



**National Center for  
Healthy Housing**

Creating healthy and safe homes for children through practical and proven steps.

# Healthy Homes Partnerships Meeting the Needs



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## **NCHH Resources for You**

- **Training**
  - National Healthy Homes Training Center
  - Healthy Homes Specialist Credential
- **Policy**
  - National Safe and Healthy Housing Coalition
  - State of Healthy Housing
- **Research**
  - Impact of Energy Efficiency Upgrades on Health



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# TRAINING

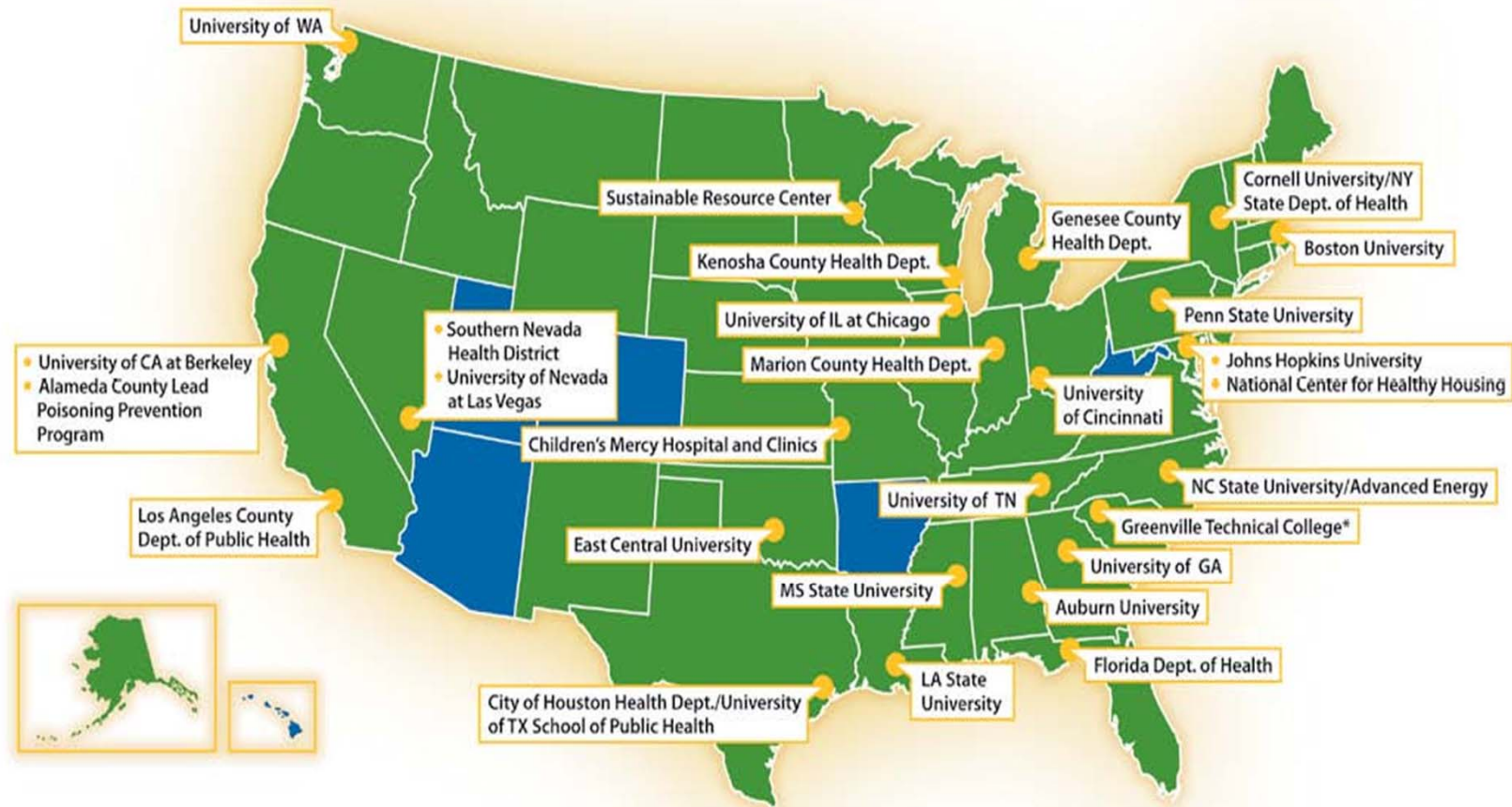
[www.nchh.org/Training/National-Healthy-Homes-  
Training-Center.aspx](http://www.nchh.org/Training/National-Healthy-Homes-Training-Center.aspx)



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# Healthy Homes Training Center





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## Training Center Courses

- Essentials of Healthy Homes
- Launching a Healthy Homes Initiative
- On-Line Pediatric Environmental Home Assessment
- Integrated Pest Management for Multi-Family Housing
- Community Health Workers
- Healthy Homes for Code Inspectors
- Certified Lead Renovator
- Healthy Homes for Homebuyer Counselors\*
- Health Opportunities in Energy Audits and Upgrades
- Green & Healthy Management Strategies for Multi-Family Properties\*
- Healthy Homes Advanced Course (Coming Soon)

\*In partnership with  
NeighborWorks America



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For individuals who have demonstrated competency in the basics of the seven principles of healthy housing and how to put them into practice in homes.

- Indoor Air Quality Professionals
- Certified Home Inspectors
- Pest management Professionals
- Energy Auditors
- Lead-Based Paint Professionals
- Asbestos, Radon, and Mold Professionals
- Realtors
- Homebuyer Counselors
- Green Builders, Architects, and Developers
- Property Management Companies
- Government Agencies
- Environmental health professionals
- Code Inspectors
- Visiting nurses
- Housing Rehabilitation Specialists





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# POLICY

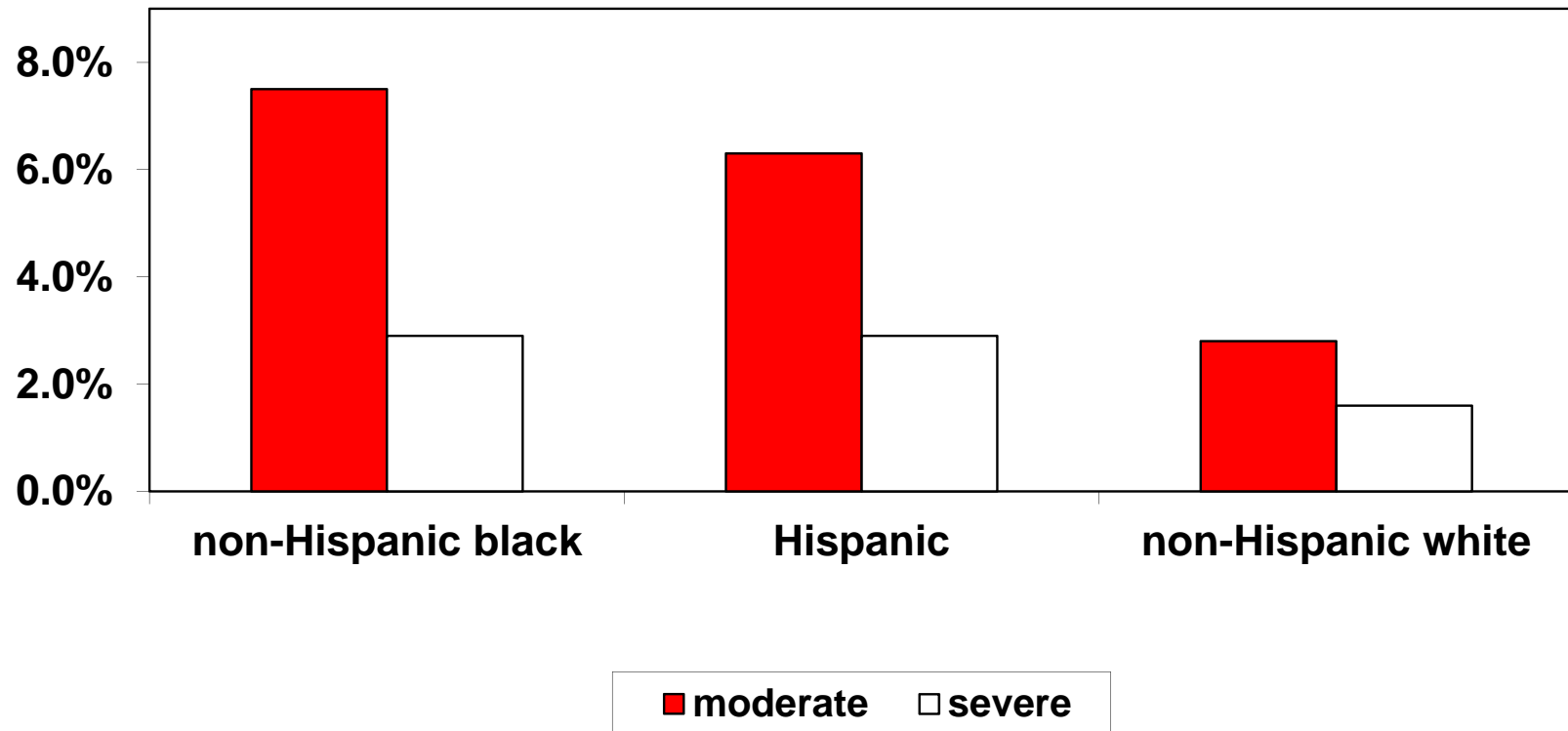
[www.nchh.org/Policy/National-Safe-and-Healthy-Housing-Coalition.aspx](http://www.nchh.org/Policy/National-Safe-and-Healthy-Housing-Coalition.aspx)



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## Race/Ethnicity and Substandard Housing



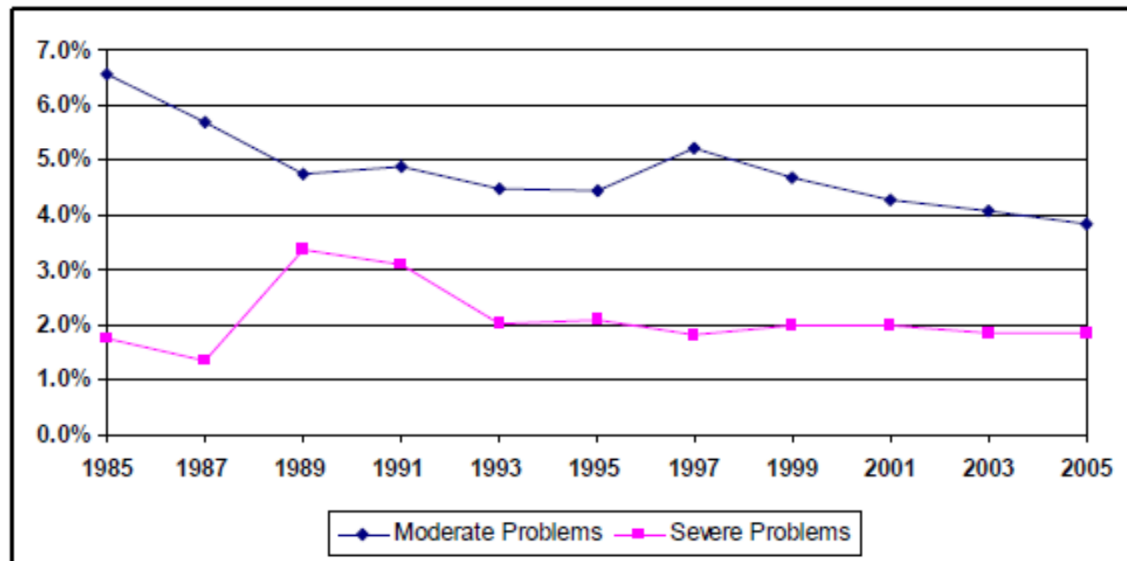




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## Percent of Housing with Problems Shows Little Improvement Since 1985





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## **Costs of environmental illness:**

- All diseases: 76.6 billion
  - Lead poisoning: \$50.9 billion
  - Autism: \$7.9 billion
  - Intellectual disability: \$5.4 billion
  - Exposure to mercury (methyl mercury): \$5.1 billion
  - Attention deficit hyperactivity disorder: \$5.0 billion
  - Asthma: \$2.2 billion
  - Childhood cancer cost: \$95.0 million
- 3.5% of health care expenditures

Source: Trasande L, Liu Y. Reducing the staggering costs of environmental disease in children. Health Aff. 2011 May;30(5):863-70.



## National Safe and Healthy Housing Coalition

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Mission: To implement the most promising and realistic  
recommendations for a National Healthy Housing Action  
Plan



American Public Health Association

[www.nchh.org/Policy/National-Safe-and-Healthy-Housing-Coalition.aspx](http://www.nchh.org/Policy/National-Safe-and-Healthy-Housing-Coalition.aspx)




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## **Coalition FY11 Priorities:**

- Protect healthy homes funding.
- Pass Senator Reed's Healthy Housing Bills.
- Pass the Livable Communities Act.
- Create minimum federal standards for private rental housing.
- Allow flexible use of categorical funding for Weatherization Assistance and Lead Hazard Control.
- Achieve medical reimbursement for healthy homes assessments and interventions.

# State of the Nation's Healthy Housing

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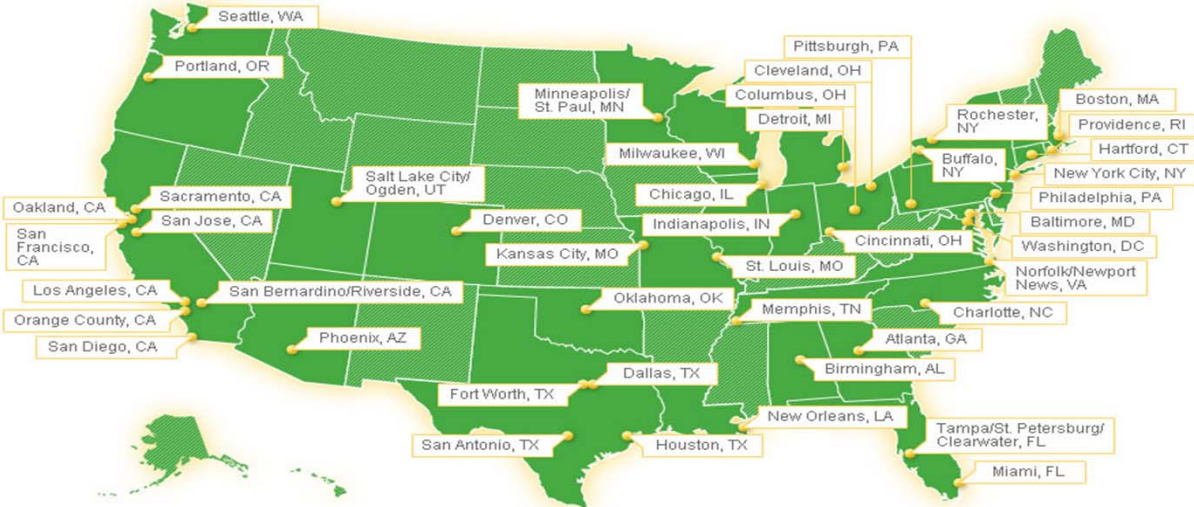
[Policy](#) > [National Policy](#) > [State of the Nation's Healthy Housing](#)

### State of the Nation's Healthy Housing

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### Inside State of the Nation's Healthy Housing

[Study Design](#)



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[www.nchh.org/Policy/State-of-Healthy-Housing.aspx](http://www.nchh.org/Policy/State-of-Healthy-Housing.aspx)

**State of Healthy Housing**  
**Ranking of Communities by Healthy Housing Quality - All Units in MSA**

Atlanta – 2nd →

Minneapolis-St. Paul – 6th →

Washington, D.C – 9th →

Phoenix- 11th →

St. Louis – 13th →

Portland – 13th →

Denver – 16th →

Providence – 16th →

Detroit – 21st →

Milwaukee - 24th →

Boston – 29th →

Los Angeles – 39th →

Memphis – 39th →

NYC – 43rd →

San Francisco – 44th →

Rank	Metropolitan Area	Survey year	Legend
1	Charlotte, NC	2002	Most Healthy
2	Anaheim-Santa Ana (Orange County), CA	2002	Fair
2	Atlanta, GA	2004	Most Unhealthy
4	Sacramento, CA	2004	
4	Tampa-Saint Petersburg-Clearwater, FL	2007	
6	Miami-Hialeah, FL	2007	
6	Minneapolis-Saint Paul, MN	2007	
8	San Jose, CA	1998	
9	San Bernardino-Riverside (metro surveys), CA	2002	
9	Washington, DC	2007	
11	Phoenix, AZ	2002	
11	Chicago, IL	2003	
13	San Diego, CA	2002	
13	Saint Louis, MO	2004	
13	Portland, OR	2002	
16	Denver, CO	2004	
16	Providence, RI	1998	
18	Kansas City, MO	2002	
18	Cincinnati, OH	1998	
18	Seattle, WA	2004	
21	Hartford, CT	2004	
21	Detroit, MI	2003	
21	Rochester, NY	1998	
24	Indianapolis, IN	2004	
24	Buffalo, NY	2002	
24	Columbus, OH	2002	
24	Pittsburgh, PA	2004	
24	Milwaukee, WI	2002	
29	Boston, MA	2007	
29	Baltimore, MD	2007	
29	Philadelphia, PA	2003	
32	Salt Lake City-Ogden, UT	1998	
32	Norfolk/Newport News, VA	1998	
34	Houston, TX	2007	
35	Birmingham, AL	1998	
35	Cleveland, OH	2004	
35	Oklahoma City, OK	2004	
35	Fort Worth-Arlington, TX	2002	
39	Los Angeles-Long Beach, CA	2003	
39	Memphis, TN	2004	
39	San Antonio, TX	2004	
39	Dallas, TX	2002	
43	New York City, NY	2003	
44	San Francisco, CA	1998	
45	Oakland, CA	1998	





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# RESEARCH





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## Green and Healthy Renovation of Affordable Housing



Source: Public Health Reports / 2011  
Supplement 1 / Volume 126



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## **Common Green and Healthy Rehab Elements**

- Low-VOC adhesives, paints & coatings
- Ventilation: ASHRAE 62.2
- Integrated pest management
- No carpet in wet areas
- Energy Star fans exhausted to exterior



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## Adult Health Changes

	MN Green		DC Green		
	Pre	Post	Pre	Post	
General Health Status					
• Very good or excellent	33%	62%	31%	41%	
• Good	48%	24%	35%	30%	
• Fair or poor	19%	14%	32%	30%	
Injury	9%	9%	14%	4%	



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## Child Health Changes

	MN Green		DC Green	
	Pre	Post	Pre	Post
General Health Status				
• Very good or excellent	53%	65%	58%	61%
• Good	35%	35%	31%	39%
• Fair or poor	12%	0%	9.5%	0%
Injury	0%	18%	3%	0%
# ER Visits due to Asthma	NA	NA	14	0



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## Specific Housing Condition Changes

	MN Green		P-value	DC Green	
	% Pre	% Post		% Pre	% Post
Water/dampness	33%	7%	p<0.102	84%	16%
Mildew odor/musty smell	25%	0%	p<0.046	60%	0%
Dehumidifier use	25%	0%	p<0.046	11%	0%
Cockroaches	25%	13%	p<0.414	57%	8%
Mice/rats	25%	0%	p<0.046	66%	12%
Smoke inside home	60%	47%	p<0.157	93%	72%
Stove exhaust fan	85%	100%	p<0.046	0%	100%



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## Environmental Testing-MN Green

	Min	Mean	Max	Comparison Value
CO <sub>2</sub> (ppm)				
Pre-Renovation	NA	NA	NA	1000
Post-Renovation	253	982	2499	1000
Radon (pCi/L):				
Pre-Renovation	1	3.1	6.7	4
Post-Renovation (post-mitigation)	0.3	0.7	2.2	4



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## **Health Outcomes and Green Renovation of Affordable Housing**

Conclusions. We found significant health improvements following low-income housing renovation that complied with green standards. All green building standards should include health requirements.

Collaboration of housing, public health, and environmental health professionals through integrated design holds promise for improved health, quality of life, building operation, and energy conservation.

This study was cited in the International Code Council newsletter in May of 2011

Public Health Reports / 2011 Supplement 1 / Volume 126





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## Summary

- Training is available to help connect energy and health programs and people
- Policy change is possible but we need your involvement
- Research opportunities abound; build evaluation into your projects and programs early.



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## **For More Information:**

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