

Weatherization Plus Health Promising Practices

Wade Gardner
Opportunity Council

Bellingham Washington
The birthplace of Weatherization Plus Health



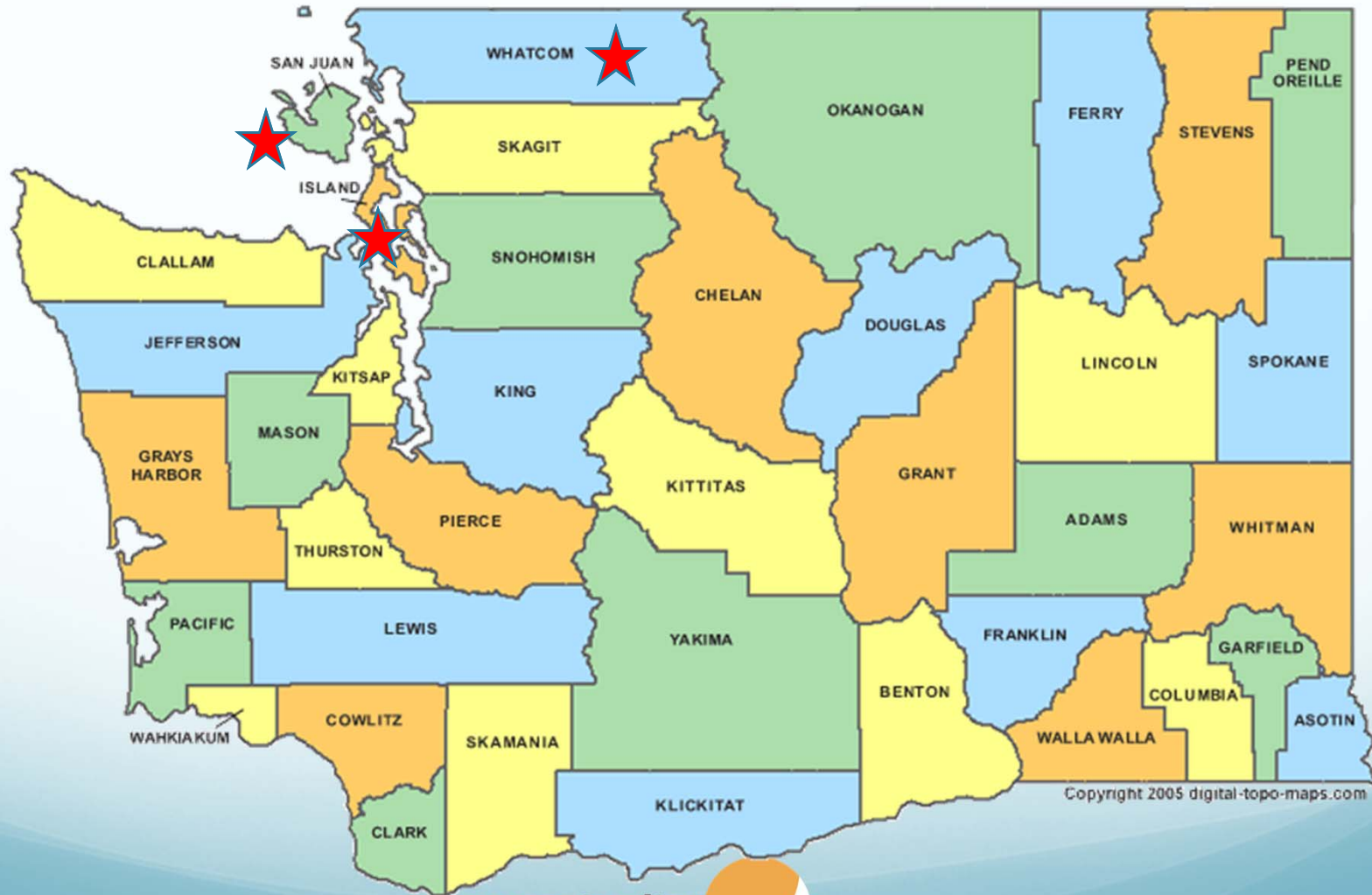
Opportunity Council is a Private nonprofit Community Action Agency

Mission Statement

To act as a catalyst for positive change, both in the community and in the lives of the people it serves.



Opportunity Council serves Whatcom, Island and San Juan Counties ★



Opportunity Council Departments

- Early Learning and Family Services
- Community Services
- Weatherization and Home Repair
- Island County Services
- Whatcom Homeless Service Center
- Building Performance Center

4 themes for today

- Community engagement
- Service integration
- Implementation
- Continuous improvement

Taking indoor air and safety seriously

In 1992 while working with local Native American Nations we realized there was need for a more comprehensive approach to working on homes that would ultimately have a positive impact on peoples health.



A Community Action Agency approach to an emergent need

- Problem:
 - Identified the tribal members we had been serving had specific problems and associated needs around housing.
 - Realized that families in our early learning programs had similar needs. Poor indoor air was contributing to respiratory problems and was keeping kids home from school.
 - We noticed an increased number of people we were working with had health issues related to their indoor environments.
 - The more we learned about indoor air and other home health and safety issues the clearer it became it needed to be part of our weatherization approach.

History of Healthy Housing at the Opportunity Council

- 1993 and 1995 EPA Environmental Justice Grants
(Used to create Indoor Air Coalition of Whatcom county)
- 2002 HUD Healthy Homes Grant (pilot project)
 - Development of Weatherization Plus Health
- 2005 Head Start starts referring families
- 2008 Energy Assistance takes over conservation education role
- 2009 Private donation and commitment of \$100k annually
- 2010 Energy Assistance takes the lead in the agency administering Healthy Homes
- 2010 Agency receives EPA grant to train home visitors in the community in the 7 principles of HH and to make HH referrals

1993 Community Partnerships and development of the IAQ Coalition

- Opportunity Council (facilitator sponsor for 19 years)
 - Energy Assistance
 - Early Learning and Family Services
 - Weatherization & Building Performance Center
- Whatcom and Island County Health Departments
- Northwest Clean Air Agency (local air pollution authority)
- Health Clinics, asthma and allergy clinics
- Nooksack and Lummi Nations
- City of Bellingham
- Western Washington University

Situations the WAP encounters:

- No exhaust fans
- Exhaust fans venting to attics
- Poorly vented combustion appliances (including wood smoke)
- Lots of dust loading
- Clutter/poor housekeeping
- Chemicals stored inside
- Electrical problems
- Pests – rodents, insects
- Little or No insulation
- Moisture problems/wet crawlspaces/leaky roofs
- Mold – variety types, places
- Prime dust mite habitat
- Back-flow from sewer or septic
- Lead paint
- Poorly ventilated spaces

Health risks of the families we assist:

- Asthma: children and adults
- Other respiratory illness
- Exposure to lead dust
- Compromised immune systems
- Chemical sensitivities
- Smokers and exposure to second-hand smoke
- Electrical and plumbing hazards
- Exposure to bio-contaminants

Bio-Contamination

Severe bio-contamination is any situation where the quantity or types of bio-contaminants present (fungi, bacteria, protozoa, viruses, etc.) a significant risk to human life or health:

- *extreme mold contamination*
- *sewage backflow*
- *stream or ocean flooding*
- *long-term clean water damage*
- *protein decomposition*
- *blood-borne pathogens*

Weatherization Should . . .

At a minimum not inadvertently create or exacerbate health and environmental threats in the home.

And whenever possible weatherization should improve the indoor environment.....

..... especially when the occupants have fragile health conditions.

2002 Healthy Homes implementation strategy

- Utilize technical expertise and infrastructure of the low-income weatherization program to implement.
- Target families with children in Head Start and early learning programs.
- Address the environments of the homes they (children in Head Start) live in and childcare facilities where they spend hours away from home.
- Engage the indoor air coalition in design and oversight of the Healthy Homes project.

Mission of Weatherization Assistance Program (WAP)

To reduce energy costs for low-income families, particularly the elderly, people with disabilities, and children, while ensuring their health and safety

Bringing it all together



Department of Commerce
Innovation is in our nature.

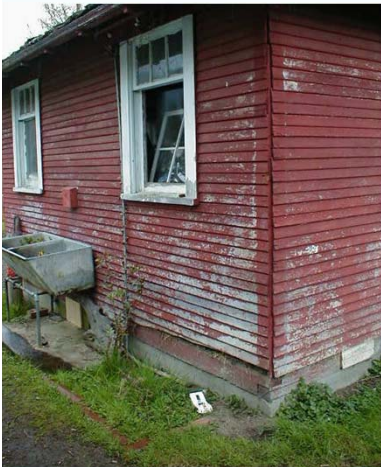


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Health & Housing Connection:

Link between health & indoor environment is well established
the link between our departments in addressing family needs was
not as well established



- We were serving households based on priority groups but not based on emergent need.
- Households from other programs were not receiving priority.
- We were not bringing resources to bare in a systematic way



Implementing *WX Plus Health*

A holistic approach to implementing programming



Weatherization can be the catalyst but a more comprehensive approach is recommended. Key ingredients include:

- Documented process to ensure the families most in need are prioritized.
- Centralized intake or very efficient referral system.
- All programs need to have an understanding of WX Plus Health (takes training)
- Very good coordination between programs.
- Evaluation tool



Number 1 partner

Our own agency

Within our own agency we see thousands of households each year.

Energy assistance 5,000

Early learning programs 450

Maple Alley Inn 400

Childcare Resource and Referral 2,000

Homeless housing 250

Where do referrals come from?

Energy Assistance

Early Learning programs

Indoor Air Quality Coalition

Housing Case Managers

Community Service and Health Clinics

Asthma and allergy clinics

School districts

Clean Air Agency

Eligibility

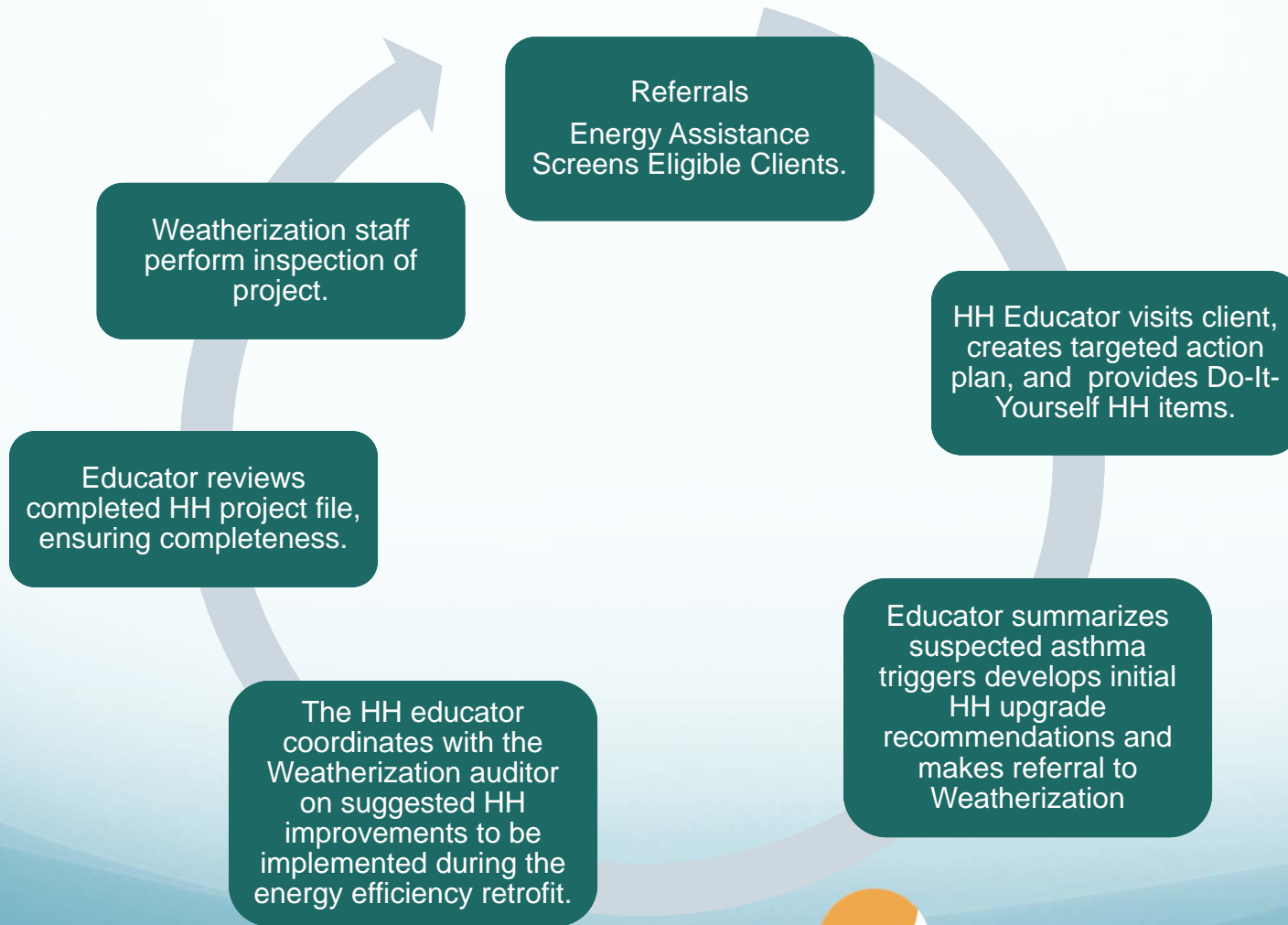
Integrated with existing eligibility services to maximize efficiency and centralize application processes for clients (Energy Assistance Program).

Follow eligibility rules and standard procedures for Weatherization.

Determine Appropriate Assessment Level: If the client answers “yes” to one or more of the additional questions the project will receive the Weatherization *Plus* Health assessment* (Improve Indoor Air Environment).

*Includes: Healthy Homes with Education, Materials, and Tools and Conservation Education.

Education & Weatherization Coordination



WX Plus Health Program

Improve Indoor Environment

Additional measures that improve the indoor environment and build on basic weatherization and education component

Education Component

Visual survey of indoor air and health issues
interview with client
Develop action plan for behavior changes and implementation
Low cost, no cost materials

Basic Weatherization

A weatherization audit, energy saving measures
combustion safety

Do No Harm adds to Basic Weatherization such
elements as Lead Safe work practices, Asbestos
awareness

Conservation education

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Level 1 Basic Weatherization / Do No Harm

Program Components

Weatherization Audit

Diagnostics

Basic Educational
Component

Lead safe work/Mold
moisture survey

Energy Savings



Funding Level 1

DOE

HHS

State Funding

Utility Funding



Environment

Program Components

Basic WX

Do No Harm

Plus

Lead Hazard Reduction

Comprehensive IAQ

Extended Education Component

Dust Control & Non-Toxic cleaning



Level 2 – A More Extensive Educational Component

Additional time is needed to deliver a more formalized education component that involves one on one discussions with residents to help them establish a workable and long term plan to maintain a healthy home.

Focus on 6 month and 12 month follow up visits for some families.

Education Component

IEQ & You

Informal Education for staff & clients

Informal
Education
Series

Dry

Minimizes mold growth • reduces chances of pests • low humidity

Clean

Eliminates asthma triggers • reduces chances of pests •

Well ventilated

Helps keep home dry • reduces strength of contaminants

Combustion Product free

These products are poisonous and should not be breathed •

Pest Free

Rodents, roaches carry disease and their byproducts are asthma triggers •

Toxic Chemical Free

Most chemicals found in the home are toxic to living organisms • by products can be asthma triggers

Lead Hazard Free

Paint that is older than 1978 may contain lead • peeling paint presents a health hazard



Improve Indoor Environment – Education

IEQ and You (Indoor Environment Quality)

Asthma Home Environment Checklist – EPA

Pollution Source Survey

HH Action Plan

HH Home Visit Report

How Your House Works Workbook

Asthma Training Workbook

Moisture, Mold, and Your Home – EPA

Toxic Free Cleaning Tips Brochure

Eco-Clean Deck 50 Recipes for Nontoxic Household

"Quit Now" business cards w/ available hotline promoting smoking cessation

Information on Lead

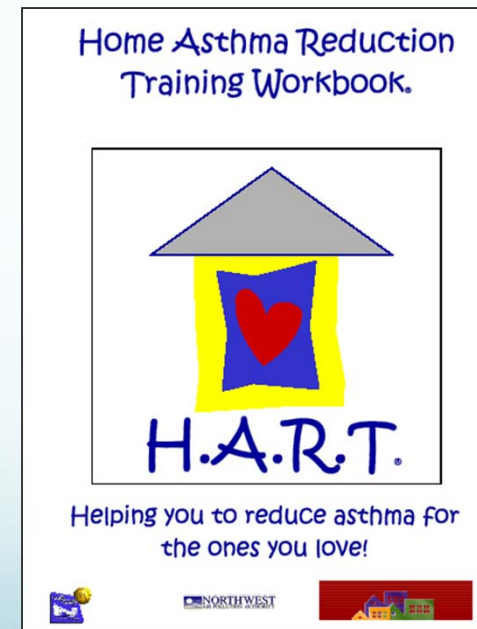
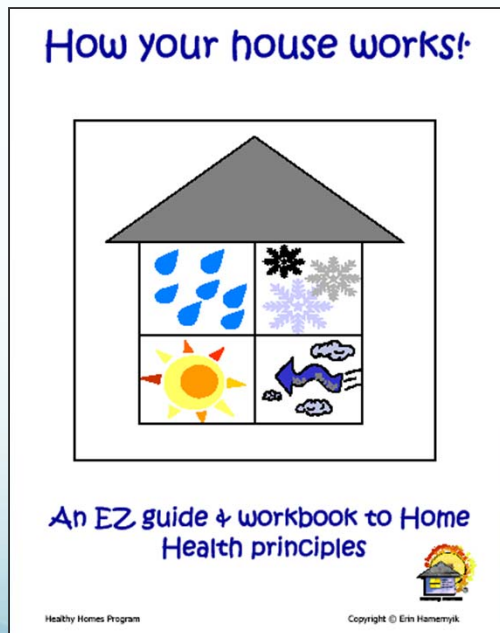
Safety information CFLs and disposal

2 different HH focused coloring books



Expanded Education

During Improve Indoor Environment, a more detailed education package is delivered that promotes engagement with the client. It includes workbooks and in-home training to encourage and support behavior change that can lead to improved health outcomes.



Family Action Plan

Opportunity Council

Family Energy & Indoor
Air Quality Action Plan

Date: _____

Three Steps to improve your Indoor Air Quality

1. _____

2. _____

3. _____

Three steps to reduce your Energy Bills

1. _____

2. _____

3. _____

The Opportunity Council Energy Representative has explained what we need to do to make this action plan work for us. We can call the energy representative at the Opportunity Council if we have any questions.

Signed: _____

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Level 2 – Improve Indoor Environment

Adding assessment tools and undertaking repairs

Assessing and delivering more complicated ventilation strategies

Repairing indoor hazards with a health link (moisture/mold, asbestos, lead hazards from lead-based paint and dust, radon, pests, dust mite habitats)

Estimating Costs above basic Weatherization



Dust Control & Non-Toxic Cleaning

Home Asthma Trigger Reduction

Damp Wiping
HEPA Vacuum
Dust Control Strategies
Walk Off Mats
Dust Mite Covers on Pillows
& Mattress
Non-Toxic Cleaning /
Green Cleaning Kit
Flooring Change outs



Estimating Costs

Experience with the WX Plus Health pilot project indicates that roughly 15%-20% of the homes will require this additional level of service.

Our current healthy homes related project costs are approximately \$2,000 per home on top of the weatherization grant.

Funding Level 2

Utility Funding

State Matching Funds or General Fund

Federal/State Housing Rehabilitation

Federal Lead Hazard Control Funds

Private / Discretionary Funds

Federal Healthy Homes Funds

2010

Completed and closed 60 HH projects:

- 36 received a home visit, education, and healthy homes inventory (60%)
- 5 Received the above *plus* a Wx assessment (8%)
- 19 Received the above *plus* Wx upgrades (full Wx) (32%)
- \$2000 Average cost for educator, inventory, pc, contractor POs

For more information contact

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Building Performance Center

<http://bpc.oppco.org/>

