

# Understanding Lead

Nebraska Health Disparities Conference  
October 16, 2024



1

1



## Outline

- Potential Sources of Lead Exposure
- Vulnerable Populations
- Impacts and Effects of Lead Exposure
- Taking Action
- Occupant Protection

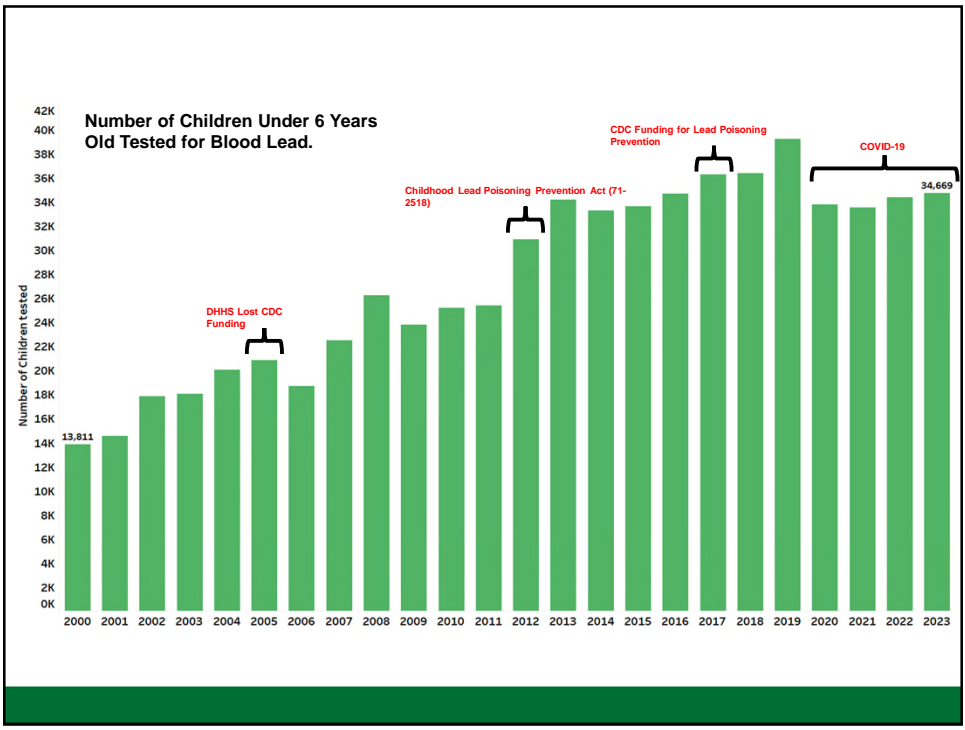
2

2

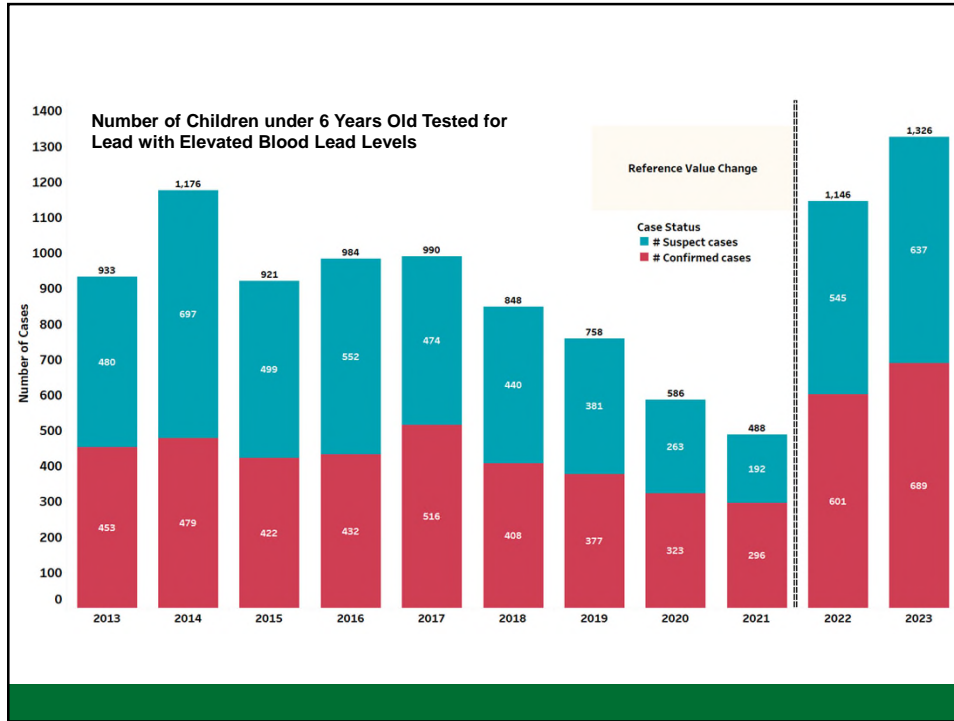


2

3



4



3

5

[http://mfrtz8science.wikispaces.com/file/view/lead\\_1.jpg/262242078/lead\\_1.jpg](http://mfrtz8science.wikispaces.com/file/view/lead_1.jpg/262242078/lead_1.jpg)

### What is Lead?

- Bluish-gray metal found in small amounts in the earth's crust.
- Impossible to identify with the naked eye.
- Does not biodegrade or disappear from the environment over time.

6


6

Where do you think lead can be found?

7

4

7



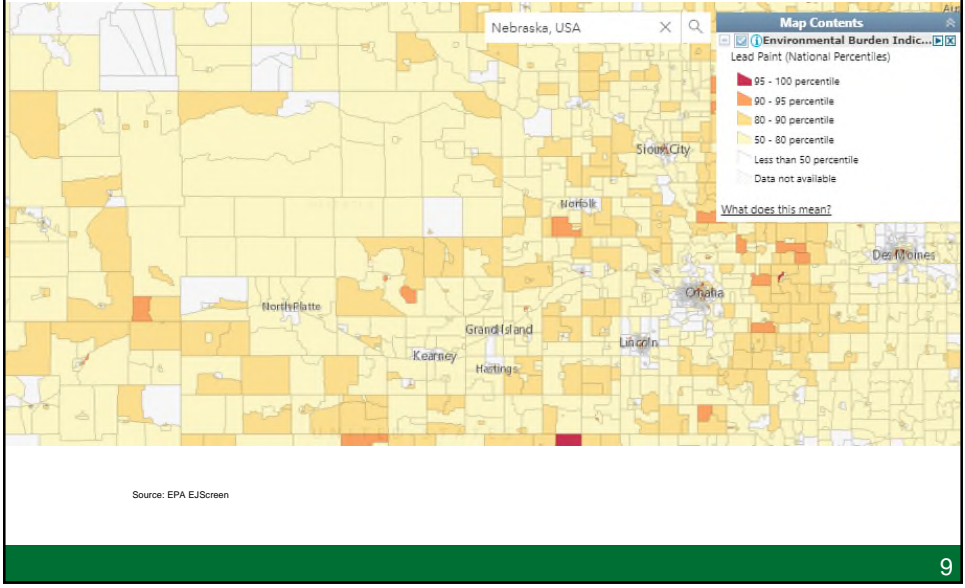
**Lead-based Paint**

- Found in older homes built before 1978.
- Major source of exposure when not maintained.
  - i.e., peeling, chipping, cracking
- Chips and dust can scatter and become a hazard, which can be breathed in or swallowed by children, residents and workers.
- Renovation, repair, or remodeling projects in a pre-1978 home can easily create dangerous lead dust.

8

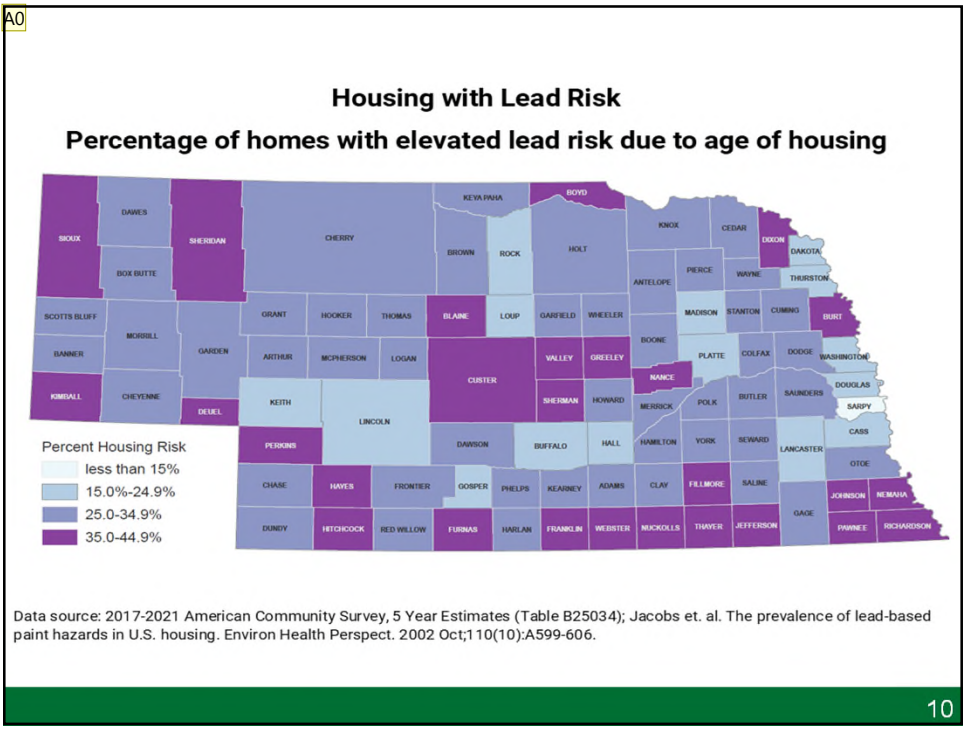
8

# Pre-1960 homes in Nebraska



5

9



10

10

## Slide 10

---

**A0** Use EPA EJ Screen Mapper to screenshot community map highlighting pre-1978 housing stock: <https://ejscreen.epa.gov/mapper/>. Make sure 'lead paint' is selected under pollution and sources.

Author, 2023-09-13T19:09:13.496



A0

## Potential Sources of Exposure

- Painted farm equipment and boats
- Imported pottery, candles, older mini blinds
- Toys
- Ceramicware
- Solder
- Batteries
- Ammunition
- Fishing tackle
- Old cellphones in disrepair
- Cosmetics



Photo by Randy Fath on Unsplash



Imported pottery from Mexico



Toy Recall from  
<https://www.cpsc.gov/Recalls/2007/rc2-corp-recalls-various-thomas-friends-wooden-railway-toys-due-to-lead-poisoning>

11

11

6

## Potential Sources of Exposure

- Lead can enter drinking water when plumbing materials that contain lead corrode.



Lead pipes



Faucets

12

12

## Slide 11

---

**A0** Are there other sources of lead exposure in the community not mentioned in this section? If so, weave those into the Potential Sources of Exposure slides.

Author, 2023-09-13T19:09:32.104



## Potential Sources of Exposure

- Lead can enter soil
- Lead in soil can:
  - Settle on or be absorbed by plants
  - Get tracked into the house on the bottom of shoes
  - Be inhaled if resuspended in the air



Use raised garden beds

13

13

## Potential Sources of Exposure

- Imported materials
  - Spices
  - Pottery
- Ammunition and fishing tackle



14

14


Let's review: What are some sources of exposure to lead?

15


15

8


### Vulnerable Populations



Children under age 6



Adults through jobs, hobbies or cultural practices



Pregnant and nursing people

16

16

## Vulnerable Populations



Children under age 6



### Health Effects: Children

- Behavior and learning problems
- Lower IQ and hyperactivity
- Slowed growth
- Hearing problems
- Anemia

A0

## Vulnerable Populations



Adults through jobs, hobbies or cultural practices

1 0

19



### Health Effects: Adults

- Increased blood pressure and incidence of hypertension
- Decreased kidney function
- Reproductive problems (in both men and women)

20

## Slide 19

---

**A0** Supplement with any information about industry jobs in the community where lead exposure may be an issue.

Author, 2023-09-13T19:09:55.241

## Vulnerable Populations



Pregnant and nursing people

1 1



### Health Effects: Pregnant People

- Lead can pass from the parent, exposing the fetus or breastfeeding infant.
- Puts the parent at risk for miscarriage.
- Baby may be born too early or too small.
- Hurts the baby's brain, kidneys and nervous system.



**Health Effects: Wildlife**

- Lead can also impact wildlife species, such as birds, mammals and amphibians.
- Animals can be exposed to lead from mining, facility emissions and lead-based paint.

23

1 2

23

**Taking Action**

Lead exposure and lead poisoning is preventable!



24

24





### Keep Homes Clean & Dust-Free

- Wet mop floors and hard surfaces.
- Wipe down hard surfaces with a wet cloth.
- Inspect and maintain painted surfaces.
- Wet wipe peeling, chipping, chalking or cracking paint.

1 3

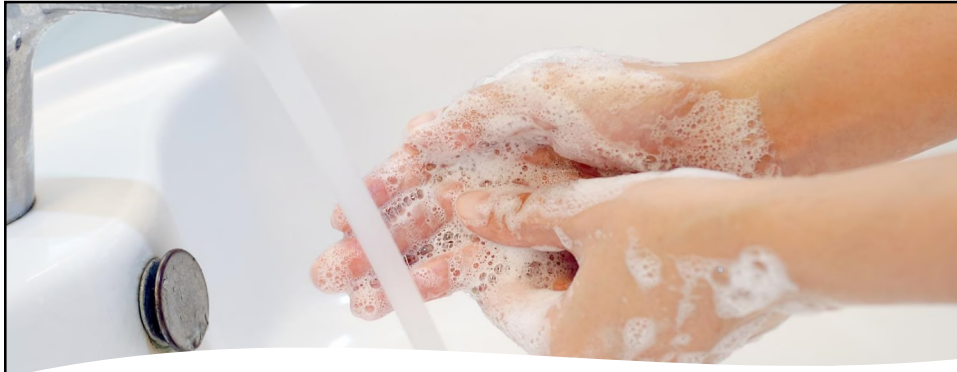
25



### Eat a Diet High in Iron, Calcium & Vitamin C

- Wash food thoroughly with clean water prior to eating.
- Do not eat food or drink water cooked or stored in chipped or cracked lead-crystal, lead-glazed pottery or lead-porcelain cookware.

26



## Wash Hands

- Use soap and water (warm or cold) to wash children’s hands several times a day.
- Adults should wash their hands after participating in activities in which they may have come in contact with lead.

1 4

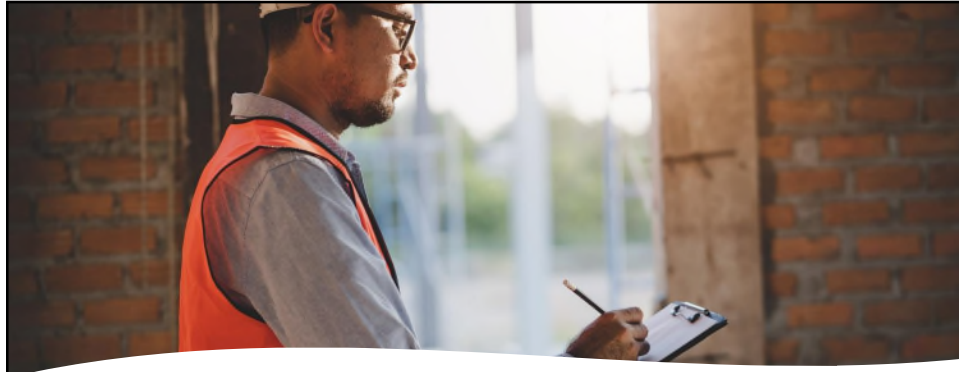
27



## Play in Grass

- Play in grassy/non-contaminated bare soil areas.
- Use designated picnic, camping & hiking areas.
- Wipe, remove shoes and wash hands after playing outdoors.
- Wipe off pet’s paws.
- Place dust mats inside and outside your home.

28

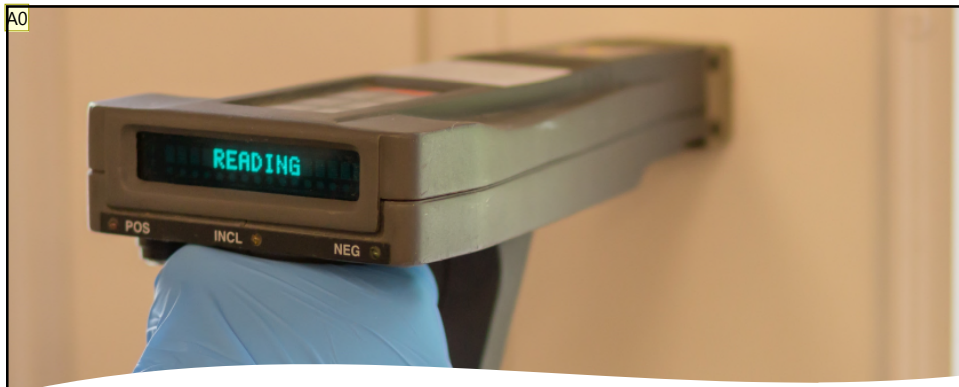


### Hire Certified Lead Professionals

- Hire a certified lead professional for renovation and repair work on pre-1978 homes.
  - [www.epa.gov/lead/findacontractor](http://www.epa.gov/lead/findacontractor)
- Or use do-it-yourself (DIY) lead-safe work practices to keep yourself and others safe
  - [www.epa.gov/lead/rrp-diyers](http://www.epa.gov/lead/rrp-diyers)

1 5

29



### Hire Certified Lead Professionals

- Nebraska Lead-Based Paint Program:
  - <https://dhhs.ne.gov/Pages/Lead.aspx>
  - (402) 471-0386
  - [dhhs.asbestoslead@nebraska.gov](mailto:dhhs.asbestoslead@nebraska.gov)

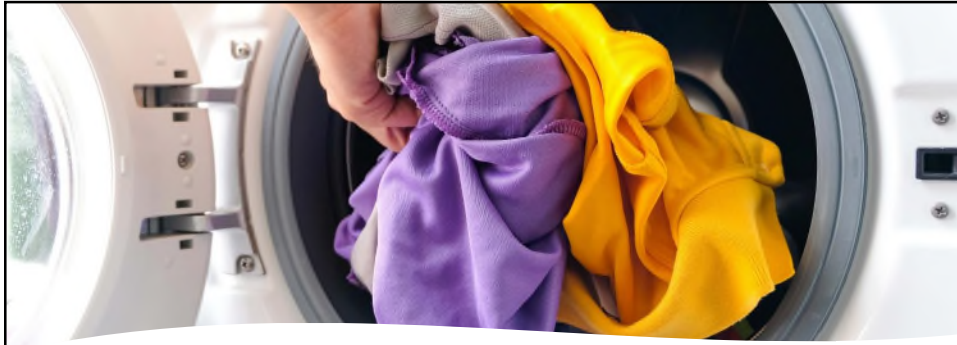
30

## Slide 30

---

**A0** Insert state-specific information about their lead programs if the state or tribe has their own program.

Author, 2023-09-13T19:11:01.156



### Shower & Change

- Clean or remove work clothes and shoes before entering your home.
- Wash work clothes separately.
- Shower after activities in which you may have been exposed to lead.

1 6

31



### Wash Toys, Pacifiers & Bottles

- Wash children's pacifiers, bottles, and toys, like stuffed animals, often.
- Do not let children chew on painted toys, window sills or other painted surfaces.

32






A0

### Run Your Water

- Before drinking, flush your home's pipes by running the tap, taking a shower, doing laundry or washing dishes
- Use a water filter that is certified to remove lead
- Clean faucet screens regularly

33

33



### Run Your Water

- Contact your water utility or a licensed plumber to:
  - Determine if the pipe that connects your home to the water main (service line) is made from lead
    - [www.epa.gov/protectyourtap](http://www.epa.gov/protectyourtap)
- Test your water for lead
- Learn about lead levels in your drinking water

34

34

## Slide 33

---

**A0** Update with specific flushing time recommendations for the community – these recommendations may come from the state, county or city.

Author, 2023-09-13T19:11:10.247





## Getting Your Child Tested

- Lead exposure often occurs with no obvious symptoms
- A blood test is the only way to know if a child has lead in their blood
- Testing is generally recommended at ages 1 and 2

1 8

35



## Getting Your Child Tested

- Contact your healthcare provider, local health department, clinic or hospital
- Nebraska Lead Poisoning Prevention Program: <https://dhhs.ne.gov/Pages/Lead.aspx>
  - (402) 471-2937
  - [dhhs.epi@nebraska.gov](mailto:dhhs.epi@nebraska.gov)

36

## Slide 35

---

- A0** Update with state requirements and recommendations for getting children tested. Provide participants with locations on where to get a blood lead test and/or local phone numbers to call to get more information about nearby blood lead testing.

If you do not have local information about blood lead testing, use the following to talk about requirements and recommendations from CDC regarding blood lead testing:

Blood lead tests are required for:

- Children ages 12 and 24 months who receive Medicaid and
- Children between ages 24 and 72 months who receive Medicaid with no record of a previous blood lead test.

Blood lead tests are recommended by Centers for Disease Control for:

- Children ages 12 and 24 months living in high-risk areas or who belong to high-risk populations,
- Children or other family members who have been exposed to high levels of lead,
- Children who should be tested under your state or local health screening plan, and
- Pregnant people who think they may have been exposed to lead.

In 2021, CDC updated the blood lead reference value (BLRV) from 5.0 µg/dL to 3.5 µg/dL. The BLRV is the level at which a child has more lead in their blood than do most U.S. children (97.5% of children ages 1–5 years) and is used as a guide to determine appropriate follow-up actions and prevent further exposure.

Author, 2023-09-13T18:54:35.033

## Slide 36

---

- A0** Provide participants with locations on where to get a blood lead test and/or local phone numbers to call to get more information about nearby blood lead testing.

Author, 2023-09-13T19:11:23.036

## Targeted Efforts in Nebraska

- ▶ Enhancing blood lead testing access and availability.
  - Clinician education and outreach.
  - Expanding testing access to key settings- Head Start Programs
- ▶ Improving surveillance systems to identify risks and vulnerable populations.
  - Data linkages with WIC and Medicaid.
  - Communication of data and identifying the root causes and risks for children.
- ▶ Expanding referral and support systems for families.
  - Identify new referrals, resources, and partners for families.
  - Improve referral pathways and tracking.

1 9

37

Which of these actions do  
you think you will start  
using?

38

38

A0



# Protect Your Family

**Before You Buy or Rent**

- Before signing a lease or contract, homebuyers and renters have the right to know whether lead is present.


39

39

2 0

A0

## Federal Law Requires Buyers & Renters Receive



- A copy of the *Protect Your Family From Lead in Your Home* pamphlet
- Any information about the presence of lead-based paint and/or lead-based paint hazards
- Disclosure of information in or attached to the contract/lease

Submit complaints to EPA at  
1-800-424-5323

40

40

## Slide 39

---

**A0** This might need to be changed for Massachusetts - they had a lead disclosure rule prior to EPA's and have additional requirements.

We will need update the notes this later this year. Zero bedroom dwellings are currently excluded, but the definition is being updated in the upcoming revised DLHS/DLCL rule so that zero bedroom dwellings where children under 6 are expected to reside are not excluded.

Author, 2024-01-30T19:33:32.460

## Slide 40

---

**A0** This might need to be changed for Massachusetts - they had a lead disclosure rule prior to EPA's and have additional requirements.

Author, 2024-01-02T19:22:20.374

## National Lead Information Center

1 (800) 424-LEAD [5323]

- Ask for information about lead, lead hazards and lead exposure prevention.
- Monday to Friday, 8:00 am to 6:00 pm ET (except federal holidays).
- Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8339.

2 1

## Environmental Justice Thriving Communities Technical Assistance Center (EJ TCTAC) Program

- EPA has selected **17 EJ TCTACs** for award to provide comprehensive nationwide coverage
- Each EJ TCTAC will provide training, capacity building, and related support on:
  - Writing and preparing grant proposals,
  - Managing grant funding
  - Identifying funding sources; and
  - Navigating federal grant application systems.





## Conclusion

- We discussed:
  - Potential sources of lead exposure.
  - How lead harms children and adults.
  - Lead's impacts on the environment and wildlife.
  - Actions that can be taken to prevent potential lead exposure.

2 2

What questions do you have about the information we covered today?



# Thank You!

For more information, you can contact:

*EPA contacts:*

- Anthony Pierce [pierce.anthony@epa.gov](mailto:pierce.anthony@epa.gov)

*Nebraska contacts:*

- Nebraska Childhood Lead Prevention Program  
Brian Coyle [Brian.Coyle@nebraska.gov](mailto:Brian.Coyle@nebraska.gov)
- Nebraska Lead-Based Paint Program  
Doug Gillespie [Doug.Gillespie@nebraska.gov](mailto:Doug.Gillespie@nebraska.gov)

2 3

Visit us online at:

- [www.epa.gov/lead](http://www.epa.gov/lead)
- <https://espanol.epa.gov/plomo>