

MCPS WATER SAFETY WORKGROUP

Location: Facilities Maintenance Depot, Conference Room 1

Date: February 28, 2019

Time: 9:30 am – 12:00 pm

Agenda Items

9:30 – 9:40

Welcome

Review and Confirm Minutes from 1/24/2019 Meeting (ALL)

News on pending legislation: SB481, County bill - Lead in Drinking Water - Schools

9:40-10:15

Follow up from last Meeting- Lead presenter(s) in parenthesis, input from all

MCPS Detailed Data Review

1. GIS Maps displaying schools where the percentage of samples exceeds 10% of the total samples at various levels (5, 10, 15, and 20 ppb)
2. Comparative analysis of previous sampling data (>2004) at with sampling conducted in 2018 for the town of Poolesville schools and the 5 other schools constructed prior to 1940
3. Cumulative Quantities of each type of fixtures at various levels, overall and by school type
4. Regression Analysis by Fixture Type & Type of School: concentration vs. age of school
5. % of fixtures at various levels, overall and by school type and age group
6. % of schools with at least 1 fixture at various levels by age group
7. % of schools with at least 10% at each level by age group

10:15-10:30

Additional information gathered

Town of Poolesville water treatment procedures, elevated BLL? (MDE/DHHS)

Kindergarten/Pre-K classrooms that were elevated in 2018

Plumbing assessments of 6 facilities < 1940 (MCPS)

Data on use of kitchen outlets with elevated sampling data (MCPS)

Preliminary post-remediation data– *as available* (MCPS)

10:30-11:00

Begin Draft of Types of Recommendations (ALL)

Options for Discussion

1. Action Level Priorities w/Tiers and Phases
2. Flushing & Education
3. Communication to Parents

11:00-11:15

Flushing Information

Hospital management plans (NSF)

Chicago school system flushing protocols (MCCPTA)

WSSC article

11:15-11:45

Other School District Information/Best Practices

Bottle filling stations implementation in Michigan and Oakland County (MCCPTA)

Other school systems action levels and sampling protocols

- Sampling protocols for systems reporting action levels of 5 and 15 ppb (Nutrition Policy Report from Harvard School of Public Health)
- Additional information? (All)

Additional best practice procedures to be considered?

11:45-11:55 **Next Steps/Deliverables for next meeting**

Next Meeting proposed dates: March W27, TH28, F29 AM

Final Analysis

Review Recommendations

11:55 – 12:00 **Meeting Analysis**

9:30 am – 12:00 pm
Water Safety Work Group

Meeting notes from February 28th, 2019

Participants:

Harold Chase	National Sanitation Foundation (NSF) International, Legislative Director
Sean Gallagher	Montgomery County Public Schools (MCPS), Assistant Director, Department of Facilities Management
Nasser Kamazani	Montgomery County Government (MCG), Senior Engineer, Department of Environmental Protection (DEP)
Teresa Lloyd	MCPS, Environmental Specialist
Rebecca Morley	Montgomery County Council of PTAs (MCCPTA), Chair, Safe Water Committee
Brian Mullikin	MCPS, Team Leader, Environmental Services and Indoor Air Quality Services
Christine Rogewitz	MCPS, Admin. Secretary II
Tim Rule	Maryland Department of the Environment (MDE), SDWA Implementation
Jin Shin	Washington Suburban Sanitary Commission (WSSC), Division Manager, Water Quality
Lynne Zarate	MCPS, Director, Division of Maintenance

Absent:

Dr. Travis Gayles	Department of Health and Human Services (DHHS), Health Officer
Fred Mason	Maryland State Department of Education (MSDE), Branch Chief, School Facilities
Peter Park	MCPS, Team Leader, Systemwide Safety Programs
Laura Stewart	MCCPTA, Vice President of Advocacy

The meeting commenced with a request for attendees to review previous meeting minutes. No revisions were suggested.

MCPS provided a brief update of proposed State and County legislation relating to lead in drinking water in schools. Both State and County legislation proposes the reduction of the lead content in school drinking water outlets to an action level of 5 parts per billion (ppb).

Action: Upload Draft County Bill to Google Drive. [MCPS](#)

Follow-up

MCPS Data Review

1. GIS Maps displaying schools where the percentage of samples exceeds 10% of the total samples at various levels (5, 10, 15, and 20 ppb).

WSSC asked how many fixtures were tested per school and MCPS stated that the number of fixtures tested varied for each school. There does not appear to be any geographical correlation between GIS map and elevated levels.

Action: Identify school highlighted with a red dot (40-49 fixtures) in the eastern quadrant of the "MCPS Schools With Greater Than 10% of Fixtures Above 5 ppb Action Level" GIS MAP (slide 4).

MCPS

2. For the five schools constructed prior to 1940 and schools located in Poolesville: Results from the 2004-2006 round of testing were compared with results from the 2018 testing..

A review of comparable fixtures was presented. MCPS stated it was not possible to compare results from individual fixtures from 2004 due to factors such as missing barcodes. In general, it was noted that the range of sample concentration was much wider in 2004 for Germantown ES, Chevy Chase ES, Westbrook ES, Damascus ES, and East Silver Spring ES. Additionally, the average and median values have decreased significantly. MCPS stated the samples exceeding the action level in 2004 numbered in the thousands but only in the hundreds in 2018, which indicates that many fixtures > 20 ppb were successfully mitigated in the earlier initiatives.

MCPS questioned whether the addition of orthophosphate by WSSC may have contributed to the decrease in the concentration ranges, mean and median values. WSSC stated that orthophosphate added for compliance with the EPA's Lead and Copper rule may have contributed to passivation and concentration decreases. MCPS mentioned that the flushing protocol MCPS implemented in 2004 may have also contributed to these decreases.

The dot plots for John Poole MS, Poolesville ES and Poolesville HS show no statistically significant change in concentration between the two periods of testing.

The PTA asked about broken fixture replacement. MCPS stated that broken fixtures are replaced with fixtures compliant with current regulations.

WSSC asked about the Poolesville water utility system that supplies schools located in Poolesville. MDE stated that schools located in Poolesville are served by treatment plants managed by the Town of Poolesville, with water supplied by 13 (soon to be 15) wells and 11 (soon to be 13) treatment plants. There is currently no treatment for corrosion control. A review of federal Lead and Copper Rule monitoring data since 2001 indicates that there has been only 1 sample with a lead concentration greater than 0.015 mg/L (in 2013). This did not result in an exceedence of 0.015 mg/L for the 90th percentile, which is the action level for the Lead and Copper Rule. MDE stated that the Town may have technical difficulty implementing corrosion control due to the number of wells tapped in various different formations. MDE is looking into possibilities for conducting monitoring at these sources for various parameters relevant to corrosivity, such as pH, alkalinity, hardness, etc. MDE also mentioned that the size of the school supply piping may contribute to long water stagnation times.

3. Discussion of the type and quantity of fixtures at by school type.

The PTA asked whether the classroom faucets are drinking water outlets. MCPS stated that in most elementary schools they are part of a combination sink that has both a faucet and a bubbler. The faucets are primarily used for hand-washing and the students could use the bubblers for drinking. Both classroom bubblers and faucets were tested (slide 17).

PTA suggested placing signage on faucets in classrooms indicating fixture is to be used for hand-washing only. The group also suggested that a survey be conducted to determine teacher preferences versus complete shutoff.

MDE noted the elevated kitchen sinks are a greater percentage at ≥ 5 ppb overall.

Action: Provide the testing data conducted at Central Production Facility operated by Division of Food and Nutritional Service for the next meeting. MCPS

Action: Provide the data for instant hot water fixtures. MCPS

PTA asked if kitchen fixtures are sampled for hot and cold water. MCPS stated that per the regulation and 3T's, fixtures are sampled for cold water except for instant hot water outlets.

4. Regression Analysis by Fixture Type & Type of School: concentration vs. age of school

MCPS stated that for elementary school coolers there seems to be a decreasing correlation for lead concentration as age of school increases. A possible explanation is that many of the older coolers have been replaced with newer models.

Members also noted that there were many fixtures below the level of detection that were not included in these graphs because they did not have a distinct numerical value that could be graphed. The relative quantity of fixtures is important to consider.

NSF asked to graph non-detects for the bubblers based on the age of the school.

Action: Create charts where the data of <1 is incorporated. MCPS

5. % of fixtures at various levels, overall and by school type and age group

6. % of schools with at least 1 fixture at various levels by age group

7. % of schools with at least 10% at each level by age group

MCPS stated there was a substantial change in lead and drinking water regulations starting in 1986.

The PTA noted that schools where 10% of the fixtures tested exceeded 20 ppb were all constructed prior to 1986. NSF mentioned this may be due to the solder in the piping.

Additional information gathered

MCPS reviewed the limited data available for kindergarten classrooms with fixtures >20 ppb. Flush data demonstrates a noticeable decrease in the concentration of lead detected in the fixtures located in Kindergarten and Pre-K classrooms (referring to slide “Kindergarten/Pre-K classrooms that were elevated in 2018 = 5 faucets & 2 bubblers).

PTA asked why this decrease is considerable. The follow-up round of test results showed, on average, that a 30 second flush of water reduces lead content by approximately 80 percent. MCPS said this demonstrates the value in educating students to flush the fixture prior to use. PTA stated that students are timed while using fixtures therefore fixture flushing procedures may have to involve teachers. The group noticed the need to distinguish between first thing in the morning versus each time used.

WSSC stated if there are water conservation concerns related to flushing, data from EPA indicates that only 2% of all water used is for consumption. Water loss due to flushing could still add up to the cost, depending on how extensively you flush. But the benefit of health protection far outweighs the insignificant additional cost due to loss of water.

Action: Provide Uses of Water Document. [WSSC](#)

PTA observed that approximately 50% of the re-tested remediated fixtures were ≥ 5 ppb. MCPS stated that this may be due to lack of passivation and that additional options may need to be considered to provide for periodic water flows to achieve anti-corrosion passivation prior to retesting.

The PTA mentioned that water bottle filling stations may be useful as an option. MCPS stated that 99 percent of coolers already test below 5 ppb and 94 percent of coolers tested below the detection limit of 1 ppb. MCPS clarified coolers are usually in the hallway and are believed to be the preferred drinking source while bubblers are located in classrooms, are not refrigerated, and as a result have less frequent use.

WSSC commented – filling stations discourage water use from other fixtures, which will increase stagnation and lead level in those fixtures. So unless we shut them down, whoever consumes water from those fixtures are at increased risk of exposure. Additionally, POU filters can remove lead, but increases the risk of bacteriological contamination if not maintained properly.

PTA stated that bottle filling stations also encourage hydration.

NSF mentioned that guidance should be provided on best practices for water bottle use.

DEP asked how we determined the source of lead for the post remediation samples exceeding the action level. Do we have data by manufacturer?

Action: Investigate fixture lead levels based on manufacturer. [MCPS](#)

Water Safety Work Group Options for Discussion – See Comments

Action: Provide costs for remediating 238 fixtures. MCPS will share data provided to County Council. [MCPS](#)

Action: Post current letters sent to schools to Google Drive. [MCPS](#)

NSF provided an update regarding the taskforce created to develop a future standard for voluntary manufacturer certification of fixtures at <5 ppb for use in schools. NSF stated that there has been a meeting but there is no definite timeline for the development of the standard. This may not include kitchen fixtures.

NSF is unsure if voluntary standard under development will be applied to kitchen fixtures.

NSF mentioned the availability of water exceeding the 5 ppb level may be beneficial for hygiene purposes.

Action: Share consumer confidence information provided by EPA for inclusion in the letter sent to parents. [WSSC](#)

Action: Consider adding links on MCPS website to WSSC website containing supplemental lead information. [MCPS](#)

Action: Contact the City of Rockville regarding their use of orthophosphate or other corrosion protection. [WSSC](#)

Action: Research Chicago flushing protocol and provide contact information for Michigan School using bottle filling stations. [MCCPTA](#) to provide and [MCPS](#) to follow-up