2020 Data Updates

On July 1, 2020, we began a new six-month compliance sampling monitoring period in University Park. Compliance samples allow us to measure lead levels in water that has sat stagnant in customers' pipes for six or more hours and is therefore at a higher risk for lead exposure.

In July 2020, we collected 66 compliance samples from University Park homes and businesses so we could better understand the chemistry in customers' pipes and track our treatment's progress.

Moving forward, on an ongoing monthly basis, we will collect additional compliance samples from homes within our existing sampling pool. To keep the public and other stakeholders informed of our progress, all results will be shared on this page by the 10th of each month.

Customers can call 877.987.2782 at any time to request water sampling.

August 2020 Data Update

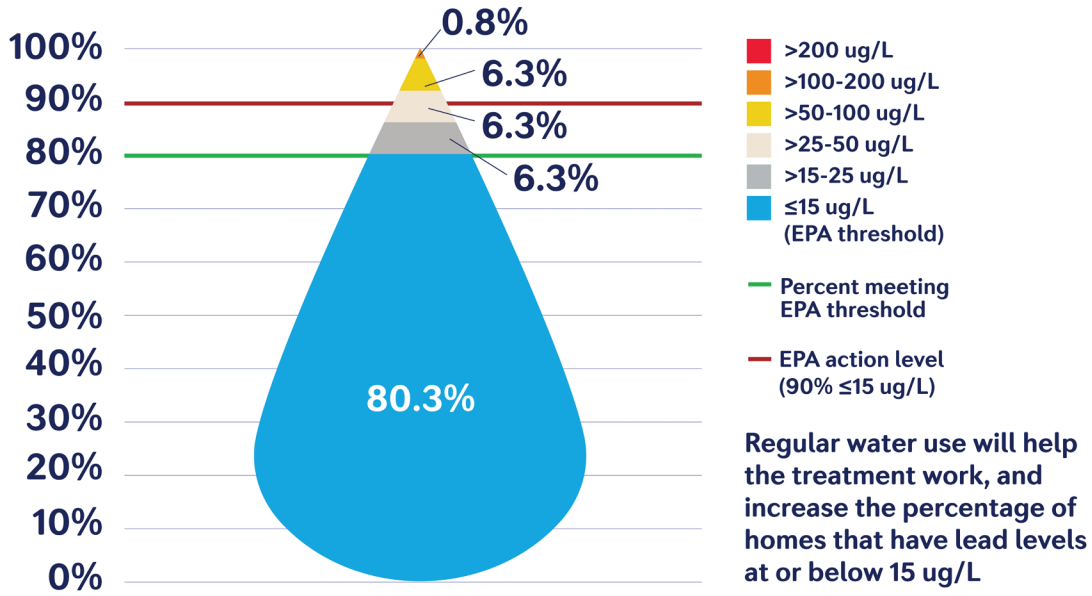
09/10/2020

Overall water quality in University Park has improved, but data continue to show that it is critical that impacted customers regularly use their tap water to fully resolve this situation.

In the August 2020 sampling event alone, about 89 percent of all compliance-sampled homes are at or below the Environmental Protection Agency's threshold for lead, 15 micrograms per liter (ug/L). For the six-month compliance sampling period so far, as of August 2020, about 80 percent are at or below that threshold.

About 80 percent of compliance samples are at or below the EPA threshold for lead in water

Compliance samples, by ug/L, collected from University Park homes and businesses, July-August 2020



According to the EPA's Lead and Copper Rule that regulates drinking water, the treatment is considered effective when 90 percent of sample locations meet the EPA threshold.

The data demonstrate that overall lead levels have improved, but elevated lead levels remain in some homes. Lead concentrations continue to show some variability, which is to be expected as the piping continues to adjust to the treatment.

To view a table listing all compliance sample results for each sampled home from the July-August 2020 sampling events, please see Appendix A at the end of this document.

To help resolve this situation, customers under the advisory should continue to regularly use their tap water and regularly use cold tap water at their kitchen sinks. This will allow us to work together toward the solution and speed up the treatment process.

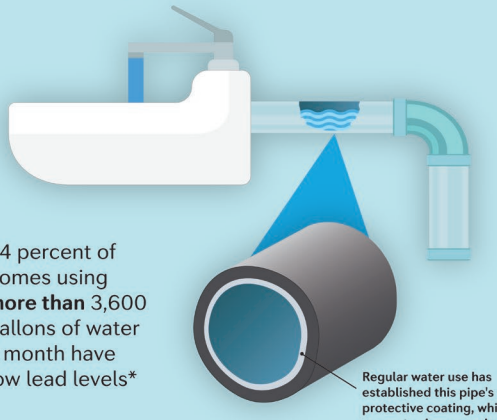
Water Use is Critical for the Treatment to Work

Regular water use is critical to resolving this situation in University Park. Water use moves our treatment through customers' plumbing systems so it can build a protective coating. Once formed, this protective coating prevents lead inside customers' pipes from interacting with fresh water flowing into their homes.

University Park homes with regular water use tend to have lower lead levels

Data from regularly sampled University Park homes indicate water use significantly impacts lead levels

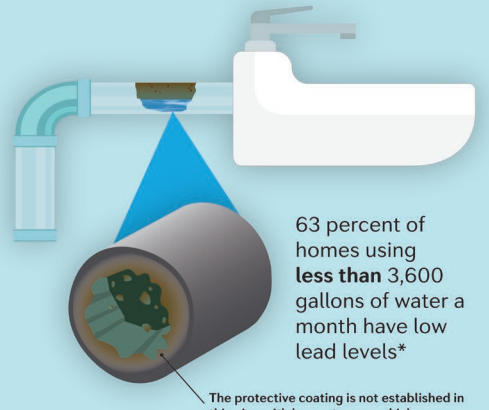
Regular water use



84 percent of homes using **more than** 3,600 gallons of water a month have low lead levels*

Regular water use has established this pipe's protective coating, which prevents pipe corrosion and lead exposure.

Low water use



63 percent of homes using **less than** 3,600 gallons of water a month have low lead levels*

The protective coating is not established in this pipe with low water use, which means lead from the internal plumbing can interact with water flowing into the home.

*Monthly water use is based on monthly medians and low lead levels include those below 15 micrograms per liter (ug/L).

Source: Compliance data collected September-December 2019

Use tap water throughout your home

We encourage all University Park customers who are under the advisory to continue tap water use and regularly use cold tap water at their kitchen sinks to support the treatment.

Up to date as of 08/31/2020

As illustrated above, using tap water moves the treatment through the system so it can establish a protective layer inside customers' home plumbing. The protective layer will stop lead inside customers' internal plumbing from interacting with water flowing into their homes.

In the same way that painting a room at home sometimes requires several coats of paint, the treatment requires regular water flow to fully coat the home's pipes.

By the end of 2019, 100 percent of samples that were collected from University Park homes after running the tap water for two to three minutes had nearly non-detectable lead levels. This validates that, in addition to helping the treatment work, regular tap water use is highly effective at reducing potential lead exposure.

We thank our customers for their continued patience and cooperation.

See below for more information about compliance sampling and our process or click here to view previous 2020 data updates or here to view 2019 data updates.

More Information About Compliance Sampling

The Lead and Copper Rule and Compliance Sampling Requirements

The EPA, through its Lead and Copper Rule, requires water utilities to work with their customers to collect regularly scheduled stagnation samples, or compliance samples. These samples must be taken after water has remained in customers' pipes unused for six or more hours, therein providing high-case scenario data for lead exposure. Under the rule, utilities must choose sample locations that represent properties with the highest inventory of lead. For example, so-called "Tier 1" locations include those with lead service lines or lead solder on copper pipes within homes constructed after 1982.

The Lead and Copper Rule does not set a health-based lead limit; it is a treatment-based rule, which means if 90 percent of compliance samples test below 15 ug/L, treatment is deemed effective, and any samples with lead levels above 15 ug/L are analyzed on an individual basis.

Compliance Sampling in University Park

IEPA regulations require us to work with at least 40 homes and businesses in the University Park service area to conduct compliance sampling. Regulations require us to conduct sampling twice annually. Sample locations must be submitted to the IEPA before compliance sampling can begin.

We collected regularly scheduled samples in May 2019 as part of our biannual compliance testing schedule. On June 13, 2019, we began receiving those sampling results, some of which showed elevated lead levels. As a result, we began working with the IEPA on a treatment plan and voluntarily increased the sampling frequency, which now includes conducting monthly sampling, to help us understand and monitor progress as we resolve this issue.

All sample locations in the sampling pool were built before 1990, which means they likely have lead in their internal plumbing and represent "high-case" scenarios.

To complete compliance sampling, we schedule appointments with participating customers and a member of our team collects the samples after customers' water has been unused for six or more hours. We then send the samples to an independent lab for testing.

What we Believe Happened and how we are Working to Fix it

We immediately issued a voluntary do-not-consume advisory on June 14, 2019 for all customers in the service area **to be as protective as possible** after receiving compliance samples that showed elevated lead levels in 14 homes on June 13, 2019. Thereafter, we investigated and gathered information about this situation. It is important to note that no state or federal regulation required us to issue the do-not-consume advisory and that we issued it as a precaution to protect the public until we learned more about the extent, cause and level of the issue AND until we could implement alternative protective health measures. We have since transitioned to a lead advisory to provide more useful guidance to customers. We are continuing our public education efforts, so impacted customers know the protective steps to take to consume their water.

We have identified that the likely cause of elevated lead levels is due to water chemistry interacting with lead solder in customers' internal plumbing. Our information shows that the water in our distribution system and the University Park infrastructure do not have elevated levels of lead.

The EPA banned lead solder in 1986, and compliance testing results in post-1990 University Park homes have shown lead levels meet the EPA action level. We have since removed some areas from the advisory based on property age and water sample results. While not *required*, we still recommend customers whose properties have been lifted from the advisory run their tap water for two to three minutes and until they notice a temperature change before consumption. This ensures they receive fresh water from the mains in the street rather than water that has been sitting stagnant in their internal plumbing.

On June 15, 2019, we introduced a new treatment, orthophosphate (or, more specifically, a 90/10 phosphate blend), into the water system in the entire service area. This treatment is known for its ability to create a protective coating where lead is present, keeping the lead out of the water we consume. The treatment can take months to become effective. It is important to note that this treatment is not harmful to humans or pets.

A Message from the IEPA

The Centers for Disease Control and Prevention indicates there is no safe blood lead level in children. Lead exposures come from a combination of environmental sources, which may include lead in water. U.S. EPA estimates that water can make up 20 percent or more of a person's total exposure to lead, and infants who consume mostly mixed formula can receive 40-60 percent of their exposure to lead from drinking water. The source of lead in water is most often from a building's plumbing system.

The IEPA and Illinois Department of Public Health support point-of-use (POU) filters as a short-term strategy for reducing lead in drinking water. (*Please note: Aqua Illinois is providing free faucet filters and pitcher filters to customers in University Park*). A POU system filters water at the point where water is being used and is installed at the water connection, typically under the sink in the kitchen or bathroom. Water pitchers with POU filters may also be used. POU filters are commercially available and can be effective at removing most lead. There are several POU cartridge filter units on the market. They can vary in price and effectiveness. Filters should routinely be replaced or maintained in accordance with manufacturers guidelines and recommendations to remain effective.

To select a lead-reducing POU filter, check with the manufacturer or a third-party website (such as www.nsf.org) to verify the product was tested and certified for lead removal (NSF/ANSI Standard 53). For additional protection for particulate lead, look for a POU filter that is also certified against NSF/ANSI Standard 42 (for class I particulate reduction, 0.5 micrometers to less than 1 micrometers). To be effective, the POU filters should be installed at locations used for drinking water or for food preparation according to the manufacturer's instructions. This includes kitchen water faucets and refrigerators with water dispensers and ice makers or in water pitchers.

POU filters should be considered an interim measure until [effective treatment is restored, or] the sources of lead have been removed and replaced with lead free plumbing materials. After replacement of lead plumbing materials or disturbance of a plumbing system, the plumbing system should be flushed for 30 minutes with aerators and screens removed from all faucets. Because you cannot see, smell, or taste lead in water, testing the water is the only way to determine if lead is present in drinking water.

To access additional information about lead in drinking water and a consumer tool for identifying POU filters certified to reduce lead, please visit U.S. EPA's website at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water and https://www.epa.gov/water-research/consumer-tool-identifying-pou-drinking-water-filters-certified-reduce-lead.

Lead in homes can also come from sources other than water. To access more information about other sources of lead, please visit IDPH's website at: http://www.dph.illinois.gov/illinoislead. Consider contacting your doctor to have your children tested if you are concerned about lead exposure.

Appendix A:

Compliance sample results, in ug/L, July-August 2020

Samples	Home ID	ug/L
1	3	25
2	4	<1.0
3	5	<1.0
4	6	<1.0
5	7	1.6
6	8	<1.0
7	9	<1.0
8	10	<1.0
9	11	<1.0
10	12	<1.0
11	13	<1.0
12	14	<1.0
13	16	30
14	17	<1.0
15	20	15
16	21	1.7
17	23	2.8
18	27	6.6
19	28	110
20	29	21
21	30	<1.0
22	31	<1.0
23	32	<1.0
24	33	21
25	34	<1.0
26	43	<1.0
27	44	100
28	45	<1.0
29	47	<1.0

AQUA℠

An Essential Utilities Company

30	48	<1.0
31	50	36
32	51	<1.0
33	53	16
34	54	53
35	55	50
36	56	7.4
37	57	34
38	58	28
39	60	<1.0
40	61	5.8
41	62	<1.0
42	63	15
43	64	13
44	66	<1.0
45	67	<1.0
46	68	15
47	69	1.3
48	70	<1.0
49	71	65
50	72	18
51	73	21
52	74	<1.0
53	75	8.6
54	76	19
55	77	3.3
56	78	<1.0
57	79	<1.0
58	80	3.9
59	81	2.9
60	82	<1.0
61	84	1.2
62	85	21
63	86	<1.0

AQUA℠

An Essential Utilities Company

64	87	9.7
65	89	88
66	90	12
67	4	<1.0
68	5	<1.0
69	6	<1.0
70	7	1
71	8	<1.0
72	9	<1.0
73	10	1.6
74	11	<1.0
75	12	<1.0
76	13	1.3
77	14	<1.0
78	16	5
79	17	<1.0
80	20	26
81	21	1.9
82	23	1.2
83	27	7.7
84	28	78
85	29	2.1
86	30	<1.0
87	31	<1.0
88	32	<1.0
89	43	<1.0
90	44	86
91	45	<1.0
92	47	<1.0
93	48	<1.0
94	50	7.6
95	51	<1.0
96	53	5.4
97	54	77

AQUA℠

An Essential Utilities Company

98	55	32
99	56	<1.0
100	58	26
101	60	<1.0
102	61	14
103	62	<1.0
104	63	1.9
105	64	14
106	66	<1.0
107	67	<1.0
108	68	<1.0
109	69	4.7
110	70	<1.0
111	72	71
112	74	<1.0
113	75	<1.0
114	76	1.4
115	77	3.1
116	78	<1.0
117	79	<1.0
118	80	6.4
119	81	2.3
120	82	<1.0
121	84	<1.0
122	85	7.3
123	86	<1.0
124	87	7.9
125	90	<1.0
126	91	<1.0
127	94	<1.0