

Low-income seen at most exposure

By Beth Daley

Based on Boston's Chinatown and the area at the western end of Massachusetts Avenue, the most environmentally burdened areas in the city are those in the inner city. The city's poor and the African American population live in the areas with the highest levels of environmental pollution, according to a study by the Massachusetts Department of Environmental Protection.

Study Says Natural Gas Buses Have No Edge in Cleanliness

By Randy Kennedy

Buses powered by compressed natural gas are being viewed as the cleanest alternative to diesel buses, but a study by the Massachusetts Department of Environmental Protection says that they are not necessarily cleaner than diesel buses. The study, which was conducted by the Massachusetts Department of Environmental Protection, found that natural gas buses have similar levels of air pollution to diesel buses.

Massachusetts Department of Environmental Protection officials said that the study was conducted to help the state decide whether to invest in natural gas buses as a way to reduce air pollution. The study found that natural gas buses have similar levels of air pollution to diesel buses, but that they are cleaner than diesel buses in some areas.

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It was long thought that low-income people — including a disproportionately large number of minorities — have tended to move to cities with lots of industrial pollution because rents tended to be cheaper. While that may be partly true, a federal report in the early 1980s showed that some low-income families in the Southwest appeared to be purposefully built in lower-income areas because residential trends to be weaker, said William Kruttschnitt, professor of urban and environmental policy at Tufts University.

Forever. But Chastain is one of the most heavily affected areas in that geographical zone. "It's sort of a new dimension to environmental health in the city," said Martha Tai, coordinator of the Campaign to Protect Chastain. "We've been focusing on construction that, you see it every-where, and traffic. The report talks about all these other hazards that we aren't really aware of. It really opens our eyes."

Most overburdened

Massachusetts communities with most pollutants

Community	Population points per square mile
Dorchester South	224.8
Charlestown	134.2
Chelsea	127.4
South Boston	126.2
East Boston	123.3
Cambridge	105.0
Somerville	104.7
Woburn	102.5
North Boston	100.0
Waltham	100.0

A Northeastern University allocated pollution points for every environmental hazard for every community in Massachusetts. Low-income communities are most overburdened.



plan on trash in in Roxbury

By Chely Rodriguez

Among Roxbury's 100,000 residents, there's a high level of awareness about the city's trash problem. The city is planning to build a new trash transfer station in Roxbury, which would help reduce the amount of trash that ends up in the city's landfills.

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"It's a place to come together..."

CHELSEA

GREEN SPACE AND RECREATION COMMITTEE

1997 CITY GARDENER CERTIFICATE PROGRAM and SERVICE CORPS

City & Region

THE BOSTON GLOBE SATURDAY, DECEMBER 30, 2000

In Chelsea, little taste for 5½-acre pile of s

By Beth Daley

Chelsea — It's not the bulk of the matter that's the problem. It's the location. The 5½-acre pile of silt and debris is located in Chelsea, a city that's known for its diverse population and its proximity to the city's waterfront. The pile is located in an area that's known for its high levels of environmental pollution.

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Lead poisoning in children too high in Dorchester

By Megan Scott

Two decades after the federal government's effort to cut the number of children with lead poisoning, the rate of lead poisoning in children in Dorchester is still too high. The rate of lead poisoning in children in Dorchester is still too high. The rate of lead poisoning in children in Dorchester is still too high.

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Case Studies
Case Study I
Urban Environmental
Infrastructure in Boston, MA

Sustainable Boston

Thomas M. Morris, Mayor
Andrew J. Amann, Mayor
Cecilia Proffitt, Director

Case Studies

The UEI Community Development Pyramid was applied to a range of urban environment and public health issues and created a sustainable urban infrastructure that increased local capacity to solve problems. This section highlights three case studies to illustrate the model in action. The case studies include: Urban Environmental Infrastructure in Boston, MA; Evolution of

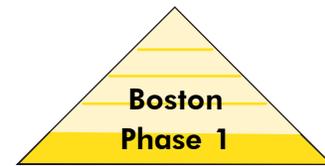
the Environmental Justice Movement in Hartford, CT; and Lead Poisoning Prevention in Providence, RI. These case studies are a small slice of UEI's successful deployment of the UEI Community Development Pyramid. Each case study had its genesis in different environmental problems and community response, and every one resulted in a consistent progression up

the pyramid to create a stable infrastructure that will last beyond the length of the pilot program. The uniqueness of the case studies illustrates the diversity and flexibility of the UEI Community Development Pyramid in bringing people, groups, and resources together to produce measurable environmental and public health results.

Case Study I: Urban Environmental Infrastructure in Boston, MA

Boston is a tightly packed city with sixteen neighborhoods. In 1990, Boston's multi-racial population totaled 574,283 comprised of 24.3% African-American; 10.8% Hispanic; and 5.2% Asian/Pacific Islander. Children under 10 and people over 65 comprised 22.4% of the population. 18.7% of Boston residents and 50.8% of Roxbury residents are living at or below the poverty level. Chinatown is the most densely populated neighborhood with over 111 residents per acre, and 9.6 persons per acre of open space. This is nine times higher than any other neighborhood. Chinatown is also surrounded by major expressways (Mass Pike & I-93) and local residents live with more traffic than in any other neighborhood. 90% of Boston children under six have been tested for lead poisoning, and the greatest number and most severe cases of lead poisonings occur in minority neighborhoods. Asthma and bronchitis are the leading cause of childhood hospitalization, and the rate is 178% higher in Roxbury.

Boston has always been a city full of neighborhood activism, so it was not difficult to find groups, issues or communities to work with. Many Boston neighborhoods launched community-based efforts to protect the urban environment, but were faced with many daunting obstacles. Federal, state and municipal environmental laws were numerous, confusing, and often not designed to meet resident needs. The legal and technical resources required to solve urban problems were nonexistent because mainstream environmental groups generally ignored inner city environmental issues and focused on wildlife habitat and ecosystem preservation. There was also little public education on the connections between the urban economy, environment and public health. This case study documents the UEI's efforts to service community needs by developing a sustainable infrastructure so local stakeholders and residents have a forum to get information, raise their concerns, and access resources to improve the health and environmental quality in Boston neighborhoods.



Phase 1: Understanding the Problems & Identifying Stakeholders

EPA New England responded to the public's request by requiring staff to focus more program efforts on urban neighborhoods in Boston and created the UEI as a dedicated resource. The UEI and community groups organized a number of environmental justice tours in Roxbury and Chelsea to increase agency awareness of the issues and concerns in the most disadvantaged Boston neighborhoods. These tours highlighted the disproportionate risks for residents including diesel and bus traffic and transport, vacant lots, lead poisoning, air pollution, asthma, and lack of green and open space along urban rivers.

The UEI continued working with Boston neighborhoods and listened to community concerns. Focus groups were held in partnership with Tufts University and the Boston University School of Public Health to engage local residents and environmental leaders about their issues and ideas. The UEI expanded historical EPA New England partnership efforts with the National Center for Lead Safe Housing, local public health agencies and community organizations in the Codman Square neighborhood to develop strategies to reduce lead poisoning in high-risk neighborhoods for lead poisoning. A key product was the Massachusetts Lead Law workshop with a curriculum for community stakeholders to understand the history and components of the law and confirmed the value of involving neighborhood based organizations to prevent childhood lead poisoning. The workshop empowered local residents with information so they could effectively advocate for needed change and reform in local laws, which ultimately helped to reduce exposure to lead for children.

The UEI also identified more local environmental groups to improve Boston neighborhoods. The UEI joined forces with City Year's urban youth corps to tap the energy of the volunteers to work in urban neigh-

hoods in Roxbury and Dorchester. The UEI also helped to support newly emerging environmental groups including Alternatives for Community and Environment (ACE), Environmental Diversity Forum (EDF), and the Dudley Street Neighborhood Initiative (DSNI) and worked with health organizations including the Bowdoin Street and Dimmock Community



City Year youth workers in Roxbury, MA.

Health Centers to better understand the problems facing Boston residents.

The most critical project success that laid a foundation for future work in Boston was a project called Green Spaces Healthy Places. UEI, City Year, AmeriCorps, DSNI and other community groups worked to reduce community environmental hazards in the

Dudley Street area in Roxbury. The project emphasized open space revitalization, resource conservation, and indoor air quality. The project marked the first UEI-coordinated effort to focus training and funding with neighborhoods, the private sector, and public health professionals to revitalize an urban neighborhood. The diverse project team promoted environmen-

tal understanding, skill building, neighborhood environmental audits, environmental sampling to detect lead and radon levels, GIS mapping of vacant lots, and delivered training to 20 City Year Corps members. These efforts helped the youth understand available data on environment and public health issues in Roxbury and share this information to local residents. Green Spaces Healthy Places produced visible and measurable results and helped residents better understand their local environment and their role in solving environmental problems.

During this first phase, the UEI worked to understand community concerns and supported stakeholders

that were already serving as champions for urban environment and public health concerns in Boston neighborhoods. UEI focused technical and financial resources to help build trust with the community partners. The majority of financial resources supported staff time in non-profit organizations and directed academic resources to start gathering

information and data to understand the extent and depth of contamination in Boston neighborhoods.



Phase 2: Building Local Capacity & Developing Local Partnerships

Building off the early project successes in Boston, the UEI started developing slightly larger scale projects to encourage community groups to jointly address common problems facing residents. A critical project was Neighborhoods Against Urban Pollution (NAUP), launched in partnership with UEI, ACE, DSNI, Massachusetts Campaign to Clean Up Hazardous Waste, Environmental Diversity Forum, Bowdoin Street Health Center, and the Tellus Institute. The NAUP team developed a blueprint for community-based ecosystem protection that started with resident awareness and mobilization and then leveraged technical resources (i.e. GIS mapping) to help the community identify and catalogue the sources of environmental hazards and environmental assets. The information was used to help prioritize problems and develop coordinated plans of action by creating Neighborhood Core Groups to organize and facilitate citizen involvement and input. This effort produced model campaigns for addressing some of the most common urban environmental problems including illegal dumping of waste on vacant lots, hazardous waste, pollution



A multi-ton salt pile located along the Chelsea Creek in Chelsea, MA.

from auto repair and paint shops, and contaminated Brownfields sites.

One of the ongoing results of the Green Spaces Healthy Places project included the introduction of urban farming in the DNSI area through The Food Project. With a budget of \$100,000, three staff, eighteen youth (many from the inner city) and 2.5 acres of land at Drumlin Farm in Lincoln, MA the Food Project launched its first growing season in 1992. That summer, they grew and donated 4,000 pounds of food. This project was transitioned to engage local youth in the DSNI area for the first on-site urban farm. Collaboration between the UEI, Green Spaces Healthy Places groups and The Food Project helped identify and transform vacant land in the DSNI area into a working urban farm.

In 1997-98, the UEI worked with Boston University School of Public Health (BUSPH), Tufts University School of Medicine (TUSM), and South Boston Community Health Center staff to conduct surveys of public housing apartments with West Broadway residents. These surveys assessed indoor air contaminants, safety

hazards, health, and the role of residents in maintaining housing quality. Participants were trained by BUSPH and TUSM on indoor air quality issues and the surveys helped document apartment and building conditions, maintenance history, and resident health. The survey revealed that there is a critical link between building and apartment quality (i.e. water leaks, moisture, mold, uncontrolled heating, poor ventilation, etc.) and resident health. The partners also determined that this complex problem could only be solved by a combination of building improvements, change in maintenance policy, and community health education programs.

The UEI also continued to expand the number and diversity of stakeholders involved. New community partners included Roxbury Community College, Coalition to Protect Chinatown, and the Chelsea Creek Action Group. UEI funded Tufts University to diversify the New England Lead Coordinating Committee by including more community based partners in addressing lead poisoning, and helped focus attention

on urban air issues through collaborating with the Northeast States for Coordinated Air Use Management (NESCAUM) on conferences and outreach. The UEI also provided community trainings to our partners including GIS mapping, how to apply for funding, facilitation and conflict resolution, and general management skills. The UEI focused resources on projects to map environmental hazards in Boston communities and shared this information at community forums and events. ACE was a pivotal partner engaging local residents and youth and worked with other community partners to organize “EJ in the Hood” which brought together hundreds of residents, youth and local groups on a Saturday to learn about the quality of their environment and what they could do to improve it. All of these projects addressed common issues of concern identified in Phase I, and encouraged local stakeholders to work together and share success.



**Phase 3:
Leveraging Public Resources
To Improve Public Health &
The Environment**

Years of collaboration with a diverse set of local partners set the stage for the UEI to identify more public resources to support urban project work throughout Greater Boston communities. The UEI provided funding to the Massachusetts Riverways Urban Rivers Program, within the Massachusetts Dept. of Fisheries, Wildlife, and Environmental

Law Enforcement, to restore the ecological integrity of urban rivers. EPA New England’s Office of Environmental Stewardship conducted a River Reconnaissance on the Mystic River including the Chelsea Creek, a neglected urban riverway lined with petroleum tank farms, a multi-ton salt pile, 21E hazardous waste sites, and much more. The UEI also worked with Roxbury Community College to create a certification program for lead abatement that used adult education programs to build a network of trained minority contractors that can safely do lead abatement work to reduce lead poisoning in children and create jobs. The program collaborated to increase or target the work of numerous departments and programs in city government such as Parks and Recreation, Neighborhood Development, Inspectional Services, Environment, Boston Redevelopment Authority, and the Boston Environmental Strike Team (BEST).

As a pilot program, the UEI could not effectively service all the needs of the sixteen communities in the area and was open to alternative mechanisms for

securing direct technical and fiscal government resources to conduct project work. When the United States Dept. of Agriculture (USDA) issued a request for proposals for a new program to create Urban Resource Partnerships across the country. The UEI, Sustainable Boston, the Dept. of Environmental Management and a broad coalition of community, government, academic and local business partners joined forces to successfully receive a total of \$1.3 million dollars to invest over five years in communities through the Greater Boston Urban Resources Partnership (GB-URP). The stage was set to build off the successes of the past and set new visions for the future.



**Phase 4:
Effective Partnerships**

Once the USDA support was secured, the challenge was to take the partnership beyond the grant funding and



Participants in the Roxbury Community College adult education program.

make it effective. GB-URP grew to become a coalition of over forty members representing community organizations, local business, academic partners, and federal, state and local government. Its mission was to help local communities conduct projects that link social, economic, and environmental concerns with available resources to produce results. GB-URP members work together on projects and coordinate technical, financial, and in-kind resources to community based organizations and neighborhoods throughout Greater Boston. GB-URP operated with funding and support primarily from the USDA, with

additional investment and involvement from the Dept. of Housing and Urban Development, the UEI, the City of Boston, BSC Group, Mystic River Watershed Association, Eagle Eye Institute, and Chelsea Human Services Collaborative. GB-URP annually awards approximately \$250,000 in grants to neighborhood groups to support the mission. The UEI is a member of the Executive Committee and jointly participates in decision-making. GB-URP has gone beyond providing funding to coordinate a series of “Piecemeal to Cohesion” meetings that link grant-making foundations with community groups around specific

environment and public health topics to help ensure that these projects receive consideration for funding.

UEI’s work to assist small organizations in Greater Boston with skills and knowledge has empowered them to form better partnerships to secure financial resources for more complex projects. For example, ACE was able to expand its collaboration with local groups and received over \$1 million from EMPACT to conduct a multi-year AirBeat Program that provides real-time ambient air quality data to residents and corresponds with a public outreach campaign that lets asthma

New England Lead Coordinating Committee

The New England Lead Coordinating Committee (NELCC) is a highly successful regional collaborative with diverse community and government representation. NELCC has successfully reduced barriers to end lead poisoning by developing partnerships with state, federal, and community stakeholders to revise and address conflicting regulations and policy that prohibited implementing lead poisoning remediation and prevention strategies throughout New England. NELCC worked with UEI to have EPA New England release a memo stating that soil contaminated with lead from house paint could be disposed of under the household hazardous waste exemption, removing it from a quagmire of conflicting regulations and policies. NELCC facilitated the development of low-cost landscape measures to manage soil on site. These plans have been shared and adopted across the county. NELCC also ensures efficient and effective use of resources. New England States have successfully competed for a wide range of government funding for lead poisoning prevention and remediation work. NELCC was awarded additional funds from state legislatures and used the resources more efficiently by minimizing start-up costs and sharing basic information (i.e. specifications and programmatic development) to quickly service delivery. States in the region shared bid specification software and jointly developed a standard reporting format for blood lead data from private laboratories.

NELCC also started and continues a Keep It Clean Campaign, partnering with over 50 local hardware stores in New England to deliver messages about lead safe renovation. The NELCC designed brochures, posters, and press releases. States paid for printing and coordinated local partnerships, and members worked together to translate the brochure into Spanish to reach a broader audience. Community-based organizations and parent run non-profits have been critical to support changes that reflect the needs of those who face the dangers of lead poisoning and developed some of the most creative community level solutions. NELCC illustrates the value and effectiveness of strong, inclusive, collaborative approaches to resolving a critical urban environmental and public health issue. It has demonstrated the need for a more unified, holistic approach to health issues, and it offers a model for engaging stakeholders to develop a lasting infrastructure to build regional capacity to solve problems.



sufferers know the air quality and be able to adjust their outdoor activities accordingly. The Boston Foundation, The City of Boston Sustainable Boston Program, many community stakeholders, and the UEI worked together to initiate the “Boston Indicators of Progress, Change and Sustainability” project to measure and track detailed information on environment, public health, and social issues facing urban residents in Boston. The project is an ambitious information-gathering effort that released “The Wisdom Of Our Choices,” which identified Education and Health Care, Civic Health and Cultural Life, and other issues to be tracked in the future.



Phase 5: Healthy Communities

The UEI and our community partners have successfully created many sustainable and effective partnerships that will continue to make measurable improvements in the quality of the environment and public throughout Greater Boston in the future. In 2000 the GB-URP was recognized by EPA as a Federal Interagency Environmental Justice Demonstration Project which highlights an effective inter-agency partnership to address the needs and concerns of environmental justice communities in Greater Boston. The GB-URP serves as a stable liaison between community-defined needs and available federal and private resources in order to respond to problems and concerns. There is a full time staff person that serves as the Executive Director of the partnership that coor-

dinates and leads the day to day communication, management, and oversight of the organization including creation of an annual work plan to track efforts.

Other partnerships that were once supported substantially by the UEI have expanded their role and gone well beyond their original local scope to service the entire city or state. ACE coordinates a citywide effort through the Greater Boston Environmental Justice Network which joins numerous community based environmental efforts in sharing information, political support and strategic planning. The Massachusetts Riverways Program now has a permanent Urban Rivers focus and funding source, and the indoor air efforts of the BUSPH has grown into a major collaborative effort between the three schools of public health in Boston (Tufts, Boston University and Harvard), the City of Boston and a community group (The Committee for Boston Public Housing). This cutting edge partnership will assess and implement system-wide changes in retrofitting and maintenance of Boston public housing.

The Food Project now has its own 21-acre farm in Lincoln, 2.5 acres of land in Boston on two sites in the DSNI area, works with 100 young people, 14 staff and an annual budget of \$1.4 million. The Food Project grows and distributes 150,000 pounds of organic produce each year, and is a true leader in urban agriculture and local, safe food production in urban areas. The Boston Indicators Project continues on track. Seminars will be held at Boston College every two years through the year 2030, Boston’s 400th anniversary, to report progress to the public. The report provides a new and sustainable tool to measure Boston’s strengths, assets as well as its challenges.

Boston has always been fortunate to have strong activists and passionate professionals willing to work for change. UEI’s efforts provided federal resources to support these community efforts and created effective projects, long-term partnerships, and measurement tools that will ensure better, cleaner, and safer neighborhoods for future generations.



Environmental Infrastructure in Boston, MA

