

CHAPTER 8
Reclaiming New Orleans'
Working-Class Communities

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A powerful editorial in the December 11, 2005 *New York Times*, “Death of an American City,” raised the specter that without national political will and leadership, New Orleans would be left to rot from the ravages of hurricane damage. Part of raising New Orleans from its “political deathbed” involves demonstrating that homes and other key structures in working-class neighborhoods can be restored and reoccupied in a timely—yet safe and healthy—manner, at a far lower cost than razing and rebuilding the city.

One critical trend that has helped jump-start the city’s recovery is residents’ reoccupancy of thousands of structurally sound New Orleans homes. Hurricanes Katrina and Rita did not affect all New Orleans area neighborhoods equally. By October 2005, some flood-affected, predominantly well-to-do communities were already beginning to repopulate, and homes were being saved and restored. As of January 2006, other, usually poorer, working-class neighborhoods affected by flooding and reflooding were still almost vacant and housing restoration was sparse. Most of the displaced residents of these communities are African-Americans and other people of color.

Throughout the five months after Katrina hit, authorities continued to discourage former residents from returning to some low-income communities, citing all-too-real health and safety risks. Indeed, flood-damaged

homes pose a range of health and safety hazards, including mold, deteriorated lead-based paint, carbon monoxide hazards, contamination with toxic chemicals and materials, pest infestations, structural damage, and injury hazards. Contrary to some earlier reports, however, by the end of 2005 it was clear that many older homes in lower-income and working-class neighborhoods of color could be saved and rebuilt. Many homes in affected neighborhoods such as the Ninth Ward and parts of Gentilly, Hollygrove, and Upper Carrollton were built with board sheathing and plaster that are quite resistant to mold and better able to survive sustained water submersion and intrusion than newer homes made with more porous materials that are highly susceptible to mold and water damage.

Homes determined to be structurally sound must be assessed for health hazards. The results of home investigations should be communicated quickly and thoroughly to residents—both owner-occupants and renters—so they can make informed decisions about whether to reoccupy their homes and avoid exacerbating hazards through unsafe cleanup and repair methods.

There is a growing body of practice, tools, and knowledge developed by the Alliance for Healthy Homes, a national non-profit organization, and others that can minimize health and environmental barriers in order to spur the reoccupancy and revitalization of housing in vibrant, affordable working-class neighborhoods, neighborhoods that have been a hallmark of New Orleans for over a century. Without the practical environmental remediation of these houses, major sections of New Orleans will continue to be virtual “ghost towns,” with nothing but passing memories and abandoned dwellings.

Many organizations, ranging from The Sierra Club to the American Planning Association to the U.S. Green Buildings Council, issued statements of overarching principles for rebuilding after Katrina and Rita that call for displaced residents to have the right and the ability to return, and for respecting and including displaced residents in decision-making. However, none of these important statements will bear fruit unless salvageable homes can be saved and rebuilt to form a core from which communities can repopulate and redevelop.

This chapter focuses on major factors affecting the environmental restoration of houses; short-term and long-standing environmental conditions in New Orleans; an action strategy for saving and restoring homes and other dwellings; the training, technical support, and equipment needed for safely reclaiming homes in New Orleans; and the resources and supports that residents, do-it-yourself providers, contractors, elected officials, and community-based organizations can utilize. The premise of this chapter is that displaced residents who want to return must be able to do so—but

they should not come back to an unhealthy environment without first taking appropriate precautions, and they should understand the major health and environmental issues affecting their homes.

Environmental Conditions

Existing Conditions before Hurricanes Katrina and Rita

Ambient Health Hazards: The area along the Mississippi River between Baton Rouge and New Orleans contains hundreds of hazardous waste sites from mines, factories, and chemical plants, many of which were located there to facilitate shipping. The area, one of the most impoverished in the country, has been labeled “Cancer Alley” due to extremely high levels of toxic emissions associated with various ailments, including cancers, birth defects, asthma, and bronchitis (Physicians for Social Responsibility 2004). In 2003, Louisiana ranked second highest overall in cancer mortality rates among all states and Washington, D.C. The annual age-adjusted mortality rate for cancer deaths per 100,000 people is 230.4 in Louisiana, compared to a national average of 199.8 (Centers for Disease Control and Prevention 2004). In Louisiana, the data indicate that blacks are at higher risk than whites for death from heart disease, cancer, and stroke, according to the 2003 Louisiana Health Report Card (Louisiana Department of Health and Hospitals 2003). Blacks also show higher death rates than whites for lung, colorectal, breast, and prostate cancers. The possible links to environmental exposures, such as poor air quality and hazardous waste contamination, are palpable.

Indoor Health Hazards: Beginning two years before Hurricanes Katrina and Rita struck the Gulf Coast, Louisiana ACORN participated in the Community Environmental Health Resource Center, a project of the Alliance for Healthy Homes designed to support community-based organizations' use of environmental sampling to identify health hazards in low-income homes and advance policy solutions. Louisiana ACORN's trained hazard assessment investigators visited 258 homes in the Lower Ninth Ward in 2003. Slightly more than half of the homes were owner-occupied, most were multifamily, and 96% of the households were African-American. The assessment of conditions in these New Orleans homes revealed:

- 33% of homes had excessive moisture problems.
- 56% of the homes appeared to have at least one hazard (e.g., excessive moisture or pest infestation) that can trigger asthma or other respiratory-related problems.

In addition to the problems specific to the Lower Ninth Ward, three other issues were discovered through Louisiana ACORN's sampling:

- 62% of the homes had lead dust hazards on floors, windowsills, or both.
- The highest levels of lead among ten U.S. sites for each type of lead hazard (floor dust, sill dust, and play area soil samples) were found in New Orleans.
- Using data from the same survey and aggregating the results of sampling floor dust, sill dust, and loose paint chips for interior lead hazards, on average 38% of U.S. homes had a lead hazard and 64% of New Orleans homes had a hazard (Alliance for Healthy Homes 2005).

Conditions after Hurricanes Katrina and Rita

Throughout the fall and early winter of 2005, messages in the news media about New Orleans' health and housing conditions fluctuated from reassurances that it was perfectly safe to return to dire warnings that the houses and yards were all filled with poisons.

One study team led by the Natural Resources Defense Council (NRDC 2005) reported in mid-November that ambient airborne mold levels posed a serious health risk that "could trigger serious allergic or asthmatic reactions in sensitive people." The team found that indoor air quality was even worse, rendering the homes they tested "dangerously uninhabitable by any definition." While the American Academy of Allergy and Immunology considers outdoor mold levels of 50,000 spores per cubic meter "very high," the spore counts in six New Orleans neighborhoods, including the Lower Ninth Ward, exceeded 77,000. Local advocates and NRDC called for federal agencies to provide clear information about precautions and offer personal protective equipment (gloves, respirator, safety glasses, and a Tyvek coverall).

Another NRDC-led study identified dangerously high levels of arsenic, DDT and two other pesticides, petroleum products (diesel fuel and polyaromatic hydrocarbons), lead, and other chemicals and heavy metals in soil samples of the sediment covering New Orleans after the flooding from the hurricanes. Arsenic causes cancer of the bladder, skin, and lungs, and damages the liver and kidneys. Residue of the pesticides, which are linked to neurological problems and hormonal system disruption, were found near an abandoned pesticide factory. NRDC's Dr. Gina Solomon stated in a December 1, 2005 press release that "residents face a health risk because they can easily inhale contaminated sediment or get it on their skin when they are trying to clean it up" (NRDC 2005).

Soil sampled by a research team from Texas Tech University that found elevated levels of lead, arsenic, iron, and pesticides. The researchers believed that lead (primarily from past use of leaded gasoline) had been buried

under vegetation and soil during the past century and was suspended by the floodwaters, then redeposited elsewhere. The same team found high levels of pathogenic bacteria in water samples (David Brown 2005).

The U.S. Environmental Protection Agency asserted that the levels of organic compounds, hydrocarbons, pesticides, and heavy metals found in the soil are “similar to the historical levels found in these parishes before Katrina and to other urban areas throughout the nation” (Knickerbocker 2005). A Louisiana state health officer echoed the view that problems were no worse than before the recent flooding, except for sites in New Orleans’ Gentilly and the Lower Ninth Ward communities contaminated with arsenic and petroleum (Matthew Brown 2005).

Regardless of which view of current environmental conditions best reflects reality, caution is in order. Even if hazards are severe, it is possible to manage these hazards as people return to their homes and communities. Demonstration projects in fall and winter 2005 by the National Center for Healthy Housing, NRDC, and others proved that trained workers using personal protective equipment can accomplish the removal of wet, mold-covered building materials and belongings as well as pave the way for the repair of structurally sound housing, including housing with wooden frames and cladding. Resources and political will are needed to empower residents to both overcome a lack of knowledge regarding health hazards and make informed choices about their future. Health threats from environmental issues that can be solved must not be used as an excuse to abandon or demolish structurally sound buildings or write off playgrounds and yards—or even entire communities.

Challenges and Barriers

A healthy housing restoration and rebuilding strategy for New Orleans faces several major environmental, political, and economic hurdles. Some predate the 2005 hurricanes, while others were exacerbated by Katrina’s and Rita’s devastating floods.

- *Erosion of protective Gulf Coast wetlands:* Rapid erosion of barrier islands and other coastal wetlands in the Mississippi Delta and Gulf of Mexico has been occurring for over a century. Storm surges from hurricanes press closer each year to populated areas that are less and less protected from direct water damage. Slowing erosion and re-establishing barrier islands as well as large tracts of wetlands are critical to minimizing the impacts of storm surges from future hurricanes.

- *Climate that fosters mold and moisture problems:* New Orleans has a very humid climate that is ideal for the growth of mold. Indoor mold levels were made much worse by flooding, water damage, and the lack of air conditioning and other mechanical ventilation during and following the hurricane strikes. Many of the flood-ravaged, abandoned, and salvageable dwelling units had dangerously high levels of mold at the end of 2005, which must be resolved in the initial stages of home restoration before the dwellings can be reoccupied. Training in health, safety, and personal protective equipment (PPE) are prerequisites for clearing out moldy furnishings and other possessions, removing moldy and damaged building components, and cleaning and drying out homes. Use of mold-resistant building materials and techniques appropriate to the area's climate in reconstruction can help minimize future mold problems.
- *Duration of flooding:* Many houses and neighborhoods were under water for an extended period of time, or were flooded a second time after Hurricane Rita, resulting in the spread of mold, chemicals, sewage, and other environmental hazards. These substances can be mediated, but it is critical to provide PPE and appropriate tools to help eliminate these toxins.
- *Lack of coordinated and targeted strategy:* Four separate governmental jurisdictions were attempting to respond to New Orleans' hurricane damage and evacuees by the end of 2005—FEMA and other federal agencies; the New Orleans Mayor's Office; the New Orleans City Council; and the State of Louisiana. The print and television media showed the lack of coordination in rebuilding efforts. There is either a lack of political will or a failure to understand where to focus the rebuilding efforts in neighborhoods that were severely impacted and depopulated. It is important to begin in several locations with a critical mass of returning residents along with community and economic institutions that can spur cleanup in order to demonstrate the viability of reclaiming salvageable homes for other residents who want to return. As of May 2006, there was no genuine governmental public health strategy that had emerged to expedite the systematic cleanup of structurally sound housing that was flooded.
- *Housing reoccupancy has been overlooked:* Throughout the fall of 2005, there were few messages of encouragement from elected officials and the media that indicated that many houses could indeed be saved, cleaned, and reoccupied. For New Orleans to be re-populated in a significant manner, the restoration of existing housing

will be necessary. New Orleans has traditionally had one of the most affordable housing stocks in the U.S., occupied by multiple generations of residents with limited incomes. The restoration of these units, where possible, is a prerequisite for thousands of former residents to return to New Orleans.

- *It takes time to build new housing:* Developing new housing is time consuming and requires significant capacity and resources. Prior to the hurricanes, the nonprofit housing sector in New Orleans was weak compared to other major metropolitan areas. Leaders of these institutions were dispersed as a result of the flooding from the hurricanes, and many are grappling with the recovery of their own properties. No matter how many efforts are made on the state and federal level to appropriate recovery and rebuilding funds, there needs to be a delivery system and dedicated funding stream put in place, all of which takes time.
- *Larger system issues:* As of May 2006, residents in numerous sections of New Orleans were without electricity and gas, surviving off generators and other temporary forms of power. Although the President pledged in December 2005 to increase federal funding by \$1.6 billion for rebuilding levees to provide protection from a Category 3 hurricane, little action has yet been taken to actually repair the levees in order to prevent another catastrophic flood. Funding to strengthen levees to withstand storms more severe than Category 3 remained uncertain, and land restoration was projected to take many years. Without a broad and committed vision focusing on larger systems and momentum, pushed by citizens who want to reclaim their homes and former neighborhoods, it will be extremely difficult to rebuild New Orleans.
- *Insurance:* By May 2006, confusion was still rampant among the general public about what insurance will cover and what replacement and repair work it will not pay for. There remained a need for FEMA, private underwriters, and others to clarify what is covered and what will be covered in the future, for both homeowners' insurance and flood insurance. Both the insurance industry and government have misled numerous home owners, and it is government's responsibility to clarify and correct those situations.

Means of overcoming the barriers to reoccupancy

The challenges and barriers that must be overcome to recover New Orleans and the Gulf Coast region are fairly imposing, but they are not insurmountable. Some of the key steps for building momentum towards reoccupancy follow.

- *Work with local leadership and organizations:* Outside technical assistance organizations will have limited impact unless they are connected to local leadership and efforts that are best suited to identifying the priorities, capacities, and strengths of residents and others. Louisiana ACORN, with 9,000 members in pre-Katrina New Orleans, has emerged as the leading advocacy organization working to ensure that working-class residents, who are predominantly African-American, are provided the opportunity to reclaim their homes as long as dwellings and neighborhoods are safe and free from environmental contaminants. ACORN has basic knowledge of environmental cleanup and how to train residents in assessing and mitigating mold, lead-based paint, and other contaminants.
- *Invest time in learning about local conditions and in building relationships with local institutions:* New Orleans had a history of environmental pollution, both outdoor and indoor, that was severely exacerbated by the extent and duration of hurricane-related flooding. Equipment, protocols, training, and resources need to be tailored to local conditions in New Orleans and other Gulf Coast communities. Experts outside the region can help train do-it-yourselfers, contractors, community-based organizations, and others in safe techniques needed for reclaiming structurally sound dwellings. The skills, resources, and supports of these organizations can be coordinated to achieve expertise and scale. This is critical, since the reclamation of the Gulf Coast cannot occur just one house at a time. Rather, groups of two or three blocks must be restored at a time. It is local institutions that will be there for the long haul and that will be most responsive to the evolving needs and opportunities presented.
- *Focus on strengths and impact and be S.M.A.R.T.:* In medium- to long-term disaster rebuilding efforts, it is critical to focus on and connect strengths. One helpful framework is to view the recovery and rebuilding work as S.M.A.R.T.:
 - **Specific** — The work has to be specific and designed to eliminate contaminants in housing.
 - **Measurable** — There need to be clear benchmarks and targets for reclaiming housing.
 - **Achievable** — There needs to be sufficient training, safety equipment, and individuals and enterprises to clean up homes on a large scale in order to restore portions of neighborhoods that can become organic, functioning communities.

- **Results-oriented** — This is determined by the number of structures (residential, commercial, schools, etc.) that are reclaimed and returned to their best use.
- **Time-bound** — Some of the rebuilding strategies will take a long time, while reclaiming houses that are structurally and environmentally safe is a more immediate opportunity that is time-bound, once the training and support begin in earnest.
- *Link strategy/techniques to larger cross-sectoral opportunities:* A strong case can be made that restoring and rebuilding healthy homes contributes in many ways to larger strategies of repopulation and community stabilization. However, there is not a “silver bullet” solution for revitalizing the neighborhoods of New Orleans. Healthy homes alone cannot stabilize working-class neighborhoods without functioning public utilities, schools, transportation, commercial nodes, etc. This work has to be coordinated and supported by public-sector officials.
- *Build awareness and communicate regularly:* It is essential to build awareness of progress and momentum by communicating it through multiple information and communication channels, from flyers and church notices to press releases, radio announcements, and public service announcements on television. Communication must be undertaken on a regular, sustained basis.
- *Assume that government contributions and relationships will be uneven:* Governmental units and programs can be quite different, and government officials face major challenges in coordinating their initiatives. Some government programs and resources will be relevant and helpful, but others will not. Advocates must be strategic about when to wait and when to move forward in the face of these differences and potential difficulties among various levels of government. Organizations can always ask for forgiveness for exceeding boundaries after they have done something positive and important.
- *Maximize resources from government and private insurance:* Individuals and organizations were extremely generous with their money and time in the aftermath of Hurricanes Katrina and Rita. Yet these contributions still pale in comparison to the potential resources individuals can receive from the federal government. But funding for assistance to affected residents, as well as for cleanup and recovery, should not displace funding for prior and continuing social needs. The hurricane disasters dramatically illuminated the extent of poverty, a severe shortage of

decent affordable housing, and the substandard housing conditions in which many Americans live. It is neither fair nor sensible to exacerbate these crises for the rest of the country by using disaster relief spending as an excuse to further cut domestic discretionary spending. Spending priorities must ensure basic dignity and fairness for all Americans. All efforts, from advocacy for more government resources to applying for an array of programs, should be exhausted before turning to philanthropy, nonprofits, and others. Philanthropic and nonprofit resources can be very catalytic in terms of advancing significant rebuilding opportunities, including cleaning up structurally sound housing, but the federal government and the insurance industry must realize that it will take immense resources of the type that only government and industry can provide in order to reclaim New Orleans and the Gulf Coast.

- *Insist on fairness:* Landlords and homeowners will not be able to make needed repairs unless financial institutions, including insurance and mortgage companies, meet their corporate and civic responsibilities to assist their customers. Insurance companies should meet their obligations to policyholders with timely and fair payment of claims, and should cover the full range of damage from both the wind and rain brought by the hurricanes. Because many residents have lost their jobs, mortgage companies should accommodate home owners' and landlords' need to defer payments and adjust payment schedules without engendering adverse credit consequences. Federal and state officials should vigilantly oversee these financial institutions and protect the rights of consumers. Statutes regarding federal disaster-relief programs need to fairly address the needs of low-income renters. The long-term assistance programs presently are weighted in favor of owner-occupants, without equal opportunity for renters to either receive compensation for their personal property losses or regain their financial footing. Local governments should help rental property owners meet their responsibilities to repair properties and allow tenants back as soon as possible.
- *Provide needed training:* Free healthy homes training should be provided to homeowners, landlords, and contractors. Because the scale of the cleanup, repair, and rehab effort in the Gulf region is unprecedented, well-intentioned but untrained contractors and workers are flocking to the area. Moreover, many low-income home owners will have no choice but to do the work

themselves. All of these individuals need training in safe work practices around mold and other hazards in order to protect themselves and residents, and to avoid leaving behind, exacerbating, or even creating hazards that will put residents at risk over the long term.

- *Look for economic opportunities for residents and others:* Thousands of jobs have been temporarily lost, but there is great economic opportunity and job-creation potential in the rebuilding of New Orleans. The cleanup of housing, renovation of buildings, and relandscaping are all labor intensive, providing income and employment opportunities. Self-employment, or what is viewed as microenterprise, is one of the fastest expanding job sectors across the nation, and there are a growing number of technical assistance and financial resources available. Another good example are small business development centers (SBDCs), which are usually affiliated with a university. They offer help with business issues ranging from billing to marketing to management, and could be of real value to start-up businesses in the region. Workers who take on the dangerous job of cleanup and recovery are entitled to fair wages and to vigorous enforcement of health and safety standards.
- *Enforce federal laws that provide for local employment and contracting preferences:* Local individuals and companies should be given priority in rebuilding and restoration projects. When HUD funding is used for rebuilding, Section 3 of the Housing and Urban Development Act of 1968 provides for employment and contracting preferences for local low-income residents and the businesses that employ them. Also, the Stafford Act of 1993 (PL 100-707, amended in 2000), a federal law enacted to set rules for federal assistance after major disasters, requires that preferences be given “to the extent feasible and practical” to local organizations, firms, or individuals when federal funds are spent “for debris clearance, distribution of supplies, reconstruction, and other major disaster or emergency assistance activities.”
- *Focus on relationships with important community institutions:* Schools, churches, chambers of commerce, commercial centers, and transportation nodes are good examples of visible and important community institutions to partner with in the cleanup of indoor and outdoor environmental hazards in New Orleans. By May 2006, ACORN was working with several neighborhood schools to serve as a locus for the rebuilding process.

A Strategy for Saving Low-Income and Working-Class Housing and Communities

Resources for rebuilding housing in low-income and working-class New Orleans-area communities affected by Katrina's and Rita's floods and winds have been very slow to materialize as of May 2006. Salvageable homes continue to sit empty and further deteriorate. As noted above, without community action to spur safe reoccupancy and rebuilding, the restoration of some communities may be delayed for years, or may never happen at all. Early land use planning proposals posed this threat in a dramatic fashion by recommending that homes in neighborhoods not able to prove they can come back to life within four months be forcibly transferred to a redevelopment authority and the communities converted to parks or wetlands. Additional threats to neighborhood viability may emerge as the political process unfolds. There is a desperate need to for an affordable and pragmatic approach that will allow residents to reclaim, preserve, and repair structurally sound homes and begin safe and healthy long-term rebuilding and recovery in working-class neighborhoods within a reasonable period of time.

However, before anything can be done to prepare flood-affected homes for repair and re-occupancy, residents and contractors need to be equipped with sufficient knowledge, skills, and appropriate tools to protect their health and safety in the face of well-documented indoor and outdoor environmental health hazards. Training and appropriate personal protective equipment are urgently needed to help prevent exposure of workers and occupants to toxic substances that have been documented in the sludge left in homes and yards and from astronomically high indoor mold levels.

Several local community, housing, and environmental organizations; individual property owners and their contractors; and volunteers from throughout the country are already beginning to preserve and rebuild thousands of homes in low-income and working-class New Orleans area neighborhoods. By May 2006, ACORN volunteers and returning residents had already decontaminated and stabilized more than 1,000 homes in New Orleans. Several other environmental and community development organizations have made substantial efforts to provide some basic personal protective equipment and safety instructions to workers beginning to restore homes. Unfortunately, most returning residents and many contractors and workers have received little or no training or information about safe work practices and are not using appropriate protective equipment.

A practical and affordable approach to building the capacity for safe and healthy rebuilding has three major elements: (1) providing basic training and ongoing technical assistance to residents, volunteers, contractors, and

others on how to safely clean up and stabilize their homes (and providing personal protective equipment for trainees); (2) delivering more in-depth training to people who renovate, weatherize, maintain, manage, or supervise older houses regarding safe, practical, effective, and affordable techniques to restore and maintain basic housing systems, surfaces, windows, and doors; and (3) training and assisting community-based leaders, public health professionals, and local elected officials to conduct environmental hazard assessments for lead, mold, and other environmental hazards, and to use their findings to advocate for needed environmental cleanup. Below, we describe in greater detail these three types of interrelated training to support safe, large-scale salvage and restoration of New Orleans' housing.

Safe and Healthy Home Salvage Training

Training in safely decontaminating and stabilizing structurally sound but flood-damaged homes that have mold, lead, and other major contaminants is the cornerstone of all future efforts to restore and rebuild affordable housing in New Orleans, and it could significantly increase the number of structurally sound homes that can be salvaged. A short (two- or three-hour) course should be made widely available to returning homeowners and rental property owners who are doing their own work, to contractors and laborers working for property owners, and to volunteers recruited by local organizations to assist with cleanup and salvage.

Workers need to learn how to work in a safe manner that protects them from dangerous exposure to mold, carbon monoxide, lead, a range of toxins in dried sludge, and other hazards. Workers and occupants need to be aware that clothing, furniture, food, appliances, carpeting, and wallboard contaminated with mold or toxins cannot be adequately cleaned and will have to be thrown out. In areas like New Orleans and neighboring parishes, where floodwaters carrying toxic sediments, bacteria, and raw sewage entered homes, structural components of homes may also be contaminated with mold, toxic sludge, and other hazardous substance residues. Training should include how to remove all belongings and building components that are contaminated with mold and other environmental hazards, how to treat remaining building materials to kill mold and prevent future mold growth, how to dry out homes, and how to protect homes from additional rain and water intrusion.

People returning to clean and stabilize homes also need easy-to-use materials and equipment to enable them to work safely. Each trainee should be provided a "Home Salvage Safety Kit" containing personal protective equipment and basic tools. The kits should include: appropriate respirators (N-100 or more protective); other protective garments such as disposable gloves, booties, safety goggles, and Tyvek suits; two five-gallon buckets; a

water mister; an environmentally safe mold killing/prevention substance; a small first-aid kit with eye wash and soap; heavy-duty towels and rags; trash bags; basic hand tools; health and safety fact sheets; an instruction booklet; and other useful supplies.

With very limited resources, several local organizations have already attempted to fill this need. ACORN began in December 2005 to provide some basic safety training and supplies to returning residents and volunteers working to decontaminate and stabilize homes in New Orleans. In fall 2005, the Louisiana Environmental Action Network, working with Louisiana Physicians for Social Responsibility, began to provide some basic safety supplies and instructions to returning residents and workers in the wider New Orleans metropolitan area. Southern Mutual Help Association, working with Oxfam America, has undertaken a similar effort, mainly in rural communities. In January 2006, the People's Hurricane Relief Fund began distributing a pamphlet about toxic substances found in sediment in several New Orleans locations and how people can protect themselves from exposures as they return home. Such efforts need to be supported by formal and sustainable training programs that can be replicated wherever community-based organizations or local institutions (schools, churches, chambers of commerce, etc.) are positioned to serve as the anchor—and perhaps in other locales in other parts of Louisiana, Texas, and Mississippi. Trainees will need follow-up monitoring, support, and technical assistance.

Healthy Home Repair and Maintenance Training

A second type of more in-depth training in healthy home repair is needed for workers who will be doing extensive repairs and ongoing maintenance in homes that are salvageable. This training should be designed to teach practical, effective, and affordable strategies and techniques to make and keep homes safe and healthy for partial or total occupancy, while protecting workers, occupants, buildings, and the environment. The curriculum should focus on low-cost priority measures to be conducted in a salvaged structure, and guide contractors in staging the restoration of basic systems, surfaces, windows, and doors as repair funds become available.

Trainees should learn about how a house works and interacts with its occupants. They also should learn how to analyze the causes, quantify the risks, and remediate a broad range of interrelated residential environmental problems, including lead hazards, asthma triggers, carbon monoxide risks, air quality problems, and injury hazards. Moreover, trainees should learn about laws, policies, programs, and resources that can either hinder or support healthy homes restoration and maintenance, and they should discuss strategies for transforming the current approach to home repair

and maintenance from one that is centralized, reactive, and fragmented to one that is community based, preventative, and holistic.

The audience for this training should be contractors and their employees, including day laborers hired by contractors on an ad hoc basis, who will make extensive repairs to properties that have already been secured, cleaned out, dried out, and decontaminated. It also should be delivered to people who weatherize, manage, supervise, or maintain older houses. This training could be delivered through local universities, community colleges, and trade schools, as well as in locations where workers are living.

Grassroots Home Hazard Assessment and Advocacy Training

There is a great need for evacuees and government officials to have valid information about possible health risks in and around homes and other structures. Environmental hazards must be assessed before salvage work begins, not only to help protect workers and occupants from health hazards, but also to help determine which homes can be safely remediated and reoccupied.

A third type of training is needed to teach members of local grassroots organizations how to assess homes and yards affected by flooding for priority environmental health hazards (mold, deteriorated lead-based paint, carbon monoxide hazards, contamination with toxic chemicals and materials, pest infestations, etc.), how to assess homes for structural damage and injury hazards, and how to interpret and use results of these assessments to advocate for appropriate, protective levels of environmental cleanup and safety.

Because an unprecedented amount of toxic sludge was deposited on such wide swaths of land by floodwaters that inundated Gulf communities, the yards of residential dwellings, and especially play areas, must be evaluated to determine the extent of contamination and to plan for needed cleanup. While EPA, the State of Louisiana, university researchers, and some environmental organizations (such as Southern Mutual Help Association, Physicians for Social Responsibility–Louisiana, Louisiana Bucket Brigade, and NRDC) have conducted considerable ambient environmental sampling, very little environmental assessment has been performed inside homes. Misinformation and a lack of hazard-specific information continue to provide officials and others with justification for keeping neighborhoods closed and discourage displaced residents from returning home to assess and secure their homes and begin repairs.

Trained residents working through local community, housing, and environmental organizations are ideally suited to conduct assessments of health hazards in homes, in partnership with government agencies and local experts. Because community residents have more trusted relationships with their neighbors than do outside contractors or government

officials, they will be better able to convince other residents to make their homes available for environmental assessments. Moreover, they have the credibility needed to effectively communicate to occupants the results of these assessments and the necessary action steps.

Residents can be trained quickly and equipped with simple, yet rigorous, assessment protocols that have been validated by researchers and practitioners. Local environmental groups and scientific experts from universities should be included in the assessment and cleanup strategies for yards and play areas in order to ensure transparency and accountability to community residents.

During the past four years, the Alliance for Healthy Home's Community Environmental Hazard Resources Center (www.cehrc.org) has provided a new generation of low-tech, low-cost housing hazard assessment protocols, materials, tools, and training to local healthy housing advocacy organizations in more than a dozen cities in the U.S., including New Orleans. These hazard assessment tools rely to the maximum extent possible on existing accepted protocols, methodologies, and technologies. They have been reviewed both by technical experts to ensure reliability and by community members to ensure clarity. The Alliance's partners assessed more than 3,200 homes for lead paint hazards, mold and moisture problems, pest infestations, and other environmental health hazards. These hazard assessment strategies can be adapted to fit the needs of post-hurricane homes and communities.

More importantly, though, trainees need to learn how to use hazard assessment results to advocate for needed environmental cleanup and decontamination and for expanded health and safety training for workers—just as many of the Alliance's local healthy homes partners in other cities successfully used the results of their home assessments to advocate successfully for policy solutions or increased funding to address unhealthy housing.

Trainees will need post-training monitoring and technical assistance. Other needs include stipends for hazard investigators, supplies, moisture meters, carbon monoxide monitors, and lab analysis of samples.

Conclusion

The devastation from Hurricanes Katrina and Rita visually and graphically underscored the impact of race and class in urban, suburban, and rural communities in the Gulf Coast region, most notably in New Orleans. Thousands of salvageable homes in low-income and largely minority sections of New Orleans remain vacant, with the risk of being bulldozed. This contrasts sharply with middle- and upper-income communities in New

Orleans and surrounding parishes where the housing is being stabilized and reoccupied.

Reclaiming structurally sound housing through safe, practical, and affordable healthy homes techniques will provide an important jump-start for reoccupying dwellings in flood-impacted neighborhoods. Community residents (home owners, volunteers, entrepreneurs, leaders, etc.) are best equipped to shape decisions about recovery and rebuilding of neighborhoods and communities where they have a huge stake.

If there is a silver lining to widespread hurricane destruction, it is the opportunity to repair, rehab, and rebuild homes to higher standards that protect occupant health and better withstand high winds and very moist conditions. The cleanup, repair, and rehab of salvageable homes, as well as the construction of replacement homes, should use construction standards, building materials, and methods that will ensure a healthy living environment for occupants and the durability of the home. Old, dilapidated housing that may be unhealthy can be replaced with new, healthier, more energy-efficient housing that is a good investment for lenders, insurers, and owners. The good news is that cleaning up housing is a practical, affordable, and safe strategy for helping to repopulate low- and moderate-income African-American communities. This approach will only succeed in the context of national, state, and local political resolve to prevent New Orleans and other communities from becoming “ghost towns” and “historical amusement parks.”

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