

**Technical Assistance  
for Code Transformation  
and Innovation Collaborative  
(the TACTIC Project)**

**Final Report for the  
City of Detroit, Michigan**

by

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for the

**Michigan Department of Health and Human Services,  
Child Lead Exposure Elimination Innovations Grant**

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**National Center for  
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## **Table of Contents**

<b>Summary</b>	<b>3</b>
<b>Summary of Recommendations</b>	<b>3</b>
<b>Introduction</b>	<b>4</b>
<b>How Housing Codes Can Help Prevent Childhood Lead Poisoning</b>	<b>4</b>
<b>Key Characteristics of Detroit</b>	<b>4</b>
<b>National Best Practices</b>	<b>4</b>
<b>Methods</b>	<b>7</b>
<b>Results and Recommendations</b>	<b>8</b>
<b>Code Language</b>	<b>8</b>
<b>Staffing and Enforcement</b>	<b>8</b>
<b>Training</b>	<b>9</b>
<b>Implementation Considerations – Involving the Public</b>	<b>9</b>
<b>Conclusions</b>	<b>11</b>
<b>Acknowledgments</b>	<b>11</b>
<b>Appendices</b>	<b>11</b>
<b>Appendix A: Elements of Effective Housing Code Enforcement Programs</b>	<b>12</b>
<b>Appendix B: Code Comparison Tool Results</b>	<b>16</b>
<b>Appendix C: TACTIC Site Visit Meeting Minutes</b>	<b>22</b>

## Summary

Detroit is undertaking a two-pronged effort to address lead-based paint hazards. The first involves completing lead inspections and risk assessments and remediation in virtually all the city's rental stock; this is occurring on a scheduled ZIP-code-by-ZIP-code process. The second involves a code inspection that, among other things, seeks to identify and correct deteriorated paint, regardless of whether it contains lead.

At our April 2019 meeting with the City of Detroit, it was reported that four ZIP codes are now required to be in compliance. There are 43 ZIP codes in the city, and all are required to be in compliance by May 31, 2020. The pilot ZIP code program began on February 1, 2018. Most rental properties are not properly registered and have no current certificate of compliance. Mayor Duggan and the Buildings Safety Engineering and Environmental Department (BSEED) launched a process last year to encourage more landlords to register their properties. Since that time, the city has increased its number of registered rental properties from about 2,000 to 8,783, out of a total of approximately 152,000 rental units, most of which were built before 1978; an estimated 25,887 rental units have young children.

Other best practices for rental housing codes across the country provide for proactive paint, dust, or soil testing, instead of only requiring action after a child has been exposed. Detroit's approach to conduct lead inspections and risk assessments in most of the city's rental housing stock is quite innovative and deserves further evaluation following its full implementation.

This report describes the current Detroit code and lead ordinance process and provides recommendations on improvements to its housing code and associated inspection, enforcement procedures, staffing, public education, and other related matters. This project was funded by the Michigan Department of Health and Human Services, Child Lead Exposure Elimination Innovations Grant, contract number E20183042-00. The opinions in this report are those of the National Center for Healthy Housing and do not necessarily reflect those of the City of Detroit.

### Summary of Recommendations

Conduct further public education to ensure rental property owners understand when compliance with the Detroit Lead Ordinance is required for their units in a given ZIP code and what funding options may be available for them.

Increase the number of housing code inspectors and lead inspection firms. Owners hiring inspectors currently experience about a month's wait.

Evaluate the progress of the ZIP-code-by-ZIP-code compliance process to determine impediments to full compliance.

Create a referral system to help property owners who need to comply with the Detroit Lead Ordinance gain access to lead inspection and hazard control services funded by Detroit’s recent HUD Lead Hazard Control grant.

## Introduction

### How Housing Codes Can Help Prevent Childhood Lead Poisoning

Housing quality is an important social determinant of health in general and childhood lead poisoning prevention specifically. Yet the housing and health sectors are typically governed by separate fragmented and isolated systems. Although today’s housing codes originated over a century ago in the sanitation movement to combat health problems such as cholera, tuberculosis and typhoid, current codes (with important exceptions described below) typically refer housing-related lead paint problems to local health departments instead of using the code process to identify and correct these hazards. Health departments often focus on identifying lead hazards only after an elevated blood lead level has occurred.

This secondary prevention reactive approach hampers the application of the existing housing inspectorate and code systems to detect and correct lead hazards in housing before children have been exposed. Furthermore, housing codes in many jurisdictions are driven largely by complaint-driven reactive enforcement systems. In many cases, local housing codes are either silent on correction of lead hazards or defer to specialized lead risk assessments by local health departments. An effective code enforcement system can be a powerful tool for improving and protecting residents from lead exposure. Appendix A describes key elements of an effective system.

### Key Characteristics of Detroit

Detroit has a population of about 679,865 (2017 estimate), of whom about 49,879 are children between 0-5 years old. Detroit has about 258,471 occupied housing units, 51.9% of which are rentals. Based on Detroit’s population data, an estimated 25,887 of those units would have children under six living in them. Fifty-eight percent of Detroit’s housing was built before 1950, and 91% was built before 1978.

### National Best Practices

Detroit’s ZIP-code-by-ZIP-code lead inspection/risk assessment process appears to be unique in the nation. If substantial compliance is achieved by 2020 as intended, it will likely emerge as a best practice. Full lead-based paint inspections and risk assessments are currently required only in public housing, project-based Section 8 housing pursuant to the HUD Lead-Safe Housing Rule, and in units served by Detroit’s Lead Hazard Control grant from HUD.

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(the TACTIC Project) – Final Report for the City of Detroit, Michigan*

Several municipalities across the country have taken action to address lead hazards in housing through codes, which are reviewed briefly here.

For example, in December 2005, Rochester (NY) passed an ordinance adding inspections of most pre-1978 rental housing for lead paint hazards to their ongoing rental housing inspections needed to obtain a certificate of occupancy (C of O). Rental housing inspections occur every three or six years, depending on building size (see <https://www.cityofrochester.gov/article.aspx?id=8589935004>). To receive a C of O, property owners must correct identified lead hazard violations (if any). If hazards are identified, the property owner must pass a private clearance test (a visual inspection plus at least eight dust wipe samples). The protocol, available at <https://www.cityofrochester.gov/lead/> and <https://ecode360.com/8677786>, states in part: “Dust samples shall be taken from each of no more than four rooms. The selection of rooms to be tested, where applicable, shall include no less than one bedroom and the living room. At least one wipe sample shall be taken from a window trough or a windowsill with a paint history, if present, and one from a floor in each room. Where there are less than four rooms, then all rooms shall be sampled.” Results are compared to current EPA dust lead hazard standards). For the initial inspection, code officials examine paint condition; and if it is intact and the home is in a high-risk area, then they will collect eight dust wipe samples to ensure that the home is safe for children. If paint is not intact, lead safe work practices must be used to repair the paint, followed by private dust testing to ensure cleanup is adequate (unless the home has been found to be free of lead-based paint). The city maintains a publicly accessible database showing the date all rental properties passed their most recent C of O inspection, including lead.

The code does not appear to have significantly impacted the housing market in Rochester, a key concern of code officials and property owners prior to passing the law. Landlords have since accepted it as a routine cost of business (<https://www.ncbi.nlm.nih.gov/pubmed/22001644>). As of August 28, 2018, Rochester has inspected 166,906 individual dwelling units (see <https://www.cityofrochester.gov/lead/>). Data show that blood lead levels in Rochester improved more than twice as fast compared to the rest of the state. Eighty-six percent of inspections did not have an exterior lead violation, and 88% of those with a violation had complied with remediation as of August 2018. For interiors, of the 166,906 units inspected, 95% passed the initial visual inspection, and among those with an interior violation, 84% had complied as of June 30, 2018. Of the 4,141 units cited with a lead dust hazard, 98% have complied as of June 30, 2018. Ninety percent of the units subjected to dust wipe testing (over 30,000 units as of 2016) passed. During the first 12 years, the city has issued 782 vacate orders for situations with severe hazards that put children at risk and 3,418 tickets for noncompliance. The frequency of violations has declined in recent years, as landlords know what to expect. Furthermore, the ordinance has created a demand for more private inspectors to perform

**Technical Assistance for Code Transformation and Innovation Collaborative  
(the TACTIC Project) – Final Report for the City of Detroit, Michigan**

clearance testing; the increased competition has resulted in a price reduction. Before the law was passed, a clearance test cost about \$350 per unit; the cost is now about \$125 per unit.

In Maryland, owners of older residential rental properties must register their properties annually with the Department of the Environment. Private inspectors issue a lead paint risk reduction certificate for each dwelling that passes the inspection, which includes both a visual examination of paint condition and dust lead testing. Rental properties covered by the law must be free of chipping, peeling paint and lead-contaminated dust. To qualify for registration, owners must hire a certified contractor to address any defective paint and have an accredited lead paint inspector verify compliance before any change in occupancy. Inspectors issue a lead paint risk reduction certificate for each dwelling unit that passes the inspection. Whenever a tenant notifies an owner that there is defective paint or a child with an elevated blood lead level, the owner has 30 days to conduct modified risk-reduction measures and pass lead inspection certification. The rental property owner is responsible for temporarily relocating the family to a lead-safe or lead-free dwelling while the original dwelling undergoes risk reduction measures. A key component in Maryland's substantial decline in childhood lead poisoning has been its strong public enforcement of the Maryland Reduction of Lead Risk in Housing Act coupled with local enforcement coordination and private enforcement actions by nonprofit agencies and *pro se* tenants. The Maryland Department of the Environment files 500 to 800 violation notices annually, and a team from the state's attorney general's office is responsible for enforcing actions against non-compliant owners. Another highly effective best practice has been Maryland's policy of pursuing enforcement against a rental property owner's entire non-complaint housing portfolio once enforcement actions have been initiated against any one of the owner's properties. Local housing code enforcement and landlord licensing officials at the city and county level also help coordinate enforcement by referring noncompliant properties in their jurisdictions to MDE for enforcement of the registration and risk-reduction requirements.

Rhode Island passed the Lead Hazard Mitigation Act in 2002 and implemented code regulations in 2004. Before any change in ownership or tenancy of a property and at least every two years, the property owner must have the property inspected and demonstrate via a certificate of conformance (COC) or a lead-safe or lead-free certificate that the dwelling is safe for children. Establishing lead safety includes dust testing. Under the law, rental property owners are required to attend a training on unsafe lead conditions, inspect/repair any lead hazards at their properties, make residents aware of their findings and actions, address residents' lead-hazard concerns, follow lead-safe work practices during maintenance, and verify each unit's compliance through a lead inspector. Typically, the owner must have the property inspected every two years and prove its safety for children by showing a COC or a lead-safe or lead-free certificate. Since the law's enactment the state has been challenged by compliance. In 2014, when the Providence Plan completed an evaluation of the Lead Hazard Mitigation Law, it found that only 20% of the covered properties had complied with the regulations within the first five years of implementation. Several cities have taken steps to improve enforcement. Providence,

for example, created a separate division of Housing Court to address lead violations. The Inspection and Standards division reported that 484 of 537 lead violation cases filed over the first four years resulted in corrective action. An analysis conducted by the Rhode Island Department of Health discovered that there was a significant decline in children with elevated blood lead levels in Providence between 2012 and 2013. Notably, the decline coincided with the implementation of the building permitting requirements and the lead docket.

The National Healthy Housing Standard, a model code, provides that lead levels at or above federal regulatory limits are defined as hazards and must be remediated. Those levels include deteriorated lead paint (0.5% by weight or 1.0 milligram per square centimeter); dust (40 micrograms of lead dust per square foot [ $\mu\text{g}/\text{ft}^2$ ] on floors and 100  $\mu\text{g}/\text{ft}^2$  on windowsills). The Standard also states that painted surfaces shall be maintained intact and with the exception of paint tested and found not to contain lead, deteriorated paint at a property built before 1978 shall be repaired using lead-safe work practices and follow-up dust testing.

Many federally assisted housing programs, including public housing, Section 8 project-based assistance and federally assisted housing rehabilitation programs also require paint and dust testing, regardless of whether a child with an elevated blood lead level resides there.

Additional case studies of best practices across the nation for childhood lead poisoning prevention are available here: <https://nchh.org/who-we-are/nchh-publications/case-studies/lpp-stories-case-studies/>.

## Methods

We conducted several conference calls with key local personnel to introduce the project, describe the process, and identify current codes in October and November 2018. After reviewing the local code, we used the NCHH Code Comparison Tool (<https://nchh.org/tools-and-data/housing-code-tools/cct/>) to compare Detroit's housing code with best practices (see Appendix B).

In December 2018, we conducted an on-site visit, which was attended by Harolyn Baker, Director of Child Health Services, Maternal and Child Health; Arthur Rushin, Supervisor, Residential Inspections, BSEED; and Anna Pinter, Lead Program Manager, Housing and Revitalization Department. A second meeting in April 2019 was attended by Julie VandeVusse, Project Manager, BSEED.

Representing the National Center for Healthy Housing were David Jacobs and Sarah Goodwin. The relevant documents were obtained and subsequent data requests identified. The timeline includes provision of a draft report (this document) to the jurisdiction in mid-March by NCHH,

comments from Detroit personnel to be integrated into the draft in mid-April, and completion and presentation of the final report in May 2019.

## **Results and Recommendations**

### **Code Language**

Detroit requires that lead inspections and risk assessments be completed by independent third-party private certified firms. The third-party inspectors complete two forms, a Lead Activity Declaration Project and a Lead Remediation Clearance Current Summary form. The city is enforcing on a ZIP-code-by-ZIP-code process. Six months before enforcement starts in a given ZIP code, the city sends mailings, internet notices, and meetings to alert the regulated community of the new compliance target dates. Owners then have six months to comply.

If a hazard (violation) is identified and there is no compliance, the city issues a violation notice(s). If the rental property is not in compliance, the tenant can apply to participate in the rental escrow program, and a financial institution can hold the rent in escrow for 90 days. If there is still no compliance at the end of the 90 days, the tenant gets to keep the escrow money.

Although the Detroit housing code does prohibit deteriorated paint, it does not require actual testing of that paint; instead, the third-party private inspectors test the paint for lead. Therefore, no code language changes have been recommended for Detroit.

Under the ordinance, landlords who do not have a certificate of compliance (unaddressed lead issues are one reason to withhold a C of C) cannot legally collect rent from their tenants until the issues are addressed and a C of C is issued.

No code language changes are recommended in this report. Although local code officials in some jurisdictions do occasionally measure lead in paint, dust, or soil, in Detroit, this function appears to be performed mostly by private inspectors and is underway.

### **Staffing and Enforcement**

The city has issued progress reports for each ZIP code.

As more ZIP codes are scheduled for compliance, there may need to be additional capacity in lead inspectors for the city. Owners hiring inspectors reportedly currently experience about a month's wait.



***Technical Assistance for Code Transformation and Innovation Collaborative  
(the TACTIC Project) – Final Report for the City of Detroit, Michigan***

In addition to city staff and third-party lead inspectors, there is a lead enforcement task force, including state personnel, local personnel, nonprofits, Wayne State University, legal personnel, and others.

A major gap is reported to be a continued lack of awareness, finances, and RRP- (Renovation, Repair, and Painting) certified contractors. Outreach and awareness is a key aspect of proper enforcement. To enforce the regulation, rent could be held in escrow for 90 days (before the tenant gets to keep the money), and there is a \$250 fine for not registering in the first place.

Finally, Detroit city staff responsible for enforcing the Detroit Lead Ordinance should work with other city staff responsible for implementing Detroit's new Lead Hazard Control HUD grant to ensure a seamless referral system to help owners comply.

## **Training**

Housing code inspectors in Detroit currently undergo on-the-job training to fulfill their current duties. Code inspectors in Rochester, NY, and elsewhere are cross-trained to enable them to identify both housing code violations and lead-based paint hazards. The city's reliance on third-party inspectors may render such cross-training unnecessary. The existing code inspectors in Detroit are not currently trained in lead hazard identification, although other cities in Michigan, such as Battle Creek, do employ code inspectors with cross-training in both recognition of code violations and lead-based paint hazards. In addition to cross-training of code inspectors, other training needs may include the following:

- Lead hazard awareness for supervisors and property owners, especially small low-income rental property owners.
- Training for health department case workers who coordinate care for children with elevated blood lead levels on housing code violation procedures: specifically, how they can request a lead risk assessment in homes of children with elevated blood lead levels.
- Healthy homes best practices and standards for code inspectors, so that they will be better equipped when encountering other hazards.
- "Soft skills," such as customer service, communications, and ethics training for code officers who may interact often with tenants and landlords from various cultural backgrounds.

## **Implementation Considerations – Involving the Public**

Integrating lead hazard identification into the housing codes in Detroit should also consider how best to achieve community consensus. This will require careful articulation of why this is needed, as well as related costs and benefits. Community leaders should be engaged to help articulate why housing codes present an important opportunity to address childhood lead poisoning in Detroit.

Those opportunities include:

- Ending the historic divide between housing and public health.
- Taking action before children are harmed instead of only reacting after the harm has been done.
- Potential for new job creation.
- The benefits of a “health in all policies” approach.
- How the costs of proactive code inspections are less than the costs of treating and educating children with elevated blood lead levels.
- How proactive codes can benefit landlords by reducing the prospect of unanticipated housing repairs and avoidable litigation.
- Building public trust in democratic institutions to address preventable diseases, such as childhood lead poisoning.
- Active engagement of the city’s philanthropic institutions.
- Ending the current inefficient practice of shifting the costs of lead poisoning to our schools and medical care institutions.
- Explanation of how existing resources, such as Detroit’s new HUD lead hazard control grant, can be used to help landlords comply.

To maximize the public’s involvement, the city should consider appointing community leaders and members to the existing advisory council to provide organized input.

During the decision-making process, the city should make sure to consider equity impacts of code enforcement. Some particular recommendations to keep in mind include:

- Include community members in the development of the structure of the policy process to ensure that they are represented throughout the process.
- Implement strategies that are holistic and break down silos.
- Develop awareness campaigns so that the necessity of the policy changes are conveyed to the community.
- Prioritize resources at areas that need them most.
- Protect tenants as programs are implemented.

More details for these recommendations and others about addressing equity in lead poisoning prevention policy change can be found in *Achieving Equity in Lead Poisoning Prevention Policy Making: Proceedings from a Consensus Conference*, a report from Human Impact Partners:

<https://humanimpact.org/wp-content/uploads/2018/11/Achieving-Equity-in-Lead-Poisoning-Prevention-Policy-Making-Proceedings-from-a-Consensus-Conference.pdf>

## Conclusions

A recent authoritative report, *10 Policies to Prevent and Respond to Childhood Lead Exposure* (see <https://nchh.org/information-and-evidence/healthy-housing-policy/10-policies/>), showed how every dollar invested in residential lead hazard control (which can include better codes) will yield at least \$1.36 in monetary benefits. Community involvement in such changes is essential. Although housing codes are often considered to be mundane, they can also be an important vehicle to rebuilding trust in government and in the city's ability to solve its challenges. In short, implementation must include an important public education and involvement component if such changes are to be lasting and productive.

Detroit's lead requirements, when fully implemented, will be a national best practice. Its successful implementation will hold important lessons for other jurisdictions. The reliance on third-party lead risk assessors would appear to make cross-training of Detroit's code officials unnecessary; however, additional city staff may be needed to oversee the third-party inspectors. Additional training and awareness is also clearly needed for small landlords and city legal staff charged with enforcing the Detroit Lead Ordinance. Changes in staffing levels, enforcement, and creative use of subsidies, such as the City of Detroit's new HUD Lead Hazard Control grant, can all be used to help eliminate childhood lead poisoning as a major public health problem in Detroit.

## Acknowledgments

We thank Julie Vande Vusse and other City of Detroit staff, for their important review of this report.

## Appendices

Appendix A: Elements of Effective Housing Code Enforcement Programs

Appendix B: Code Comparison Tool Results

Appendix C: Meeting Minutes

## **Appendix A: Elements of Effective Housing Code Enforcement Programs**

Adapted from *Up to Code: Code Enforcement Strategies for Healthy Housing*.

### **Adopt a Strong Housing Code**

Housing codes often contain ambiguous phrases in their standards, such as “clean,” “sanitary,” “safe,” and “healthy,” and the lack of detail makes efficient and effective code enforcement difficult. Without specific standards to serve as a guide, property owners, residents, and code enforcement officers can interpret housing codes differently, leaving compliance decisions subject to challenges and residents vulnerable. In addition, many housing codes don’t properly address health-related threats in the home, such as pests, moisture, ventilation, and chemicals (radon, lead, and pesticides, for example).

*Resource/tip: The National Healthy Housing Standard provides model codes that incorporate public health rationale into building code parlance.*

### **Fund the Code Enforcement Program Sufficiently**

Effective code enforcement programs require sufficient financial resources. In many localities, state law sets forth how the locality may fund its code enforcement operations (typically through general fund, Community Development Block Grant (CDBG) funding, permits/regulatory fees, or fines). State laws may also set forth the types of fees and amount of fines the jurisdiction may assess on those who violate the housing code.

*Resource/tip: Some communities fund their code enforcement programs with moneys from the CDBG program, administered by the U.S. Department of Housing and Urban Development. These grants can fund code enforcement officers’ salaries and related expenses, legal proceedings to enforce housing codes, and rehabilitation or improvement of some types of housing.*

### **Training Officers Comprehensively**

Code enforcement programs require well-trained officers to enforce the local housing code. Officers need to participate in a broad-based training program, periodic training updates, and routine inspections with other officers to ensure professionalism and consistency in the field. Training should cover all applicable federal, state, and local laws but also best practices, soft skills (e.g., how to work effectively with residents from diverse backgrounds), and availability of community resources to assist residents.

*Resource/Tip: The National Healthy Homes Training Center offers training for code inspectors.*

## **Partner with Community Organizations**

Community organizations can raise awareness of the purpose, policies, and procedures of code enforcement, and provide supplementary resources and services.

*Resource/tip: Code enforcement programs have a variety of potential community partners, including housing advocates, public health professionals, immigrant and refugee service providers, social workers, tenant organizations, and home repair programs.*

## **Promote Cross-Agency Coordination**

Ensuring housing is safe and habitable requires cross-agency coordination. Because responsibility for health and safety is usually divided among various city agencies or departments, intragovernmental communication and collaboration can help make code enforcement more efficient and effective, and less like a series of disjointed, isolated efforts.

*Resource/tip: Staff of the Erie County (NY) Department of Health’s Healthy Neighborhoods Program and Lead Poisoning Prevention Program are trained and deputized code enforcement officers, which enables health department staff to formally cite for violations of the Erie County Sanitary Code while conducting home assessments. Deputizing health and/or housing agencies to enforce each other’s code provisions assures a unified perspective toward housing-based lead poisoning primary prevention.*

## **Develop a Cooperative Compliance Model**

Under a cooperative compliance model, rather than simply inspecting housing and citing for violations, the code enforcement officer works cooperatively with property owners to help them understand the elements of healthy housing, the importance of code compliance, and how to bring the property into compliance. The code enforcement officer is armed with cooperative tools – information, education, and resources – along with traditional enforcement sanctions. Cooperative compliance allows property owners and officers to work together to improve housing conditions and promote health.

*Resource/tip: Many communities struggle with enforcement. A cooperative compliance approach can reduce the number of properties that require follow-up enforcement action.*

## **Enforce the Local Housing Code**

Most owners do their best to comply with housing codes, but code enforcement programs must be prepared to deal with those who don’t. To protect the health and safety of residents effectively, programs need to be flexible and efficient, and have teeth. There are three major types of enforcement: administrative, civil, and criminal.

*Resource/tip: ChangeLab Solutions’ [Healthy Housing Laws that Work: Creating Effective Implementation and Enforcement Clauses](#) explains the different ways local governments can enforce housing and property maintenance codes.*

## **Adopt a Proactive Rental Inspection (PRI) Program**

Traditional code enforcement programs are complaint-based; that is, in response to a resident’s complaint about a substandard housing condition, a code enforcement officer conducts a housing inspection. Under a PRI program, rather than wait for a complaint to trigger a housing inspection, the locality inspects all covered rental housing on a periodic basis. Though the specifics vary by locality, PRI programs typically share the same basic structure: registration, periodic inspections, and enforcement. A PRI system doesn’t replace a complaint-based system and can help both property owners (by incentivizing routine maintenance that prevents costly repairs) and tenants (e.g., by ensuring equitable access to services for vulnerable populations that may be unaware of or fearful of exercising their rights under a traditional complaint-based system).

*Resource/tip: ChangeLab Solutions’ [A Guide to Proactive Rental Inspection Programs](#) and [Model Proactive Rental Inspection Ordinance](#) explains how proactive rental inspections can help protect vulnerable residents, preserve safe and healthy rental housing, and work to increase neighborhood property values.*

## **Establish Supplementary Programs**

Jurisdictions can establish auxiliary programs that increase code enforcement effectiveness by educating community members, incentivizing and/or financing repairs, and helping residents move when necessary.

*Resource/tip: [Up to Code: Code Enforcement Strategies for Healthy Housing](#) contains several examples of supplementary programs that other communities have established to support their code enforcement activities.*

## **Evaluate the Code Enforcement Program**

Code enforcement programs should collect and analyze data regularly to better understand their strengths and weaknesses. Evaluation can help monitor functioning, identify areas for improvement, help to justify resources, and provide accountability. Communities may also consider tracking key performance metrics by census tract or neighborhood to ensure equitable access and that the system is working well for all residents.

*Resource/tip: Data collection and analysis can provide valuable information to both government agencies and the community. Whenever possible, communities should work to establish data*

***Technical Assistance for Code Transformation and Innovation Collaborative  
(the TACTIC Project) – Final Report for the City of Detroit, Michigan***

*sharing with other agencies or programs and, as appropriate or feasible, make data publicly available.*

**Citation**

*ChangeLab Solutions (eds.). (2015, May). Up to code: Code enforcement strategies for healthy housing. Oakland, CA: ChangeLab Solutions. Retrieved May 23, 2019, from [https://changelabsolutions.org/sites/default/files/Up-tp-Code\\_Enforcement\\_Guide\\_FINAL-20150527.pdf](https://changelabsolutions.org/sites/default/files/Up-tp-Code_Enforcement_Guide_FINAL-20150527.pdf).*

## Appendix B: Code Comparison Tool Results

### Background

Location	Property Maintenance Code	Other Code Sections	Other Documents
Battle Creek  Uses IPMC 2015	<a href="#">Part 14, Title 4, Chapter 1450: Property Maintenance Code</a>  <a href="#">International Property Maintenance Code 2015</a>	<a href="#">842 Rental Housing</a> <a href="#">1456 Vacant or Abandoned Structures</a>	<a href="#">Rental Permit Application</a> <a href="#">Rental Property Checklist</a> <a href="#">Vacant or Abandoned Registration Form</a>
Detroit  Based on the 2000 IPMC	<a href="#">Chapter 9, Article 1: Property Maintenance Code</a>	<a href="#">Chapter 9, Article 1, Division 3: Rental Property</a> <a href="#">Chapter 26 - Housing</a> <a href="#">Chapter 24, Article X: Lead Poisoning Prevention Testing and Prevention</a>	
Flint  Uses IPMC 2015	<a href="#">Chapter 5, Article 3: Property Maintenance Code</a>  <a href="#">International Property Maintenance Code 2015</a>	<a href="#">Chapter 5, Article 3, Sec. 5.3-3 on: Certificate of Compliance</a> for rental properties	
Grand Rapids  Uses IPMC 2012 with amendments	<a href="#">Title VIII, Chapter 140: Property Maintenance Code</a>  <a href="#">International Property Maintenance Code 2012</a>	<a href="#">Title VIII, Chapter 140, Sec. 8504: Amendments to the Code</a> including certificate of compliance for rentals	
Michigan  State Lead Law	<a href="#">Public Health Code, Act 368 of 1978, Part 54A: The Lead Abatement Act</a>		<a href="#">Lead Hazard Control Rules</a>

### Code Comparison Tool

#### SECTION E: Chemical Hazards – Building Products

Questions: 10  
Total Responses: 25  
Answered: 25  
Percentage Complete: 100%

*Status: Average*

#### Questions E1-E6: Lead



**Technical Assistance for Code Transformation and Innovation Collaborative  
(the TACTIC Project) – Final Report for the City of Detroit, Michigan**

**Strong.** Congratulations! Your responses indicate that your community is using most of the evidence-based provisions in the National Healthy Housing Standard (NHHS) in this area – NHHS Provisions (7.1, 7.2.2, 7.2.3, 7.2.4). To take the next step in using housing codes to protect resident health, consider implementing some or all of the provisions listed below.

**Questions E7-E8: Asbestos**

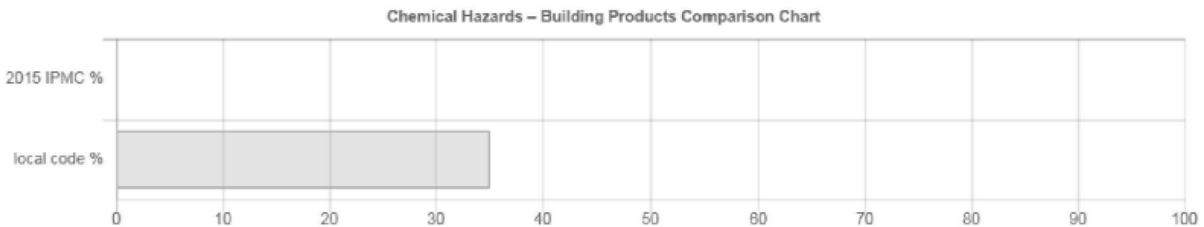
**Significant Opportunities for Improvement.** Your responses indicate your community may benefit by being more protective of health in this area. You can review the National Healthy Housing Standard (NHHS) provisions in this area – NHHS Provisions (7.3, 7.3.2) to explore ways to improve your code. Consider implementing some or all of the provisions listed below.

**Questions E9-E10: Toxic Building Materials**

**Significant Opportunities for Improvement.** Your responses indicate your community may benefit by being more protective of health in this area. You can review the National Healthy Housing Standard (NHHS) provisions in this area – NHHS Provisions (7.4.1, 7.4.2) to explore ways to improve your code. Consider implementing some or all of the provisions listed below.

SECTION	NUMBER OF NHHS MANDATORY PROVISIONS	NUMBER OF 2015 IPMC PROVISIONS THAT MEET OR EXCEED NHHS PROVISIONS	COMMUNITY SCORE (POINTS ALLOCATED FOR EACH PROVISION THAT WAS PARTIALLY OR FULLY MET)*	COMMUNITY % (COMMUNITY SCORE/NUMBER OF NHHS MANDATORY PROVISIONS)
Chemical Hazards – Building Products	10 (100%)	0%	3.5	35%

*\*Meets or exceeds standard = 1 point; partially meets standard = 0.5 point; doesn't meet standard=0 points*



**NHHS Provisions that You Reported Already Exist in Your Local Code**

**NHHS Provision 7.2.5.** Lead-based paint shall not be applied to the interior or exterior of any dwelling or dwelling unit.

**NHHS Provision 7.2.1.** Lead levels at or above federal regulatory limits pursuant to 40 C.F.R. § 745.65 are deemed hazardous:

1. Lead-based paint on an existing painted surface – 0.5% by weight or 1.0 milligrams per square centimeter;
2. Dust on floors – 40 micrograms of lead per square foot of settled dust ( $\mu\text{g}/\text{ft}^2$ );
3. Dust on interior windowsills – 250  $\mu\text{g}/\text{ft}^2$ ;

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(the TACTIC Project) – Final Report for the City of Detroit, Michigan**

4. Dust on window troughs (wells) – 400 µg/ft<sup>2</sup>;
5. Bare soil in children's play areas – 400 parts per million (ppm) of lead; and
6. Bare soil in areas of the yard that are not children's play areas – 1,200 ppm.

**NHHS Provision 7.2.2.** Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with *40 C.F.R. § 745.82(a)*, deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of *40 C.F.R. § 745 Subpart E*, and the underlying cause of the deterioration shall be corrected.

**NHHS Provision 7.3.1.** Friable asbestos-containing material shall be abated by licensed asbestos professionals in accordance with federal, state, or local requirements.

**NHHS Provision 7.3.2.** Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

**NHHS Provision 7.3.3.** Abatement, removal, and disposal of all asbestos-containing material shall comply with all appropriate federal, state, and local requirements.

**NHHS Provisions that Your Local Code Does Not Include (in Part or in Full)**

**NHHS Provision 7.1.** All chemical and radiological agents in dwellings, premises, and accessory structures, including but not limited to deteriorated lead-based paint, friable asbestos-containing material, formaldehyde, volatile organic compounds, radon, pesticides, and methamphetamine, shall be contained, stored, removed, or mitigated in a safe and healthy manner consistent with federal, state, and local laws and regulations. When an applicable regulatory limit is more protective than the level included in this section, the more restrictive limit shall apply.

**NHHS Provision 7.2.2.** Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with *40 C.F.R. § 745.82(a)*, deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of *40 C.F.R. § 745 Subpart E*, and the underlying cause of the deterioration shall be corrected.

**NHHS Provision 7.2.3.** All renovation, repair, and painting work that disturbs a painted surface in a pre-1978 dwelling shall be performed in accordance with the renovation requirements of *40 C.F.R. § 745, Subpart E*, unless the paint has been tested and found not to contain lead-based paint in accordance with *40 C.F.R. § 745.82(a)*. Dust clearance testing shall be performed at the conclusion of the renovation work.

**NHHS Provision 7.2.4.** With the exception of paint that is tested and found not to contain lead-based paint in accordance with *40 C.F.R. § 745.82(a)*, a painted surface shall not be disturbed using methods that involve (1) open-flame burning or torching or operating a heat gun at temperatures above a maximum of 1, 100° F (593° C); or (2) power sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and a high-efficiency particulate air (HEPA) vacuum attachment that collects dust and debris at the point of generation. The shroud or containment system shall release no visible dust or air outside the shroud or containment system.

**NHHS Provision 7.3.** Every owner shall maintain in good repair all asbestos-containing material on the premises. All asbestos-containing material shall be maintained non-friable and free from any defects such as holes, cracks, tears, and/or looseness that may allow the release of fibers into the environment.

**NHHS Provision 7.3.2.** Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

**NHHS Provision 7.4.1.** Building materials consisting of hardwood plywood, medium-density fiberboard, and particleboard as defined by *15 U.S.C. 2697(b)(2)* shall not be used in maintenance and renovations within dwellings, unless the materials have been certified to meet the formaldehyde emission standards of *15 U.S.C. 2697(b)(2)*:

1. Hardwood plywood with a veneer core, 0.05 parts per million (ppm);
2. Hardwood plywood with a composite core, 0.05 ppm;
3. Medium-density fiberboard, 0.11 ppm;
4. Thin medium-density fiberboard, 0.13 ppm; and
5. Particleboard, 0.09 ppm.

**NHHS Provision 7.4.2.** Building materials used in maintenance and renovations, including but not limited to paints, coatings, primers, glues, resins, adhesives, and floor coverings, shall be certified as having no volatile organic chemicals (VOCs) or low-VOC emissions, and having no halogenated flame retardants (HFRs).

#### **NHHS Stretch Provisions (Not Assessed in Online Tool)**

**NHHS Stretch Provision 7.2.** Lead present at or above the following limits is deemed hazardous:

1. Lead-based paint on a friction, impact, or chewable surface, damaged or otherwise deteriorated, or non-intact – 0.06% by weight;
2. Dust on floors – 10 micrograms of lead per square foot of settled dust ( $\mu\text{g}/\text{ft}^2$ );

3. Dust on interior windowsills – 100 µg/ft<sup>2</sup>; and
4. 40 µg/ft<sup>2</sup> on porches.

### **Why Chemical Hazards – Building Products Matter**

Lead is a heavy metal that accumulates in the body when ingested and has toxic effects on the nervous system, cognitive development, and blood-forming and other systems. Sources of lead include lead-based paint and the dust it generates, soil, drinking water, and consumer and other products. Lead-contaminated soil may be found particularly around older buildings contaminated by flaking external paintwork, adjacent to industrial premises using (or previously having used) lead, and near busy roads from the exhaust fumes from leaded gasoline. Lead is readily absorbed from the intestinal tract, especially in children, and its absorption is enhanced by dietary deficiency of iron and calcium.

Exposure to asbestos increases the risk of developing lung disease. Asbestos products were historically used extensively in building materials. Vermiculite insulation in homes may be contaminated with asbestos. Vermiculite insulation should be assumed to be contaminated with asbestos and should not be disturbed. Trained professionals must be hired to remove vermiculite insulation. Formaldehyde is a prominent VOC found in household and construction products. It is a colorless, strong-smelling gas that can cause watery eyes, nausea, coughing, chest tightness, wheezing, skin rashes, and allergic reactions, and a burning sensation in the eyes, nose, and throat.

Formaldehyde is classified by the World Health Organization as a known human carcinogen. The most significant source of formaldehyde in the homes has been pressed-wood products made using adhesives that contain urea formaldehyde (UF) resins.

### **Suggested Next Steps**

You have your results. Now what? Here are some suggested next steps:

- Review your results and identify places where your code is already strong and where there may be an opportunity to improve your local codes.
- Use the graphic provided (or export your data and create one yourself) to create a memo or presentation summarizing these results to start a conversation about whether there is an opportunity for action in your community.
- Download the National Healthy Housing Standard for reference as a model code.
- Read about how other communities have used the NHHS to strengthen their local codes and are using codes to improve health.
  - Healthy Housing Codes:  
<https://nchh.org/information-and-evidence/healthy-housing-policy/state-and-local/healthy-housing-codes/>

***Technical Assistance for Code Transformation and Innovation Collaborative  
(the TACTIC Project) – Final Report for the City of Detroit, Michigan***

- Proactive Rental Inspections:  
<https://nchh.org/resources/policy/proactive-rental-inspections/>
- Incentivizing Healthy Housing:  
<https://nchh.org/resources/policy/incentivizing-healthy-housing/>
- APHA: Healthy Homes:  
<https://www.apha.org/healthy-homes>
- Ask for technical assistance or help getting connected to a peer mentor. Contact Jonathan Wilson (<mailto:jwilson@nchh.org>).

## **Appendix C: TACTIC Site Visit Notes**

### **Meeting One: December 19, 2018 – City of Detroit Offices**

Attendees:

Malik Johnson, Environmental Specialist, BSEED  
James Foster, Manager, BSEED  
Harolyn Baker, Director of Child Health Services, Maternal and Child Health,  
funded by CLPP  
Mark Baron, Environmental Specialist, BSEED  
Arthur Rushin, Supervisor, Residential Inspections, BSEED  
Anna Pinter, Lead Program Manager, Housing and Revitalization Department  
Aimee Surma, Program Manager/Environmental Case Management  
David Jacobs, Chief Scientist, National Center for Healthy Housing  
Sarah Goodwin, Policy Analyst, National Center for Healthy Housing

#### **Enforcement Program**

All code inspectors are certified in compliance with state requirements (Act 54).

LIRAs are done separately but are required for a rental certification.

The city's lead ordinance began in 2010; the ZIP-code-by-ZIP-code registration process started in 2017. They are currently on their third ZIP code. Lead ordinance details:

- The regular rental inspections do include deteriorated paint. This is not related to the lead paint violation. There is no communication between the rental inspectors and the lead inspectors on paint deterioration.
- One- and two-family homes use a third-party inspector for the rental inspections, including a third-party lead inspector. Once they have achieved clearance, the inspector forwards it to the city.
- Owners are required hire two separate inspectors (the rental inspector and the lead inspector); this is because they didn't want to put any property owners at a disadvantage if one company was responsible for both inspections.
- The hired inspectors go through a qualification process with the city, and the city oversees any complaints from customers.
- The city performs the inspections for larger multifamily homes.
- Ticket schedule:
  - First ticket: \$250 for not registering (registration is free).
  - Second ticket: \$500 for not having an inspection done.
  - Third ticket: \$250 for noncompliance with code (this applies to any city codes).

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- The fines double in a second round of tickets if the owner is found to be responsible for lack of compliance.
- The stipulation agreement with the city upon accepting a written ticket gives the owner 90 days to get into compliance. Tickets can be dismissed when they come into compliance.
- There is a forbearance agreement available to give more time to people who haven't been ticketed but who are close to the deadline.
- The city encourages those with children under six to apply for a grant with the state.
- The health department can send referrals for rental inspections, but BSEED is not doing anything special for houses with EBLLs.
- The health department will order investigations through a third party for kids with EBLLs greater than 20.
- Pushback:
  - The volume of tickets can get too high if people aren't coming into compliance.
  - There are a limited number of people available to perform the LIRAs. There may be a waitlist of months for owners with multiple homes to get them into compliance.
  - Smaller companies offering lower rates can become overwhelmed.
  - Rates for a LIRA range from \$400-\$700.

## **Meeting Two: April 17, 2019 – City of Detroit Offices**

### Attendees:

Julie Vande Vusse, Project Manager IV, Buildings, Safety Engineering  
and Environmental Department

David Jacobs, Chief Scientist, National Center for Healthy Housing

Sarah Goodwin, Policy Analyst, National Center for Healthy Housing

### Notes

The city has run into some challenges with their ZIP-code-by-ZIP-code process. Some of the changes they are implementing to counter these challenges include:

- Improving their known rental owners list with the following sources:
  - Assessors' database.
  - Rental registry – identifying people who are registering without a certification.
  - Water department accounts.

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- Zillow.com – looking to see who is advertising rentals.
- Department of neighborhoods data.
- Postal service data.
- In the coming months, they are hiring a policy analyst to look at the program as it continues.
- Pushing the schedule back, so that all ZIP codes will be compliant by May 31, 2021, rather than January 1, 2020.

Ongoing challenges include continuing to identify all the owners and carrying out the enforcement for those who won't get into compliance. They had wanted to charge misdemeanor tickets after three rounds of noncompliance with tickets but are still working with lawyers to figure out how to make that process easy.