

**Portland Water Bureau**  
**Water Quality**



Date: August 30, 2016  
Author: Sarah Messier

**Lead Hazard Reduction Program (LHRP) Evaluations**

<b>LHRP Component: Water Treatment and Monitoring</b>		
<b>Report Date</b>	<b>Report Title</b>	<b>Evaluator</b>
June 1999	Water Treatment and Water Quality Monitoring Tier One Follow-up Study	PWB Staff
This report summarizes the findings of an investigation conducted in April and May 1999 to better understand factors that contribute to elevated levels of lead and copper in the tap water for some Portland Water Bureau customers.		
June 2001	Lead and Copper Monitoring Results and Data Analysis for September 2000	Kelly Mooney, PWB
This technical memo summarizes the data analysis of the Lead and Copper Rule home sampling results for September 2000 and examines factors that have potential to affect lead levels.		
September 2003	Review of Corrosion Control Practices for Portland Water Bureau Water Sources	Technical Advisory Committee (Gregory Kirmeyer, P.E., TAC Chair)
Portland Water Bureau and the EPA convened a Technical Advisory Committee (TAC) to review the PWB corrosion control treatment practices, review monitoring results, and provide recommendations regarding several short-term and long-term issues.		
September 2004	The effects of moving from consumption-based to Tier-1 home occurrence-based monitoring on lead compliance.	Reuben Snyder, PWB
This analysis examines Tier 1 home data from before and after the Joint Monitoring Plan revision in 2003.		
June 2005	Tier 1 Home Analysis for Fall 2004	Ann Richter, PWB
The purpose of this report was to evaluate the results of the October 2004 Tier 1 home lead sample period and to determine why the lead 90 <sup>th</sup> percentile increased from previous sampling periods.		
November 2005	Tier 1 Home analysis for October 2005	Ann Richter, PWB
The purpose of this report was to evaluate the results of the October 2005 Tier 1 home lead sample period and to determine why the lead 90 <sup>th</sup> percentile decreased from previous sampling periods.		
March 2007	LCR Tier 1 Home analysis for Fall 2006	Kristin Anderson, PWB
Lead and Copper Rule Tier 1 home sample lead results from the Fall 2006 sampling period yielded a 90th percentile value of 0.017 mg/L, above the action level of 0.015 mg/L. An analysis of historic lead results was conducted to try and see what trends or relationships of lead to other water quality parameters are evident.		
July 2014	Analysis of Fall 2013 LCR Tier One Home Lead Results	Sarah Silkie, PWB
Lead and Copper Rule Tier 1 home sample lead results from the Fall 2013 sampling period yielded a 90th percentile value of 0.016 mg/L, above the action level of 0.015 mg/L. This memo presents an analysis of existing data to see if there is any evidence of water system operations affecting lead levels, and to see if there are any other trends or relationships evident between the home lead results and other water quality parameters in the distribution systems.		
Fall 2017 (anticipated)	Corrosion Study	Black & Veatch
This study's objectives include better understanding of the causes of lead release in PWB's system and to identify data gaps and conduct additional sampling required to better understand the role of water quality on lead release.		

8/31 Landout

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<b>LHRP Component: Public Education and Community Outreach</b>		
<b>Report Date</b>	<b>Report Title</b>	<b>Evaluator</b>
<b>February 2001</b>	<b>Prevalence of Lead Dust Hazards Study</b>	<b>John Dougherty, PhD, Program Design and Evaluation Services (PDES), Multnomah County Health Department (MCHD)</b>
The goal of this study was to understand the locations and amounts of lead dust hazards in older Portland homes.		
<b>October 2002 – present</b>	<b>LHRP Partner Quarterly Reports</b>	<b>PWB Staff</b>
PWB collects progress reports from LHRP community partners as a process measure evaluation. The quarterly reports are summarized in a PWB quarterly report, and reported to EPA in the semi-annual report.		
<b>January 2003</b>	<b>Portland Lead Hazard Control Program (PLHCP) Outreach and Education Program Evaluation</b>	<b>Stacy Edwards, PWB</b>
Provides a qualitative evaluation of the Portland Lead Hazard Control Program that compares program objectives with the types of activities, strategies, and messages actually being used.		
<b>July 2004</b>	<b>Drinking Water: Safeguarding the District of Columbia's Supplies and Applying Lessons Learned to Other Systems</b>	<b>John Stephenson, U.S. Government Accountability Office (GAO)</b>
At the request of the Subcommittee on Environment and Hazardous Materials, Committee on Energy and Commerce, House of Representatives, the GAO examined issues concerning lead in drinking water generally and the situation in Washington, D.C., in particular. The GAO examined the PWB LHRP as an example of how a water system notifies and educates its customers on lead health risks, and how it interacts with federal, state, and local agencies to respond to lead issues. The GAO visited the PWB, studied the program, toured LHRP partner education and testing events, and summarized its findings in this report.		
<b>August 2005</b>	<b>Community Energy Project Follow-Up Visit Evaluation Project</b>	<b>Elyce Brown, Community Energy Project</b>
CEP contracted John Dougherty to design an evaluation plan for the CEP Lead Poisoning Prevention workshops. CEP then implemented this plan and produced this report. An evaluation that is modified from the procedures in this report has been conducted annually through present, and the results are reported in CEP's Quarter 4 reports.		
<b>March 2006</b>	<b>How to Assess and Understand Your Community-Based Lead Education Program</b>	<b>John Dougherty, PhD, PDES</b>
Based on his work with CEP on their follow-up evaluations, John Dougherty developed an evaluation toolkit that other organizations can use to design and implement an evaluation program that is applicable for their program.		
<b>July 2006</b>	<b>Blood Lead Level Analysis</b>	<b>John Dougherty, PhD, PDES</b>
John Dougherty used GIS data of blood lead level testing from 2000-2005 to identify geographic and other patterns in the data that might inform lead hazard reduction outreach and education efforts by the Portland Water Bureau.		
<b>May 2007</b>	<b>LHRP FY2005-06 Evaluation</b>	<b>James Burke</b>
James Burke surveyed past clients or participants in LHRP activities conducted by the community partners in FY2005-06. The evaluation resulted in specific recommendations for each community partner to improve their services. In 2008, PWB staff conducted a follow-up evaluation by sending surveys to a random selection of participants who received services from the LeadLine, PWB targeted home outreach, and Growing Gardens. A summary document of these results was drafted but not completed.		
<b>November 2009 – present</b>	<b>LeadLine Postcard Survey</b>	<b>Scott Bradway/Sarah Messier, PWB</b>
PWB mails a simple postcard survey to people who called the LeadLine in the previous quarter to evaluate this service. This postcard continues to be mailed out quarterly. Results are reported in PWB quarterly reports and to the EPA in the semi-annual reports.		

**LHRP Component: Public Education and Community Outreach (cont.)**

Report Date	Report Title	Evaluator
February 2015 – present	LeadLine Email Survey	Sarah Messier, PWB
PWB emails a link to a simple survey to people who emailed the LeadLine in the previous quarter to evaluate their experience with the LeadLine. This email continues to be sent out quarterly. Results are reported in PWB quarterly reports and to the EPA in the semi-annual reports.		
December 2017 (anticipated)	LHRP FY2016-17 Evaluation	David Dowler, PhD, PDES
The objective of the evaluation is to answer questions regarding the efficacy in the LHRP grantees in reaching targeted subgroups, and raising awareness and knowledge around community lead hazards and resources for reducing exposure to lead.		

**LHRP Component: Lead in Water Education and Testing**

Report Date	Report Title	Evaluator
March 2000	Report on Analysis of Kitchen Sink Tap Water Lead Concentrations from Customer Requested Lead-in-Water Tests	John Dougherty, PhD, PDES
John Dougherty conducted an analysis of the PWB customer data after corrosion control treatment started to determine, in part, the age of home most at-risk for lead in water.		
January 2003	Lead in Water Education and Testing Program Pilot Program Evaluation	John Dougherty, PhD, PDES
The evaluation focused on the target populations who called the LeadLine, persons who participated in water testing, on participant satisfaction with the LWET, and on changes in behavior that reduce exposure to lead in water.		
February 2004 – present	Annual Review of LWET Data	PWB Staff
This annual report analyzes the data of the customer-requested lead-in-water kits to identify historical and new trends.		

**LHRP Component: Portland Housing Bureau Home (PHB) Lead Hazard Control Program**

Report Date	Report Title	Evaluator
August 2001	Portland Lead Hazard Control Program (PLHCP): Lead Hazard Reduction Follow-Up Evaluation Report	John Dougherty, PhD, PDES
January 2010	Portland Lead Hazard Control Program (PLHCP): Lead Hazard Reduction Follow-Up Evaluation Report: 2009	John Dougherty, PhD, PDES
The purpose of these studies was to collect follow-up data on lead dust loadings in dwellings that have received lead remediation work by contractors hired through the Portland Development Commission as part of the Portland Lead Hazard Control Program (PLHCP), supported by a HUD-funded grant administered by the City of Portland Bureau of Housing and Community Development (BHCD).		



Nick Fish, Commissioner  
Michael Stuhr, P.E., Administrator

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## IMPACT STATEMENT

187978

**Date:** July 6, 2016

**Council Date:** August 24, 2016

**Legislation Title:** Authorize an Intergovernmental Agreement in the amount of \$56,250 with the Multnomah County Health Department for Program Evaluation Services of the Lead Hazard Reduction Program (Ordinance)

**Contact Name:** Scott Bradway

**Contact Phone:** 503-823-1951

**Presenter Name:** Scott Bradway

**Purpose of proposed legislation and background information:**

The purpose of this legislation is to authorize an Intergovernmental Agreement with the Multnomah County Health Department (MCHD) to provide program evaluation services for the Water Bureau's Lead Hazard Reduction Program (LHRP). The program evaluation will provide essential information related to the effectiveness of the program in reducing exposure to lead in the Bull Run service area.

The Water Bureau, through the LHRP, provides funding to community organizations to provide education and outreach to reduce exposure to lead hazards. The main objective of the LHRP is compliance with the Environmental Protection Agency's Lead and Copper Rule for drinking water. In 1997, the LHRP was approved by the State of Oregon as "optimized treatment" for compliance with the Lead and Copper Rule.

The LHRP has four components: treatment and monitoring; home lead reduction; lead in water testing; and education and outreach. The Water Bureau funds education and outreach programs for lead poisoning prevention through community partner programs. The Water Bureau will evaluate the education and outreach component of the LHRP to determine the effectiveness of the community partner programs in reducing the community's exposure to lead in the Portland area. The MCHD is capable and willing to provide the program evaluation services through its Program Evaluation and Design Services (PDES) group. The scope of work for this agreement has been developed to support the Water Bureau's compliance requirements with the Lead and Copper Rule.



**Financial and budgetary impacts:**

The not-to-exceed value of the Intergovernmental Agreement is \$56,250 and is intended to last no longer than two years. Funding for the Intergovernmental Agreement is available in the FY 2016-17 Budget and will be requested in the FY 2017-18 Budget. The legislation does not create any staffing changes.

**Community impacts and community involvement:**

The result of the evaluation proposed in this legislation is anticipated to benefit the Portland community with regard to City livability and health. The LHRP education and outreach efforts have focused on targeting the most at-risk populations for lead exposure, which historically has been low income residents in older Portland neighborhoods. The evaluation will examine: if the LHRP community partners are reaching the targeted, at-risk populations in the Portland community; if the LHRP partners are raising awareness and knowledge about lead hazards in the community; and, if the populations reached by LHRP partners are using LHRP partner resources to reduce lead exposure.

**Budgetary Impact Worksheet****Does this action change appropriations?**

- ☐ YES: Please complete the information below.  
☒ NO: Skip this section

Fund	Fund Center	Commitment Item	Functional Area	Funded Program	Grant	Sponsored Program	Amount



Michael Stuhr, P.E., Administrator

7/21/16  
Date