

US EPA ARCHIVE DOCUMENT

Executive Summary

1. Water Treatment and Water Quality Monitoring

In January 1997, the Portland Water Bureau began corrosion control treatment of its Bull Run supply. This treatment consists of adding 3 to 5 mg/L of sodium hydroxide to the water at the Bureau's Lusted Hill Water Treatment Plant. This pH adjustment has changed Portland's water from slightly acidic (pH 6.7) to slightly basic (pH 7.4).

A water quality monitoring plan was developed to ensure that monitoring of lead, copper and water quality parameters that would be representative of the entire Bull Run service area, including monitoring by wholesale purveyors. This joint monitoring plan was approved by the Oregon Health Division. Subsequent analysis of monitoring results showed that there was no statistically significant difference in results of the joint plan for lead, and the Joint Monitoring Plan provided significantly higher results for copper as compared to results for individual monitoring of each consecutive system.

Two rounds of lead and copper monitoring at Tier 1 sites has been conducted following implementation of pH adjustment. The treatment has proven to be highly effective in reducing lead and copper levels in the Bull Run service area, with lead and copper levels reduced by about 75% and 60%, respectively from levels measured in 1992. Both lead and copper levels are now below the Lead and Copper Rule's Action Levels.

Based on these results, in combination with the additional components of Portland's Lead Hazard Reduction Plan, on November 18, 1997 the Oregon Health Division approved the LHRP "as optimal corrosion control treatment for lead and copper at the customer taps throughout the regional distribution system."

2. Home Lead Hazard Reduction Program (HLHRP)

This program was developed in 1997 as a joint effort by the Portland Water Bureau (PWB), the Multnomah County Health Department (MCHD) and the Oregon Health Division (OHD).

The purpose of the program is to prevent children from being exposed to hazards due to lead dust in their home environments. The program is being implemented as an AmeriCorps program called CLEARCorps (Community Lead Education and Reduction Corps). The program is being implemented in targeted Portland neighborhoods in which children are likely to be at greatest risk for home lead dust exposure.

In Year 1, the focus is on implementing the program in Portland's Humboldt neighborhood, and then using the knowledge gained to develop a model to expand the program to other neighborhoods in the Portland Water Bureau service area. Total program duration is expected to be five years.

The program contains a significant and critical evaluation component. Evaluation is being designed and implemented concurrently with appropriate components of Portland's Lead Hazard Reduction Program in an effort to, from the onset, produce an effective and comprehensive program that is performance-based. All data gathering protocols are being designed so that the program's results will be measurable, and it will be possible to establish appropriate cause and effect relationships from the activities undertaken. All of the HLHRP's programmatic activities (work in homes, followup testing, etc) will be subjected to the evaluation protocols, as will the outreach and Public Education program components. Information and data will be collected in the formative year (Year 1), and then used to produce a model for implementation in Years 2 to 5. It is anticipated that the evaluation efforts will be instrumental in producing a model which can be effectively used for the design and implementation of similar programs elsewhere.

The objectives of the Evaluation component are to:

- assure that the development and implementation of HLHRP activities will achieve the Water Bureau's public health, regulatory compliance, and stakeholder related objectives
- collect relevant program information
- analyze processes and results of program activities to develop an optimally effective program for Year 2 and beyond

Management of Evaluation components of the program have been contracted with the Program Design and Evaluation Services (PDES) unit of the Multnomah County Health Department. A Review and Oversight Team has been established to provide on-going review of the design, implementation and outcomes of the key HLHRP components (HLHRP development and implementation, outreach and public education, evaluation, and the Lead Dust Prevalence Study). The Review and Oversight Team will make immediate recommendations to change program protocols as necessary to assure that all programmatic objectives are met. Linkages between the Review and Oversight Team and the Stakeholder Advisory Committee (see Section 3) will be established to further insure effective stakeholder involvement and needed programmatic changes and enhancements.

Through extensive and proactive outreach and education, all program efforts are developed and implemented with involvement of the stakeholders in the community. This community organizing results in a program which is developed as a partnership effort between project managers and community members. Evaluation components of the program will be applied to evaluate the actual extent to which outreach and education efforts were perceived by the community to be effective.

During Year 1 pilot year, it is projected that 125 homes will be evaluated for lead paint and that in 60 of these homes, lead hazard reduction activities will take place.

CLEARCorps Team members will perform "interim lead hazard control" activities and will *not* be performing licensed lead abatement work. Assessed needs for lead

abatement work will be referred to Portland's HUD program.

Efforts to design the Home Lead Hazard Reduction Program resulted in the realization that little, if any, information existed that quantified the magnitude and nature of the actual home lead problem in the Portland service area. Therefore, a Household Dust Lead Prevalence Study was added to the program. This study will be conducted during the summer of 1998. The objectives of the Household Dust Lead Study are to:

- estimate the prevalence and magnitude of dust lead hazards in high-risk neighborhoods
- determine the characteristics of dwellings most likely to have dust lead hazards so that high-risk homes can be identified and residents can be recruited for participation in the HLHRP program more efficiently
- insure that resources are targeted wisely to a problem of known magnitude

Results of the study will be made available to others, thus enabling the design of similar studies, or the application of the results to analogous situations.

The funding of Portland's HUD program resulted in a unique and beneficial opportunity to establish a linkage between that program and the HLHRP. The objective will be to provide an effective way to furnish more of the lead hazard control services which targeted and high risk homes need. Houses that are eligible for the HLHRP and where appropriate "interim lead hazard controls" costing less than \$2,500 are determined will be processed by the HLHRP. For houses requiring more extensive hazard control or abatement, a referral will be made to the HUD program for partial or full abatement, or other appropriate rehabilitation activities. The Portland Development Commission (PDC) which will be handling referrals for the HUD lead hazard control grant. All CLEARCorps referred housing units will be given priority consideration by PDC.

The HLHRP has received significant, and positive, exposure in the media. Print media coverage has included the intergovernmental agreement for services going before the Portland City Council, critical community concerns about lead exposure and risk, and information on the program. A major press event for the Home Lead Hazard Reduction program will be held as the program is being implemented in the Humboldt community.

3. Stakeholder Involvement, Public Education, and Outreach

Proactive outreach into both the Humboldt neighborhood and throughout the Portland Water Bureau's Bull Run Service Area has been an instrumental part of the HLHRP's CLEARCorps effort and the Water Bureau's comprehensive Lead Hazard Reduction Program. The public education and outreach program is currently being implemented throughout the entire Portland Water Bureau's Bull Run Service Area.

A half-time Program Coordinator position was created and filled in August 1997 for the purposes of managing these efforts. The Program Coordinator has significant experience and expertise in community organizing, and is an active member of the

North/Northeast Portland communities. Outreach, stakeholder involvement, and education activities began in August 1997 and are documented in this section.

Services were also contracted with a community-based consultant in August 1997 for the purpose of soliciting and obtaining formal letters of support from key persons and agencies in the community that have a fundamental or critical connection to the success of the Home Lead Hazard Reduction Program. Contacts are currently being made with these key persons and agencies, significant support is being obtained, questions about the program are being answered, and commitments are being received for provision of formal letters of support. The effort to obtain formal letters of support is expected to be completed by the end of March.

The consultant will be summarizing her effort in a final report expected to be completed by the end of April. The report will also serve as a set of guidelines for others who wish to build relationships and obtain formal support from persons and agencies that have fundamental or critical connections to the success of their community-based effort.

Sixteen community outreach presentations have been conducted. The program has been met with very high levels of acceptance and appreciation for the unique and needed community-based approach. The outreach has served to gain valuable feedback from the community on how best to gain participants in the program and build an effective partnership with the community. The outreach has also served to educate significant numbers of persons in the Humboldt community and the Portland area about the nature of the program and the expected benefits.

CLEARCorps Team members are currently conducting extended outreach activities with the Albina Head Start Childcare program, and outreach in partnership with a local non-profit organization called SKIP (Screening Kids in Portland), and the Portland chapter of the Physicians for Social Responsibility (PSR).

A public education brochure has been developed, presented in a variety of community forums and outreach presentations, and made available when requested via the Water Bureau's Customer Service telephone lines. The Water Bureau has also produced a Lead in Drinking Water bill stuffer. These were developed to provide information in easily understandable terms and a lay person's language. Fact sheets about the program are available for those who desire a greater level of detail and explicit information. Compilations of Fact Sheets, brochures and other materials will be provided in resource libraries located in the community.

Portland Cable Access and the Portland Water Bureau are working together to produce two video taped presentations for public and private educational purposes. One is a 30-minute documentation of the project, the second videotape is a 5-7 minute presentation on the Home Lead Hazard Reduction Program.

On February 12, 1998 the first annual Lead Summit was conducted. There was a perceived need to, for the first time, bring key organizations doing lead work in the

community together to share information, identify opportunities for collaboration, and begin to develop an organized community-wide effort centering on lead issues. Invitations to the Lead Summit were extended to all local and regional organizations, and health and service providers that were found via outreach efforts to be playing key roles in lead-related issues in the community and region. The participants included representatives from local and state health agencies, health clinics, Urban League, Oregon Legal Services, community activists, elected officials, neighborhood associations, EPA, HUD, and the Bureau of Housing and Community Development. The Lead Summit began with short presentations by each organization regarding their current and predicted lead activities, and available resources. Small group work sessions identified major lead issues and recommended strategies. Participants identified the need for a community-based, city-wide lead strategy. The group will meet again in one month, and come to consensus on major issues, additional resources needed and a group-sponsored strategy for implementation on a community-wide effort. A resource directory will be published, and it is hoped that the Lead Summit will become an annual event.

Outreach to potential stakeholders has included information on the program, identification of areas for collaboration, and, where appropriate, an assessment of the appropriateness and willingness of persons to become part of the Stakeholder Advisory Committee (SAC). The Lead Summit and the consultant's efforts to obtain formal letters of support for the program are also proving to be helpful in identifying potential SAC members. The Stakeholder Advisory Committee is expected to be formally established in August. Roles and responsibilities for SAC members are currently being defined. A list of potential SAC members is being developed. If an FPA for Project XL is realized, then the SAC will be restructured to gain formal commitment from persons who will be designated as Direct Participants, Commentors (and the General Public). Regardless of the XL status of this program, the Stakeholder Advisory Committee will be formed to provide stakeholder involvement, review and feedback on the program as it is implemented.

4. Lead-in-Water Testing Program

The Lead-In-Water Testing Program is an enhancement of the Bureau's long-standing practice of providing free lead-in-water testing for any Portland customer who makes such a request. The enhanced Lead-in-Water Testing Program is intended to further help reduce the risk of exposure to lead from drinking water by providing testing for residential, commercial, industrial and institutional customers throughout the entire Bull Run service area.

This new program will include testing for targeted classes of customers at special risk from lead exposure (such as day-care centers and schools) and classes of services

most likely to have elevated lead levels in their drinking water (such as housing of a certain age or with certain plumbing materials). It will also include assistance for customers with elevated levels of lead-in-water to aid them in reducing their risk of exposure to lead from this source.

Final development and implementation of the Lead-In-Water Testing Program has been on hold pending clarification of the status of the Water Bureau's proposal to EPA's Project XL. At this time, the Bureau will proceed with obtaining consulting services to assist in the final design of the program and development of an implementation plan. That work is scheduled to be complete by September 1998, at which time the final Lead-In-Water Testing Program will be implemented. Until that time, the Bureau will continue with its practice of providing complimentary lead-in-water testing for Portland customers.

5. Lead Pigtail Removal Program

While not specifically a component of Lead Hazard Reduction Program, the Water Bureau has nearly completed removing all lead pigtails in Portland's water distribution system. Although originally scheduled to be completed in 10 years, the schedule for this program was extended by 3 years due to the high costs of this work. The schedule extension was approved by the Oregon Health Division.

As of February 1998, a total of 9,776 lead pigtails have been removed, at a cost of nearly \$10 million (1998 dollars). There are currently only 410 pigtails remaining, with removal of these pigtails scheduled to be completed by no later than June 30, 1998.