Lead in Water Sampling Case Studies

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Case Studies

- Case A
  - 10,200 students
  - 12 school buildings
- Case B
  - 5,600 Students
  - 6 School Buildings

Case A: Sampling

- Collected 181 first draw water samples
- 15 samples had lead concentrations greater than 15ppb
- Collected 15 second draw (flush) samples
- 3 samples had lead concentrations greater than 15ppb
- Recommendations
  - Replace outlet/fixture for the 12 locations where only first draw failures
  - Replace outlet/fixture AND install in-line filter for the 3 locations with 2nd draw (flush) failures.
- Sample collection time total = 5 days

Case B: Sampling

- Collected 237 first draw water samples
- 7 samples had lead concentrations greater than 15ppb
- Collected 7 second draw (flush) samples
- 0 samples had lead concentrations greater than 15ppb
- Recommendations
  - Replace outlet/fixture for the 7 locations where only first draw failures
- Sample collection time total = 4 days

Summary

	Case A	Case B
Buildings	12	6
1st Draw Samples	181	237
1st Draw Exceedances	15	7
1st Draw % Exceeded	8%	3%
2nd Draw Samples	15	7
2nd Draw Exceedances	3	0
2nd Draw % Exceeded	1.5%	0%
Sampling duration	5 days	4 days

Takeaways

- First draw samples have a failure rate of less than 10%
- Second draw samples have a failure rate of less than 5%
- This evidence plays a significant role in selecting either the “Same Day” sampling protocol or the “Different Day” protocol.
  - Significantly less total time will be spent using the “Different Day” protocol
  - Also, reimbursement will only cover the required sampling and analysis.