

**Protecting Children from
Lead Poisoning with
Wisconsin's *NEW* Renovation,
Repair and Painting Rule**

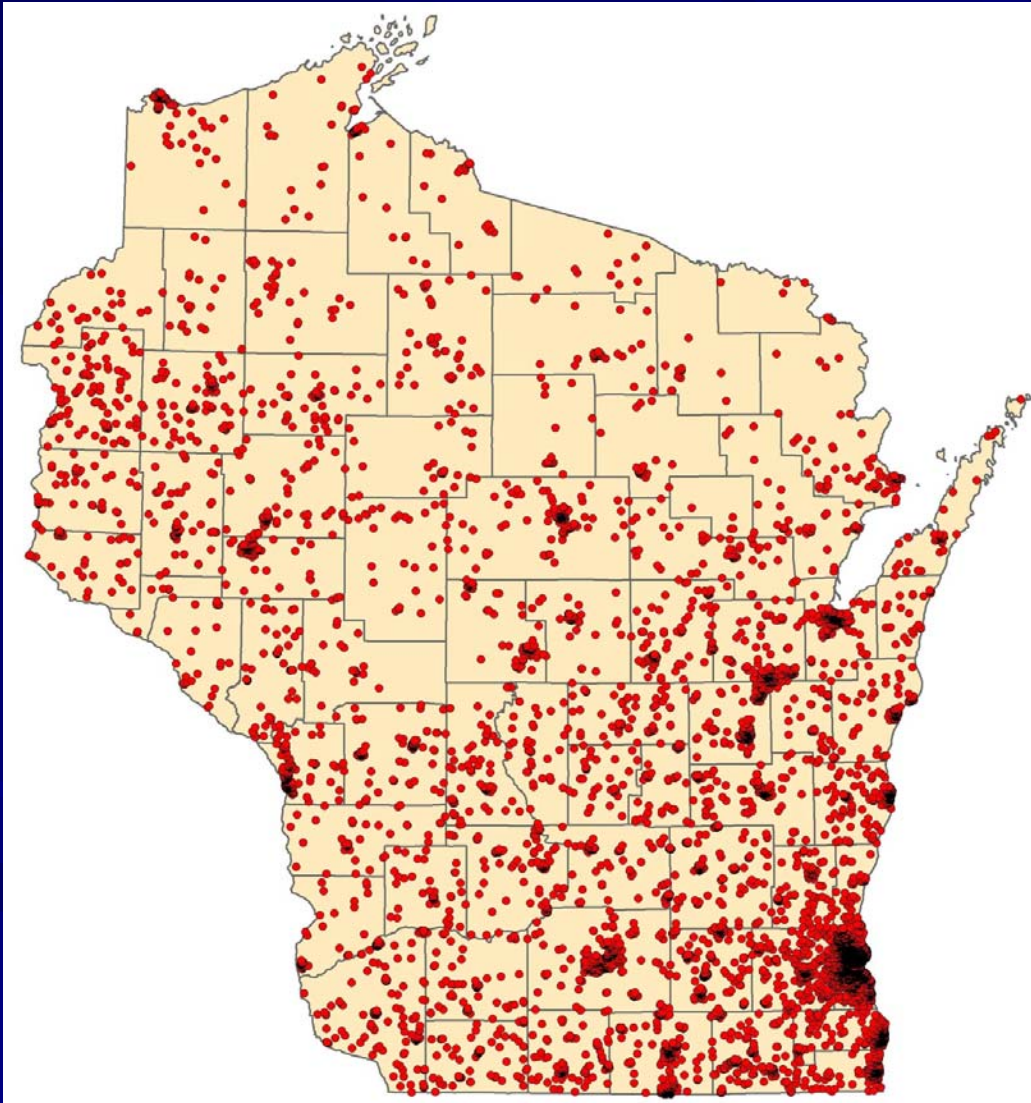
2010

Wisconsin Department of Health Services

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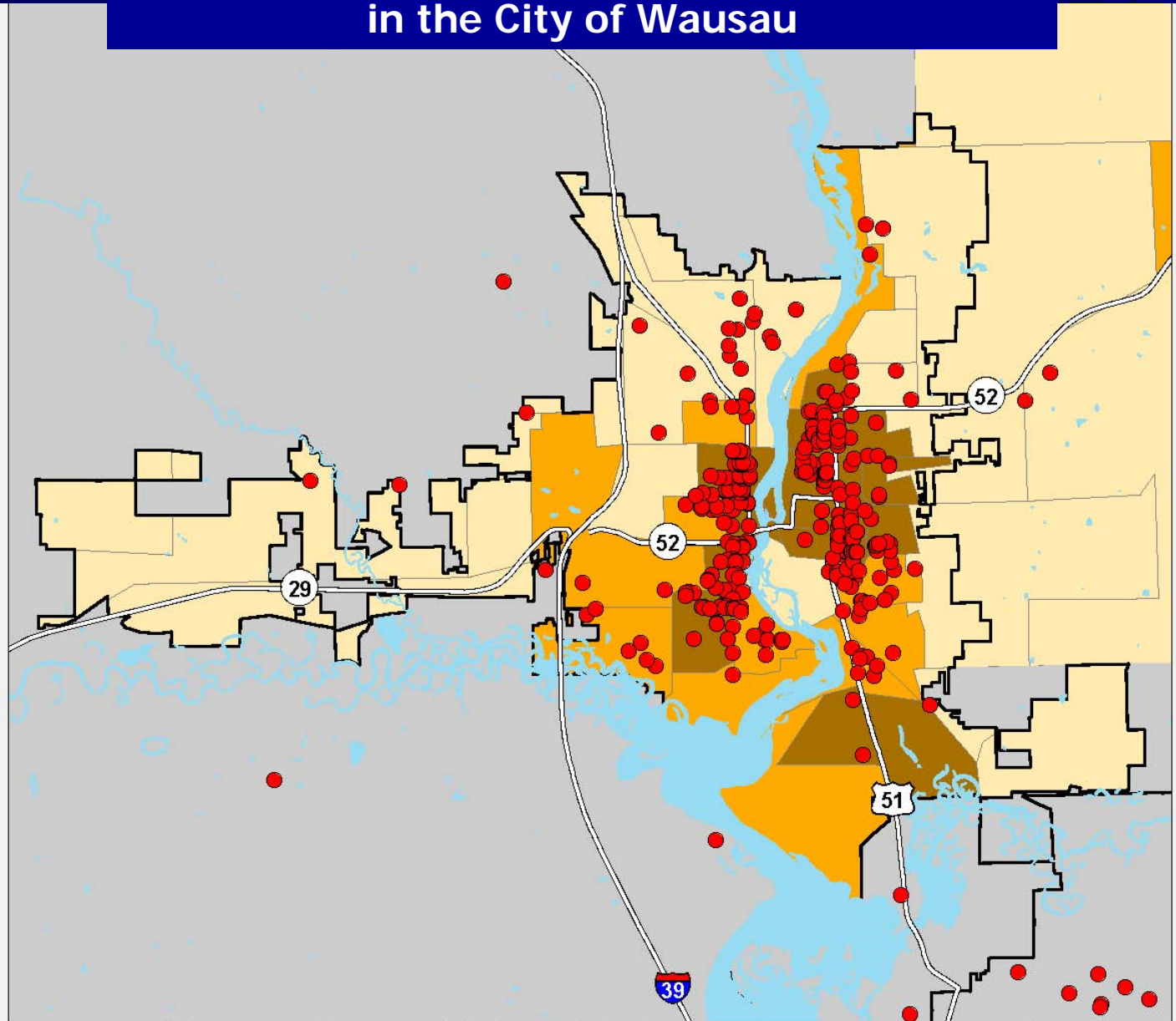
Lead Poisoning is a Statewide Problem



Each red dot represents an address related to a lead-poisoned child, 1996 - to present

More than 46,000 children!

Lead Poisoning Associated with Old Housing in the City of Wausau



Red dots indicate locations of children with lead poisoning*, 1996 - 2006 test results
(* blood lead levels greater than or equal to 10 micrograms per deciliter)

Wisconsin vs U.S.

The rate of lead poisoning in Wisconsin's children, in general, is *more than* double the national average.

Cities With Highest Percentage of Tested Children Poisoned

Cities with 30 or more Children Tested 2003 through 2008

City	Percent Poisoned	City	Percent Poisoned
Waldo	9.8	Cassville	5.1
Milwaukee	9.1	South Wayne	5.1
Norwalk	6.6	Reeseville	5.0
Bagley	6.3	Blanchardville	5.0
Dalton	5.9	Avoca	5.0
Hazel Green	5.8	Racine	5.0
Hurley	5.8	Shullsburg	4.7
Gratiot	5.4	Cascade	4.4
Sheboygan	5.2	Horicon	4.3
Lancaster	5.1	Browntown	4.3

Housing and Lead

- **681,000** housing units in Wisconsin have some lead-based paint hazards
- **109,000** pre-1950 dwelling units house children under 6 years old
- **90%** of children who *are* lead poisoned live in homes built before 1950

How Does Lead Get into the Body?

- Ingested -- hand to mouth --most common source of exposure for children
- Inhaled



Children at Greatest Risk

Children under age 6 who:

- **Live in homes built before 1978**
- **Attend a daycare, pre-school or school built before 1978**

Renovation projects in these buildings pose an additional threat of exposure to these children

Why are Young Children at Greater Risk?

- Normal hand-to-mouth behavior
- Rapidly developing brain is vulnerable to the effects of lead
- Higher rate of absorption



How Lead Affects Children

Lead Poisoning causes:

- Learning disabilities
- Lowered I.Q.
- Behavioral problems - hyperactivity, aggression
- Attention Deficit Disorder
- Speech delay
- Hearing Loss



How Lead Affects Children

As the child ages, *increases* in . . .

- Classroom disruptions
- Special education costs
- High school dropout rates
- Juvenile delinquency
- Teenage pregnancy
- Violent crimes



Lead's Continuing Effects

- Adults who had higher blood lead levels as children show a significant reduction in brain volume in the frontal cortex, the region of the brain that **reasons, judges, solves problems,** and **controls impulses** and **emotions**.¹
- For every increase of 5 micrograms per deciliter of lead in the blood of a child 6 years of age, that child has a **50% greater chance** of being arrested for **committing a violent crime** as a young adult.²

- 1 Wright, Dietrich, Ris, Hornung, Wessel, Lanphear, Ho & Rae (2008). Association of Prenatal and Childhood Blood lead Concentrations with Criminal Arrests in Early Adulthood, *PLoS Medicine*, Vol. 5, Iss. 5, pp. 732-740.
- 2 Menke, Muntner, Batuman, Siebergled & Guallar (2006). Blood Lead Below 0.48 $\mu\text{mol/L}$ (10 $\mu\text{g/dL}$) and Mortality Among U. S. Adults, *Circulation Online American Heart Association Inc.*, Iss. 114, pp. 1388-1394.

Lead Affects on Adults – You and Your Workers

Long-term health effects of lead poisoning:

- Reproductive problems
- Stroke
- Heart attack
- Kidney disease
- Diabetes
- Cognitive deficits such as memory loss and Alzheimer's disease



Preventing Lead Poisoning is Cost Effective:

- Estimated *minimum benefit* of preventing lead poisoning is **\$45,608 per child**
- **\$2 Billion** lost for the 46,000 Wisconsin children found to be lead poisoned in the last 15 years

Children still need protection

now and in the future

Lead Poisoning is Preventable



**Lead poisoning can
be prevented by
working lead-safe**



Wisconsin's

Lead-Safe Renovation Rule

went into full effect

April 22, 2010

This rule will

Ensure lead-safe renovations in pre-1978 housing and child-occupied facilities by requiring:

- Training and certification of renovators
- Education for owners and occupants
- Use of lead-safe work practices
- Final cleaning verification

What Buildings are Covered under the Rule?

Target Housing:
Single-family and multi-family housing built before 1978



Child Occupied Facilities:
Buildings, or portion of buildings, built before 1978 and regularly visited by the same child under age 6 (schools, daycares, etc.)

Rule Applies to



Work done for compensation in pre-1978 housing or child-occupied facility that disturbs more than:

- 6 ft² of paint in an interior room
- 20 ft² of paint on the exterior

Windows are *always* subject to the rule



What Work is Covered under the Rule?

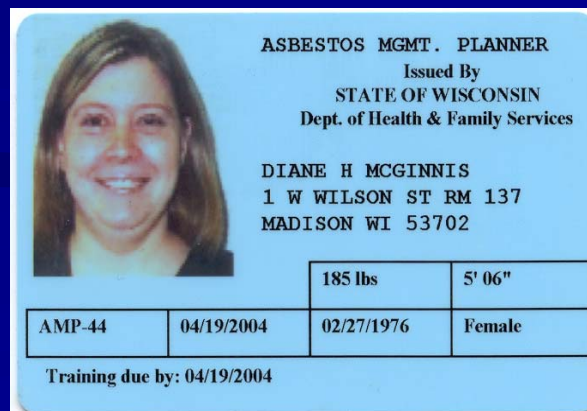
Work that disturbs paint, including:

- Remodeling and rehab
- Repair and maintenance
- Painting
- Electrical, plumbing, HVAC
- Window replacement
- Floor refinishing
- Etc., etc., etc.



What Training is Required?

- Every renovation project must have at least one trained and certified Lead-Safe Renovator
- Every worker must work for or own a **Certified Company**.
- Other workers must receive on-the-job training from the Lead-Safe Renovator



Required Training & Certification

Renovation companies must be certified

- 2-year **Lead-Safe Company** certification
- \$75 fee for 2-year certification

Renovators must be trained and certified

- Take a Department-approved 1-day Lead-Safe Renovation training course
- Apply for **Lead-Safe Renovator** certification
- \$50 fee for 2-year certification

Certified Renovator Responsibilities

- Provide on-the-job training in lead-safe work to other workers
- Be at the jobsite during containment set-up and during final clean-up
- Supervise work and ensure ongoing containment of dust & debris
- Be available by phone to return promptly
- Personally conduct final cleaning verification
- Have certification card when at a job site
- Prepare renovation records

Required Pre-Renovation Education



Before work starts, the renovator must provide the **Renovate Right** pamphlet to:

- Owners and occupants
- The parents of children in child-occupied facilities

Obtain a signature of receipt and keep records for 3 years.

Required Lead-Safe Work Practices

- Prevent distribution of dust and debris - Containment
- Restrict access
- Clean up work area daily
- Manage waste

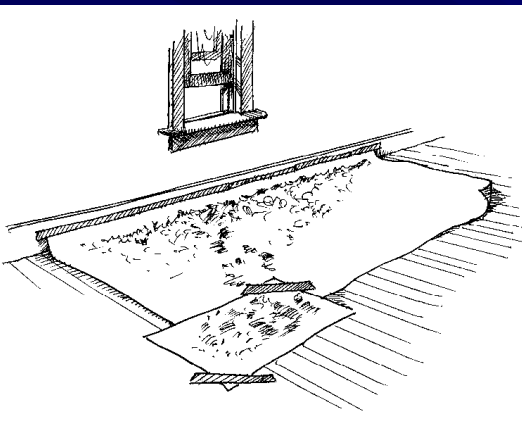


Set Up Safe Work Areas

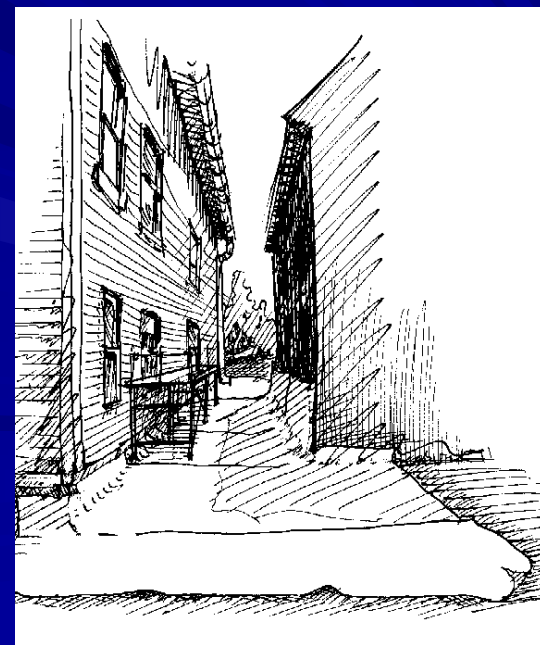
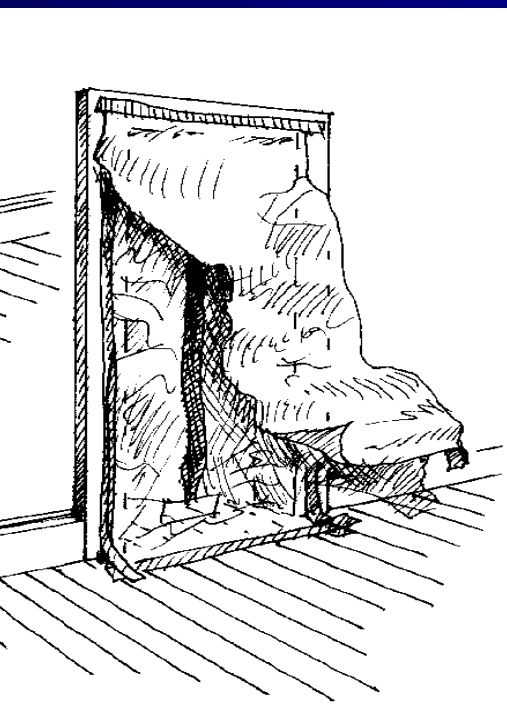


- Appropriate personal protective equipment - eyewear, clothing, and respiratory protection
- Right materials and equipment for the job
- Work area contained so no dust or debris leaves the work area & personal belongings removed or sealed in plastic

Use Lead Safe Work Practices



- Keep residents **out** of the work area.
- Use plastic sheeting.
- Isolate the work area.
- Seal vents.
- Minimize dust.



Prohibited Work Practices

- ⊘ Paint strippers with Methylene Chloride
- ⊘ Uncontained water or abrasive blasting
- ⊘ Power tools without HEPA dust containment
- ⊘ Open flame burning
- ⊘ Heat-Guns over 1100°
- ⊘ Dry sweeping
- ⊘ Improperly operating
HEPA vacuum



What a Lead-Safe Job Looks Like:



When the Job is Complete

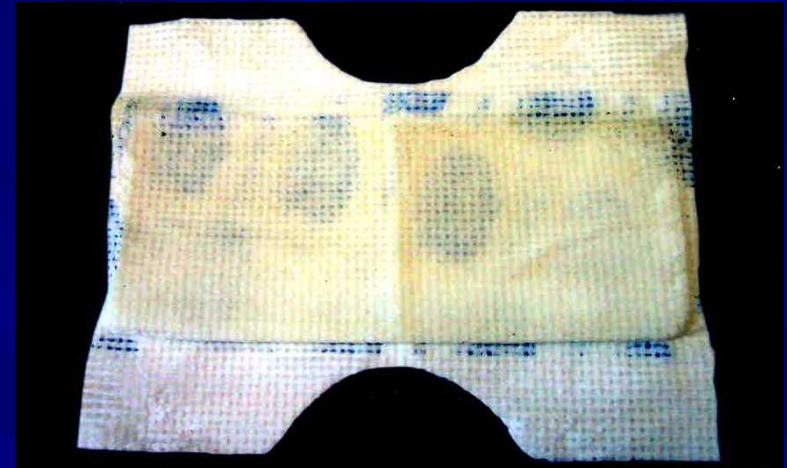
- Clean all horizontal surfaces in work area thoroughly and carefully using wet methods and HEPA vacuum.
- Clean contained work area PLUS 2 feet beyond.



Required Final Cleaning Verification

Verify cleaning by visual inspection of the exterior and interior.

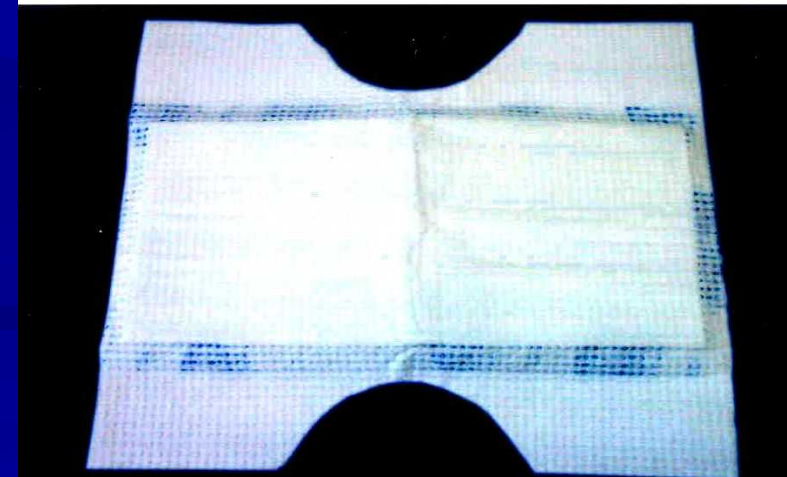
Certified Renovator uses disposable cleaning pad and compare results to EPA template



Marginally Passing Wet Disposable Cleaning Cloth



EPA Post-Renovation Cleaning Verification Card



Unused Wet Disposable Cleaning Cloth

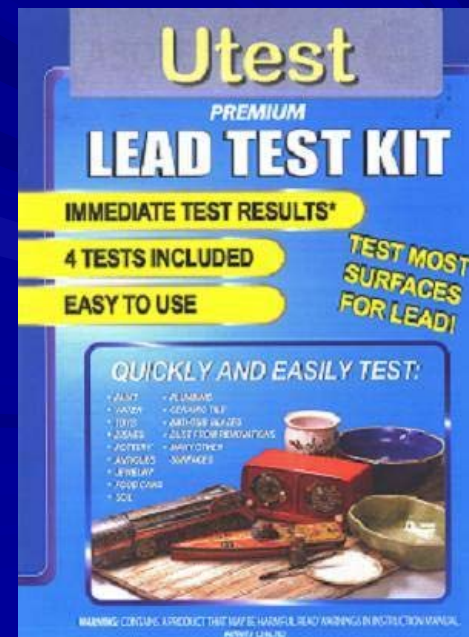
Paint Must be Assumed to be Lead-Based Paint

In pre-1978 Housing and Child-Occupied Facilities unless it has been

1. TESTED by a state-certified Lead Inspector or Risk Assessor
2. And PROVEN not to contain lead
 - By XRF testing
 - By paint chip sampling and analysis

Chemical Test Kits

- None currently approved for use in Wisconsin
- When approved, information will be put on the Lead-Safe Wisconsin website at www.dhs.wi.gov/lead
- Approved kit would allow a certified Lead-Safe Renovator to test paint



For More Information:

www.dhs.wi.gov/lead

or

GOOGLE: WI lead

DHS Lead Program: 608-261-6876

