Population: 99,763



# Flint, Michigan



- April 25, 2014: City of Flint switches to Flint River as source
- May 2014: Complaints Begin
- Oct 13, 2014: General Motors Stops Using Flint River Water, highly corrosive
- Feb 25, 2015: City test reports lead value of 104 ug/L
  - AL - 15 ug/L
- April 2015: State notifies EPA Flint CC not implemented
- July 13, 2015: MDEQ Concerned Citizens “can relax”

# Flint, Michigan



- Aug 20, 2015: MDEQ invalidates samples, under 90<sup>th</sup> % action level
- Sep 2015: V.T. team tests hundreds of homes finds “Serious” Lead Levels
- Sep 24, 2015: Study Finds Elevated blood levels in children
- Sep 25, 2015: Flint issues Lead Advisory
- Oct 16, 2015: City switched back to Detroit Water Supply
- Dec 14, 2015: Mayor declares State of Emergency

# Flint, Michigan



- Jan 2016: Governor Snyder and President Obama Declare State of Emergency
- Feb 17, 2016: Governor Snyder testifies
- April 12, 2016: Researchers Say Water is still unsafe
- April 20, 2016: Criminal charges filed against 3 MDEQ officials
- July 22, 2016: Lawsuit filed against 2 Consulting Corporations
- July 29, 2016: Criminal charges filed against 6 MDEQ officials

# CNN Reported...

“More than 5,300 water systems in America are in violation of the EPA's lead and copper rule, a federal regulation in place to safeguard America's drinking water from its aging infrastructure.”

- Violations include failure to properly test water for lead, failure to report lead results to residents, and failure to treat water properly to avoid lead contamination.

# Lead and Copper Rule

- 1991 regulation by EPA written to minimize the corrosivity and the amount of lead and copper in water supplied by public water systems.
- Action Levels (ALs)
  - Lead = 0.015 mg/L (15 µg/L)
  - Copper = 1.3 mg/L (1300 µg/L)
- If >10% of sample results are above ALs, requires increased monitoring, treatment technique (optimized corrosion control)

# What makes water corrosive?

- Many characteristics of water determine its corrosivity:
  - pH
  - Calcium concentration
  - Hardness
  - Alkalinity
  - Temperature
- Water that is soft and acidic (pH <7.0) tends to be more corrosive.



# Lead and Copper Monitoring

- Select monitoring sites at “high risk” locations based on Tier Classification System.
  - Lead service lines
  - Lead or copper pipes
  - Lead solder 1982-1989
- First-draw samples to be collected at homes/buildings from a tap that has not been used for a minimum of 6 hours.
  - Avoid homes with water softeners and/or filtration devices.



# Action Level Exceedance

- If either AL is exceeded at 90<sup>th</sup> percentile...
  - Water Quality Parameter Monitoring
  - Source Water Monitoring and Source Water Treatment
  - Corrosion Control Treatment
  - Lead Service Line Replacement
- If Pb AL is exceeded at 90<sup>th</sup> percentile...
  - Public Education

# Lead and Copper in Kansas

According to KDHE's 2015 Annual Report:

- 9 water systems incurred 12 monitoring/reporting violations.
- No violations for optimal corrosion control treatment or source water treatment.
- No violations for Lead Public Education.
- No health based violations.
- 94.7% of systems in KS were below the action levels.
- Less than 30 systems on increased monitoring frequency (out of 900 systems).

# Questions?

Monica Wurtz

Technical Assistant

Kansas Rural Water Association

(785) 262-7301

[monica@krwa.net](mailto:monica@krwa.net)

[www.krwa.net](http://www.krwa.net)

