



Green and Healthy Homes Initiative (GHHI) Overview & Tutorial

Ruth Ann Norton
Executive Director

National Coalition to End Childhood Lead Poisoning

National Healthy Homes Conference
June 20, 2011





Green & Healthy Homes Initiative

Goals for Session

- Provide Summary Overview of GHHI
- Discuss Key GHHI Highlights and Developments
- Tutorial on “How Do I Develop My Local GHHI Model?”
- Next Generation GHHI Sites

The Purpose Behind the GHHI Approach

- Re-management of Resources – Learning to Braid
- Reflection of Lessons Learned from Lead, Healthy Homes
- Continue focusing on families
- Micro-solutions for Macro-problems – Best Practices
- Putting it all together for a Public Private Platform for more efficient and cost effective programs

What is the Green and Healthy Homes Initiative?

- GHHI is designed as a comprehensive approach to offer integrated health, safety, lead hazard reduction, energy efficiency, and weatherization interventions in low to moderate income homes.
- GHHI is currently in 15 sites around the country – 13 cities and 2 Native American tribes.
- The National Coalition to End Childhood Lead Poisoning is the Technical Assistance provider for GHHI with direct support from HUD, CDC, and national and local philanthropies

The Case For Change

Every year, there are:

- **250,000** cases of childhood lead poisoning
- **800,000** asthma related ER visits
- **20,000** carbon monoxide poisonings
- **13 million** preventable home-related injuries
 - ...as a result of unsafe housing – creating...
 - Wealth depletion
 - Abandoned properties
 - Housing instability
 - Potential homelessness
 - Housing-based illness



The Burden of Unhealthy and Energy Inefficient Homes

- American taxpayers lose **hundreds of millions** every year in medical bills, skyrocketing energy costs and lost wages due to inefficient and unhealthy housing conditions.
- Nearly **6 million** households live with moderate to severe physical housing problems which place them at-risk for illnesses and injuries including asthma, slip and falls, and respiratory illnesses
- Low income households spend **14%** of income on energy compared with only **3.5%** for other households
- Total annual costs for certain childhood environmental diseases are estimated to be **\$54.9 billion**

This sum amounts to 2.8 percent of total U.S. health care costs



Green & Healthy Homes Initiative

How individuals Experience The Current Model

PROGRAMS



IMPACT OF UNHEALTHY HOMES



BALTIMORE:
45,000 People
MARYLAND:
357,000 people
US: 22,900,000 people



BALTIMORE:
347 children
MARYLAND:
553 children
US: 250,000 children

POST-INTERVENTION



ASTHMA

BALTIMORE - \$41 million
MARYLAND - \$323 million
US - \$20.7 billion

LEAD POISONING

BALTIMORE - \$60 million
MARYLAND - \$96 million
U.S. - \$43.4 billion

A World Without



Green & Healthy Homes Initiative

ENERGY COSTS for UNWEATHERIZED HOMES



BALTIMORE - 240,000 homes
MARYLAND - 1.5 million homes
US - 100 million homes

BALTIMORE - \$105 million
MARYLAND - \$692 million
US - \$43.7 billion



Principles of GHHI

- Break the link between unhealthy housing and sick children
- Replace stand-alone programs (weatherization, lead hazard control, fire safety, etc.) with a comprehensive strategy to enable and ensure a national healthy housing standard
- Create feasibility for low and middle income communities
- Reduce inefficiencies under current system by reducing number of programs and contractors required to complete multiple interventions in a single home
- Reduce barriers to intergovernmental coordination
- Reduce potential unsafe work practices in weatherization and energy efficiency interventions that could generate lead hazards



Green & Healthy Homes Initiative

National Partners

- White House Office of Recovery Implementation
- White House Council on Environmental Quality
- Federal Healthy Homes Work Group
- Council on Foundations and Philanthropy
- National Coalition to End Childhood Lead Poisoning
- U.S. Department of Housing and Urban Development
- Centers for Disease Control and Prevention/HHS
- U.S. Department of Energy
- Environmental Protection Agency
- U.S. Conference of Mayors
- 15 Project Sites (13 cities and 2 tribes)



Current Green and Healthy Homes Initiative Sites





The Initial Opportunity was Recovery Through Retrofit: But GHHI is built to work beyond stimulus by coordinating funding from the following:

DOE Weatherization Assistance Programs
DOE Energy Assistance Programs
DOE State Energy Programs
HUD Healthy Homes and Lead Hazard Control
HUD CDBG and CSBG
HUD Green Retrofit Program for Section 8
HUD Neighborhood Stabilization Program
HUD Public Housing Capital Funds Program
HUD Choice Neighborhoods Program
HUD HOME Program
DOL Adult Employment and Training
DOL/HHS Health Worker Training Program
HHS/CDC Prevention Wellness Trust Program
HHS/MCH Title 5 Funds for Injury Prevention
And many others.....



GHHI Recent and Current Activities

- Evaluation Framework with Harvard School of Public Health
- Efforts to Outcome (ETO) Shared Data Platform
- Technical Assistance and Capacity Building for 15 sites
- Unit Production underway in 10 sites
- Hiring of GHHI coordinators - 7 sites hired
- National Dialogue with National Academy of Public Administration
- Site Compacts – 5 signed, many under way
- Final Criteria for GHHI Designation and Standards
- Implementation of Training, Certification and Workforce Development
- Alignment of GHHI with Housing and Community Development Tools



GHHI Recent and Current Activities

- U.S. Conference of Mayors – GHHI Resolution
- DOE's Embracing of Healthy Homes Concepts
 - New Health and Safety Guidelines released
 - Weatherization Plus Health 11-6 Guidance
- Emerging Partnership with Enterprise Green Communities
- Green for All, Emerald Cities
- MCOs preventive intervention initiatives/Reducing hospital reentry – Building on the Best Parts of Health Care Reform



Green & Healthy Homes Initiative

GHHI Results to Date

- Unit production is underway (**Over 750 units to date, 1,400 in pipeline**) in most sites, other sites have begun pulling together resources and infrastructure
- Organizations such as the U.S. Conference of Mayors and Living Cities and corporate and philanthropic foundations have committed over **\$20 million** to support local GHHI efforts
 - ✓ Health and Safety Benefits (reduced ER visits and hospitalizations)
 - ✓ Energy Consumption reductions (~\$360/year)
 - ✓ Efficiency and cost savings (20-25%)
 - ✓ Increased Access to Resources for families (one stop shop)
 - ✓ 500 persons trained Green and Healthy assessments and interventions (Wage increases from \$9 to \$15-\$22 per hour)



GHHI Project Sites – Securing New Lines of Funding

- Buffalo - \$2.1M Attorney General
- San Antonio - \$12M CPS and Water Utilities
- DOE WIPP Grantee sites
- Baltimore - \$3.1 M Constellation
- Providence - \$500K – Children’s Health Forum

28 Philanthropies Invested

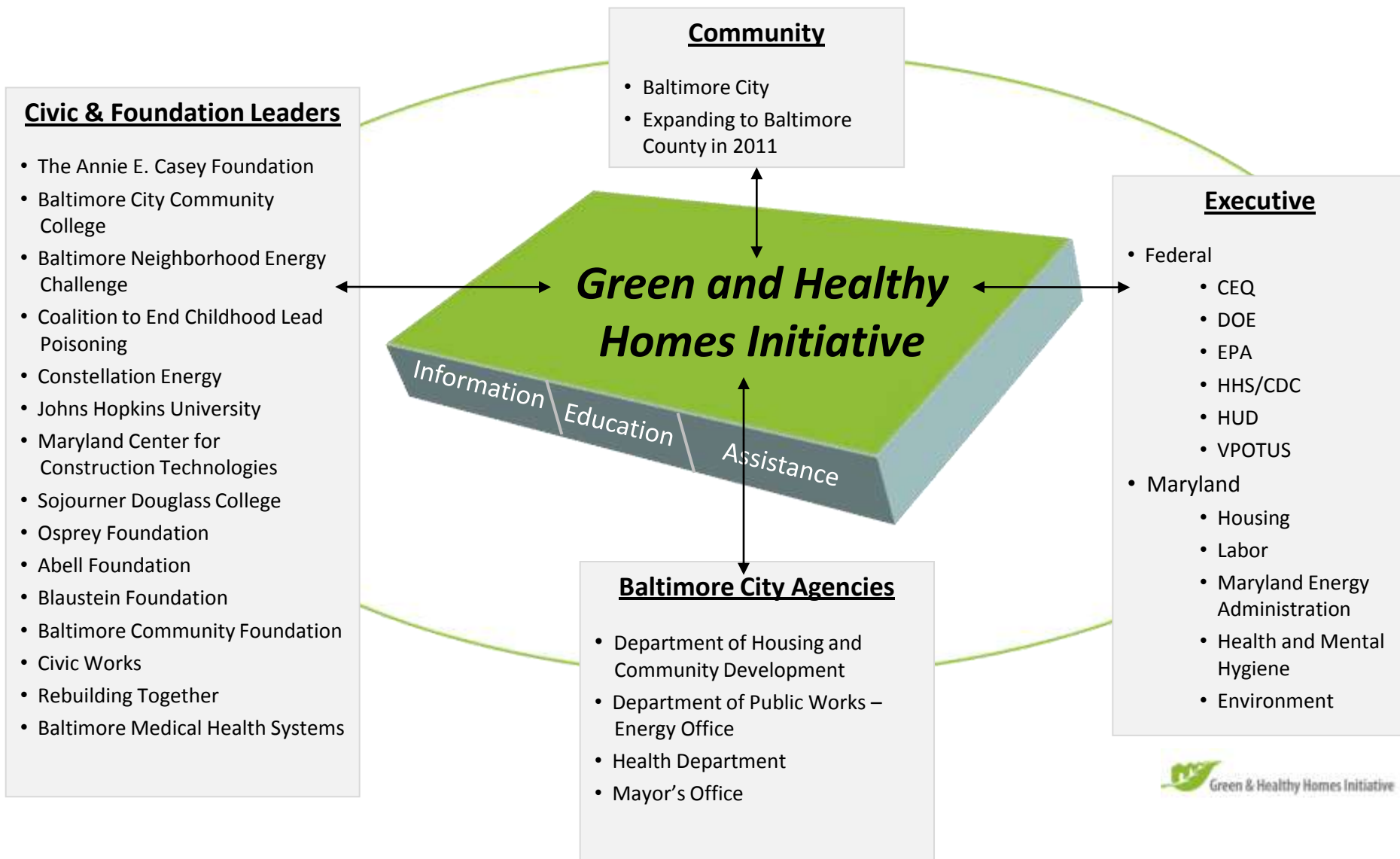
Proposed:

Social Impact Bonds, PRI’s and
Municipal GHHI Bond



Model Networked Platform at Work in Baltimore, MD

Baltimore has completed 252 homes at an average cost savings of 20-25% per home while lowering long term energy, maintenance and health costs for families.





Lessons Learned to Date from Baltimore GHHI:

Clear efficiencies and cost savings realized when weatherization and energy efficiency interventions are coupled with Healthy Homes and lead hazard reduction in terms of time and hard costs

In the initial 60 GHHI Pilot Project Baltimore homes with integrated interventions, cost savings in some homes were over 25%. Creating a process that effectively produced every fifth (5th) house for free.

Baltimore Example: The Young Family

Total Intervention Cost with GHHI Approach: \$12,057

Total Intervention Cost with non-GHHI Approach: \$16,096

GHHI Cost Savings: \$4,039 (25%)

Key Progress – Policy and Practice Changes Resulting in Integration of Health Interventions into Energy Efficiency and Weatherization Interventions

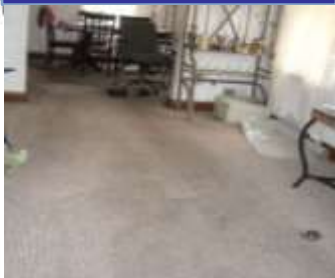
GHHI approach addressing health and safety hazards resulting in increased WAP enrollment and interventions

Increased Contractor Skills and Expanded Green Job Opportunities

Before GHHI



Old allergen-ridden carpets



Water leaks creating mold hazards



Deteriorated inefficient windows



Defective gutters causing water leaks



Broken hot water heater and furnace



Chipping paint



Safety hazards



Air loss increasing heating bills



Asthma related medical costs were substantial due to Dwayne going to the ER or being hospitalized 4-5 times per year. Home heating costs and repairs were so expensive that the family couldn't afford to pay to repair the furnace or replace the hot water heater

Post Intervention



Carpets removed and allergens reduced



HUD (HHDP)

Mold remediated; dehumidifier installed



HUD (HHDP)

Energy Star windows installed



HUD (HHDP)

Gutters and downspouts repaired



New furnace and hot water heater installed

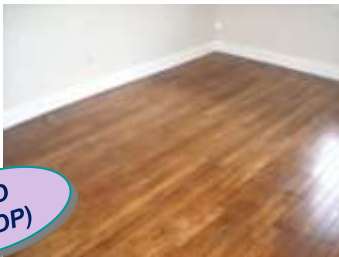


Paint stabilized



HUD (HHDP)

Tripping hazards repaired and floors resurfaced



HUD (HHDP)

Blown insulation installed; air sealing performed



Private Leverage Partner

An integrated approach that cost 25% less to implement (total cost of \$12,057 versus \$16,096), has kept the family out of the hospital for asthma related emergency room visits or hospitalizations, improved school attendance and performance, and reduced monthly heating bills (36%)

DOE (WAP)



Green & Healthy Homes Initiative



O'Bannon Family – 3917 W. Garrison Avenue (Homeowner)

- History of asthma episodes resulting in 13 hospitalizations for youngest of two children with asthma in the home
- Prior lead poisoned children in the home
- Lack of weatherization in the home

Triggers: Allergens (mice, pests, mold from water leaks, dust mites); lead hazards

GHHI Intervention Cost: \$15,444

Non- GHHI Process: \$21,310 (Net projected savings of \$5,866)

Programs Engaged: HUD OHHLHC, MEA, CDBG, CSBG, Foundations

Results: • Indoor allergens and lead hazards remediated

- Daughter has not been hospitalized since the intervention resulting in avoided medical costs of \$53,000
- Home is weatherized resulting in 27% reduction in natural gas usage in 12 months post intervention

The Green and Healthy Homes Standard – What it means to be GHHI?

Background

- There are over 40 localities requesting designation as next generation Green and Healthy Homes Sites
- US Conference of Mayors Resolution on adoption of a Green and Healthy Homes platform
- HUD Designation of Jurisdictions for Green and Healthy Homes via SHIP (Safe and Healthy Homes Investment Partnership)



Green & Healthy Homes Initiative

Developing a Local GHHI Model?

Capturing the Vision and Taking Ownership of Integration

Move to Maximizing public and philanthropic investments for a triple net benefit:

- Creation of green and healthy housing units in low-income neighborhoods
- Development of sustainable “green collar” jobs for community members
- Measurable improvements in childhood health and development



Green & Healthy Homes Initiative

The Strategy

Align

Braid

Coordinate

The ABC's of the GHHI Approach



Green & Healthy Homes Initiative

Focus on the Key Elements of the GHHI Model

1. Identifying and Overcoming Barriers to Integration
2. Identifying Partners and Resources
3. Establish Local Learning Network/ Compacting
4. Create Single Portal Intake
5. Create Data Collaborative
6. Comprehensive Assessment Tool
7. Utilize Integrated Intervention Strategy
8. Post Intervention Education
9. Cost Benefit Analysis
10. Regulatory and Policy Changes



Green & Healthy Homes Initiative

Barriers to Integration

- Identification of Local Barriers
- Developing and Implementing Strategies to Overcome Local Barriers
- Designate Local Project Coordinator





Green & Healthy Home



Green & Healthy Homes Initiative

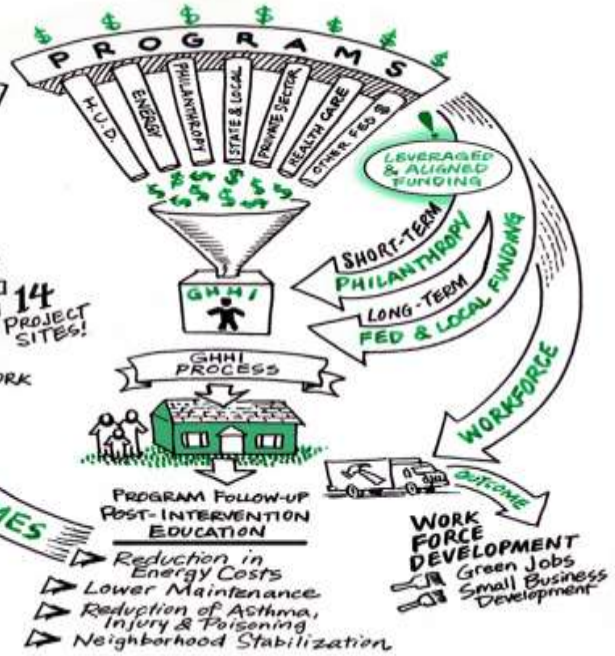
STRATEGIES



- GHHI SITE**
1. Compact
 2. Community Commitment
 3. Comprehensive Assessment
 4. Integrated Intervention
 5. Leveraged & Aligned Funding



NATIONAL LEARNING NETWORK



Partnership Identification

- Conduct Asset Mapping
- Engage All Housing Intervention Service Providers and other Key Stakeholders in the Process
- Utilize Local GHHI Compacts to Solidify Commitments of Partners and the Adoption of Key GHHI Principals



Green & Healthy Homes Initiative

Garner City, State, and Philanthropic Leaders Public Support for the GHHI Approach Through Local Compacts





Green & Healthy Homes Initiative



Establish GHHI Learning Network

Local GHHI Learning Network aids in:

- Establishing Standards
- Site Work Plan Development
- Developing Micro Solutions to Macro Problems
- Developing Outcome Measurements
- Conducting Data Analysis to Measure Outcomes and Benefits of GHHI Model



Data Collaborative

- Develop Shared Data Platform
- Track Key Indicators:

A screenshot of a web application interface. At the top left, it says "ETOSoftware®". Below that, there's a navigation bar with links like "Home", "Quick Search", "My Profile", "Messages", "My Favorites", "My Dashboard", and "User Profile". A search bar is also present. The main content area has a green header with the "Green & Healthy Homes Initiative" logo and name. Below the header, there are several menu items with green checkmarks: "Add a New Entity Record" (with sub-items: Units, Vendors, Partners, GHHI Trained Worker), "View or Edit an existing Entity record", "Unit Information/Assessments: Take a new assessment or Update an existing one", "Project Progress Notes", "General Program Checklist and Monthly Jobs Outcomes Report", and "Dismiss and Entity from this Program". At the bottom, there's a footer with "© 2011-2011 Developed by Social Solutions, Inc. All rights reserved." and some utility links.

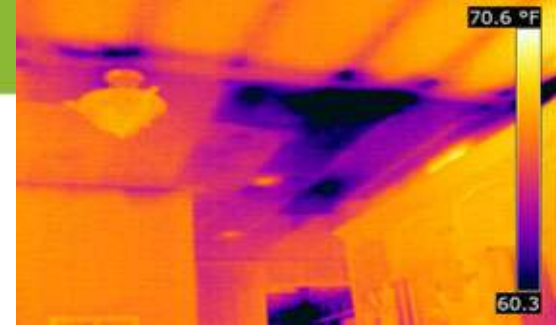
- Improved Efficiencies and Cost Benefits from Integrated Assessment and Intervention Model
- Reductions in Health Care Costs (Asthma, Lead Poisoning, Injury)
- Reductions in Energy Consumption Costs
- Reductions in Foreclosures and Tenant Eviction

Single Intake Portal/Shared Intake

- Common Referral Form
- Common Program Eligibility Criteria (Income)
- Shared Client Intake Data Platform



Green & Healthy Homes Initiative



Comprehensive Assessment Tool

- Utilize a Comprehensive Health and Housing Assessment Tool

Benefits

- Cost effective approach by completing combined activities during a single visit using a single inspector
- Less homes visits required and less client drop-out
- Integrated Scope of Work is produced
- Allows for better alignment and leveraging of resources
- Multi-faceted interventions can then be completed by one team of workers
- Allows for lessons & best practices to be analyzed, evaluated, and documented



Green & Healthy Homes Initiative

Comprehensive Assessment Tool



- Utilize a single inspector to conduct all assessments and audits

During a single visit, the Environmental Assessor-Energy Auditor performs:

1. Homeowner/occupant Interview
 2. Environmental Assessment (Asthma Triggers, Lead, Safety, Radon, Asbestos)
 3. Energy Audit
 4. Client Environmental Health and Safety Education
- Single Scope of Work Developed



Green & Healthy Homes Initiative

Cross Trained Inspectors and Contractors



- Cross Training of Contractors and Inspectors From Multiple Fields to Increase Efficiencies
- Increased Contractor and Inspector Capacity
- Development of Green Trades Accreditation
- Job Training and Economic Development for Residents of Low Income Communities



Green & Healthy Homes Initiative

Integrated Intervention

- Create a framework for integrated, single stream interventions
- Systematic Braiding of Funds to achieve project goals and maximize existing resources
- Reduce inefficiencies of multiple contractors





Green & Healthy Homes Initiative

Lead Hazard Reduction



- Window replacement (Energy Star)
- Paint stabilization
- Repair of structural defects
- Lead specific cleaning
- Referral for Lead Violation Enforcement, Housing Code Enforcement, Family Advocacy Services, other leveraged resources



Healthy Homes (Indoor Allergens, Safety)

- Integrated Pest Management
- Installation of air filtering system, mattress and pillow covers, air conditioners, and dehumidifiers
- Venting
- Removal or steam cleaning of carpets
- Injury prevention measures including: installation of smoke alarm (with 10 year lithium battery), carbon monoxide detector, cabinet locks, electrical outlet covers, slip and fall prevention measures
- Provision of a HEPA-vacuum and indoor allergen reduction cleaning kit to client





Healthy Homes (Indoor Allergens, Safety)

- Mold remediation
- Radon remediation and limited asbestos enclosure
- Resource referral to fully address hazards such as asbestos and other hazards where necessary
- Client Behavior Modification including reduction in: ETS, clutter, harborage, and food and water sources for pests, among others



Weatherization and Energy Efficiency

- Compact florescent light bulbs (CFLs)
- Programmable thermostats
- Hot water heater blanket
- Pipe insulation
- Foam insulation around cracks and crevices
- Caulking
- Air duct sealing
- Replacement of air filters on HVAC systems
- Furnace cleaning and repair
- Bathroom, kitchen, and dryer venting
- Attic/basement insulation
- Plumbing repair



Weatherization and Energy Efficiency

- Energy Star window replacement (match funded)
- Exterior weather stripping and caulking
- Installation and replacement of gutters and downspouts
- Roof repair or Cool Roof replacement where warranted
- Energy Star appliance installation
- Furnace replacement (match funded)



Green & Healthy Homes Initiative

Post-Intervention Education

- Post remediation education with occupants to enhance intervention (Behavioral change –ETS, food and water sources for pests)
- Behavioral training component to educate occupants on energy efficiency and reduction of energy usage
- Post remediation education with owners on how to sustain the intervention (Lead safe work practices, ongoing maintenance)





Green & Healthy Homes Initiative

Cost-Benefit Analysis

Cost Benefit Analysis for Government Innovation, Wealth Retention and Long Term Health and Energy Outcomes

- Develop evaluation tools to measure improvements in health outcomes
- Develop evaluation tools to measure energy consumption reductions and energy cost savings
- Develop evaluation tools to measure cost savings from integrated assessment and intervention approach



Green & Healthy Homes Initiative

Regulatory and Policy Changes

- OMB
- Lead Court Rhode Island
- Legislative Initiatives
- Departmental Alignments
- Common Qualification Standards





Green & Healthy Homes Initiative

National Support Network for GHHI Project Sites

- Coalition Technical Assistance
- Grants for Interventions, Workforce and Best Practices
- Ning Site – Peer Networking Site
- Webinars and Topic Driven Conference Calls
- Hands on Training and Boot Camps
- Resource Networks to Fill Gaps
- Sharing of Best Practices
- Evaluation





Criteria for Green and Healthy Homes Designation

- Basis for Work Plan
- Capacity and Collaboration – Philanthropic partners, relevant agencies, programs, and NGOs
- Public Leadership – Mayor, County Executive, Governor, or Tribal Chair
- Organizational and Agency Commitments – Compact
- Standards and Practices



The Green & Healthy Homes Vision For Your Site

Maximize public and philanthropic investments for 5 major benefits:

- ✓ Government innovation in service delivery
- ✓ Development of community-based “green collar” jobs and social enterprise
- ✓ Creation of affordable, maintainable green, healthy and safe housing
- ✓ Measurable improvements in health and economic and social outcomes for children and families
- ✓ Foreclosure Prevention and neighborhood stabilization

Next Generation Green and Healthy Homes Initiative Sites





Green & Healthy Homes Initiative





Green & Healthy Homes Initiative

Key Elements of the GHHI Model – Q & A

1. Identifying and Overcoming Barriers to Integration
2. Identifying Partners and Resources
3. Establish Local Learning Network
4. Create Single Portal Intake
5. Create Data Collaborative
6. Comprehensive Assessment Tool
7. Utilize Integrated Intervention Strategy
8. Post Intervention Education
9. Cost Benefit Analysis
10. Regulatory and Policy Changes



Green & Healthy Homes Initiative

Ruth Ann Norton

Executive Director

Green and Healthy Homes Initiative

410-534-6447

ranorton@ghhi.org

www.ghhi.org

www.leadssafe.org