

## Arbor Heights

**Phase I:** Nineteen drinking fountains were sampled for first draw lead levels in the first phase of the testing program. Four of the nineteen had lead levels between 20 ppb and 50 ppb. None of the samples had lead levels 50 ppb or greater.

**Phase II:** The second round of testing included eighteen fountains tested both for first draw and flushed lead levels. A flushed sample of the inlet water into the school was also taken. Sixteen of 18 first draw drinking fountain samples were below 20 ppb lead. One first draw sample showed a lead level between 20 and 50 ppb and one first draw sample, from bubbler #16, was greater than 50 ppb. Seventeen of the 18 flushed samples were below 20 ppb lead with only one sample, again from bubbler #16, between 20 and 50 ppb lead. The inlet water measured well below 20 ppb lead.

**Follow-up:** A follow-up sample was taken for the drinking fountain (bubbler #16) that had a high flushed lead level in phase II. The follow up sample was a flushed sample and was well below 20 ppb lead.

**Plumbing Inspection:** EES conducted a plumbing inspection on November 9, 1990 because of the high flushed lead level found in a sample from bubbler #16.

The building was constructed during the 1940's. No information was obtained on the service line to the building. The building plumbing is mostly galvanized pipe. Most of the piping in the building is concealed behind walls and is not accessible for physical inspection. There were no outward signs of corrosion on the piping that could be seen or on the drinking fountain itself. A ground wire was found connected to the service line in the boiler room.

The plumbing inspection found some potential for lead corrosion into the water from the galvanized piping, however, the Phase II and follow-up sampling results indicate that the flushed water lead levels are generally low in the building. Lead in the 30 second flushed sample of drinking fountain #16 in the Phase II samples appears to be the result of localized corrosion in and around the drinking fountain.

**Conclusions:** The Phase I results were probably deceptively high because of lack of use during the summer period when the samples were taken. Phase II results are probably more representative of the first draw morning lead levels and the flushed lead levels found throughout the school year.

Testing during the school year at Arbor Heights indicates that 2 of the 18 drinking fountains in the school may be above 20 ppb lead in morning first draw samples. A 30 second flush reduced only 1 of the 2 high lead levels below the recommended level of 20 ppb lead. Additional flushing on a follow-up sample from bubbler #16 (1 minute) reduced the remaining high lead level.

The follow-up samples and a plumbing inspection indicate that the probable cause of the high lead levels in the school is from corrosion of the drinking fountains and the connecting piping connecting the drinking fountains to the building plumbing. Piping materials within the building do not appear to be contributing to lead levels.

**ARBOR HEIGHTS**

<b>ppb Lead Level</b>	<b>PHASE I</b>	<b>PHASE II</b>		<b>FOLLOW-UP</b>
	<b>First Draw</b>	<b>First Draw</b>	<b>Flushed</b>	<b>Flushed</b>
0-20	15	16	17	1
21-49	4	1	1	0
50+	0	1	0	0
<b>Total Number</b>	<b>19</b>	<b>18</b>	<b>18</b>	<b>1</b>

**Lead in Drinking Water  
Seattle Public Schools**

School	Sample Location	Fixture Type	Sample Type	Phase I Results (ppb lead)	Phase II Results (ppb lead)	Fixture Replaced	Phase V Results (ppb lead)	Phase VI Results (ppb lead)	Phase VII Results (ppb lead)
Arbor Heights	1	bubbler	first draw	4	5			10	
Arbor Heights	1	bubbler	flushed		5				
Arbor Heights	2.1	bubbler	first draw	5	7			12	
Arbor Heights	2.1	bubbler	flushed		5				
Arbor Heights	2.2		first draw					7	
Arbor Heights	2.3		first draw					5	
Arbor Heights	3	bubbler	first draw	2	5			7	
Arbor Heights	4	bubbler	first draw	2	5			7	
Arbor Heights	4	bubbler	flushed		5				
Arbor Heights	5	bubbler	first draw	2	5			9	
Arbor Heights	5	bubbler	flushed		5				
Arbor Heights	6	bubbler	first draw	1	6			16	
Arbor Heights	6	bubbler	flushed		5				
Arbor Heights	7	bubbler	first draw	7	16		24	15	
Arbor Heights	7	bubbler	flushed		5				
Arbor Heights	8	bubbler	first draw	12	15		26	17	
Arbor Heights	8	bubbler	flushed		7				
Arbor Heights	9	bubbler	first draw	10	5			13	
Arbor Heights	9	bubbler	flushed		5				
Arbor Heights	10	bubbler	first draw	20	23	yes	45	28	
Arbor Heights	10	bubbler	flushed		5				
Arbor Heights	11	bubbler	first draw	24	8			31	
Arbor Heights	11	bubbler	flushed		5				
Arbor Heights	12	bubbler	first draw	17	6			12	
Arbor Heights	12	bubbler	flushed		5				
Arbor Heights	13	bubbler	first draw	33	5			11	
Arbor Heights	13	bubbler	flushed		5				
Arbor Heights	14	bubbler	first draw	19	6			18	
Arbor Heights	14	bubbler	flushed		5				
Arbor Heights	15	bubbler	first draw	31	5			12	
Arbor Heights	15	bubbler	flushed		5				
Arbor Heights	16	bubbler	first draw	11	224	yes	35	19	
Arbor Heights	16	bubbler	flushed		23				
Arbor Heights	17	bubbler	first draw	27	17		51	37	
Arbor Heights	17	bubbler	flushed		5				

Phase I, 7/90-8/90  
Phase II, 9/90-11/90  
Phase V, 9/92-11/92  
Phase VI, 1/93 - 2/93  
Phase VII, 2001-02

**Lead in Drinking Water  
Seattle Public Schools**

School	Sample Location	Fixture Type	Sample Type	Phase I Results (ppb lead)	Phase II Results (ppb lead)	Fixture Replaced	Phase V Results (ppb lead)	Phase VI Results (ppb lead)	Phase VII Results (ppb lead)
Arbor Heights	18	bubbler	first draw	15	5			21	
Arbor Heights	18	bubbler	flushed		5				
Arbor Heights	19		first draw					21	
Arbor Heights	20		first draw					5	
Arbor Heights	21		first draw					5	
Arbor Heights	22		first draw					5	
Arbor Heights	99	faucet	flushed		5				

Phase I, 7/90-8/90  
Phase II, 9/90-11/90  
Phase V, 9/92-11/92  
Phase VI, 1/93 - 2/93  
Phase VII, 2001-02

## Seattle Public Schools

### How to Read Previous Drinking Water Test Results

July 2004

**School** - Schools are identified by the building name rather than the program name, e.g. Summit K-12 is listed as Addams. Results are provided for buildings that no longer exist or that have since been renovated or relocated (please see footnote for individual schools).

**Sample Location** - The sample location number correlates with the Fountain ID Number and Location in School from Table 3 of the results of water quality testing currently available on the District web site. Sample location number 99 indicates that the sample was collected at the building inlet.

**Fixture Type** - The terms bubbler and fountain are used interchangeably.

**Sample Type** - First draw results are for concentrations measured in the first 250 mL of water from the bubbler that has stood in the piping and fixture for between 8 and 18 hours. Flushed results are from concentrations measured in a 250 mL sample collected after running the bubbler for 30 seconds.

**Phase I Results** - Phase I included the testing of drinking water from 85 District sites. Samples from 1152 water sources were collected and analyzed for lead during the summer of 1990. Phase I represented a worst case scenario because water at most sites had been standing for several weeks. Phase I was conducted by District personnel. Results are reported in parts per billion (ppb).

**Phase II Results** - Phase II included the testing of drinking water from 80 District sites. 2700 water samples from more than 1400 bubblers were collected and analyzed for lead from September 1990 through November 1990. Phase II was conducted by Economic and Engineering Services, Inc.

**Note:** Phase III and Phase IV did not include testing. Phase III was to identify bubblers with the lowest lead content and Phase IV was to replace all bubblers that had lead levels at or above 20 ppb.

**Phase V Results** - Between September 1992 and December 1992 follow-up sampling and analysis was conducted on all the replaced bubblers. Additional sampling was conducted on bubblers where Phase II analysis revealed levels between 15-20 ppb lead. Samples were also taken at new and renovated schools where no Phase II testing was done. A total of 633 samples were taken.

**Phase VI Results** - Phase VI was conducted between January 1993 and February 1993.

**Phase VII Results** - Water samples collected by District personnel between 2001 and 2002.