**DRINKING WATER LEAD TESTING MANAGEMENT PLAN**

**Monroe One BOCES**

**41 O’Connor Road**

**Fairport, New York 14450**

[**www.monroe.edu**](http://www.monroe.edu)

**I. Introduction**

The purpose of this Drinking Water Lead Testing Management Plan is to document Monroe One BOCES, M1B, effort to assess potential drinking water problems, plan to determine exposure levels, and mitigation steps for any discovered elevated levels of lead in drinking water. The regulations that affect suppliers for public drinking water and the construction of water systems do not affect M1B. M1B is a consumer, not a supplier of public drinking water.

All of the facilities M1B manages are supplied from Monroe County Water Authority, MCWA, 475 Norris Drive, PO Box 10999, Rochester NY 14610-0999. MCWA proudly states on their website [www.mcwa.com](http://www.mcwa.com): “There is no lead in the water we deliver to your home.  (It is possible for water to pick up lead from home plumbing solder or fixtures if it sits in the pipes for a long time, but tests show this is not a problem in our service area.)” However, the word plumbing derives from the Latin word for lead because of lead’s long, wide use as a component of brass, solder, cast iron caulking, and even piping to construct water and sewer systems. Plumbing materials have only recently been regulated for lead content. New York State banned lead solder from use in plumbing in 1986, but the Reduction of Lead in Drinking Water Act did not mandate “lead-free” fixtures until January 4, 2014. But “lead-free” is not literally lead-free; currently it is defined as a 0.2% maximum allowable lead content in solder and flux and a 0.25% maximum average lead content for products, such as brass parts, faucets, valves used within the “wetted surface area” of the system used to provide water for human consumption. There is no requirement to replace or retrofit fixtures installed before January 4, 2014. Therefore there is a risk, especially in older buildings, that water traveling through older plumbing pipe and fixtures could pick up and carry lead contamination. Soft water, acidic water and hot water further heighten water’s ability to carry lead.

After the national concern for the Flint, Michigan water quality at the turn of 2016, some local school districts sampled their water and announced results of some samples exceeding the United States Environmental Protection Agency (EPA) action level for lead in drinking water. This caused great concern within our community. M1B began testing drinking water in April, 2016.

In September 2016, NYS S.8158/A.10740 was passed and schools were required to test drinking water for lead contamination, using the EPA protocol, by October 31, 2016 and then discontinue use of any potable water outlets with a lead level above 15 parts per billion. Further, results were required to be reported to the school district’s website, staff and parents, the local health department and to the NYS Health Department’s electronic reporting system. Retesting is required before a discontinued outlet may be reused as a potable water source. Retesting is also required every five years from the initial testing.

**II. Risks**

While the Centers for Disease Control and Prevention (CDC) states that “lead-based paint and lead contaminated dust are the most hazardous sources of lead for US children” and that “. . . exposure to lead-contaminated water alone would not be likely to elevate blood lead levels in most adults, even exposure to water with a lead content close to the EPA action level for lead of 15 parts per billion (ppb).” Lead poisoning is defined as blood levels exceeding 10 micrograms of lead per deciliter of blood in children under the age of 6. Children, due to consumption level relative to their body size, and pregnant women due to the risk to the fetus, have unique risks. Lead is toxic and can harm a child’s brain, kidneys, bone marrow and other body systems, largely due to our body’s inability distinguish between lead and calcium. Lead poisoning may result in cognitive and intelligence function impairment, hearing loss and lack of height in children. The CDC affirms that there is no safe blood level of lead. The EPA estimates that drinking water accounts for 10 - 20% of ingested lead. Although drinking water may be a minor contributor, lead’s toxicity warrants action anytime the EPA action level for lead in drinking water exceeds 15 micrograms per liter(µg/l) or 15 parts per billion (ppb). The range of safety is small; the EPA considers a very low level of lead in drinking water to be less than 5 parts per billion.

**III. Sampling Plan**

Recognizing the concern for lead in drinking water within the community, District Superintendent Daniel White met with Assistant Superintendent for Finance & Operations Lisa Ryan, Assistant Superintendent for Management Services Scott Covell, Director of Sustainability Barbara Carlson and Operations and Maintenance Foreman James Hartman on March 15, 2016 to develop this plan. It was decided to test all water fixtures that may provide water for consumption within the facilities managed by M1B.

Specifically excluded are those fixtures in locations M1B occupies within its component school districts wherein water systems for consumption are provided and maintained by that local district. Further, East Rochester Union Free School District is the owner and our landlord for Bird-Morgan School, 108-120 East Ave, East Rochester NY 14445 and they have taken the responsibility to test and report on the water within that building.

The nine locations tested were:

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| 1 | Foreman Center Bldg 1,2,3 | 41 O’Connor Rd, Fairport, NY 14450 |
| 2 | Foreman Center Bldg 4,5,6 | 38 O’Connor Rd, Fairport NY 14450 |
| 3 | Foreman Center Bldg 7 Security | 38 O’Connor Rd, Fairport, NY 14450 |
| 4 | Foreman center Bldg 8 Pool | 41 O’Connor Rd, Fairport NY 14450 |
| 5 | Foreman Center Bldg 9,10 | 25 O’Connor Rd Fairport, NY 14450 |
| 6 | Transportation Center | 79 O’Connor Rd, Fairport NY 14450 |
| 7 | Harris Education & Tech Center | 2596 Baird Rd, Penfield NY 14526 |
| 8 | Technology Services | 11 Linden Park, Rochester NY 14625 |
| 9 | Staff Development Services | 15 Linden Park, Rochester NY 14625 |

Water samples were taken from fixtures intended to provide water for consumption: all drinking fountains, food preparation sinks in kitchens and break rooms, ice makers and kitchen appliances with directly piped water connections. Excluded was toilet room hand washing sinks, custodial closet sinks, laundry sinks, emergency and physical education locker room showers, and eye wash stations. However, some of these excluded fixture categories may have been included in sampling if coffee mugs or other evidence of food preparation or use was suspected at the time of sampling. Identification of these areas was by a unique ID, shown on a floor plan and on a spreadsheet list.

The sampling protocol followed the EPA recommendations:

1. Take a 250 mL sample from cold water outlets that are the “first draw.” A first draw is the sample taken before any water use has occurred after a documented dormancy from not less than 8 hours and not more than 18 hours of inactivity.
2. Aerators and screens will not be removed prior to sampling.
3. Samples will be taken into containers provided by the testing lab for the purpose, stored according to the testing lab’s protocol and remain in the custody of the lab hired to do the testing.

**IV. Results**

Results are published on <http://www.monroe.edu/documents.cfm>, the Monroe One BOCES website under HEALTH & SAFETY: Written Plans and Information, Water Testing. These results were sent to the Monroe County Health Department and published to the New York State Department of Health electronic reporting system.

The EPA established a Lead and Copper Rule in 1991. This established action levels for lead at 15 parts per billion or 15ppb, which is equal to 15 micrograms/liter or 15 µ/L, and for copper at 1.3 parts per million for copper or 1.3 ppm, which is equal to 1,300 µ/L.

 If water sample results showed that these levels are exceeded, then the fixture or fixtures have a sign posted that the water from the fixture is not to be used for consumption or will be closed down completely until the fixture is remediated by parts replacement, total replacement, filter additions, and/or piping replacement. Subsequent testing will be performed on any remediated fixtures until it can be concluded that all water intended for consumption is provided at a level below the EPA action levels.

 If more than 10% of the samples for any building exceed the action levels, a further investigation will be made to evaluate what parts of the system of contributing to the overall levels of lead and/or copper. A further investigation may include alternate water sourcing and extended monitoring.

 **V.** **Designated Person**

Barbara Carlson, Director of Sustainability, is designated to coordinate the Water Testing Management Plan. This includes, for each testing cycle:

1. Survey of buildings to identify fixtures that supply water intended for human consumption.
2. Develop water sampling identification on floor plans and a spreadsheet.
3. Contacting the MCWA to invite them to participate in the testing. Originally, this included contacting MCWA for any known configurations in the service supply such as goosenecks, lead piping, or valves that might impact the incoming water quality, but no such hazards are known.
4. Request proposals from environmental labs certified for drinking water testing to sample, test and report results.
5. Schedule the testing.
6. Supervise testing procedures to make sure this plan is followed.
7. Report results to administration with recommendations.
8. Provide results to the M1B website administrator for publishing.
9. Send results to the Monroe County Health Department.
10. Send results to the Health & Safety Committee.
11. Answer questions from staff.
12. Present updates to the plan and any new recommendations to the Safety Committee for review and approval.

**VI. Remediation:**

If the results of the water testing show lead and or other concerns, further actions may be required such as:

1. Reviewing with staff that safe drinking water practices include:
	1. Using only cold water for drinking and use in food preparation.
	2. Upon the first use of water after dormancy, allow the faucet to flush for not less than 60 seconds before drawing water for consumption.
	3. Avoid drawing water from custodial sinks, bathrooms and other locations not designed for consumption.
2. Review Preventative Maintenance procedures to ensure:
	1. Regularly documented flushes of hot water tanks and other low lying sections that may accumulate sediment.
	2. Regularly documented drinking fountain filter unit service.
	3. Regularly documented cleaning of aerators and screens on the fixtures that serve water for human consumption.
3. Replacement of fixtures if suspected as a lead contamination source.
4. Assessing the plumbing profile of affected locations to identify:
	1. Piping sediment traps
	2. Piping dead-ends
	3. Cross connections between the cold and hot water system
	4. Leaded valves
	5. Piping runs with lead solder
	6. Older brass fittings that may introduce lead into the water.
5. Replacement of electrical equipment grounds to the water pipes with an engineered alternative such as copper stakes in a ring driven into the earth.
6. Installing drain connections on low points to regularly remove sediment from water lines and a preventative maintenance procedure to ensure regular service.

**VII. Recordkeeping**

M1B will maintain all testing records and any correspondence with regulatory agencies regarding drinking water test results as well as records of mitigation efforts and training and support provided to affected staff. These records will be maintained on the O&M shared drive under Health & Safety, Water Testing S:\Workgroups\O & M-Staff\Health & Safety\Water Testing. Testing records, remediation summaries, if any, will be published on the M1B website, under Online Documents & Forms, Files & Documents, HEALTH & SAFETY: Written Plans & Information, Water Testing.

**VIII. Water Re-Testing and Management Plan Review**

This plan will be reviewed annually by the designated person. That person will consider whether new work or renovations have occurred to the water systems for consumption and if additional testing may be warranted. Changes to this management plan will be forwarded to the Health & Safety Committee for approval and the re-publication on the Monroe One BOCES website, under Online Documents & Forms, Files & Documents, HEALTH & SAFETY: Written Plans & Information, Water Testing. <http://www.monroe.edu/documents2.cfm?getfiles=833|0&mysid=0>

Regardless of interim testing, comprehensive re-testing of the cold, potable water outlets is required by NYS five years from the initial testing or in April 2021.

**IX. Water Testing Results**

The complete results are online <http://www.monroe.edu/documents.cfm?id=126.905>.

**X. Water Testing and Lead in Water References**

These references were used to create this management plan and also provide links for further information.

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