



# *Lead Program Summary*

## Regulation No. 19 The Control of Lead Hazards

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# *Childhood Lead Poisoning*

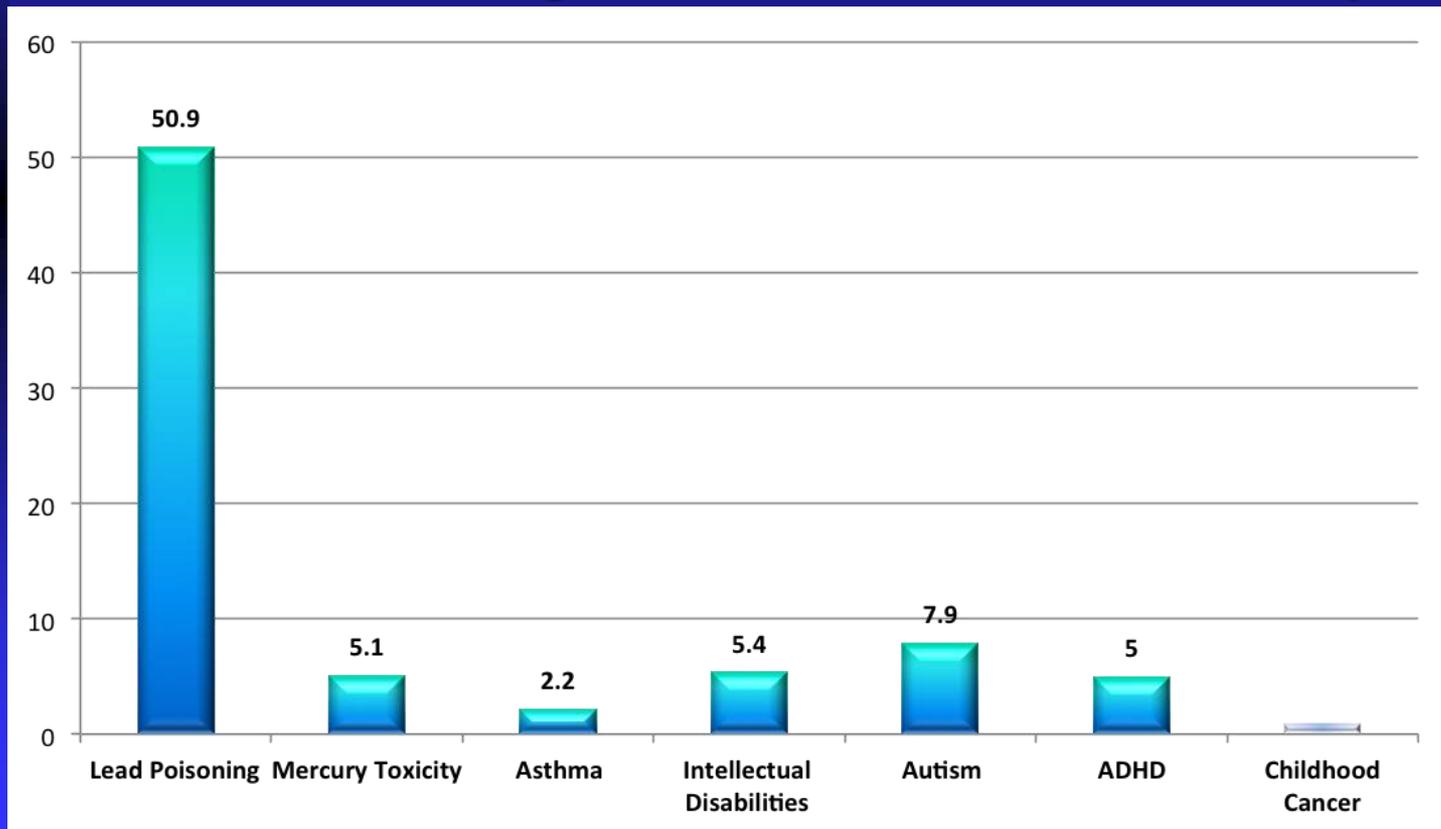
- Lead poisoning is the #1 preventable environmental health threat to children today
- It can cause permanent health, learning and behavioral problems
- Lead based paint and contaminated soil and lead dust / toys, candy and home remedies
- Eating and breathing lead dust are the most common ways for children to get lead poisoning
- The removal of lead-based paint during renovation and remodeling activities can result in exposure to lead

# *Addressing Lead Poisoning Prevention in the 21<sup>st</sup> Century*

In the United States Housing Act of 1937, Congress established as the policy of the United States to “remedy the unsafe and insanitary housing conditions and the acute shortage of decent, safe, and sanitary dwellings for families of low income, in rural or urban communities, that are injurious to the health, safety, and morals of the citizens of the Nation.”

# *2008 Annual Cost of Pediatric Environmental Diseases in Billion Dollars- \$76.6B*

Source: Leonardo Trasande and Vinghua Liu, NYU Medical Center published in Health Affairs May 2011



# *The Leading Cause of Childhood Disease in the U.S. is Lead*

Sources of Lead includes:

- Lead Paint
- Dust, Soil
- Water
- Industry
- Hobbies, toys
- Traditional Ethnic Remedies



# *Children 's Vulnerability to Lead*

CHILDREN are more vulnerable to lead exposure than ADULTS

- Size
- Consume More Food
- Inhale More Air
- Developing Nervous System
- Increased need for Calcium

# *Lead can affect children's brains and developing nervous systems, causing:*

- Diminished IQ
- Violent and aggressive behavior
- Speech delays
- Attention Deficit Disorder
- Hyperactivity
- Hearing and memory problems
- Reduced motor control and balance



# *Human Absorption of Lead*

Orally Consumed Lead Absorbed  
In Place of Calcium

CHILDREN – 30-50% OF LEAD

ADULTS – 5-10% OF LEAD

Increased During Pregnancy

# *The U.S. Center for Disease Control and Prevention*

“Today at least 4 million households have children living in them that are being exposed to lead.

There are approximately half a million U.S. children ages 1-5 with blood lead levels above 5 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ), the reference level at which CDC recommends public health actions be initiated.”



# ***Prevention of Lead Poisoning among children has important social and economic benefits***

Each dollar invested in lead paint hazard control results in a return of \$17–\$221 or a net savings of \$181–269 billion.

**Article: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control by *Elise Gould***  
Economic Policy Institute, Washington D.C. 2009

# ***Regulation No. 19, Part A***

## ***Lead-Based Paint Abatement***

- Training Provider Approval
  - Audit lead-based paint training providers
- Certification Requirements
  - Individuals / evaluation and abatement firms
- Abatement Requirements
  - Notification / Occupant Protection Plan
  - Conduct inspections and enforcement actions as needed
- Target Housing (built prior to 1978)
- Child-occupied Facilities



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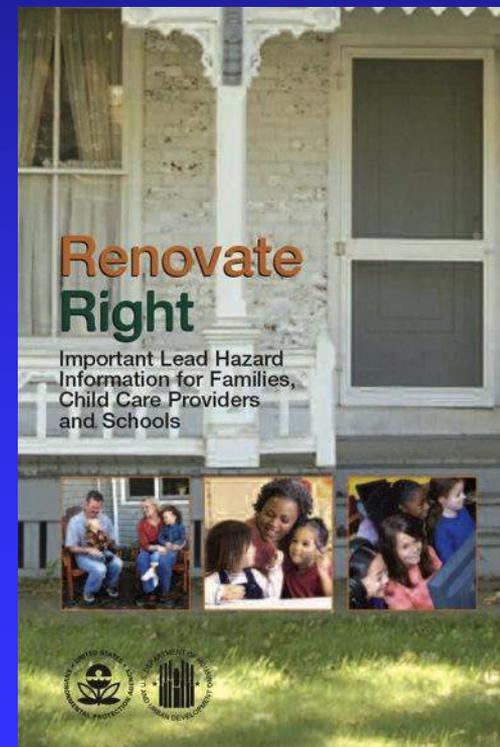
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# *Regulation No. 19, Part B Pre-Renovation Education in Target Housing*

Requires a contractor to provide a pamphlet to the owner and occupant, prior to renovating, for projects that disturbs more than two square feet of paint in target housing.



# *Recent Developments*

CDC

Reduced Action Level for Children

10 ug / dl to 5 ug / dl

Clearance Standards / Levels

Floors - 40 ug / ft<sup>2</sup>

Soil - 400 ug/g - 1,200 ug/g

# *Colorado Lead Coalition Strategic Plan Members*



- Eliminate Childhood Lead Poisoning -
  - ◆ Get Your Children Tested
  - ◆ Get Your Home Inspected & Tested
  - ◆ Use a Lead Safe Contractor for all renovation and remodeling projects

# 2010 Strategic Plan

## Eliminating Childhood Lead Poisoning in Colorado



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# *The Building Mural Project*



# *Lead Safe House*



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*Environmental Justice  
Health Equity  
and  
Childhood Lead Poisoning*

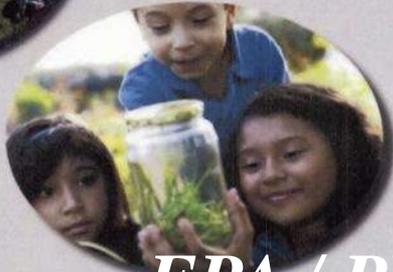
## *EPA*

### *Defines Environmental Justice as -*

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.



# Plan EJ 2014



## Executive Summary

*EPA / Plan EJ 2014*

Plan EJ 2014 is EPA's roadmap for integrating environmental justice into its programs and policies.



A message from...

EPA Administrator Lisa P. Jackson



Lisa P. Jackson  
Administrator  
U.S. Environmental Protection Agency

Dear Colleagues:

Expanding the conversation on environmentalism and working for environmental justice are among my top priorities for our work at the U.S. Environmental Protection Agency. All too often, low-income, minority and tribal Americans live in the shadows of the worst pollution, facing disproportionate health impacts and greater obstacles to economic growth in communities that cannot attract businesses and new jobs.

In 1994, President Bill Clinton issued an executive order directing all federal agencies to participate in a governmentwide effort to address environmental justice issues. To strengthen our efforts in anticipation of the 20th anniversary of that directive and to ensure that the EPA is setting a standard for all other agencies, I am pleased to share our comprehensive environmental justice strategy *Plan EJ 2014*.

*Plan EJ 2014* builds on the foundation we have established at the EPA to expand the conversation on environmentalism. Since my first days as Administrator, I have traveled the country to meet with diverse communities and listen to their concerns. And I am committed to making environmental justice an essential part of our decision making.

*Plan EJ 2014* offers a road map that will enable us to better integrate environmental justice and civil rights into our programs, policies and daily work. The plan focuses on agencywide areas critical to advancing environmental justice, including rulemaking, permitting, compliance and enforcement, community-based programs and our work with other federal agencies. It also establishes specific milestones to help us meet the needs of overburdened neighborhoods through our decision making, scientific analysis and rulemaking.

Every American deserves clean air, water and land in the places where they live, work, play and learn. Through our implementation of *Plan EJ 2014*, the EPA will be leading by example in expanding the conversation on environmentalism and working for environmental justice – now and into the future.

I am proud to be a part of this effort and ask you to join me as we strengthen our mission to protect the health of all Americans.

Sincerely,  
Lisa P. Jackson

# *Healthy People 2020 Defines Health Equity as -*

Achieving the highest level of health for all people. Health equity entails focused societal efforts to address avoidable inequalities by equalizing the conditions for health for all groups, especially for those who have experienced socioeconomic disadvantage or historical injustices.



## National Stakeholder Strategy for Achieving Health Equity



*The National Stakeholder Strategy for Achieving Health Equity* provides a common set of goals and objectives for public and private sector initiatives and partnerships to help racial and ethnic minorities -- and other underserved groups -- reach their full health potential.



# *National Stakeholder Strategy for Achieving Health Equity -*

## Blood - Lead Levels

Lead is a neurotoxic metal and an environmental toxin that is clearly linked to disparities in exposure burden related to race, ethnicity, and income.

**Lead poisoning** is entirely preventable. Children are especially at risk to **lead exposure**.

# *Determinants of Health*

Life enhancing resources, such as food supply, housing, economic and social relationships, transportation, education and health care, whose distribution across populations effectively determines length and quality of life.

Categorized under four broadly accepted categories

# *Determinants of Health*

Social Determinants of Health

Behavioral Determinants of Health

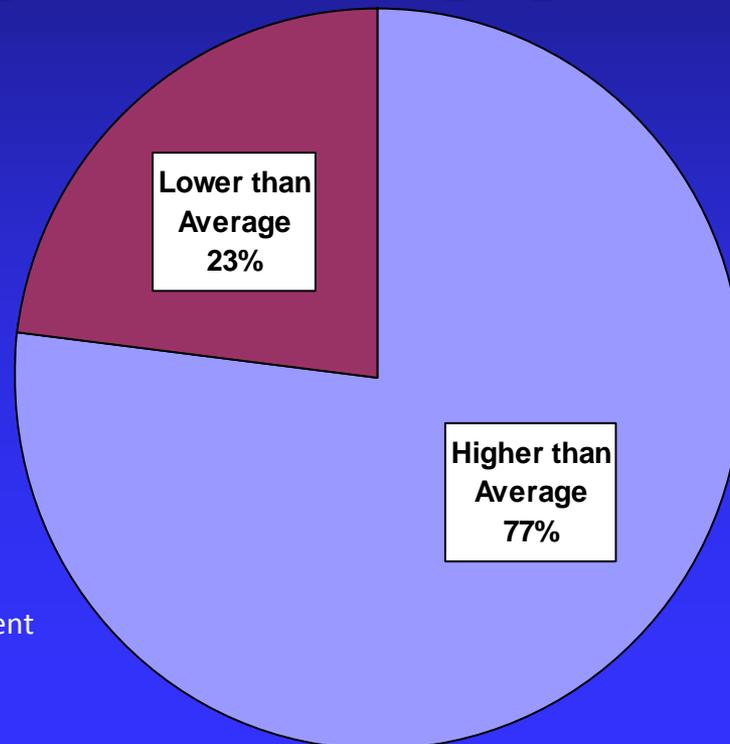
Environmental Determinants of Health

- Includes **lead exposure**, asthma triggers, workplace safety factors, unsafe or polluted living conditions

Biological and Genetic Determinants of Health

# *Children age $\leq 6$ with Elevated Blood Lead Levels (EBLLs)*

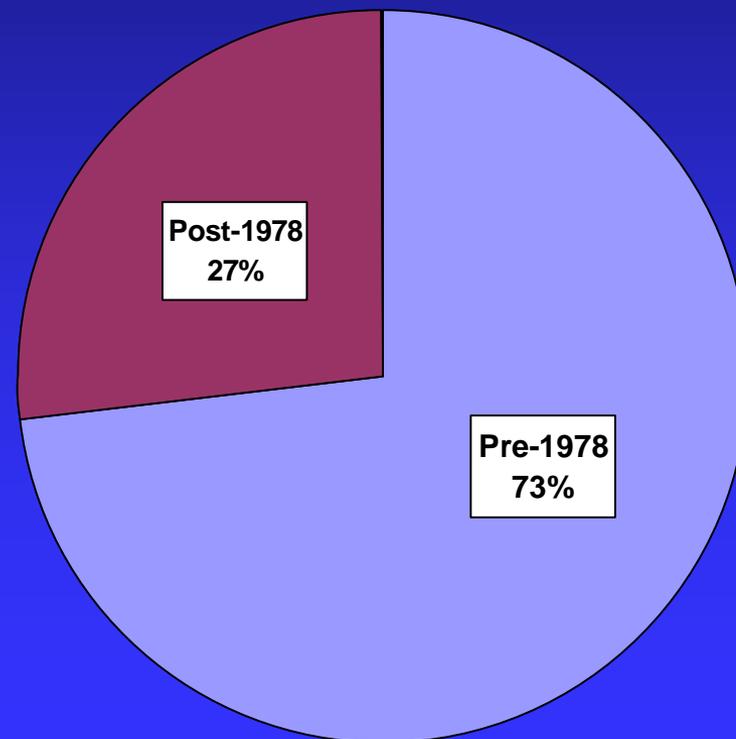
- ◆ 54 out of 70 of children with EBLLs reside in an area with a Hispanic/Latino population higher than the State of Colorado average of 17%



Data source: U.S. Census,  
Colorado Department of Public Health and Environment

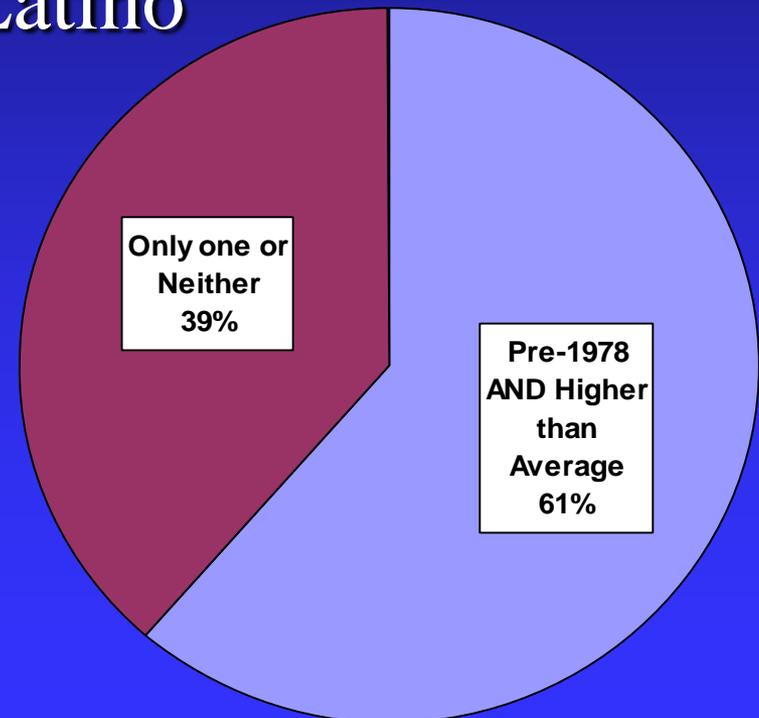
# *Children age $\leq 6$ with Elevated Blood Lead Levels (EBLLs)*

- ◆ 51 out of 70 children with EBLLs reside in an area with a median housing age that is pre-1978



# *Children age $\leq 6$ with Elevated Blood Lead Levels (EBLLs)*

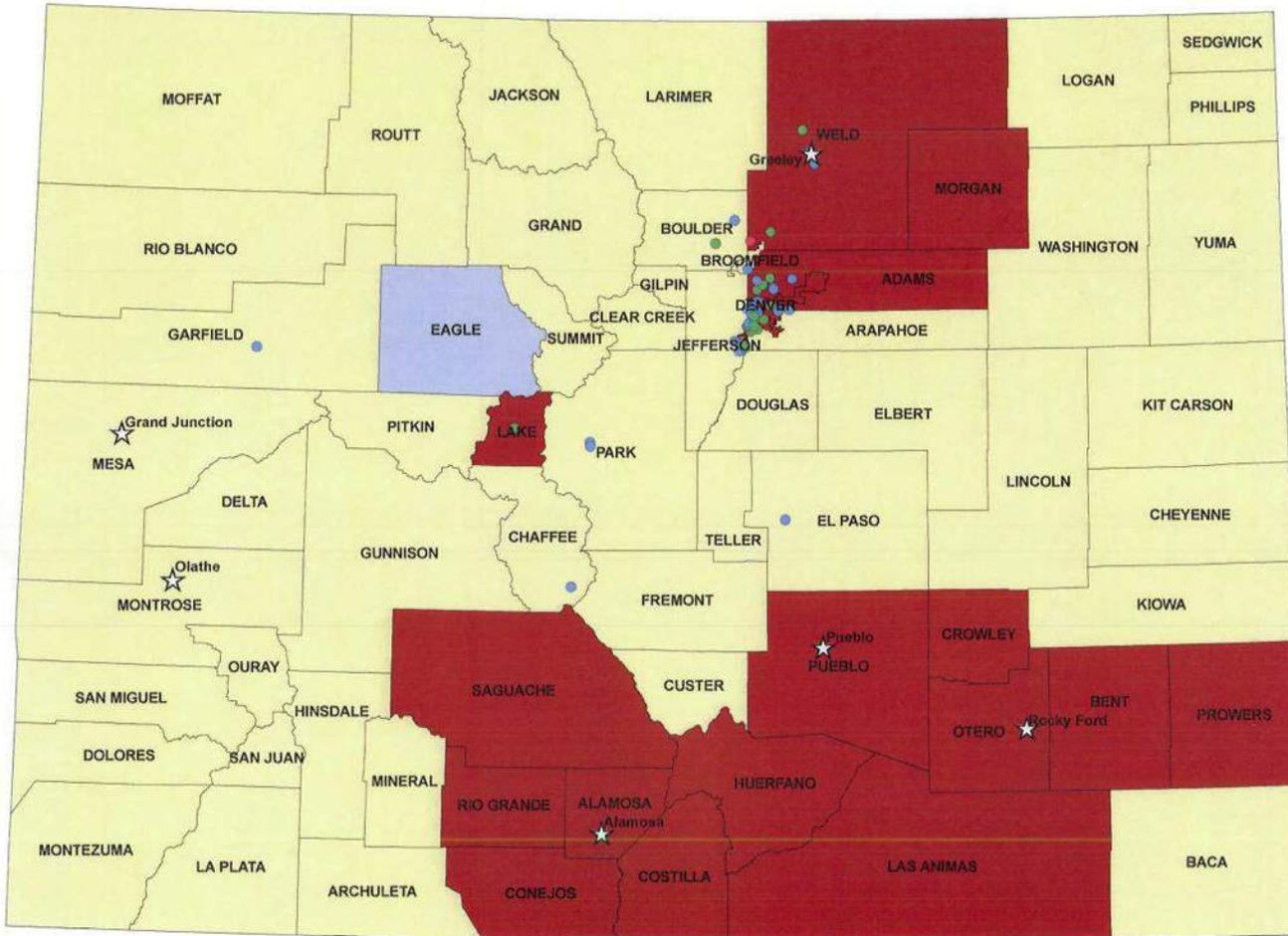
- ◆ 43 out of 70 children with EBLLs reside in an area with a median housing age that is pre-1978 AND a Hispanic and/or Latino population higher than the State of Colorado average of 17%



Data source: U.S. Census,  
Colorado Department of Public Health and Environment

# Data by County

## ELEVATED BLOOD LEAD LEVELS



## LEGEND

### Blood Lead Levels

December 2007 - August 2008

- 10 - 14 ug/dL
- 15 - 30 ug/dL
- >30 ug/dL

### Counties

- Hispanic or Latino population higher than state average of 17% AND median housing age pre-1978
- Hispanic or Latino population higher than state average of 17%
- Hispanic or Latino population equal to or lower than state average of 17%

### Testing Locations

- ☆ Greeley - Northern Area Migrant Coalition
- ☆ Pueblo - Pueblo Migrant Coalition, Inc.
- ☆ Rocky Ford - Arkansas Valley Migrant Coalition
- ☆ Grand Junction - Western Colorado Migrant Coalition
- ☆ Olathe - Olathe Medical Clinic
- ☆ Alamosa - Alamosa County Nursing Service

0 12.5 25 50 75 Miles

North American Datum 1983  
Universal Transverse Mercator Zone 13N



# Percentage of homes built before 1950



County	# of homes built before 1950	% of homes built before 1950
Adams	5857	3.6
Alamosa	1575	24.2
Arapahoe	7237	3.1
Archuleta	429	5.0
Baca	822	36.0
Bent	1117	49.1
Boulder	11332	9.0
Broomfield	170	0.8
Chaffee	1793	18.2
Cheyenne	448	39.5
Clear Creek	1706	30.3
Conejos	1365	31.9
Costilla	703	27.7
Crowley	821	52.3
Custer	596	16.1
Delta	3591	25.2
Denver	82243	29.2
Dolores	428	29.3
Douglas	1058	1.0
Eagle	1196	4.0
El Paso	815	9.2
Elbert	18664	7.5
Fremont	3721	19.9
Garfield	2406	10.7
Gilpin	638	18.3
Grand	1034	6.7
Gunnison	1295	11.6

# *Housing and Lead-Based Paint*

Approximately 38 Million Homes in the U.S. Contain Lead

Percentage of Homes Likely to Contain Lead



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# *EPA's Lead-Based Paint Renovation, Repair, and Painting (RRP) Rule*



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# *What the Research Says...*

## Renovation Studies (2000)

- Typical renovation activities that disturb lead-based paint produce hazardous quantities of lead dust.
- Typical clean-up methods (broom and shop vacuum) do not eliminate lead dust hazards.
- There is a relationship between renovations and elevations in children's blood lead levels.



## *Research Shows...*

Based on results from the National Survey of Lead and Allergens in Housing, approximately 40% of housing units (38 million) in the U.S. contain lead-based paint...

...and of those, 24 million have significant lead-based paint hazards in the form of:

- deteriorated lead-based paint
- lead-contaminated house dust
- lead-contaminated bare soil.

# *Research Shows...*



Dust Study (2007)

Confirmed that control methods in RRP were effective in reducing lead hazards.

## *Research Shows...*

2008 study showed that renovations were related to 40% of elevated blood lead levels in young children



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# *International Lead Poisoning Prevention Week of action 20-26 October 2013*

Lead poisoning is entirely preventable, yet lead exposure is estimated to account for 0.6% of the global burden of disease, with the highest burden in developing regions

Childhood lead exposure is estimated to contribute to about 600,000 new cases of children with intellectual disabilities every year

***The Nigerian village / Bagega -  
Suffered one of the world's worst recorded  
incidents of lead poisoning***

1,000 contaminated children

For some, it already  
is too late to reverse  
serious neurological  
damage



Some children are blind, others paralyzed and many  
will struggle at school with learning disabilities

# *Doctors Without Borders Uncovered the scandal in 2010*

The poisoning caused by mining from a gold rush  
killed at least 400  
children

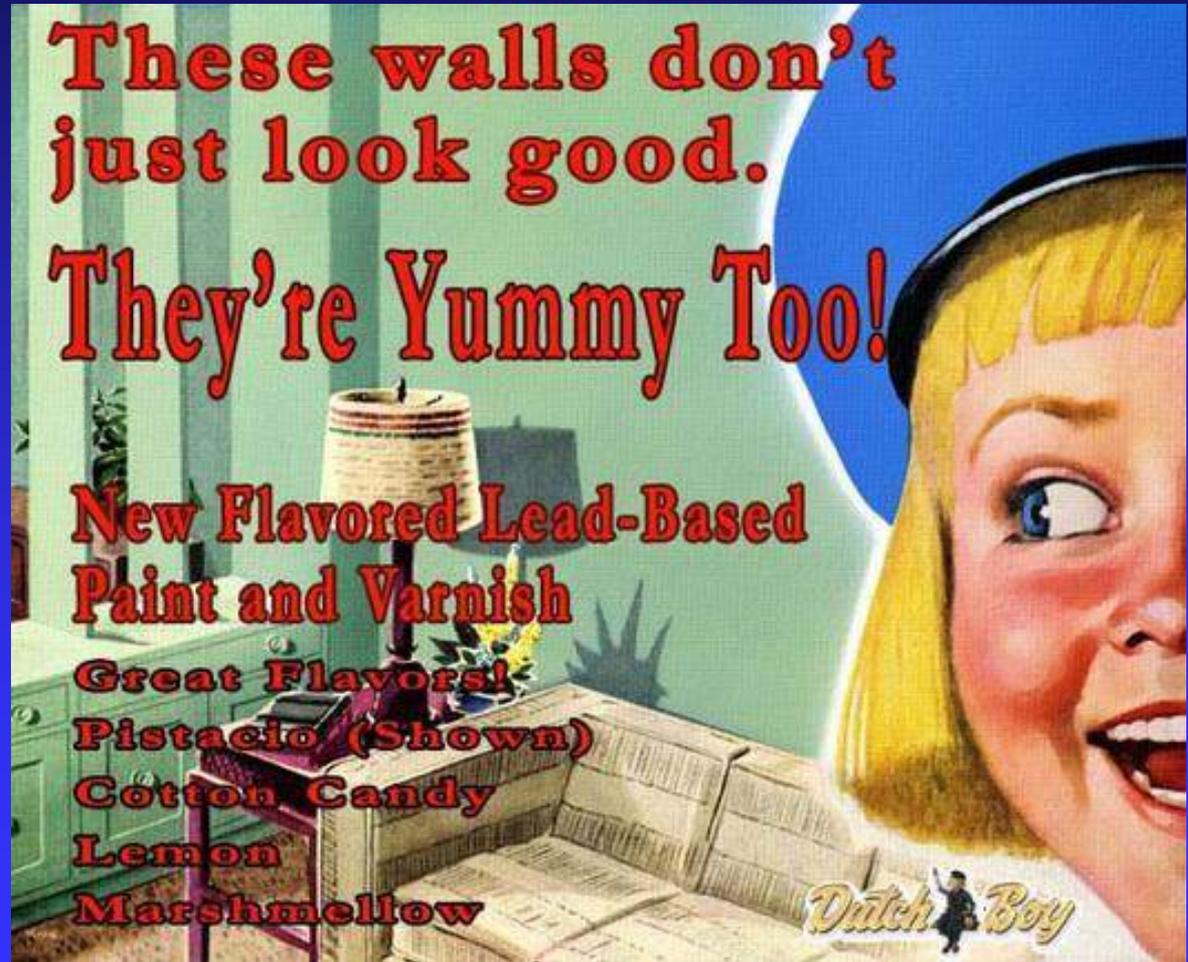
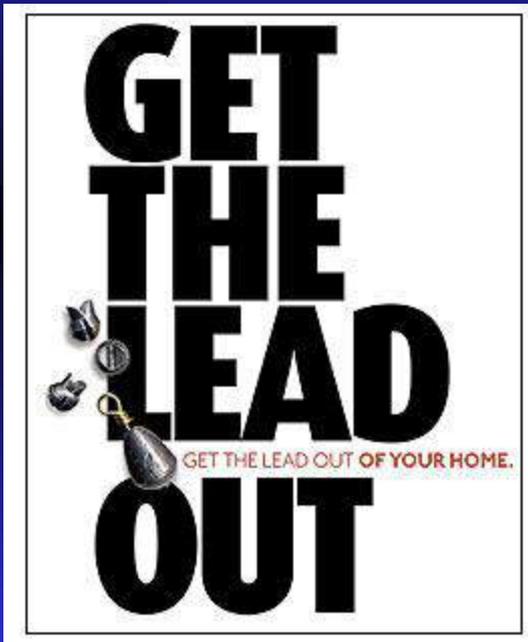
Yet villagers still say  
they would rather  
die of lead  
poisoning than

poverty

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# Lead Paint Advertisement



*The World We Have  
Created Today Has Problems  
That Cannot Be Solved By  
Thinking The Way We Thought  
When We Created Them.*

Albert Einstein

# *Questions ?*

■ *Interested Parties Call:*

*Rick Fatur (303) 692 - 3261*

