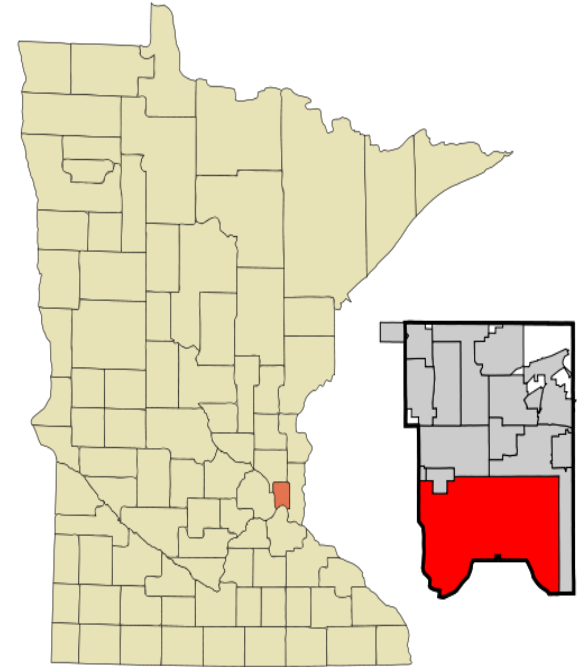


# **Knocking Down Walls to Improve Demolition Safety and Increase Deconstruction + Reuse Opportunities**

**Aaron Chavez  
Environmental Health Specialist II  
Ramsey County, MN**

# Ramsey County, MN



- Smallest, most densely populated county in MN
- ~509,000 population
- 19 communities: cities, townships, University
- If you want to put something up, take something down!

## Pre-demo inspection program

- Regulatory Basis:
  - County Solid Waste Ordinance
  - MN Rules for Demo & HW
- ~175 inspections / year
- ~.4FTE shared by four people
- No fees or license requirement
- Types of demolition:
  - 70% Residential
  - 30% Commercial-Industrial



# Why?

## Safety

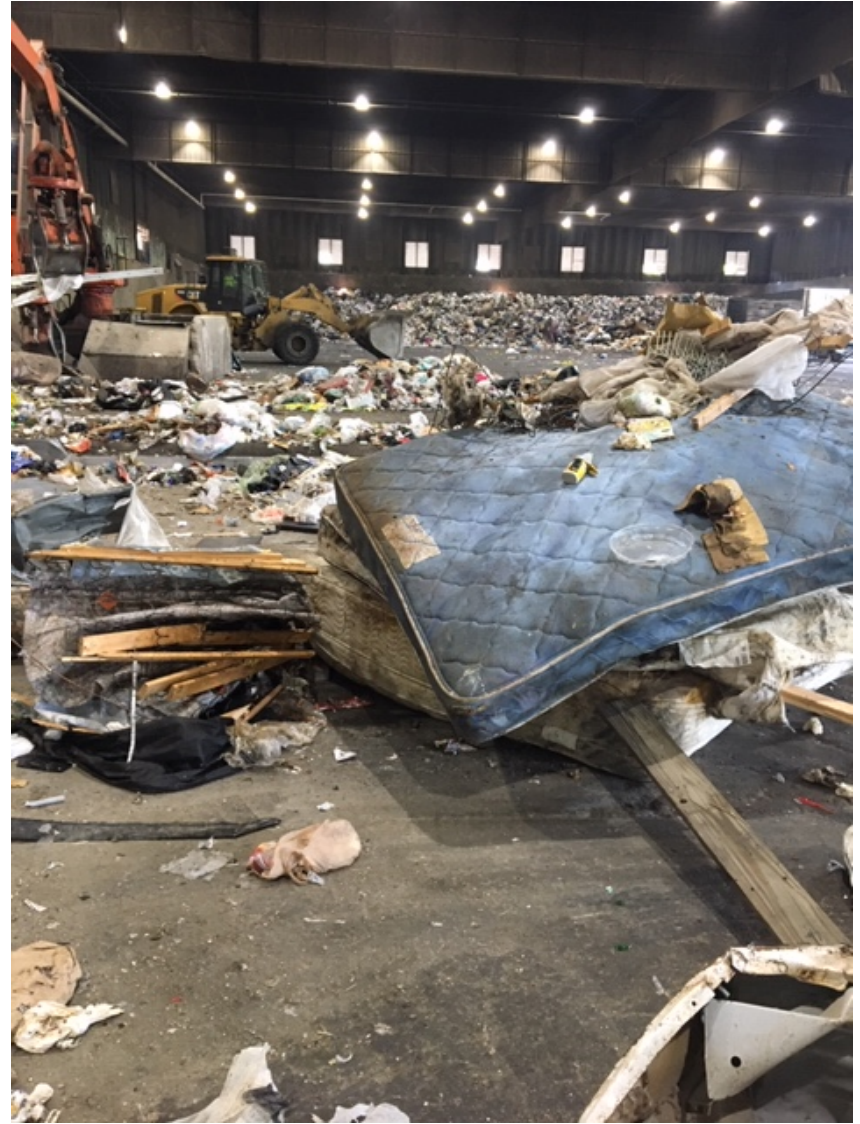
- Community health
- Worker safety



## Environmental Health

- Demolition waste improperly managed leads to exposure and costly cleanups







## Pre-demo inspections: front end

- Cities notify County when demo permit is issued
- Asbestos Survey
  - Residential – every whole house demo
  - Commercial – every major renovation/demo
- Pre-Demolition Walk Through Inspection
  - w/ demo contractor / owner / general contractor
- Technical Assistance
  - Vendors, safety, disposal/reuse outlets



**SAFE Demolitions!**

You're getting your demo permit

**What you need to do NEXT.**

- 1** CALL Ramsey County at 651-266-1199. We need to inspect!
- 2** You need an asbestos survey done before the inspection - Over 80% of all demo'd buildings contain asbestos.
- 3** Remember to disconnect the electricity, gas and water lines.

**What pre-demo inspectors look for:**

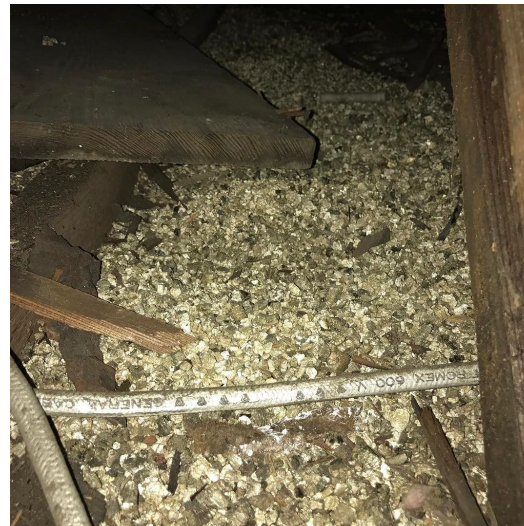
-  ASBESTOS CONTAINING MATERIALS
-  APPLIANCES
-  ELECTRONICS
-  FLUORESCENT LAMPS
-  HAZARDOUS MATERIALS
-  MERCURY CONTAINING DEVICES
-  PCB CONTAINING DEVICES

 You'll get an inspection report from us with orders to remove and properly manage these items.

## HazMat in demolition

### Asbestos

- 88% of 1073 residential
- 80% of 439 commercial
- Flooring, pipe wrap, ceiling texture, roofing, Transite, flue patching, vermiculite, foundation waterproofing

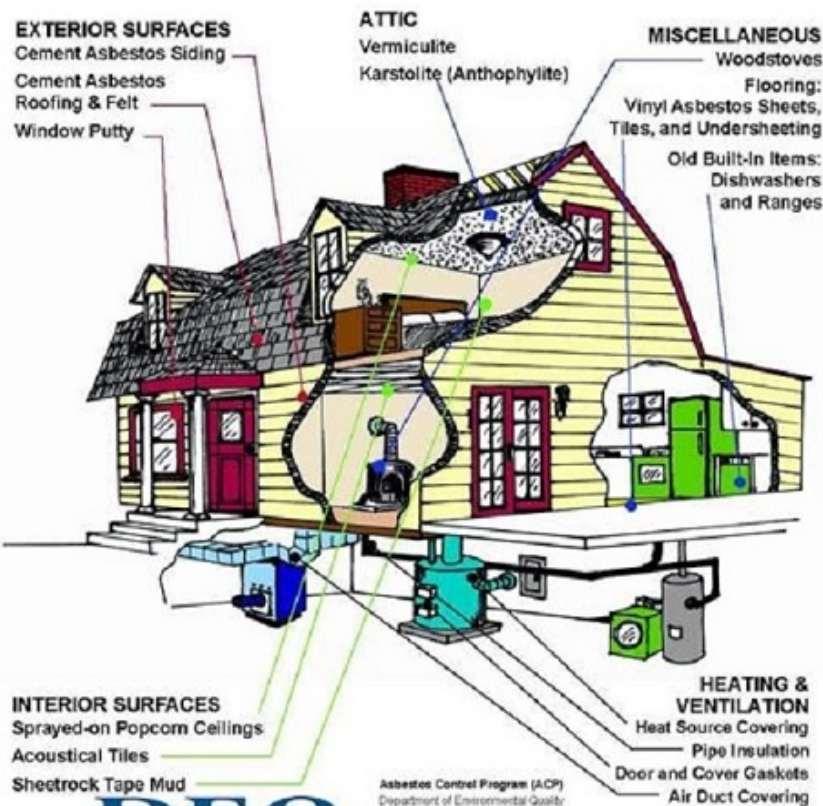




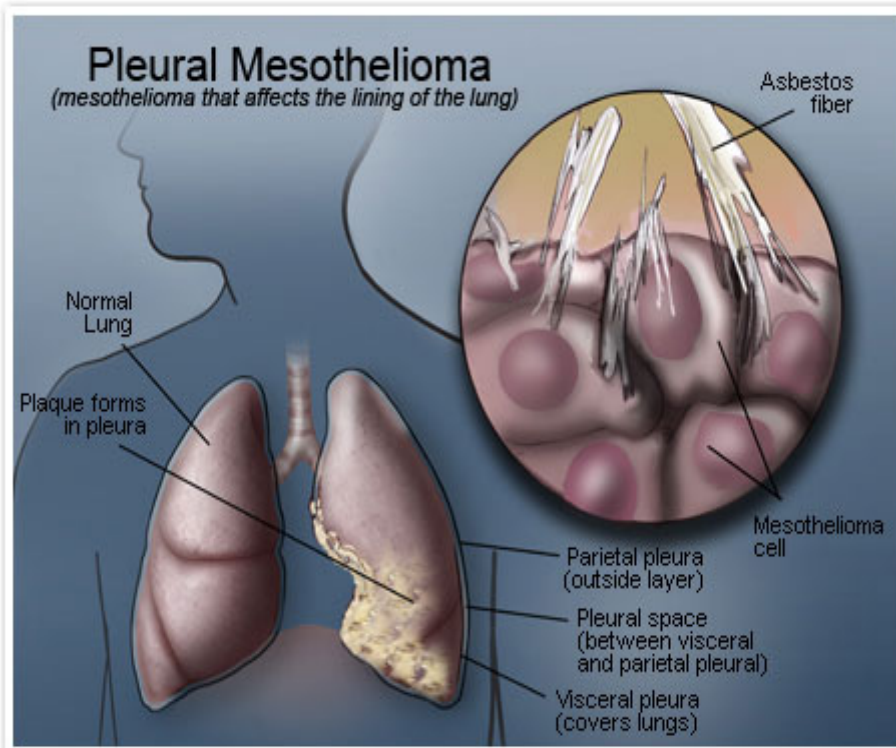
# ASBESTOS IN YOUR HOME

**CALL ACP BEFORE REMODELING OR DEMOLISHING.**

Don't put yourself or others at risk of exposure.



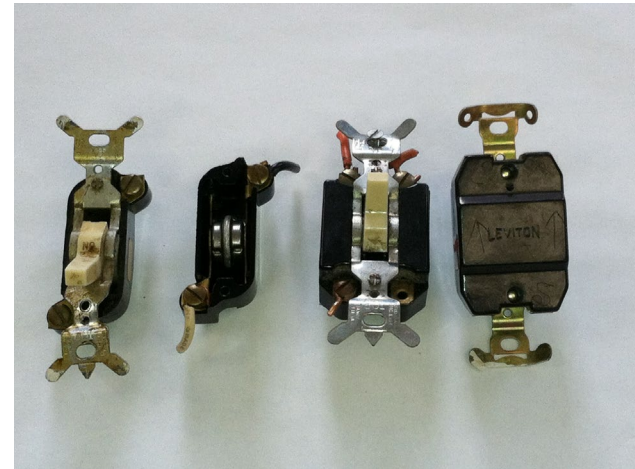
Asbestos Control Program (ACP)  
Department of Environmental Quality  
PO Box 200901  
Helena, MT 59620-0901  
(406) 555-5300 • [www.asbestos.mt.gov](http://www.asbestos.mt.gov)



# HazMat in demolition

## Hazardous Materials

- HHW, RCRA HW, PCBs, oil, mercury



# HazMat in demolition

## Lead

- Paint, pipes, solder, e-waste/circuit boards

## Appliances

- PCBs, mercury, refrigerants



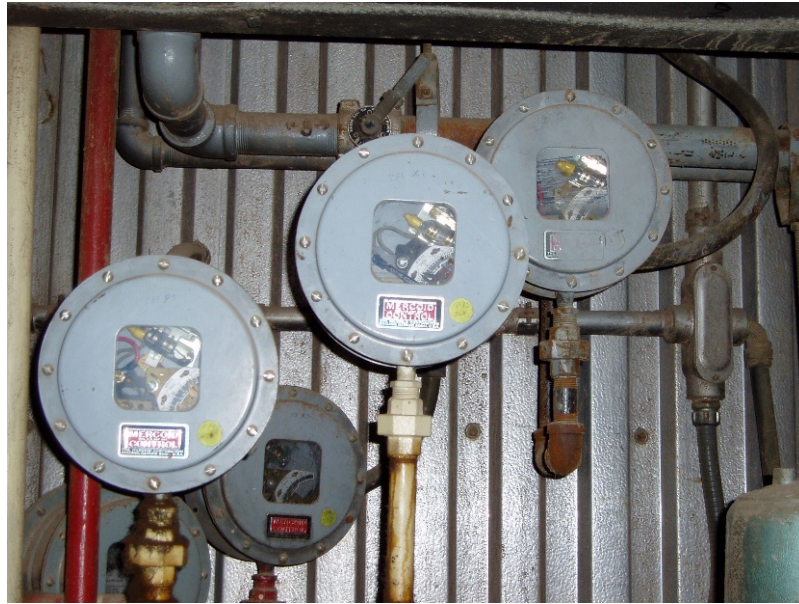
## Other safety concerns

- Wet Methods
- Utilities disconnect
- Well sealing
- Neighbor notification





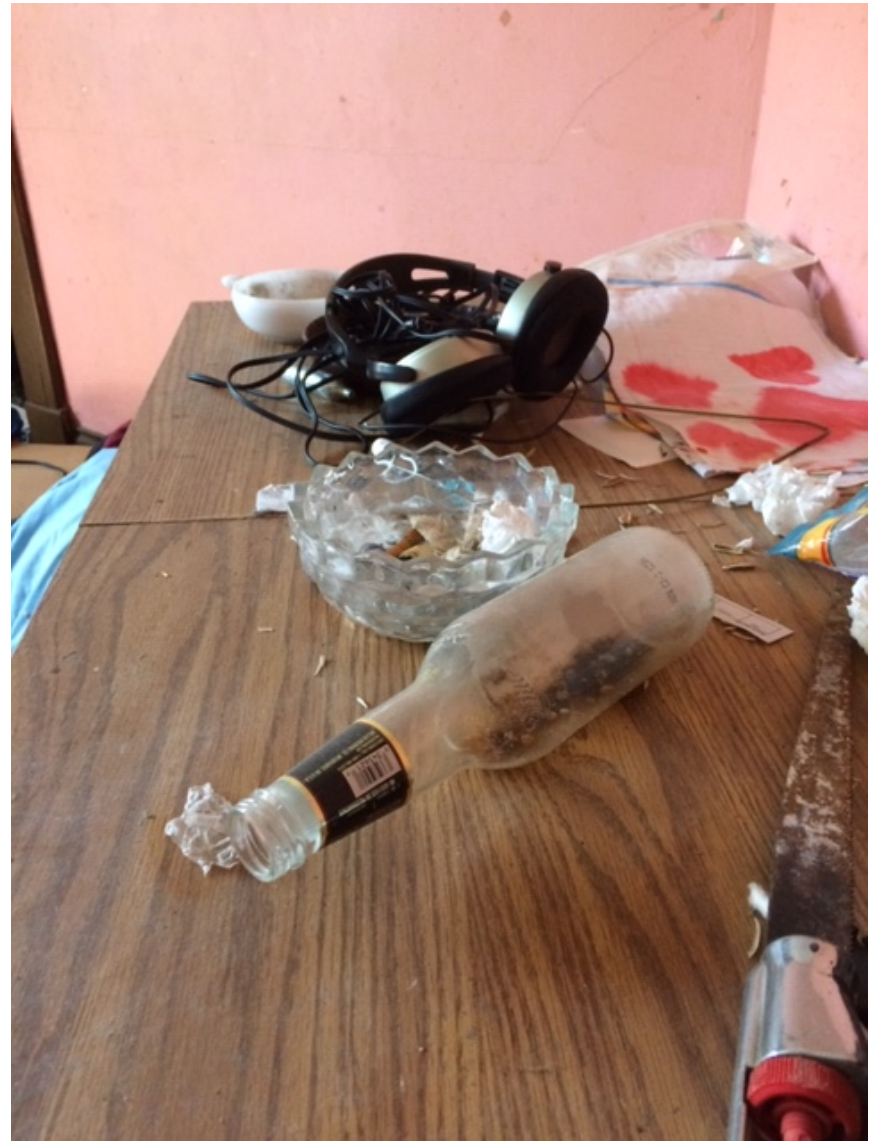
400 Mercury switches in one project







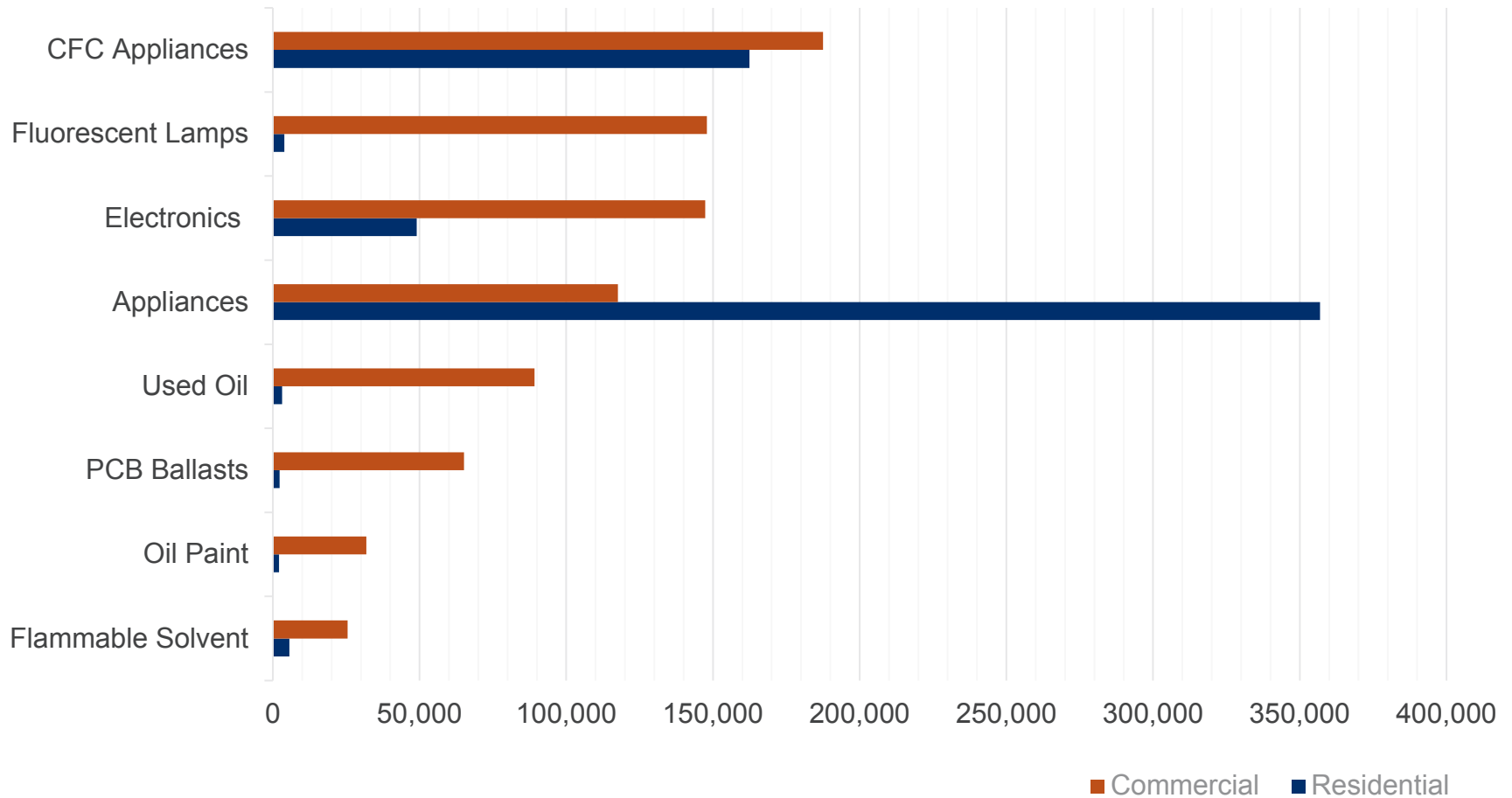








## Pounds HazMat removed from demolitions since 2010



**Mercury:** Residential: 329 lbs Commercial: 836 lbs

## Pre Demo Inspections: Back End

### Contractor provides County w/ documentation

- Asbestos manifest
- Demolition waste (dump tickets)
- MSW
- Appliances/electronic recycling
- Hazardous/HHW/Universal waste

### Enforcement

- Last resort
- Police report of missing items
- Withhold payment on govt contract projects

## Higher Uses for C&D: Local Markets

- 4 C&D processors serving metro (>60+% diversion)
  - Typical “dump & sort” transfer (5 – 15% diversion)
  - Established recycling market for tear off shingle scrap
  - Established clean wood markets
  - Concrete recycling (typically 50% by weight of total demo).
  - Some used building materials markets already exist
-

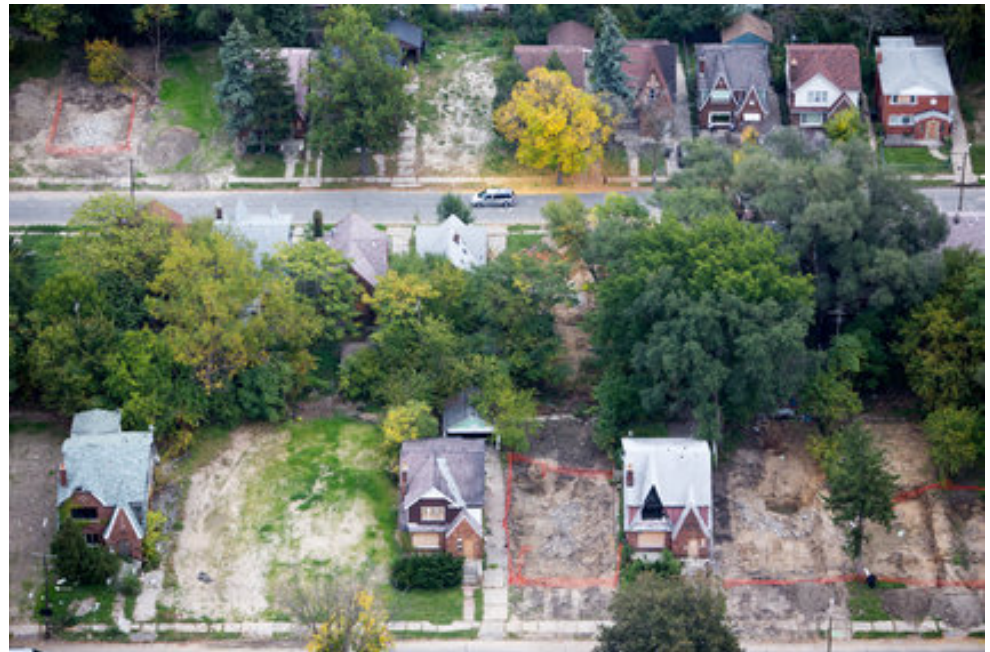
## Ramsey County's 4R Program

- **Reuse** durable building materials
- **Recycle** building components
- **Renovate** where practical - represents the highest use of a structure.
- **Reinvest** in the community by making neighborhoods safer and more cohesive through the improvement of individual properties.

## Ramsey County's 4R Program

### Successes:

- Renovations return houses to tax rolls
- Reduces “missing tooth” syndrome
- Demo only if renovation is not practical
- Light stripping/salvage
- 75% landfill diversion goal
- Waste management plans
- No tax assessment on lot





## Where are we going?

- Committed to salvage + reuse in solid waste mgmt plan
- Deconstruction training:
  - for contractors
  - public sector
- Training on home maintenance with reused materials in low income neighborhoods.



## What can you do?

- Education
- Build network, partner with agencies/organizations/business
- Open up HHW site to residential demo contractors
- Require asbestos survey on demo projects as condition of permit.
- Transite Ordinance
- Government contracted/funded demos:
  - Waste management plan
  - Perform asbestos/hazmat survey before bid

## Resources

- Minnesota Pollution Control Agency – Asbestos
- Minnesota Department of Health – Asbestos

<https://www.epa.gov/large-scale-residential-demolition/reuse-and-recycling-opportunities-and-demolition>

<https://restore.tchabitat.org/>

<https://betterfuturesminnesota.com/>

<http://bauerbrotherssalvage.com/>

Questions?

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651-266-1182