

Seattle Public Schools  
Drinking Water Quality Improvement Program  
2008-2009 Annual Report

Published August 15, 2009

This is the second Annual Report for the Seattle School District ("District") Drinking Water Quality Program ("Program"). It describes the status of the Program through June 30, 2009. Future reports will be issued each summer.

### Introduction

The District considers student health and safety as a top priority. Over the last several years we have adopted and implemented a set of rigorous requirements that have set nationally recognized standards for drinking water quality in public schools.

The program was mandated by the School Board, which adopted a Drinking Water Policy ("Policy") in 2004. The Policy is available at <http://www.seattleschools.org/area/policies/e/e10-01.pdf>. The Policy prescribes periodic testing of each drinking water source in each school and other buildings operated by the District, coupled with reporting of results, remediation, and sets criteria requiring that bottled water be provided, if necessary, to assure students and staff have ready access to drinking water.

The most important testing criterion is testing for lead. The School Board set the maximum allowable level at 10 parts per billion (ppb), which is one-half the allowable level set by the U.S. Environmental Protection Agency ("EPA") for schools. Tests are also conducted of all drinking water sources for cadmium and copper. Each school is tested at least every 3 years.

All results are available on the District's website. For each building they include a summary of current status, test results from prior to 2004, and results of tests since 2004. The link is: <http://www.seattleschools.org/area/ehs/drinkingwater/waterreports.htm>.

### Major Accomplishments

Initial testing of all schools was conducted in 2004. Recurring 3-year testing began in 2007 and 30 schools were tested by June 2008. Testing was accomplished in 34 schools in the 2008-2009 school year. For 64 schools tested since 2007, 93% of the sources tested passed all requirements, up from 73% in 2004. Standing sample passing rates increased from 65% in 2004 to 94.5% for the 64 schools and flushed sample passing rates increased from 94% in 2004 to 99.5%. These results indicate marked improvement in overall water quality during the last 5 years.

Significantly, once a source passes and is placed in service, there is high confidence it will continue to pass. Just 46 sources, or 1.8%, failed after previously passing.

Also significant is the performance of drinking fountains, where most water is consumed. Just 21 fountains failed. Only five of these were above the EPA standard of 20 ppb and only one (the

Lincoln auditorium foyer, at 36 ppb) has previously passed and now failed. Flushed results for these fountains were all pass.

Since 2007, there have been only two copper failures and no cadmium failures.

Piping replacement continued, with another four schools receiving major piping work during summer 2007, five more in 2008, and additional seven schools are receiving major piping work during summer 2009.

### Specific Activities

#### Overall School Status

As of June 2009, all open school buildings were in regular service. A total of 44 individual locations within these buildings are served by bottled water (see below).

#### Recurring Testing Between June 1, 2008 and June 30, 2009

The Program calls for recurring testing of all drinking water sources, to assure continued compliance with the Policy. This testing will take place at each school every 3 years, on a rotating schedule.

In the 2 years ending on June 30, 2009, recurring testing had been finished and results obtained on 68 schools, representing 2,623 drinking water sources, roughly 60% of the District sources. Approximately 94% of the sources tested met all Policy requirements.

For the 68 schools tested during this period, representing 1,814 sources that had previously passed, the passing rate for lead is 97.5%. Of the 141 that tested higher than 10 ppb (the District standard), only 50 were above the EPA standard of 20 ppb for schools. Of the 141 sources that tested higher than 10 ppb, 136 were for first draw results; the 30 seconds flushed results for these locations (which represents most of the water consumed), 133 of them met District requirements. Per the school district Policy, all sources testing above 10 ppb on either a first draw or flushed sample have been remediated, retested, or shut off.

In addition, 140 sources that had not previously met the Policy standards have also been tested. Of these, 107, or 76%, passed all District requirements and were returned to service. In most cases, these sources were in out-of-the-way locations inaccessible to students.

The District also tested 499 sources that had never been tested before; most of these were at schools with new piping systems. Of these, 430, or 86%, passed. To assure that all locations are identified for future testing, the coordinator has implemented a systematic review of each school to identify and record all locations prior to retesting a school.

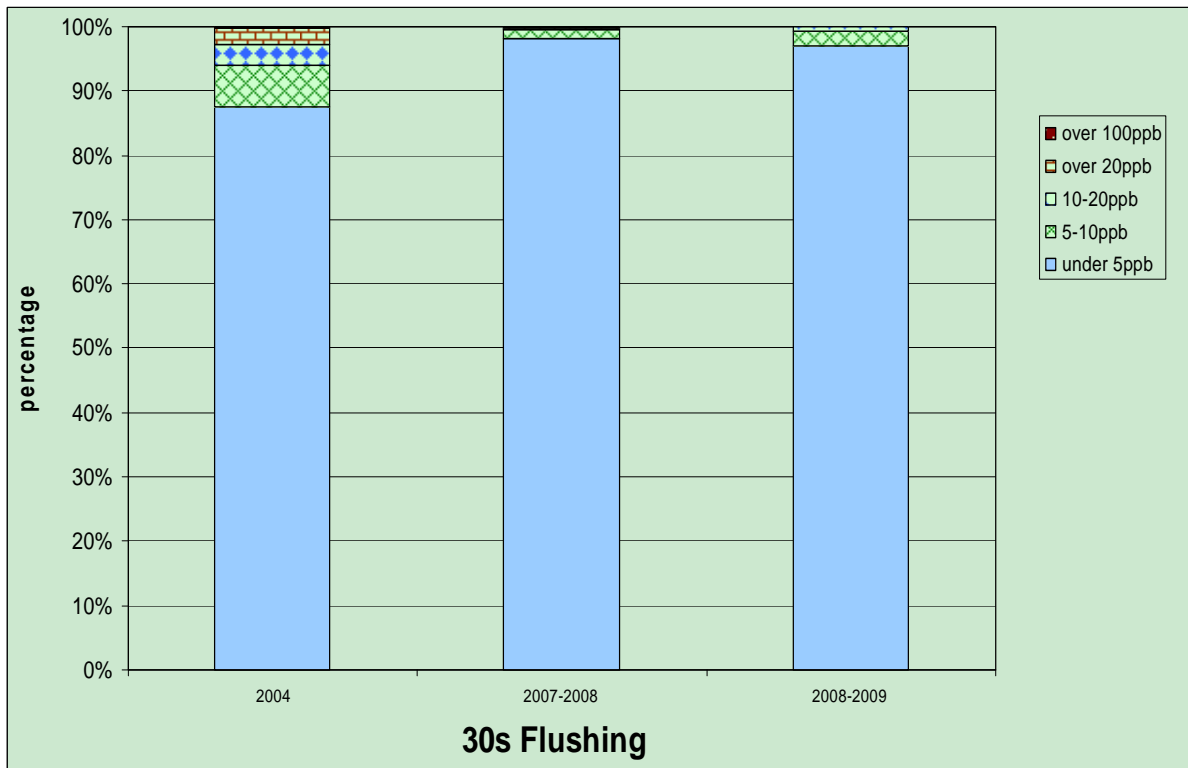
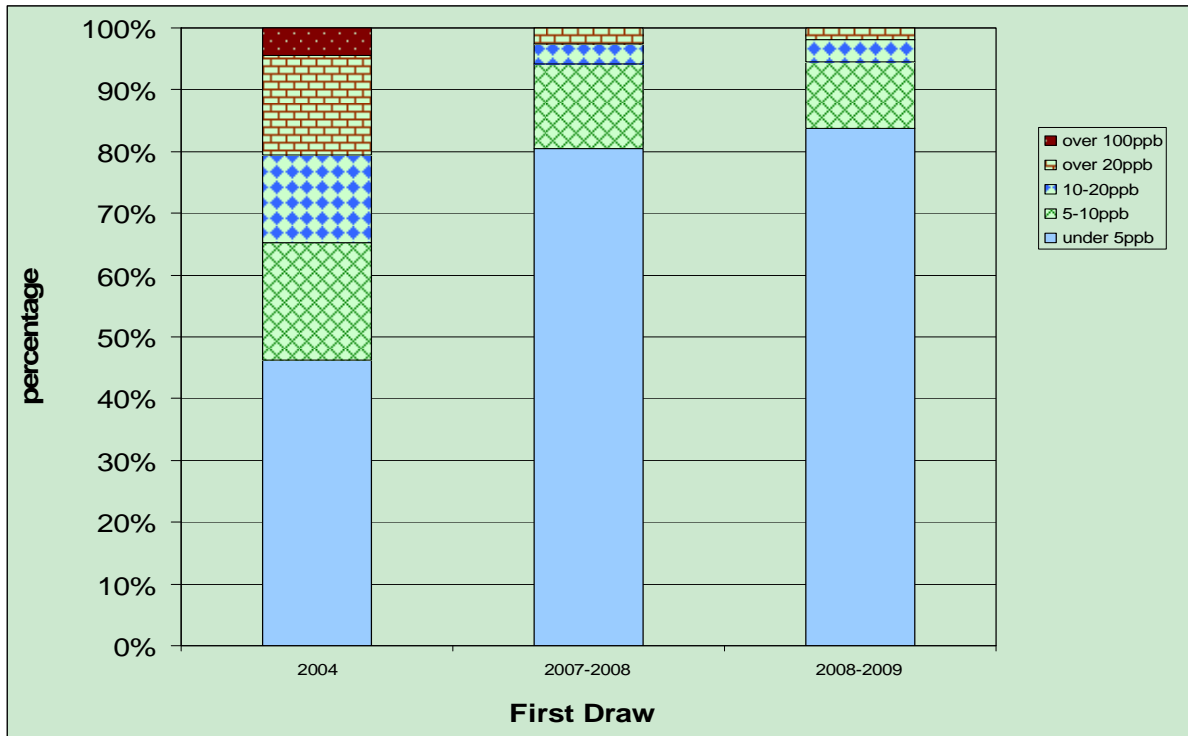
A detailed summary is attached for all schools tested since June 1, 2007 (Attachment 2).

Results for each school being retested (recurring testing or piping replacement) are summarized on Attachment 3 showing, for each school, number of locations tested, number passing and failing, number of results above EPA standard, number of signs posted and bottled water locations, and highest and lowest result and average result.

One useful way to look at these results is to compare the test results from 2004. Looking at various statistics for schools that were tested in the last year (excluding schools with complete pipe replacement), it is apparent that water quality has improved in the last 5 years.

	<b>2004</b>	<b>2007-2008</b>	<b>2008-2009</b>	<b>Cumulative 2007-2009</b>
Percentage of first draw results Passing	65	94	95	94.5
Percentage of first draw results below 5 ppb (1/2 SPS standard and 1/4 EPA standard)	46	80	85.5	83
Percentage of first draw results below 20ppb (EPA standard)	79	97.5	98.3	97.9
Percentage of 30 seconds flushing results passing	94	99.6	99.4	99.5

The following bar chart shows visually the improvement in water quality over the last 5 years.



The District expects to test another 30 schools by June 30, 2010. This will complete the first round of three-year testing for every school.

Bottled Water: Bottled water is being provided at a number of locations in buildings in regular service, as necessary to meet the access criteria. Except for rental facilities, a total of 44 individual sources are currently served with bottled water. This represents a decrease of 14 locations in the last year, a total of 54 locations in the past two years. A list of bottled water locations is attached as Attachment A1.

Regular Flushing Program: The Policy provides for flushing of drinking water sources four times annually. The most recent required flushing occurred in the week prior to the resumption of school after the spring break. Regular notices went out to all custodians and reports were received back from the school custodians. All schools were flushed as required. The flushing reports are filed in the Coordinator's office.

Flushing is planned for early September before the start of school.

Filter Replacement: The District currently has installations for activated carbon filters at 267 sources. The cartridges are to be replaced twice annually, each summer and winter break. Orders were sent to replace these filters and all filter cartridges were replaced on schedule.

Research Papers Published: Through the effort to improve water quality since 2004, the District has sponsored research in a number of areas. These papers involve a number of aspects of drinking water quality, including: Lead release from end-use plumbing components in the District and lead variability testing. A complete listing of papers is provided in Attachment 5. No new papers were published this past year.

Testing Plan and Activities Scheduled through July 1, 2010: From July 1, 2009 to July 1, 2010, the District expects to complete testing on 32 schools that were due for retesting and to have reported the results on the District's website. The schools are listed on Attachment A3.

Piping Replacement: Four schools had piping replacements in 2004, another eight schools had full or partial replacements in 2005 with four more in 2006. All have been returned to regular service.

During summer 2008, five school buildings had fully or partially piping replaced. In addition, the renovation of Garfield and South Lake were completed in 2008. Sources were tested at all seven schools and the schools are now in regular service.

Construction is under way for additional piping replacement at seven schools during summer 2009. For summer 2010, the plan is not finalized yet. In addition, the South Shore school is nearing completion and will be tested prior to school opening.

For a list that includes all schools with piping projects in 2008 through 2010, please see Attachment 7.

Publication:

This report will be posted on the District's Facilities website and provided to the following:

School Board  
School Principals  
Local and Regional Media  
Former Oversight Committee members  
Seattle Public Utilities  
Washington Department of Health  
Public Health of Seattle and King County  
HDR (District water quality consultant)  
Key District Staff (Superintendent, CFOO, Facilities Director, Education Directors)

For further information, contact Shelly Kerby, Drinking Water Quality Program Coordinator, 252-0703.

Attachments:

1. [List of Bottled Water Locations](#)
2. [Test Results summary by School](#)
  - 2.1. Lead Test Results Summary by school
  - 2.2. Evaluation of Lead Failures over 20 ppb
  - 2.3. Copper and Cadmium Test Results Summary by School
3. [List of Schools to be Tested by July 1, 2010](#)
4. [Comparison of Results in 2004 and 2009](#)
5. [Research Papers Published](#)
6. [Useful Links](#)
7. [School Piping Projects](#)