



**COMMUNITY
BASED
HOME
LEAD
INSPECTION
PROJECT**

OCTOBER 2002

**Environmental
Health
Coalition**

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Environmental Health Coalition

Promoting Environmental Justice in the San Diego/Tijuana region

Environmental Health Coalition is dedicated to environmental and social justice. We believe that justice is achieved when empowered communities act together to make social change. We organize and advocate to protect public health and the environment threatened by toxic pollution. EHC supports efforts that create a just society which foster a healthy and sustainable quality of life.

The Border Environmental Justice Campaign works in solidarity with social justice groups in the border region to promote worker and community right-to-know about the chemicals used by the maquiladoras, to increase their capacity to influence conditions that directly affect their health, and to demand cleanup of abandoned and contaminated sites.

The Campaign to Eliminate Childhood Lead Poisoning works with community residents, housing advocates, health officials, and government agencies to eliminate the sources of lead exposure in San Diego County.

The Clean Bay Campaign unites workers, bayside communities, and conservationists to clean up, restore and protect San Diego Bay as a clean and healthy multi-use water resource capable of supporting a diverse range of activities.

The Community Assistance Program responds to the needs of residents by providing scientific, technical, and policy information and assistance, and empowering residents with appropriate and effective strategies.

The Toxic Free Neighborhoods Campaign works with affected residents to promote land use and planning reforms, the relocation of hazardous industries to industrial zones, the reduction of toxic air contaminants released by industry, and the abatement of lead hazards in the home.

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TABLE OF CONTENTS

Abstract..... 3
Introduction 4
Methodology 7
Results 8
Demographic Variables 10
Discussion 10
Recommendations 12
End Notes 13

TABLES

- Table 1: Lead Content Data Collected From Homes in National City
- Table 2: Lead Content Data Collected from Homes in Sherman Heights
- Table 3: Estimates of Homes Needing Lead Hazard Control in Sherman Heights and National City
- Table 4: Characteristics of Survey Participants
- Table 5: Estimates of the Need for Publicly Funded Lead Hazard Control in the City of San Diego
- Table 6: Estimates of the Need for Publicly Funded Lead Hazard Control in San Diego, Countywide

APPENDICES

- Appendix A - Visual Inspection/Building Condition Form
- Appendix B - Resident Survey
- Appendix C - Newspaper clippings (not in PDF version)
- Appendix D - Map: Children at Risk for Lead Poisoning, San Diego

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COMMUNITY BASED HOME LEAD INSPECTION PROJECT

ABSTRACT

Environmental Health Coalition (EHC), an environmental justice organization in San Diego, California, found that 77% of housing built before 1950 contains significant lead hazards. In 2001, EHC conducted a home lead inspection program in two low-income communities of color, using a promotora model to train community leaders to provide lead inspections consistent with HUD protocols. After completing a 5 unit training program, the promotoras conducted inspections in 40 homes in Sherman Heights and National City which included taking paint chip, dust, and soil samples and doing visual inspections. A resident survey was conducted to obtain demographic information and to assess indoor air quality hazards of the homes. The inspections provided lead hazard data on a random sample of pre-1950's homes, usable for estimating needs and costs for lead hazard control in these communities. Using EPA standards for lead in house dust on floors and window sills and in soil, the study found that 77% of the homes had at least one lead hazard and 39% had two or three lead hazards. A total of 83% of the homes were in poor to very poor condition as rated by EHC's team of inspectors. The average lead dust and soil samples were well above federal standards and some samples were more than 39 times above federal standards. Based on this data and methodology EHC estimates that over 37,000 homes in the City of San Diego and over 180,000 in the county likely have some lead hazards that should be controlled.

This study reveals the need for a coordinated effort to achieve the goal of "lead free children" by 2010. EHC recommends policies and programs that constitute a comprehensive lead poisoning prevention program to include:

Lead Hazard Control: Create and implement a countywide lead hazard control work program. The program must include a system for prioritizing housing in need of lead hazard control work and identifying public resources needed to accomplish the lead hazard control work.

Lead Screening: Require screening of all children for lead poisoning every year until age six and mandatory reporting of all results. Reporting of all results enables parents and health care providers to take action.

Protect Workers: Establish standards for lead safe work practices and requirements for training for all contractors seeking renovation permits. Lead hazard control work must be concluded with a clearance test to ensure that the dwelling is lead safe for families and children.

Code Enforcement: Incorporate lead hazard identification in all city code enforcement inspection protocols. Municipal inspectors are excellent resources to identify and ensure the control of lead hazards to prevent childhood lead poisoning.

Affordable Housing: Guarantee that housing receiving public assistance for lead hazard control work remain affordable to low-income households with children under age 6 for three years.

Housing Registry: Establish a lead-safe housing registry. An easily accessible data base of housing known to contain lead hazards and lead-safe housing would provide information to prospective buyers and renters, and provide a reasonable yet significant incentive to control lead hazards.



INTRODUCTION

Lead and Health

Childhood lead poisoning continues to be a serious, preventable environmental health problem. Lead poisoning is the number one children's environmental health hazard in America today. A heavy metal which has become ubiquitous in the environment since the Industrial Revolution, lead serves no useful function in the human body. Lead is toxic to most major organ systems; some of the well established signs and symptoms of toxicity in adults and children include headache, insomnia, high blood pressure, anemia, stomach and intestinal pain, kidney damage, and deafness. At very high levels it causes encephalopathy, seizures, and death.

However, the nervous system is the most sensitive to the toxic effects of lead, and it is the potential of lead to damage the developing brain and nervous system at very low levels that has led to the focus on children up to age 6 as the target group of most concern for lead poisoning prevention. The Centers for Disease Control and Prevention (CDC) considers blood lead levels in children of 10 or more micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dl}$) as "elevated." Levels as low as 10 $\mu\text{g}/\text{dl}$ are associated with harmful effects on children's learning and behavior.¹ Newer studies are finding even lower levels associated with harmful effects on learning and behavior.² Recent studies have linked lead to hyperactivity³ and to juvenile delinquency.⁴

Two additional factors that aggravate the seriousness of lead poisoning are poor nutrition, especially a lack of adequate calcium and iron, and lack of a source of regular health care. Poor nutrition increases the absorption of lead from the gastrointestinal tract into the blood stream, thereby increasing the child's blood lead level and the dose of lead that arrives at target organs. Lack of regular health care makes it less likely that the child's blood lead level will be monitored and treated.

In San Diego County, the County Childhood Lead Poisoning Prevention Program (CLPPP) conducts case management of lead poisoned children in the region. From 1992 through 2000, the program managed 709 cases of lead poisoning. However, this is a small fraction of the estimated number of children who have elevated blood lead levels; County officials estimate that 10,600 children in San Diego County have lead poisoning.⁵

Lead poisoning is not equally distributed throughout San Diego's communities. Like many environmental health hazards, it burdens most heavily those who are least able to protect themselves against it and who benefit least from living in an industrialized society — poor communities of color. Of the 709 children identified as lead poisoned since 1992, 82% were Latino, and most were from the poorer central and southern portions of the county.⁶

Sources of Lead

Nationally, lead dust from deteriorating leaded paint in older housing is the number one source of children's exposure to lead. This appears to be true in San Diego as well; the CLPPP reports that of the cases they manage, leaded house paint is the leading source of lead exposure.⁷ Other sources important in San Diego County include lead-glazed clay pottery, specifically, *ollas de barro* used to cook beans; candy from Mexico contaminated with lead from lead-glazed containers or leaded ink on wrappers; lead in



traditional home remedies;⁸ and lead dust from deteriorating vinyl mini-blinds, now banned for sale but still in use in many homes. Soil lead sources include deteriorated exterior house paint and lead deposited from leaded gasoline in past decades.

The paint industry began adding lead to paint in the late 1800s, and continued to add it at levels of up to 70% by weight through the early 1940s. In 1955 the industry adopted a voluntary standard of 1% maximum lead in interior house paints. Federal regulations reduced the allowable lead in house paint to 0.5% starting in 1973 for federally funded housing and finally reduced the allowable level for all house paints to 0.06%, or 600 ppm, in 1978. Because of this history, public health policy related to lead poisoning prevention generally focuses on housing built before 1950 or 1960 as the housing most likely to put children at risk, because these homes are more likely to have lead based paint and to be in a deteriorated state. San Diego County has approximately 243,700 pre-1960s housing units, 26% of all housing. A total of 55% of these units are located in the communities of southeast and central San Diego. It is estimated that 65,500 children under the age of six in San Diego County live in pre-1960s housing.

In sum, childhood lead poisoning in San Diego is largely a problem of poorly maintained pre-1960s housing. Inadequate blood lead screening, the lack of affordable, non-deteriorated rental housing, and other lead sources add to the problem. The population most affected consists of young children from low-income families who are renters.

Public Policy Fails to Protect Children from Lead Poisoning

San Diego County currently does not have a comprehensive lead poisoning prevention program that identifies and controls lead contamination in homes. In effect, children themselves are being used as lead testers, their poisoned bodies silent proof that their homes were not safe for them to live in.

The CLPPP conducts case management on identified lead poisoned children, but as noted above, there is only limited blood lead screening. When a lead poisoned child is found, and lead paint in the house is identified as a source, the landlord is sent a letter requesting that he or she mitigate the hazard. However, no enforcement action is taken to ensure that this occurs.⁹

Federal law requires that landlords notify prospective tenants of known lead hazards; this law is negligibly enforced, and there is no requirement to perform testing to find out if there is a lead hazard in the first place.

As discussed in the Recommendations on page 12, Environmental Health Coalition is calling for a comprehensive countywide program to identify and eliminate lead hazards in homes and to ensure that all children under the age of 6 are regularly screened and all test results reported.

Environmental Health Coalition's Lead SALTA Project

EHC believes that every child should live in a home that is free of environmental health hazards, including lead, and that public agencies must be active participants in making this happen. EHC has been a leader in lead poisoning prevention in San Diego County throughout the 1990s and has developed special expertise in providing culturally appropriate outreach to the Latino community.

EHC's Lead SALTA Project was a vehicle to develop community leadership on lead poisoning and to



obtain quantitative information on the need for mitigation of lead hazards in two high-risk communities, National City and the Sherman Heights neighborhood of San Diego. SALTA (Salud Ambiental, Latinas Tomando Acción, or Environmental Health, Latinas Taking Action) is EHC's adaptation of the **promotora** model of community education and organizing that EHC successfully utilizes to train Latinas to be effective community leaders. The objectives of the project were to:

- Train community-based promotoras to be community advocates and educators on the full range of lead-related topics, including children's health, tenant rights, identification of lead hazards, and mitigation of lead hazards;
- Develop estimates of homes that need major or minor control in target communities, based on results of our randomized survey of household lead contamination;
- Obtain statistically reliable data to advocate for more public resources for lead hazard identification and control;
- Establish a model program for preliminary house assessment and lead hazard identification.

A secondary objective was to obtain information on potentially modifiable indoor air quality risk factors such as presence of mold and carpets and use of pesticides. This information was collected to explore the possibilities for controlling lead hazards in a "healthy homes" model that would evaluate and remediate the environmental health of housing in a unified approach that includes structural integrity, ventilation, condition and lead content of paint, floor coverings, and pest problems. This aspect of the project is beyond the scope of this report and is not discussed further.

The Lead SALTA Project consisted of three distinct elements:

1. Recruitment and training of 18 promotoras using the Lead SALTA curriculum
2. Lead hazard inspections of 40 homes in the National City and Sherman Heights neighborhoods by the promotoras;
3. A Healthy Homes survey conducted with all 40 families participating in the home inspections.

The Lead SALTA curriculum contains five units:

1. Introduction to Lead Poisoning as an Environmental Justice Issue
2. Sources and Effects of Lead Exposure to Children and Adults
3. Legal Issues: Role of the Government, Tenants' Rights
4. HUD Protocols for Lead Inspection
5. Home Inspection Practice Session

The Lead SALTA graduates then became the promotoras and inspectors for the home inspection project element.



METHODOLOGY

Selection of Homes

The project was designed and implemented in collaboration with the community. However, to ensure that the project would establish credible estimates of control needs and costs, San Diego State University's Social Science Research Laboratory was consulted regarding sample size for the home inspection element of the project. The recommendation was to sample 25 homes in each of the two target communities.

Two census tracts were chosen, one from each of the target communities: tract 118.00 in National City and tract 47.00 in San Diego, corresponding to the Sherman Heights community. For this project, the target group of homes was defined as pre-1950 homes, in order to focus on those housing units that were likely to be highest priority for lead hazard reduction. A computer-generated, random-order list of the pre-1950's homes in each census tract was created to use for recruitment of households to volunteer for a home inspection. To maintain the randomness of the home selection, recruiters were to start at the top of each list and visit each home up to four times, then continue down the list until 25 homes in each community had been selected.

To comply with a request from the City of National City, all homes selected in that community were single family homes. In the Sherman Heights community, homes selected included both single- and multifamily residences.

Teams visited a total of 51 homes in Sherman Heights and 95 homes in National City in order to recruit the necessary number for the project. In the end, the difficulty and lengthiness of this recruiting process led us to pare down the sample size. The final selection of homes was 21 in National City and 19 in Sherman.

Home Inspections

Each home inspection included a visual inspection of the exterior and interior paint condition; dust wipe sampling of floor and window sill surfaces according to HUD protocol; and sampling of exterior soil where bare soil was available near the house. In addition, an adult member of the household was asked a series of questions related to their children's health and indoor air quality risk factors. Educational materials on lead were provided, with detailed information on lead poisoning prevention. Families with children were encouraged to obtain blood lead testing for their children if they had not already done so. They were provided with referrals to local health care providers where these services would be provided at no or low cost.

As noted above, the promotoras were trained on HUD protocols for paint chip, soil, and dust sampling. Samples were analyzed by the HM Pitts Laboratory in National City. Promotoras were trained on how to complete a chain of custody form and how to interpret lab results.

Once the results were obtained, each housing unit was scored as requiring no control, minor control, or major control based on the test results and visual examination. Each unit requiring control was further scored as a low or high priority based on the severity of the problem and the presence or absence of children under 6.



Home Health Survey

Home inspections were conducted by teams of two promotoras. While one team member took the paint chip, soil, and dust wipe samples, the other conducted a short interview with an adult family member and provided lead education. The interview questions focused on possible sources of lead exposure other than paint, , and on indoor air quality factors in the home. In addition, 10 questions were asked related to the child’s health and to determine whether children had received blood lead tests. Basic demographic information was gathered, including ethnicity, income, status as renters or homeowners, ages of children, and how long the family had lived in that community and house. All families who participated in the home inspections were willing to complete the survey as well. Survey data were entered and analyzed by EHC staff using SPSS 9.0 software.

RESULTS

Lead Dust and Soil Results

Two findings summarize the home inspection results.

- 77% of the homes were found with at least one lead hazard – lead dust in windows, floor or lead soil levels above the EPA health based standards.
- 39% of the homes had two or three lead hazards – lead dust in windows, floor or lead soil levels above the EPA health based standards.

The following is the breakdown of sampling results for National City and Sherman Heights.

Table 1. Lead Content Data Collected From Homes in National City

| Area Sampled | Federal Standard | Units Sampled | Exceeded Federal Standard | Range | Average |
|--------------|------------------------|---------------|---------------------------|-----------------------------|------------------------|
| Floor | 40 µg/ft ² | 21 | 19% | 0- 1583 µg/ft ² | 117 µg/ft ² |
| Window Sill | 250 µg/ft ² | 21 | 57% | 0 - 1597 µg/ft ² | 655 µg/ft ² |
| Soil | 400 ppm | 14 | 29% | 8-6078 ppm | 657 ppm |



Table 2. Lead Content Data Collected from Homes in Sherman Heights

| Area Sampled | Federal Standard | Units Sampled | Exceeded Federal Standard | Range | Average |
|--------------|------------------------|---------------|---------------------------|------------------------------|------------------------|
| Floor | 40 µg/ft ² | 19 | 42% | 0- 1523 µg/ft ² | 116 µg/ft ² |
| Window Sill | 250 µg/ft ² | 19 | 47% | 13 - 1662 µg/ft ² | 493 µg/ft ² |
| Soil | 400 ppm | 17 | 53% | 8-2988 ppm | 538 ppm |

In both communities significant lead hazards were found on the window sills. The highest window result was seven times above the EPA standard of 250 micrograms per square foot of sill surface. This information is consistent with national data showing that windows tend to be a major source of lead paint chips and lead dust. Window sills are also thought to be an important source of exposure to small children, who get dust from sills onto their fingers and even chew on sills.

The highest floor result was found to be 39 times the EPA standard of 40 micrograms per square foot of floor surface. This is significant because children, especially between the ages of 1 and 2, spend a lot of their time on the floor. Floors also tend to be cleaned more often; the fact that some floors are as high as 39 times the acceptable standard indicates an extreme problem.

Not all homes had bare soil around the perimeter of their homes. Of the homes that had soil, the highest result found was 15 times above the EPA standard of 400 ppm for residential soil. Playing areas contaminated with leaded soil threaten not only the children living in that particular dwelling but also the neighborhood friends that play together in that same area.

Once the results were obtained, each housing unit was scored as requiring no control, minor control, or major control based on the test results and visual examination, as shown in Table 3.

Table 3. Estimate of Homes Needing Lead Hazard Control

| Level of Control Needed | National City | Sherman Heights |
|-------------------------|---------------|-----------------|
| No Control Needed, % | 33% | 21% |
| Minor Control Needed, % | 43% | 26% |
| Major Control Needed, % | 24% | 53% |



Children and Lead

Only 23 of 72 children in our survey sample (32%) have had a blood lead test, according to their parents. This is a shockingly low rate, coming from a sample of children in two of the communities most likely to have lead poisoned children. None of these children tested positive, again according to their parents. However, with an estimated prevalence rate of 2-15% for blood lead levels over 10 µg/dl for children in San Diego’s inner cities,¹⁰ the number of lead poisoned children in these two communities could be projected as 7 to 52 in Sherman Heights and 102 to 765 in National City (based on Census 2000 population figures for children aged 0-5). These figures will increase dramatically if the lead poisoning threshold of concern is reduced to 5 µg/dl, as has been proposed at the federal level.

DEMOGRAPHIC VARIABLES

Table 4. Characteristics of Survey Participants

| | Combined | National City | Sherman Heights |
|------------------------------------|----------|---------------|-----------------|
| Ethnicity: % Latino | 95% | 100% | 90% |
| Income per Month less than \$1500 | 60% | 57% | 63% |
| Adults with Medical Insurance, % | 45% | 48% | 42% |
| Children with Medical Insurance, % | 55% | 47% | 63% |
| Renters, % | 63% | 53% | 79% |

DISCUSSION

The Lead SALTA project is one of the country’s first community indoor environmental health hazard identification projects that combined community health promotion and sampling. The SALTA model’s success was apparent throughout the recruitment, training, and implementation phases. All of the promotoras recruited for the project completed the training and home inspections. They continue to share what they have learned with others in their communities.

The project achieved its research goals as well. The project provides the first quantitative estimates of the need for minor and major lead hazard control in these communities. Costs may be assigned based on the level of lead hazard control that is decided upon. Using the figure of 77% as the overall percentage of pre-1950s housing that requires lead hazard control, estimates may be derived of the numbers of pre-1950s housing in the city and county that will ultimately require remediation. See Tables 5 and 6. The priority housing for lead hazard control is clustered in San Diego’s older communities that have a high percentage of children living in poverty. See map in Appendix C: Children at Risk for Lead Poisoning, San Diego.



Community Based Home Lead Inspection Project

Table 5
Estimates of the Need for Publicly Funded Lead Hazard Control in the City of San Diego, By Council District

| a | b | c | d | r | f | g |
|---------------|-----------------------------------|---|--|--|---|---|
| District | Number of Pre-1950s Housing Units | Number of units that may need lead hazard control (b*.77) | Proportion of households in District that qualify as HUD Very low income | Number of households that have lead hazards and qualify as HUD Very Low Income** (c*d) | Proportion of households in District that Qualify as HUD Low Income | Number of households that have lead hazards and qualify as HUD Low Income (c*f) |
| 1 | 276 | 212 | 0.153 | 32 | 0.228 | 48 |
| 2 | 13,159 | 10,132 | 0.269 | 2,726 | 0.398 | 4,032 |
| 3 | 19,925 | 15,342 | 0.400 | 6,137 | 0.554 | 8,499 |
| 4 | 3,878 | 2,986 | 0.292 | 872 | 0.430 | 1,284 |
| 5 | 3 | 2 | 0.114 | 0 | 0.186 | 0 |
| 6 | 2,424 | 1,866 | 0.229 | 427 | 0.361 | 674 |
| 7 | 2,829 | 2,178 | 0.259 | 564 | 0.380 | 828 |
| 8 | 5,956 | 4,586 | 0.405 | 1,857 | 0.557 | 2,554 |
| Totals | 46,500 | 37,304 | | 12,615 | | 17,919 |

*Parcel addresses were taken from County Assessor data, geocoded in ArcView 3.2, and assigned to Council districts using a spatial join technique. A total of 99% of the addresses geocoded successfully. County Assessor property data contains a significant number of residential properties that do not indicate the year built. Some number of these may be pre-1950's housing units that are not included in this analysis; particularly for the districts with abundant older housing, the numbers in Column B may underestimate the total pre-1950's housing.

**HUD income qualifying levels are based on the number of people per household, and so they vary. The thresholds used here are up to \$30,000 (columns d, e) and up to \$40,000 (columns f, g).

Table 6
Estimates of the Need for Publicly Funded Lead Hazard Control in San Diego, Countywide

| a | b | c | d | r | f | g |
|------------------------------|-----------------------------------|---|--|--|---|---|
| County Housing Units, Total* | Number of Pre-1950s Housing Units | Number of units that may need lead hazard control (b*.77) | Proportion of households that qualify as HUD Very Low Income | Number of households that have lead hazards and qualify as HUD Very Low Income (c*d) | Proportion of households that qualify as HUD Low Income | Number of households that have lead hazards and qualify as HUD Low Income (c*f) |
| 1,040,149 | 238,888 | 183,143 | 0.24 | 44,146 | 0.37 | 68,059 |

*This total includes the housing units in City of San Diego, as broken out in Table 5.



RECOMMENDATIONS

The CDC and the California Department of Health and Human Services have established the goal of eliminating childhood lead poisoning by 2010. Achieving this goal requires a coordinated effort of government, health care providers, nonprofit organizations, and property owners. EHC strongly endorses the goal of “lead free children” by 2010 and recommends the following.

- **Lead Hazard Control:** Create and implement a countywide lead hazard control work program. The program must include a system for prioritizing housing in need of lead hazard control work and identifying public resources needed to accomplish the lead hazard control work.
- **Lead Screening:** Require screening of all children for lead poisoning every year until age six and mandatory reporting of all results. Reporting of all results enables parents and health care providers to take action.
- **Protect Workers:** Establish standards for lead safe work practices and requirements for training for all contractors seeking renovation permits. Lead hazard control work must be concluded with a clearance test to ensure that the dwelling is lead safe for families and children.
- **Code Enforcement:** Incorporate lead hazard identification in all city code enforcement inspection protocols. Municipal inspectors are excellent resources to identify and ensure the control of lead hazards to prevent childhood lead poisoning.
- **Affordable Housing:** Guarantee that housing receiving public assistance for lead hazard control work remain affordable to low-income households with children under age 6 for three years.
- **Housing Registry:** Establish a lead-safe housing registry. An easily accessible data base of housing known to contain lead hazards and lead-safe housing would provide information to prospective buyers and renters, and provide a reasonable yet significant incentive to control lead hazards.



ENDNOTES

- ¹ Centers for Disease Control and Prevention, National Center for Environmental Health, 1998. *CDC's Lead Poisoning Prevention Program*, July 1998.
- ² Lanphear, B., Dietrick, K., Auinger, P., and Cox., C., 2000. *Public Health Report 2000*, Volume 115, pp. 521-529.
- ³ Tuthill, R.W., 1996. "Hair Lead Levels Related to Children's Classroom Attention-Deficit Behavior," *Archives of Environmental Health*, Volume 15, Number 3, pp. 214-220.
- ⁴ Needleman, H.L., Riess, J.A., Tobin, M.J., Biesecker, G.E., and Greenhouse, J.B., 1996. "Bone Lead Levels and Delinquent Behavior," *JAMA*, Volume 275, Number 5, pp. 363-369.
- ⁵ County of San Diego Childhood Lead Poisoning Prevention Program, 1998. "Why Children Should be Tested for Lead."
- ⁶ County of San Diego Childhood Lead Poisoning Prevention Program, 2001. *Childhood Lead Poisoning Prevention Program Lead Update, Spring 2001*.
- ⁷ County of San Diego Childhood Lead Poisoning Prevention Program, 2001. *Childhood Lead Poisoning Prevention Program Lead Update, Spring 2001*.
- ⁸ Examples of remedies and cosmetics that contain lead include Alkohl (also know as kohl, surma): a black powder used by Middle Eastern, African and Asian cultures; Azarcon (also know as reuda, liga, coral, alarcon and maria luise): a bright orange powder used by Latino/Hispanic cultures; Bali goli: a round, flat black bean which is dissolve in gripe water and used by Asian Indian cultures; Ghazard: a brown powder used by Asian Indian cultures; pay-loo-ah and caypah, used by Laotian and Hmong cultures.
- ⁹ The City of San Diego and National City have recently taken steps to identify lead hazards in housing and hold the owners responsible. In April 2002 the City Council approved the Lead Safe Neighborhoods Program and changed city law to allow the city attorney to prosecute landlords who fail to remove lead-based paint hazards from their properties after a child living there has been found to have elevated blood lead levels. At the same time, a Lead Poisoning Prevention Citizens Advisory Task Force was created. National City has trained its code enforcement personnel to identify potential lead hazards as part of a proactive campaign to evaluate the condition of all housing in the City. Code enforcement staff now cite lead-based paint, order repairs using lead-safe work practices and conduct follow-up visits to ensure that repairs have been done in a timely manner. They are also providing free paint to community residents.
- ¹⁰ Hallerberg, G., 2002. Report on Comprehensive Health Center's Blood Lead Test study. This two-year study of children's blood lead levels at the Center found a prevalence level of 2% for blood lead levels of 10 or more mg/dl. At a 1998 street fair at which free blood lead testing was offered to Sherman Heights children by Environmental Health Coalition, utilizing finger-stick testing, the percentage of children found to have elevated blood lead levels was 15%.





Appendix A - Community Based Home Lead Inspection Project

| Visual Inspections Notes | | |
|---|-----|----|
| | Yes | No |
| Is there any paint peeling or flaking <i>inside</i> home? | | |
| Is there any paint peeling or flaking <i>outside</i> home? | | |
| Does the home appear to have any drainage problems? | | |
| Wall, ceiling, doors and trim: Obvious cracks in the plaster requiring extensive patching, more than routine painting, missing trim, or doors requiring major repair or replacement | | |
| Floors: Loose, missing, or cracked floors; finish is worn; deteriorated carpeting | | |
| Is there evidence of water stains or warping on walls or ceilings in | | |
| Living Room | | |
| Kitchen | | |
| Bathroom | | |
| Child #1 bedroom | | |
| Child #2 bedroom | | |
| Child #3 bedroom | | |
| Do the windows and doors appear to be relatively new (possibly no lead-based paint) | | |
| Do the windows and doors appear to be so old that they could possibly have lead-based paint | | |
| Is there rotting, peeling, or chipping paint around the window frames? | | |
| Visibly a lot of paint chips and dust accumulated | | |
| Is there a driveway leading to the house | | |
| Any uncovered soil areas adjacent to your home | | |
| Less than 500 feet of a freeway or busy street | | |
| Obvious factory, auto body shop, or Lead Smelter | | |
| Control track-in of dust or dirt by any of these methods | | |
| Removal of shoe | | |
| Doormat/hall rug | | |
| Do any of the outside doors have a doormat | | |
| Is there wall-to-wall carpeting in house | | |
| Are there signs of dampness in the basement (musty odor, visible water, mold, mildew, discolorations on walls, damp carpets or furniture)? | | |
| Are there faulty drainage, foundation dampproofing? | | |



Community Based Home Lead Inspection Project - Appendix A

| Building Condition Form | | |
|---|-----|----|
| Condition | Yes | No |
| Roof missing parts of surfaces (tiles, boards, shakes, etc.) | | |
| Roof with holes or large cracks | | |
| Gutters or downspouts broken or missing | | |
| Chimney masonry cracked, bricks loose or missing, obviously out of plumb | | |
| Exterior walls with obvious large cracks or holes, requiring more than routine pointing (if masonry) or painting | | |
| Exterior siding with missing boards or shingles | | |
| Water stains on interior walls or ceilings | | |
| Plaster walls or ceilings deteriorated | | |
| Two or more windows or doors broken, missing, or boarded up | | |
| Porch or steps with major elements broken, missing, or boarded up | | |
| Foundation with major cracks, missing material, structure leans, or visibly unsound | | |
| Evidence of exterior ground contaminated with paint chips | | |
| Total number | | |
| * If the "Yes" column has two or more checks, the dwelling is considered to be in poor condition. | | |
| Comments | | |
| <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | | |



Appendix B - Community Based Home Lead Inspection Project

Lead - SALTA Home Inspection Survey

ID # _____

Hello, my name is _____, and this is _____ and _____. We are part of the Environmental Health Coalition (EHC) Lead-SALTA project. We are a nonprofit organization that works to help communities solve problems with health and toxic pollution. We are conducting home inspections in (*name of community*) to identify lead hazards in the home and are glad to have your house be a part of this pilot project.

Our goal is to create a healthy environment for you and your children. Today our inspection will focus on looking for potential lead risks. But, we also want to take this opportunity to ask you some questions about your children's health specifically related to asthma and indoor air quality. All of the information is confidential and will not be shared. All questions are completely optional, you do not have to answer if you wish not to. The overall statistics collected in this survey will be used to seek further funding for lead poisoning prevention.

Date of inspection: Month _____ Day _____ Year _____ Time Starting _____ Time Ending _____

Surveyor Team _____

General Questions

Name of Person being interviewed _____

Street Address _____

City _____ Zip Code _____

Telephone number () _____ Number for messages () _____

Age _____ Gender: Male Female

G1: What is your ethnicity?

- a. Latino/Hispanic
- b. African American
- c. White
- d. Native American
- e. Asian/Pacific Islander
- f. Other

G2: What is your approximate monthly household income (money after taxes are taken out)?

- a. under \$1500
- b. \$1500 or over
- c. Don't Know

G3. Do you have health insurance for yourself? Yes No

G4. Do you have health insurance for your children? Yes No

G5. How many people live in this house? _____ Children (Under 18 years old) _____ Adults _____

G6. How many children in the household are under the age of six? _____

G7. How many children in the household are 1-2 years old? _____

G8. Is there a pregnant woman living in this dwelling at this time? Yes No

G9. How long have you lived in this home? Years _____ Months _____



G10. How long have you lived in this community? Years _____ Months _____

G11: Do you rent or own this house/apartment? (check one) Rent _____ Own _____

G12. If rented, are there any rent subsidies? [] Yes [] No
If yes, what type? (check one)
[] Public Housing Authority [] Section 8
[] Federal Rent Subsidy [] Other (specify) _____

Landlord Information (or rent collector agent)

Name _____

Address _____

Telephone Number () _____

G13. Dwelling type: (check one) [] Single family [] Multiple Unit

HOME INSPECTION

First, I am going to ask you questions concerning your home.

H1. Has your home ever been tested for lead-based paint or lead contaminated dust? [] Yes [] No

H2. (If "yes") Do you have the home inspection report? [] Yes [] No

H3. Were you ever warned about lead paint hazards? [] Yes [] No
(If "yes") By whom _____

H4. Has there been any recent repainting, remodeling, renovation, window replacement, sanding or
scraping of painted surfaces inside or outside your home? [] Yes [] No
(If "yes") Describe activities and duration of work in more detail.

H5. Do you recall when was your home last painted? Check one:
[] Less than a year [] > one year [] > five years [] > ten years [] > twenty years

H6. Are you or the landlord planning to remodel or repaint within the next 12 months?
[] Yes [] No

H7. Has your next-door neighbor removed paint from outside of the house? [] Yes [] No

Do you control track-in of dust or dirt by any of these methods?

H8. Removal of shoes [] Yes [] No

H9. Doormat/hall rug [] Yes [] No

H10. Do any of the outside doors have a doormat? [] Yes [] No (If "yes") Check one

H11 [] 1 [] 2 [] 3 [] All [] None

H12. (If "yes") About how often do you clean your doormats? Check one:
[] Daily [] Once a week [] Once a month [] Every three months [] Never

H13. Is there wall-to-wall carpeting in your home? [] Yes [] No



Appendix B - Community Based Home Lead Inspection Project

H14. Are there signs of dampness inside your home (musty odor, visible water, mold, mildew, discolorations on walls, damp carpets or furniture)? Yes No
Identify: _____
(If "yes") Is there faulty drainage, foundation dampproofing? _____

H15. Do you have a pest problem with cockroaches in your home? Yes No

H16. Do you have a gas stove? Yes No

H17. Do you have a maintenance work/crew for repainting, cleaning, repairing? Yes No

H18. (If "yes") Have you seen them use tarps or plastic sheets to contain the dust? Yes No

HOUSEHOLD PRODUCTS

I'm now going to ask you about products you may use at home.

P1. Do you use imported or handmade dishes or containers, such as bean pots, to cook, serve, or store food or drinks? (Includes clay pots, lead soldered pots, ceramic ware)
 Yes No Don't Know

P2. (If "yes") Have you ever tested your pottery for lead? Yes No
Results _____

P3. (If "yes") How often do you use your pottery to cook, store, or serve food with?
Check one: Daily Once a week Once a month Once every year

P4. Do you use the following home remedies: Azarcon or Greta? Yes No

P5. (If "yes") Have you sometimes given your children either of these? Yes No

P6. (If "yes") How often? Check one: Daily Once a week Once a month Once every year

P7. Do you eat canned foods and/or drink canned beverages from other countries such as Mexico, Philippines or Indochina? Yes No Don't Know

P8. (If "yes") How often? Check one: Daily Once a week Once a month Once every year

P9. (If "yes") Any cans found with lead soldered seams? Yes No

P10. Country of origin: _____

P11. Do you or your landlord use any pesticides inside or outside or both? Yes No

P12. (If "yes") How often? Check one: Daily Once a week Once a month Once every year

P13. Do you use roach sprays? Yes No

P14. (If "yes") How often? Check one: Daily Once a week Once a month Once every year

P15. Do you have mini-blinds? Yes No

P16. Do you burn candles? Yes No

P17. (If "yes") How often? Check one: Daily Once a week Once a month Once every year

P18. Do you use medicated baby powders? Yes No

P19. (If "yes") How often? Check one: Daily Once a week Once a month Once every year



Ask children's health questions at this time. A separate sheet is required for each child (form follows this page). Once completed with children's questionnaires, return here.

Prop. 10 Questions

P101. Have you heard about the Children and Families Commission known as the Prop. 10 Commission?
 Yes No

Inform them about our opportunity to apply for Prop. 10 funds for lead poisoning prevention activities.

P102. Would support funding going for lead poisoning prevention? Yes No

P103. Would you participate in a comprehensive lead poisoning prevention program? Yes No

CLOSING

Environmental Health Coalition is a membership-based environmental and social justice organization, based in San Diego since 1980. We need people like yourself to take action and you've already taken action by participating in this lead pilot project. We invite you to become a member and as a member you'll receive our quarterly newsletter, the Toxinformer, and in the future, if you're capable, you can make a donation to EHC. I hope you will stay involved as concerned individuals like yourself are the foundation of EHC's efforts to prevent and cleanup the toxic pollution which hurts our health and our environment.

MEMBERSHIP

M1. Would you like to a member and be put on our mailing list? Yes No

VISUAL/OTHER COMMENTS

Note any other obvious problems in the home, any other code violations.

REFERRALS (e.g. to code enforcement, lead testing, health insurance)

Any follow-up needed?



CHILDREN

The following questions concern the children of this household. There are general questions and health questions. Please answer to the best of your ability. A sheet will be **filled out for each child**.

Child # _____

General

- C1. Child's name _____
- C2. Child's age _____
- C3. Sex: Male _____ Female _____
- C4. How long has the child lived in (name of community)? Months _____ Years _____

Symptoms

Does your child have any of the following symptoms?

- C5. Does your child suddenly start coughing or cough a lot? Yes No
- C6. Does your child wheeze (a high-pitched whistle sound from the chest, not the throat?) Yes No
- C7. Has your child ever said his/her chest felt tight or has his/her breathing become difficult? Yes No
- C8. Does your child cough, wheeze, or get short of breath after running or other physical activity? Yes No
- C9. Does your child cough, wheeze or get short of breath after being around tobacco smoke, fumes or strong odors? Yes No
- Has your child had coughing, wheezing or shortness of breath:
- C10. During the night that wakes up you or the child? Yes No
- C11. Early in the morning? Yes No
- C12. Has your child had a lot of bronchitis, or pneumonia with wheezing? Yes No
- C13. Has your child had head colds that "go to the chest" and take more than 10 days to get over? Yes No
- C14. Has your child ever used an inhaler or other medication to help him or her to breathe better? Yes No
- C15. Does your child have relatives with asthma? Yes No
- C16. Has your child been diagnosed with asthma? Yes No



Lead

L1. Has your child had a blood test for lead? Yes No Don't Know

L2. (If "yes") What was the result? Positive Negative Don't Know

If positive, what was the blood lead level? _____

L3. (If "yes") Was the source of lead poisoning determined? Yes No

L4. (If "yes") What was the source? _____

L5. How old was he/she when the test was done? _____

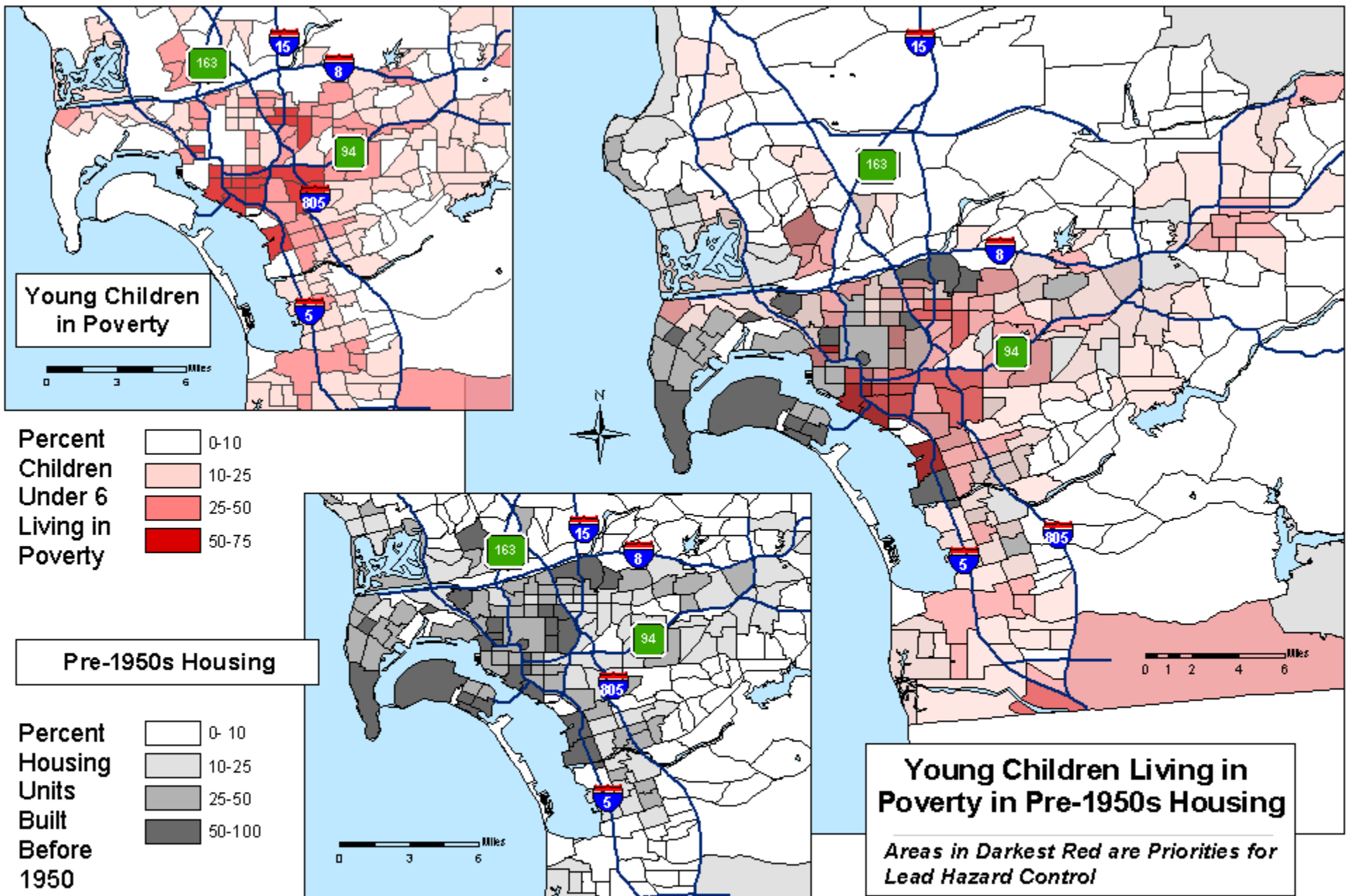
L6. Did your child have a follow-up blood test for lead? Yes No Don't Know

L7. Did you live in this house then? Yes No

L8. Did you know that high levels of lead in children can cause health and developmental problems, even when there are no symptoms? Yes No

If child has not been tested ask them:

L9. Will you take your child to be tested for lead? Yes No



Children at Risk for Lead Poisoning San Diego

Source: Centers for Disease Control and Prevention, based on 1990 U.S. Census data
 Notes: Values are by census tract, Census tracts where children under 6 numbered < 20 excluded

Map by Environmental Health Coalition, 2002