

CITY OF SAN DIEGO



**Lead-Based Paint Hazard
Awareness Seminar for
Landlords, Property Owners, and
Property Managers**





ENVIRONMENTAL SERVICES DEPARTMENT

ENVIRONMENTAL PROTECTION DIVISION

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**This child is about to eat
some poison.**



**It can damage
her brain.**

**She may have
learning and
behavior
problems for the
rest of her life.**

The poison is **lead.**

Purpose of Today's Training

- ✓ Provide general background on lead hazards and related health effects
- ✓ Review the various lead regulations
- ✓ Review the current City enforcement policy and discuss the City's future direction on lead hazards
- ✓ Ensure you are in compliance with EPA's three lead-based paint rules
- ✓ How to perform a visual assessment for lead hazards

WHAT IS LEAD?

- ✓ Lead is a heavy, bluish/gray, soft, malleable metal
- ✓ Known to be a hazard since ancient times
- ✓ Negative effects of lead were recognized by Ben Franklin in 1786
- ✓ Lead use and occupational exposures accelerated during the 1800's
- ✓ First case of lead paint poisoning was diagnosed in Australia in 1895



LEAD IN PAINT

REASONS LEAD WAS ADDED TO PAINT:

- ✓ Pigmentation
- ✓ Durability
- ✓ Corrosion resistance



How About 2014?

Will the houses you are building today last one hundred years?

NEW YORK CITY has over a score of frame houses built before 1800. "Well built," you say. True, but well painted, too, and almost uniformly with

Dutch Boy White Lead

and Dutch Boy linseed oil. Such paint, tinted any color, is so fine that it sinks into every joint and wood pore. It is just elastic enough to prevent cracking, to keep the wood thoroughly covered and hence perfectly preserved.

Write for
PAINT FOLDER B

Write for it with accuracy for you, and for your own use. It is a free folder, and a copy of it will be sent you.

NATIONAL LEAD COMPANY

NEW YORK BOSTON BUFFALO CHICAGO CINCINNATI
CLEVELAND ST. LOUIS SAN FRANCISCO

Major Source of Lead Exposure: Lead-Based Household Paint

Paint sold before 1978 may contain lead



- ✓ More than 38 million U.S. homes contain lead-based paint
- ✓ Some 23 million U.S. housing units contain lead paint hazards
 - 4 million of these units are occupied by children

Major Source of Lead Exposure: Lead-Based Household Paint

- ✓ Normal wear and tear produces **lead dust**, the most common source of lead poisoning
- ✓ Deteriorating paint may produce dust and flakes
- ✓ Disturbing intact lead-based paint during remodeling, renovation, and maintenance can **create a lead hazard**



Lead Poisoning Has Multiple Sources

- ✓ 28% from paint and dust
- ✓ Other sources include: pottery used for food, housewares (plastics, wiring, etc.), home remedies food, imported candy, water, toys, soil, jewelry, decorative goods, hobbies, and occupational hazards



* Percentages are based on cases within San Diego County

The Problem In San Diego

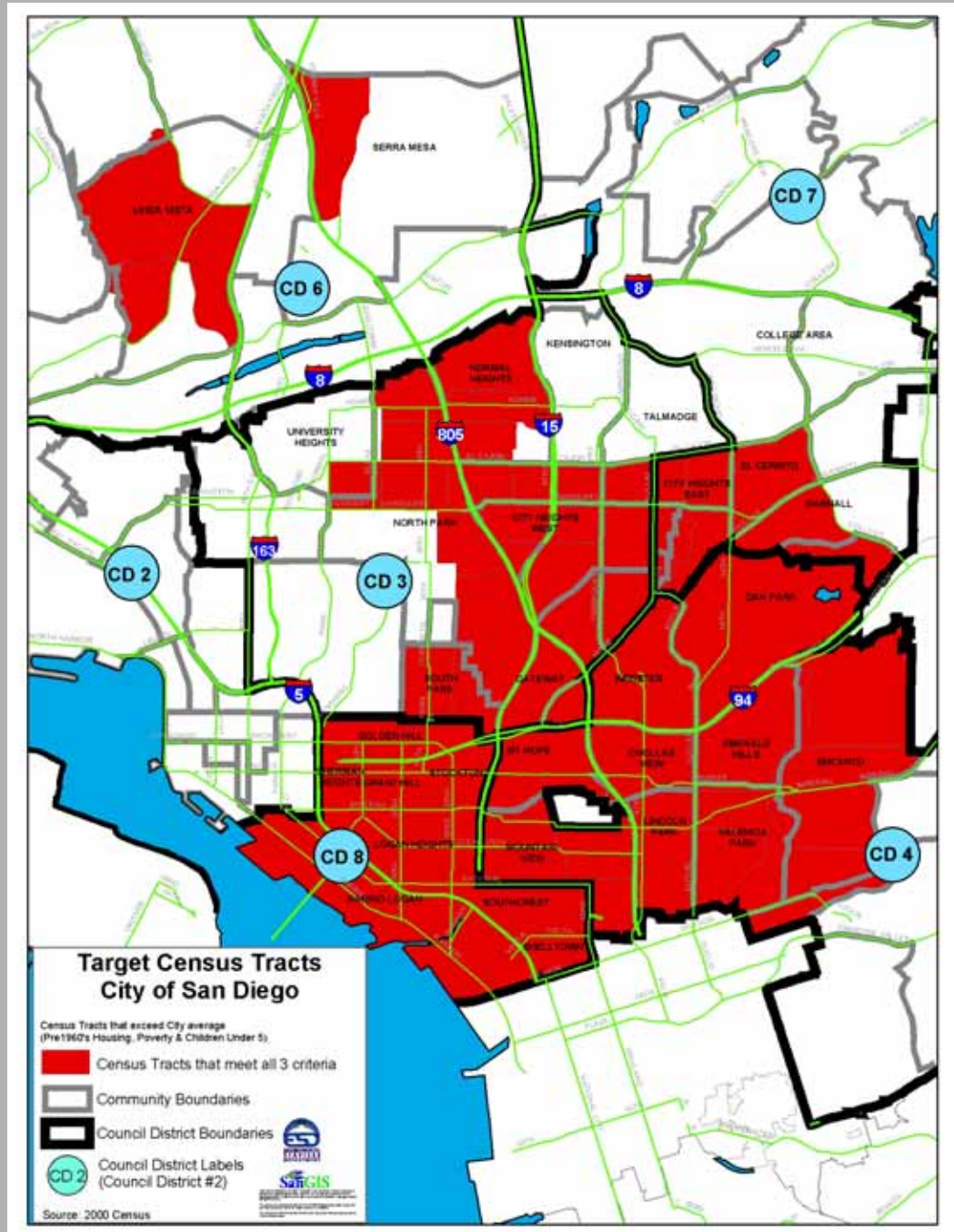
- ✓ 70% of San Diego housing was built before 1978, the year lead was banned from paint
- ✓ 28% of San Diego housing was built before 1960, when residential paint commonly had high lead content



**Deteriorated paint
on bedroom
window of a
pre-1950 home**

High risk areas in San Diego.

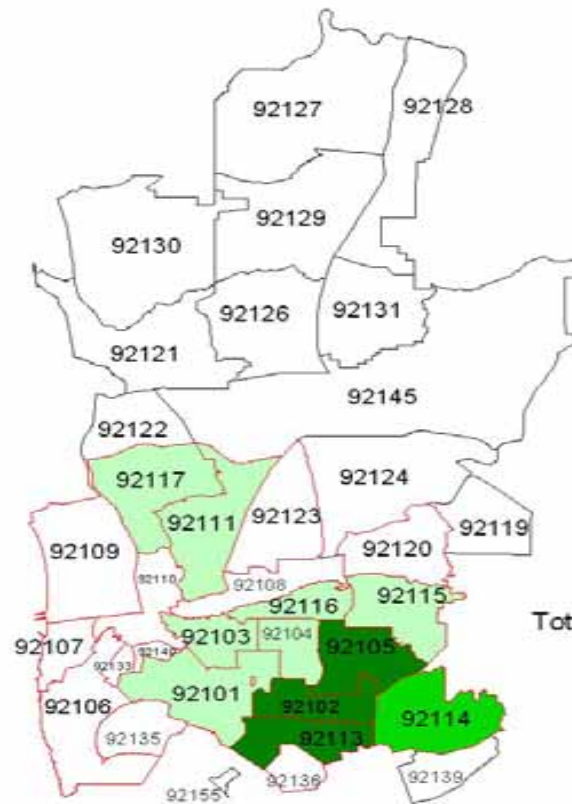
Takes into account age of construction, density of children, and income levels





County of San Diego
Childhood Lead Poisoning Prevention Program

City of San Diego Lead Poisoning Cases by Area of Residence 1992-2000



Total of 377 Cases

- Proportion of older housing
 > 27% pre-1960 housing units
- Number of cases
 0 - 5 cases
 6 - 19 cases
 20 - 43 cases
 44 - 89 cases



Mexico

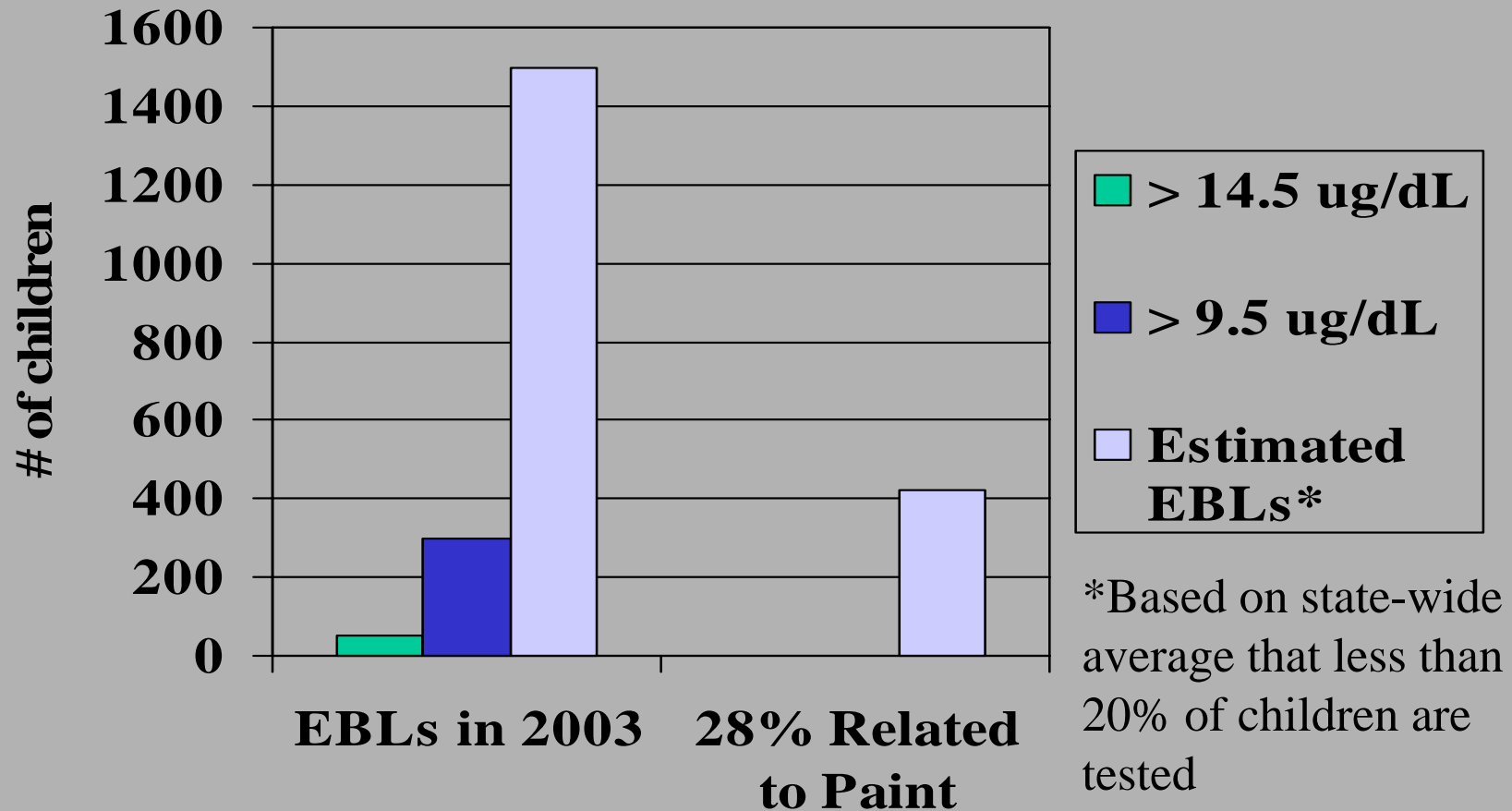
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Childhood Blood Lead Poisoning in County of San Diego

CDC definition of lead poisoned child is ≥ 10 ug/dL
(Elevated Blood Lead - EBL)



At Greatest Risk: Very Young Children



Very young children, who crawl on the floor and put their hands and toys in their mouths, are at highest risk of exposure and are most susceptible to damage.

Main ways that lead gets into a child's body:

- ✓ **Swallowing** lead-paint dust or flakes, mainly through normal hand-to-mouth activity
- ✓ **Breathing** in lead dust

Even very small amounts of lead are dangerous.

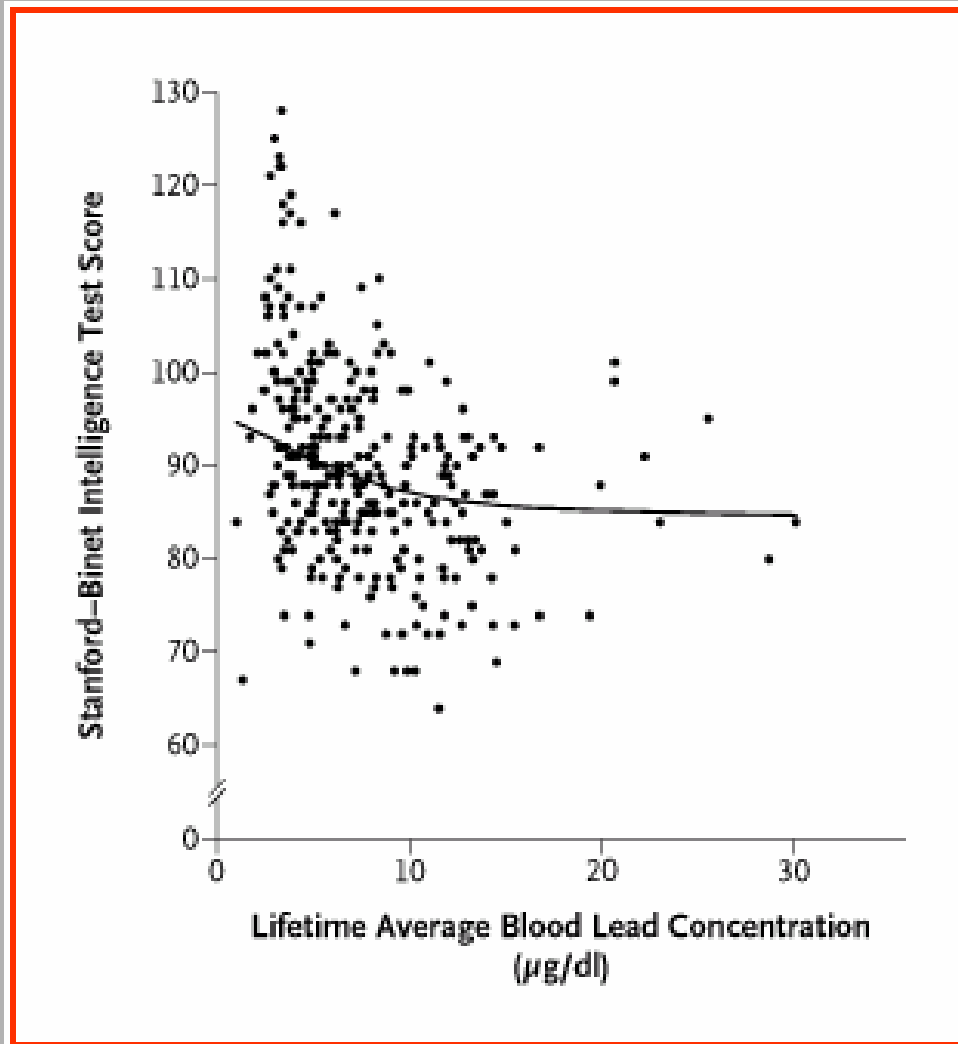
Symptoms of Lead Poisoning in Children

USUALLY THERE ARE
NO SYMPTOMS

- ✓ Fatigue
- ✓ Irritability
- ✓ Headache
- ✓ Constipation
- ✓ Stomachache
- ✓ Cramps
- ✓ Vomiting
- ✓ Weight loss



Highest
decrease in
child's IQ
occurs when
blood lead level
is less than 10
ug/dL



**New England Journal of Medicine;
April 17, 2003**

Lead's Effects on Unborn Children

- ✓ Lead from the mother's blood can pass to the unborn child
- ✓ Lead poisoning in unborn children can cause
 - Learning difficulties
 - Behavioral problems
 - Brain and nerve damage
 - Stillbirth and miscarriage
 - Premature birth
 - Low birth weight



Lead's Effects on Babies and Young Children

- ✓ Can damage the brain and other parts of the nervous system
- ✓ Can cause behavior and learning problems
- ✓ Can reduce muscle and bone growth
- ✓ Can damage hearing
- ✓ Can cause death



Even children who seem healthy may have high levels of lead

Blood Lead Levels: Federal Definitions

Centers for Disease Control and Prevention (CDC)
& Housing and Urban Development (HUD)

- ✓ **Elevated blood lead level** is confirmed concentration of lead in whole blood
 - $\geq 20 \mu\text{g/dL}$ for single test
 - $15\text{-}19 \mu\text{g/dL}$ for 2 tests taken 3 months apart
- ✓ Requires intervention in a child under the age of 6



LEAD-BASED PAINT POISONING

HOW ADULTS ARE EXPOSED:

- ✓ Occupational exposures using unsafe lead work practices
 - **Inadequate work practices and hygiene including eating, drinking, or smoking on the job**

- ✓ During home remodeling, painting, and renovation.

Symptoms of Lead Poisoning in Adults

- ✓ Fatigue
- ✓ Irritability
- ✓ Anxiety
- ✓ Depression
- ✓ Headache
- ✓ Sleeplessness
- ✓ Tremors
- ✓ Metallic taste in mouth
- ✓ Skin paleness, especially of the face
- ✓ Constipation or diarrhea
- ✓ Stomachache
- ✓ Cramps
- ✓ Vomiting or nausea
- ✓ Weight loss
- ✓ Muscle or joint pain
- ✓ Weakness in arms, legs, or wrists
- ✓ Loss of sex drive

Lead's Effects on Adults



- ✓ Reproductive problems for men and women

- ✓ High blood pressure
- ✓ Digestive disorders
- ✓ Nervous system problems
- ✓ Difficulty with memory and concentration

Lead Safe Work

Watch Video

Typical projects that need Lead-Safe Practices on homes built prior to 1978

- ✓ Replacing windows and doors
- ✓ Adding or converting rooms
- ✓ Renovating kitchens and bathrooms
- ✓ Removing and installing siding
- ✓ Refacing or replacing cabinets
- ✓ Painting and wallpapering
- ✓ Replacing flooring and carpeting
- ✓ Repairing or renovating porches and decks
- ✓ General carpentry, plumbing, electrical, and HVAC work
- ✓ Fire and disaster repair
- ✓ Historical renovations

Laws and Regulations

- ✓ Requirements of federal agencies that regulate lead-based paint issues under **Title X** of the Housing and Community Development Act of 1992
 - Environmental Protection Agency (EPA)
 - Department of Housing and Urban Development (HUD)
 - Occupational Safety and Health Administration (OSHA)
- ✓ California regulations
 - Health & Safety Code
 - Department of Health Services
 - Department of Toxic Substance & Control
- ✓ City of San Diego Municipal Code

EPA's Lead Disclosure Rule

EPA's Pre-Renovation Education (PRE) Rule

Protect Your Family From Lead In Your Home

EPA United States Environmental Protection Agency
United States Consumer Product Safety Commission
United States Department of Housing and Urban Development

U.S. EPA Washington DC 20460
U.S. CPSC Washington DC 20207
U.S. HUD Washington DC 20410

EPA747-K-99-001
April 1999

EPA's Pre-Renovation Education (PRE) Rule

- ✓ Applies to contractors, property managers, and others who do renovations for **compensation** in residential housing that may contain lead-based paint (apartments and houses built before 1978)
 - Residential rental property owners/managers
 - General contractors
 - Home improvement contractors
 - Special trade contractors
 - Painters
 - Plumbers
 - Carpenters
 - Electricians

Compensation

- Money
- Goods
- Services (bartering)

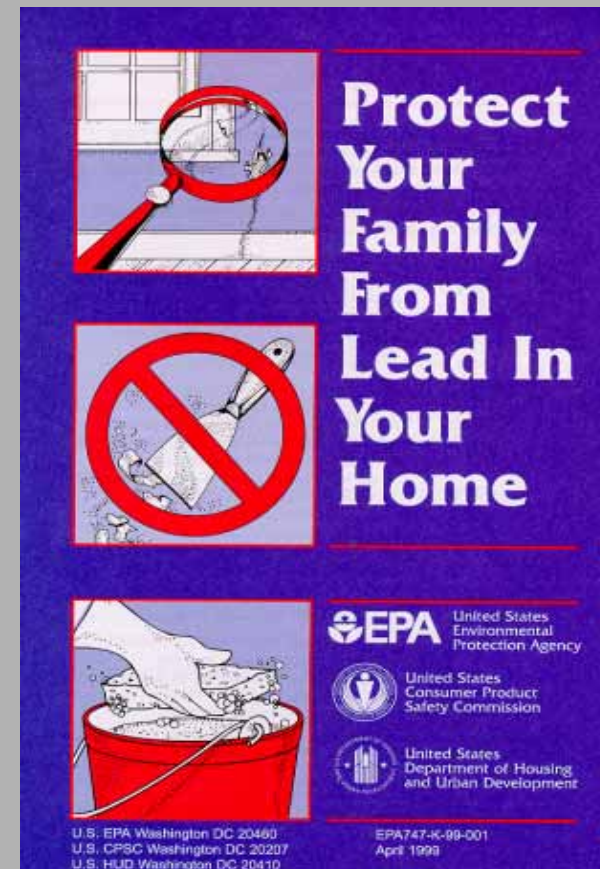
EPA's Pre-Renovation Education (PRE) Rule

- Renovations include most activities that **disturb paint** in most **pre-1978 housing**
 - Remodeling
 - Repair or maintenance activities
 - Plumbing
 - Carpentry
 - Electrical work
 - Painting
 - Window replacement

Any work that disturbs more than 2 square feet of paint

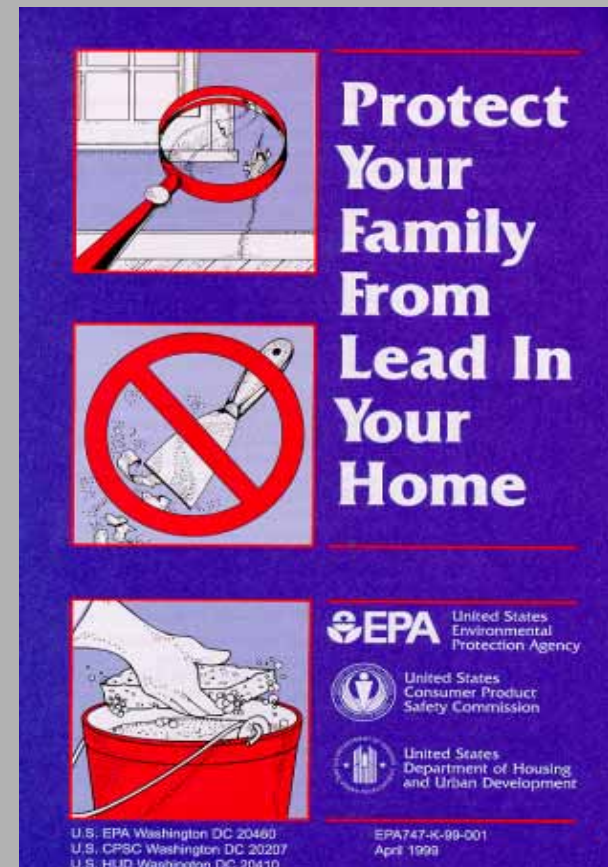
EPA's Pre-Renovation Education (PRE) Rule

Requires the contractor to distribute the lead pamphlet *Protect Your Family from Lead in Your Home* to the housing owner and occupants before renovation starts





Residential Lead-Based Paint Disclosure Program


Federal law requires that individuals receive certain information before renting or buying a pre-1978 housing:



Protect Your Family From Lead In Your Home

 United States Environmental Protection Agency

 United States Consumer Product Safety Commission

 United States Department of Housing and Urban Development

U.S. EPA Washington DC 20460
U.S. CPSC Washington DC 20207
U.S. HUD Washington DC 20410

EPA747-K-99-001
April 1999

Residential Lead-Based Paint Disclosure Program

- ✓ LANDLORDS have to disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a disclosure form about lead-based paint.
- ✓ SELLERS have to disclose known information on lead-based paint and lead-based paint hazards before selling a house. Sales contracts must include a disclosure form about lead-based paint. Buyers have up to 10 days to check for lead hazards.

Waste: EPA Regulations

- ✓ Resource Conservation and Recovery Act (RCRA)
 - Defines hazardous and nonhazardous waste
- ✓ Toxic Substances Control Act (TSCA)
 - Contains training and certification requirements for contractors

CA and Local Waste Disposal

- ✓ In the City of San Diego, only components with the paint intact can be disposed of at Miramar Landfill
- ✓ Home owners can dispose of a five gallon pail or less of lead paint chips at the City's permanent hazardous waste facility (call 858-694-7000 for an appointment)
- ✓ Need to hire a hazardous waste transporter to dispose of lead paint chips and waste if concentrations exceed levels defined in CA Title 22

OSHA Lead in Construction Standard

- ✓ Generally protects workers who encounter lead in any job, not just pre-1978 target housing
- ✓ Not addressed in detail in this training

OSHA Lead in Construction Standard: Activities Covered

- ✓ Demolishing or salvaging structures or materials that contain lead
- ✓ Removing, enclosing, or encapsulating materials that contain lead
- ✓ Constructing, altering, repairing, or renovating structures or materials that contain lead
- ✓ Installing products that contain lead
- ✓ Cleaning up contamination or emergency situations
- ✓ Transporting, disposing of, or storing lead or materials that contain lead on the construction site
- ✓ Maintenance operations associated with the previous activities

California Regulations

- ✓ Childhood Lead Poisoning Prevention Act (H&SC 105275-105310)
 - Gives authority to Department of Health Services to contract with local agencies to handle child poisoning cases
- ✓ Accreditation, Certification, and Work Practices for Lead-Based Paint and Lead Hazards (17 CCR Div 1, 35001 *et seq.*)

California Regulations

- ✓ SB 460 signed by Governor – highlights that relate to enforcement as follows:
 - Amends H&SC 17920.10 by adding “lead hazards” as a violation if present as defined by 17 CCR 35001 *et seq.*
 - Amends H&SC 17961 to allow local agencies to enforce 17920.10 when lead hazards are present, its is substandard housing
 - Amends H&SC 105251-56 making it illegal for contractors to create lead hazards and allow local enforcement agencies to perform enforcement

City of San Diego

The City enacted a new municipal code in June 2002 (54.1001 et seq.) that makes it unlawful for a property owner to maintain or cause a lead hazard.



As of October 1, 2003, the City does enforcement of SB 460.

- 1) Substandard housing
- 2) Contractors creating lead hazards.

Lead Safe Neighborhoods Program

Comprehensive Ordinance Development

- ✓ Taskforce of all stake holders chaired by two council members has been working on comprehensive ordinance for past 2 years.
- ✓ Unanimous approval by City Council Committee in August 2004 – preparing to present to entire council in November 2004.



Highlights of Proposed Ordinance

- ✓ All pre-1978 residential properties at point of sale shall have a risk assessment and remediation of lead hazards
- ✓ Sets specific lead safe work practice standards when any lead paint is disturbed or removed and requires dust clearance sampling
- ✓ Requires that all rental housing at point of unit turn-over have lead inspection and remediation of lead hazards



Highlights of Proposed Ordinance

- ✓ All childcare facilities to require blood lead testing prior to enrollment
- ✓ Requires home improvement and rental equipment stores to provide lead education material



LEAD-BASED PAINT

Lead-based paint is paint or other surface coating that contains lead at or above of established limits.

The Federal standard is 1.0 mg/cm² or 0.5% by weight (5000 ppm).



XRF – used for sampling paint to determine if lead is present

LEAD-BASED PAINT HAZARD

- ✓ **A lead-based paint hazard is any condition that causes exposure to lead from lead-contaminated dust, soil or paint that is deteriorated or present on accessible, friction, or impact surfaces.**

LEAD-BASED PAINT HAZARD

CA Title 17 Lead Hazard Definitions
(referenced in City's municipal code):

- ✓ Floor is $50 \mu\text{g}/\text{ft}^2$ (Federal's is $40 \mu\text{g}/\text{ft}^2$)
- ✓ Interior window sill is $250 \mu\text{g}/\text{ft}^2$
- ✓ Exterior window/porch is $800 \mu\text{g}/\text{ft}^2$
(Federal's is $400 \mu\text{g}/\text{ft}^2$)
- ✓ Soil for children's play area is 400 ppm

Identify Deteriorated Paint

To identify deteriorated paint, you will need to answer this question:

Is the paint peeling, chipped, chalking or cracking?



If the answer to this question is yes, then the paint should be considered deteriorated.

Identify Deteriorated Paint

Is There Anything else You Should Look For?

When performing a visual assessment, you should look for:

- ✓ Paint chips or dust from painting activities that were not cleaned up.
- ✓ Paint residue on the floors
- ✓ Evidence of paint chips in soil near driplines on exterior surfaces



Identify Deteriorated Paint

Peeling paint is always considered to be deteriorated:

- ✓ Peeling paint is often caused by moisture or poor preparation of the surface before painting.
- ✓ This may affect small or large areas



Identify Deteriorated Paint

All Chipping paint should be considered to be deteriorated.

- ✓ Chipping often is a result of impact to the painted surface.
- ✓ Chipping paint may be poor surface preparation or paint failure



Identify Deteriorated Paint

Chalking

Some paints were designed to chalk as a method to keep paint surfaces clean. If these paints contain lead, the chalking will also contain lead.

You should consider chalking to be deteriorated if you can see evidence of chalking on the surfaces below the paint or on the ground.



Identify Deteriorated Paint

Cracking

Before you call a crack deterioration, you should determine if the crack is below the de minimis level. The photo to the right shows an example of what cracking looks like



Identify Deteriorated Paint

Cracking (continued)

This photo shows a different form of cracking on a column base. This paint may start chipping soon. This type of cracking is considered deteriorated paint.



Identify Deteriorated Paint

Moisture Damage

All painted surfaces damaged by moisture should be considered deteriorated. You should look for the source of the moisture



Identify Deteriorated Paint

Friction and Impact

Friction and impacts cause paint to deteriorate:

- ✓ Most paint was not designed to resist friction.
- ✓ Windows or doors are key areas to look for friction and impact damage



Identify Deteriorated Paint

Holes in Walls

All holes in walls **larger** than nail holes or tack holes are considered to be deteriorated and should be repaired.

Nail and tack holes are not usually classified as deteriorated because:

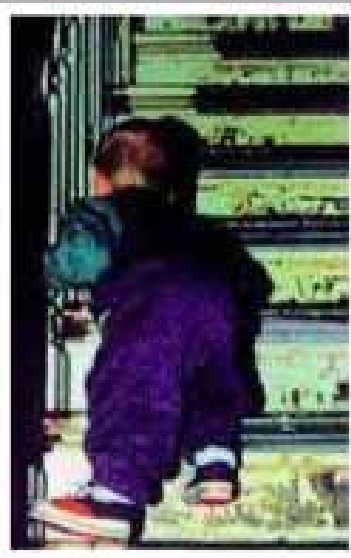
- ✓ They are too small to meet de minimus levels
- ✓ The substrate is usually stable



Identify Deteriorated Paint

These photos show evidence of substrate damage:

- ✓ The window sill has extensive moisture damage.
- ✓ The stair tread shows wear, tear and deterioration.



Lead Safe Neighborhoods Program

Options for Having Lead Hazards Corrected:

HUD Lead Hazard Control Grant

Eligibility criteria are:

- ✓ Income of family is under \$50,000/yr
- ✓ Child 6 or under lives in home or visits at least 20 hours per week.
- ✓ Target area -upper Council District 8. At the 5 $\mu\text{g}/\text{dL}$ or higher, the grant is available anywhere in the City.



Lead Safe Neighborhoods Program

Options for Having Lead Hazards Corrected:

Housing Rehabilitation Program

- ✓ Is for single family and multi-family homes that need repair for plumbing, wiring, painting, roofing, etc. and can include lead abatement.
- ✓ Loans are zero percent deferred loans and three percent interest loans. Eligibility is primarily income based and will require you to contact SDHC.



Lead Safe Neighborhoods Program

Options for Having Lead Hazards Corrected:

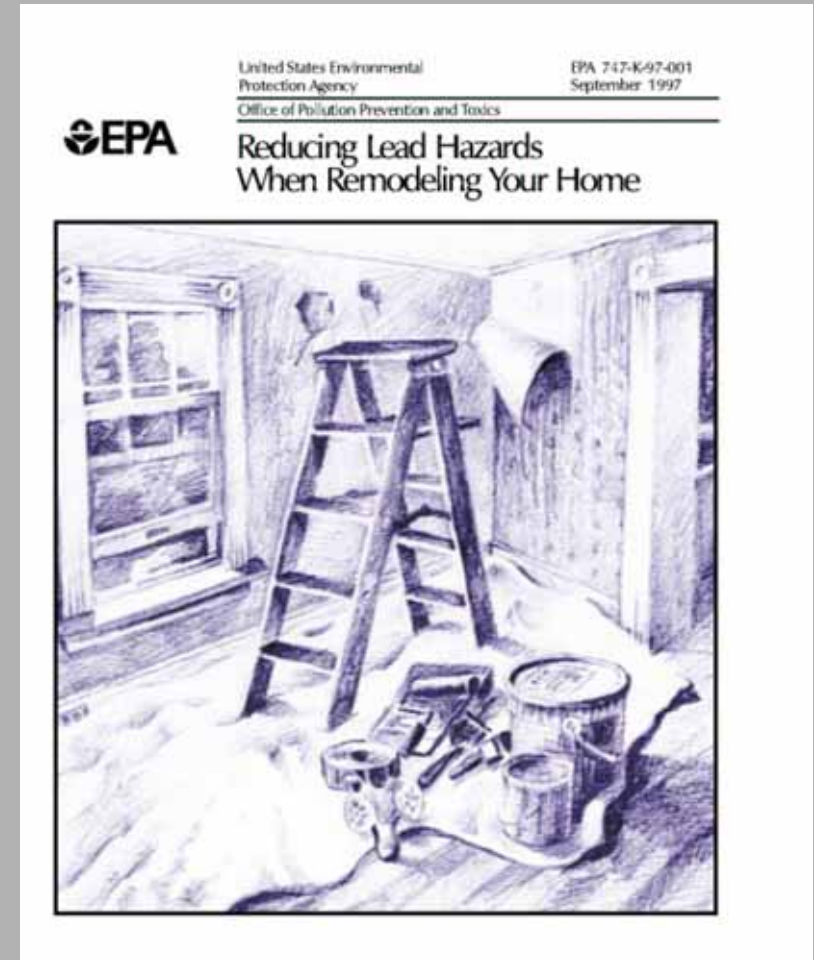
Lead Hazard Remediation Program

- ✓ Assistance in identifying lead hazards;
- ✓ Provide free training or identify contractors that are using lead safe work practices;
- ✓ Provide technical advice on how to perform abatement;
- ✓ Free equipment loans (residents only);
- ✓ Provide free visual and dust clearance (for income lower than \$50,000);
- ✓ Provide assistance in proper disposal via its household hazardous waste program.



What Can You Do Now!

- ✓ Contractors you hire should be using lead safe work practices. Make sure they are not creating additional lead hazards
- ✓ Perform visual inspections on your property on a regular basis and keep your tenants informed
- ✓ If you need assistance or additional information please call us at the City's lead information phone @ (858) 694-7000



Lead Safe Neighborhoods Program

- ✓ Serves as the primary liaison for connecting the community to lead poisoning prevention resources
- ✓ Provides: education, lead hazard assessments, and lead paint hazard removal to qualified residents who live in a home built in 1978 or earlier; have children below the age of seven living in the home or spending at least 30% of their time there; and have an annual household income less than \$50,000 (income levels vary based on size of family)



Lead Safe Neighborhoods Program

Childhood lead poisoning is the number one preventable environmental health problem facing children today and the City of San Diego's Lead Safe Neighborhoods Program is your resource to lead poisoning awareness.

Services:

- Serves as the City's resource for lead poisoning prevention
- Conducts free lead-hazard assessments for qualified low-income residents
- Investigates citizens' complaints about lead hazards
- Enforces State housing laws regarding lead hazards and lead-safe work practices

For more information call (858) 894-7000 or go to www.sandiego.gov/environmental-services/

Logos for the City of San Diego, San Diego State University, and LEAD SAFE Neighborhoods are also present.

Lead Safe Neighborhoods Program

- ✓ Responds to lead hazard tips and complaints and works with property owner or contractor to correct the problem; offers training on lead hazard awareness and lead safe work practices to contractors, property owners, childcare providers, parents/residents, tenants, and landlords; and provides vouchers for free blood lead tests for children if they are not covered by any other program.
- ✓ Partnership with County CLPPP to perform environmental investigative services for EBL's between 9.5-14.5 ug/dl





Runs better



unleaded



U.S. Environmental
Protection Agency
EPA 747-21-33-002

For more information on preventing lead poisoning
call 1-800-424-LEAD or visit www.epa.gov/lead.



LEAD
Awareness
Program

ANY QUESTIONS?



**LEAD
SAFE
NEIGHBORHOODS**