



PORTLAND PUBLIC SCHOOLS

LOW-LEAD DRINKING WATER STATION PILOT STUDY

Robert Gray

May 15, 2019





Water Quality Status

- 2,605 fixtures tested
- 1,589 returned to service
- 500 need repairs
- 516 at or above 15 ppb action level





Why are we proposing a pilot study?

- Reduce lead levels as low as possible, hoping to reach 1 ppb.
- Prevent the need to perform partial pipe replacement
- Reduced capital costs and disruption





Why did we choose Robert Gray?

Six schools were chosen for the pilot. Three elementary (Duniway, Lewellyn and Rigler), two middle schools (Arleta, and Robert Gray) and one high school (Jefferson). These six schools each have a least 15 water taps that test at or above the state action level.





Describe the Pilot Study

At Robert Gray we will install strategically located custom engineered drinking water stations (DWS). These DWS will each have a bottle filler and two bubblers (drinking fountains). Each DWS will be engineered to filter the water from the filler and both bubblers. This will result in fewer locations to access drinking water.





What kind of filters are used?

The Office of School Modernization has extensively researched filters for lead in water. Several hundred models are available. Only two manufacturers have filters that fit our specifications.





What are the specifications?

Each lead filter must be independently certified by the National Sanitation Foundation to have the capacity to filter a minimum of 6000 gallons of water. The water leaving the filter must contain a maximum average of 1 ppb lead throughout filtration of the entire 6000 gallons. The filters must also be certified for sediment removal and be capable of filtering 2.2 gallons per minute.





Custom Engineered DWS





How will we know these DWS are working?

We will test each custom engineered DWS weekly after installation during the summer. In the first two months of the school year, we will be testing weekly and publishing data for each DWS. After seeing the test results from the first two months we will decide the continued frequency of testing. Under no circumstances will we test each DWS less frequently than every two weeks during the school year.





What about maintenance of each DWS?

We will use the ongoing test results from each DWS to determine frequency of filter replacement and annual maintenance costs. Based on our specification of a 6000 gallon minimum capacity, it currently appears that filters may need to be replaced twice each year.





What about costs?

Capital Costs

Current estimates indicate that installing custom engineered DWS throughout the district could be as little as 20% of the cost of partial pipe replacement as currently planned. This would save millions of \$.

Maintenance Costs

Cost to replace filters twice per year is currently estimated to be \$250K.





Drinking Water Behavior Change

Although each DWS will have two bubblers available with a bottle filler, all building occupants will be encouraged to bring water bottles of their choice to utilize the filtered water available from the bottle fillers.





Questions?



