



# Deconstruction Program

City of Portland, Oregon

Shawn Wood

*Construction Waste Specialist*



Bureau of Planning and Sustainability

Innovation. Collaboration. Practical Solutions.



# What's the Problem?

- 800 billion tons of natural resources worldwide are stored in the built environment
- Construction and demolition debris – up to 50% of Landfill
- Global volume to nearly double by 2025
- Environmental impacts associated with production of new materials and fate of old materials



# Unnatural Disaster

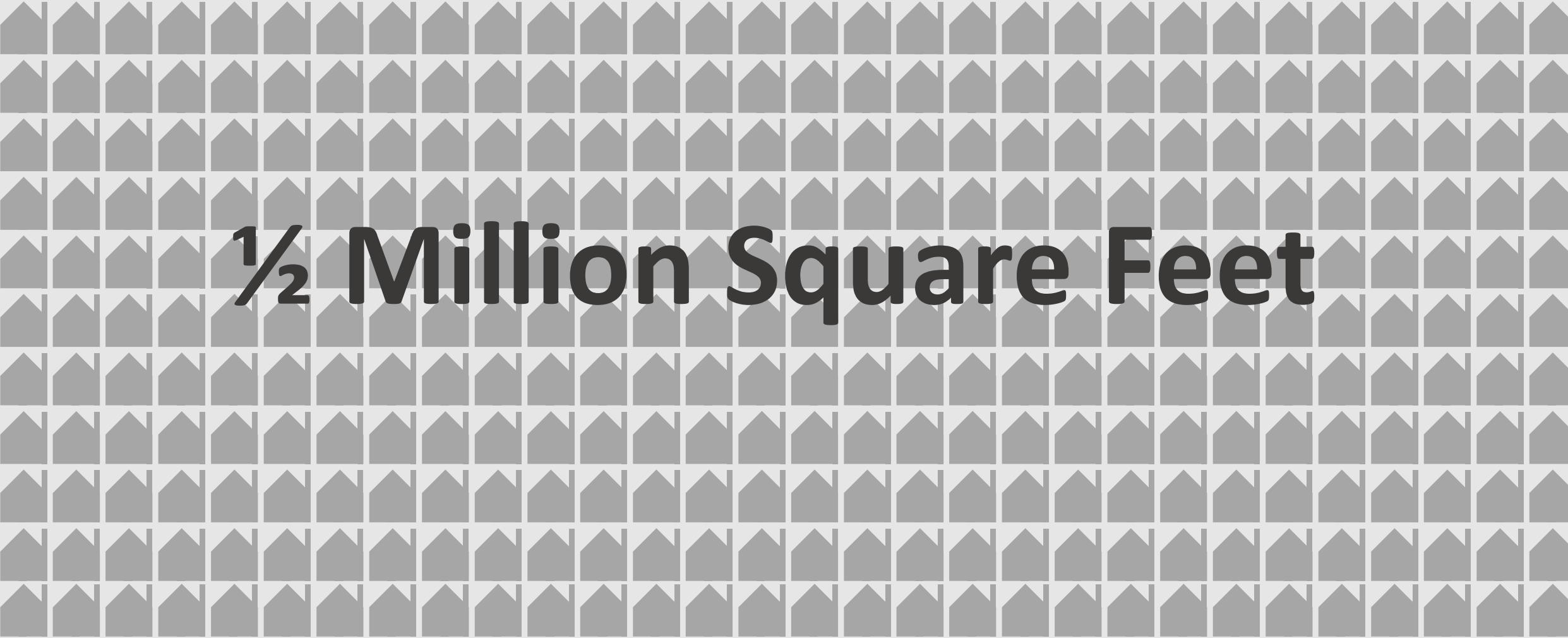


**Construction debris causes landslide in Shenzhen, China (2015)**

- Size of 70 football fields
- 80+ people died
- 33 buildings destroyed



# Annual House Demolitions in Portland



**1/2 Million Square Feet**

# Mechanical Demolition





# Deconstruction





# Mechanical Demolition



# Issue and Action



Protesting



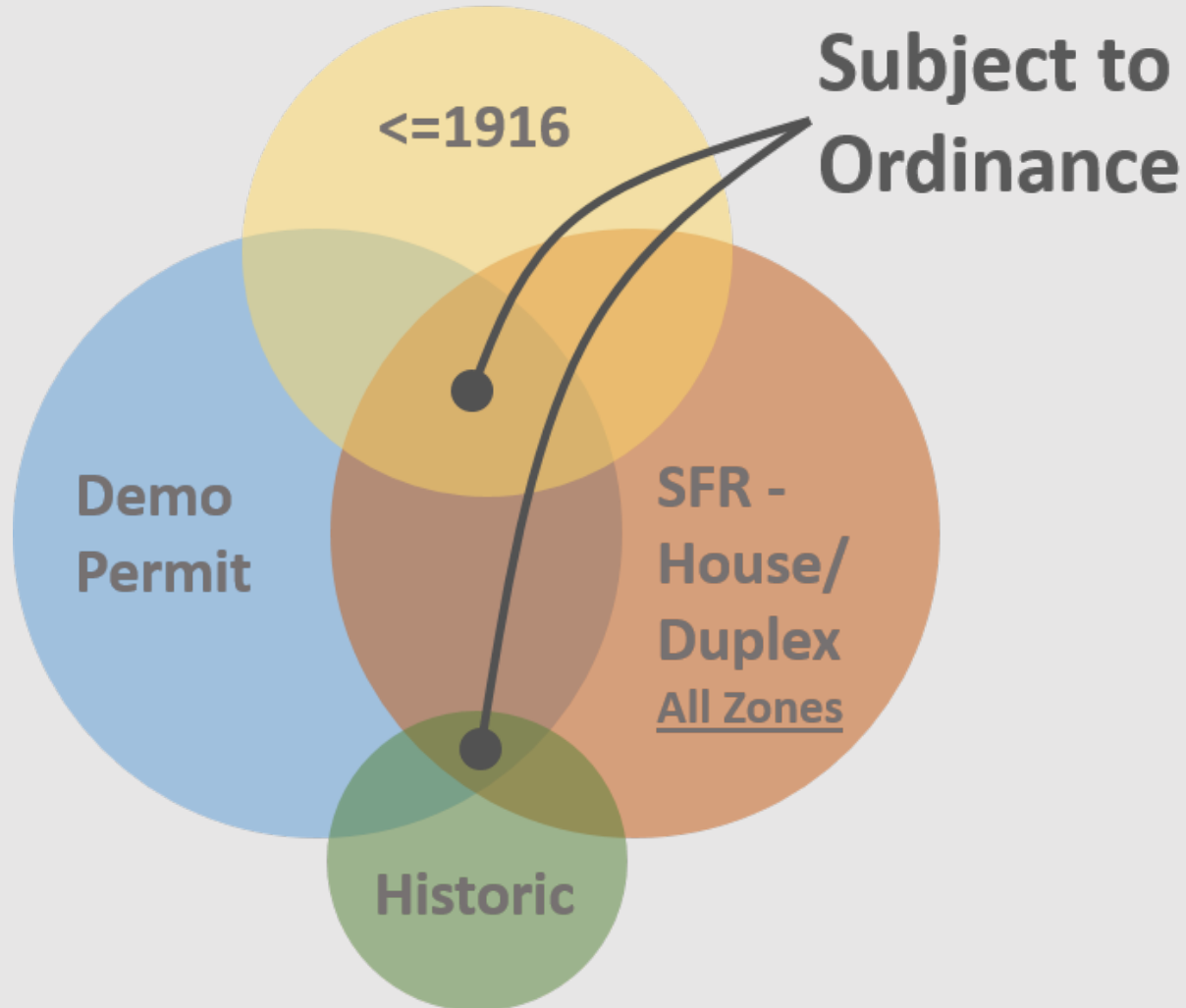
More Protesting



Deconstruction Advisory Group (DAG)



# Deconstruction Ordinance

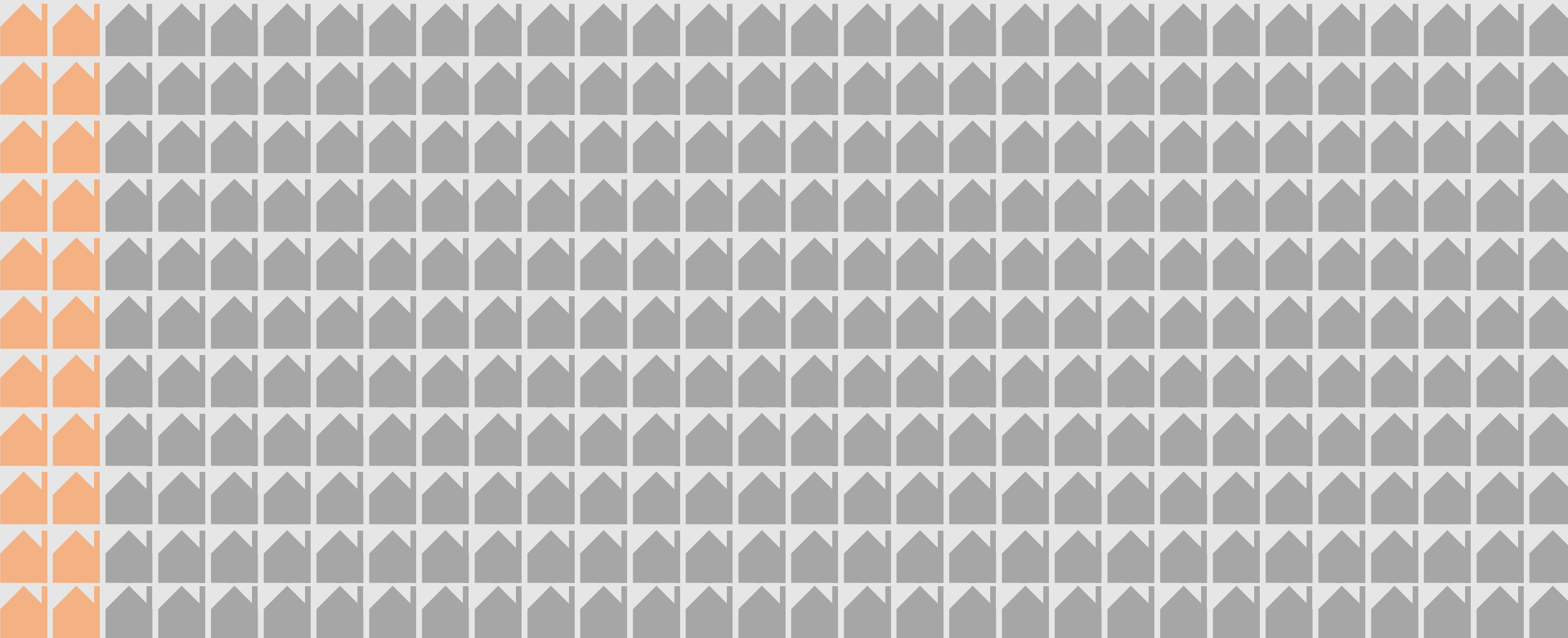


Effective Oct 31, 2016  
deconstruction required for  
house/duplex if:

- The structure was built in 1916 or earlier; or
- The structure is a designated historic resource.

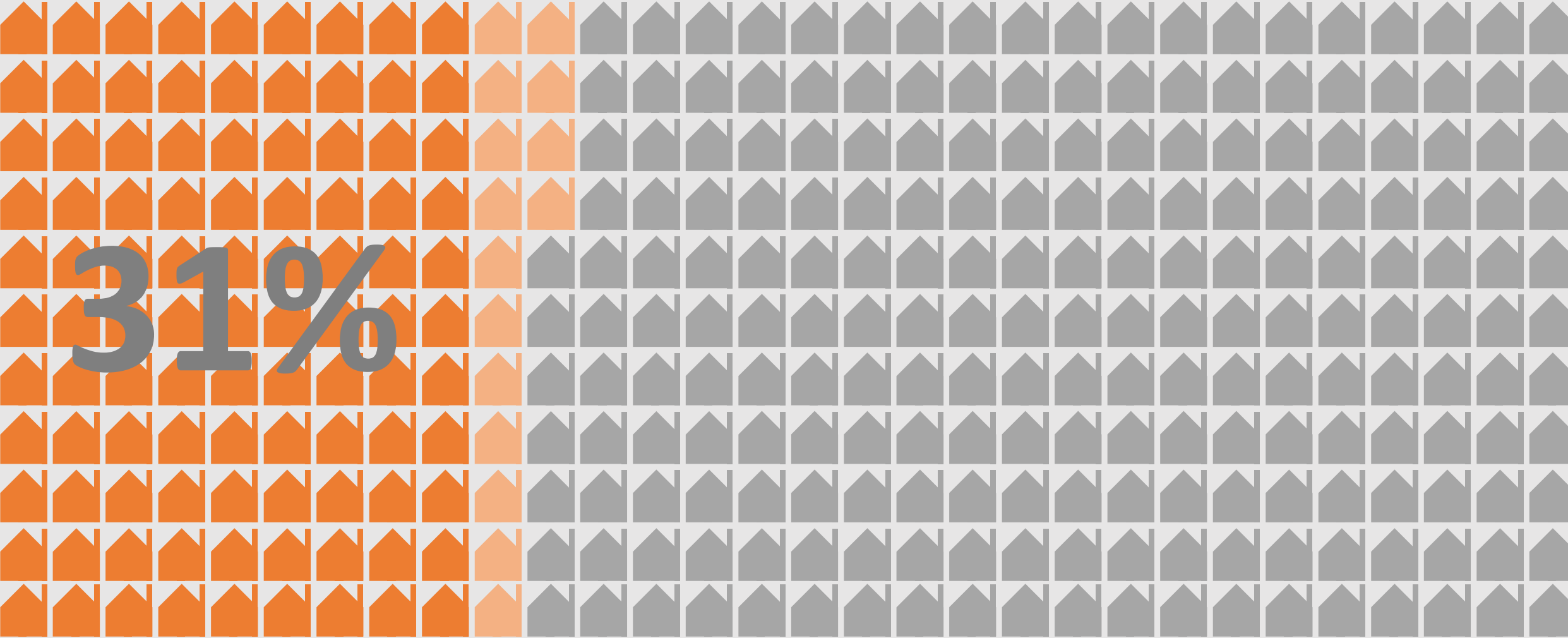
Only certified deconstruction  
contractors can do work

# Annual House Deconstructions – Pre Ordinance

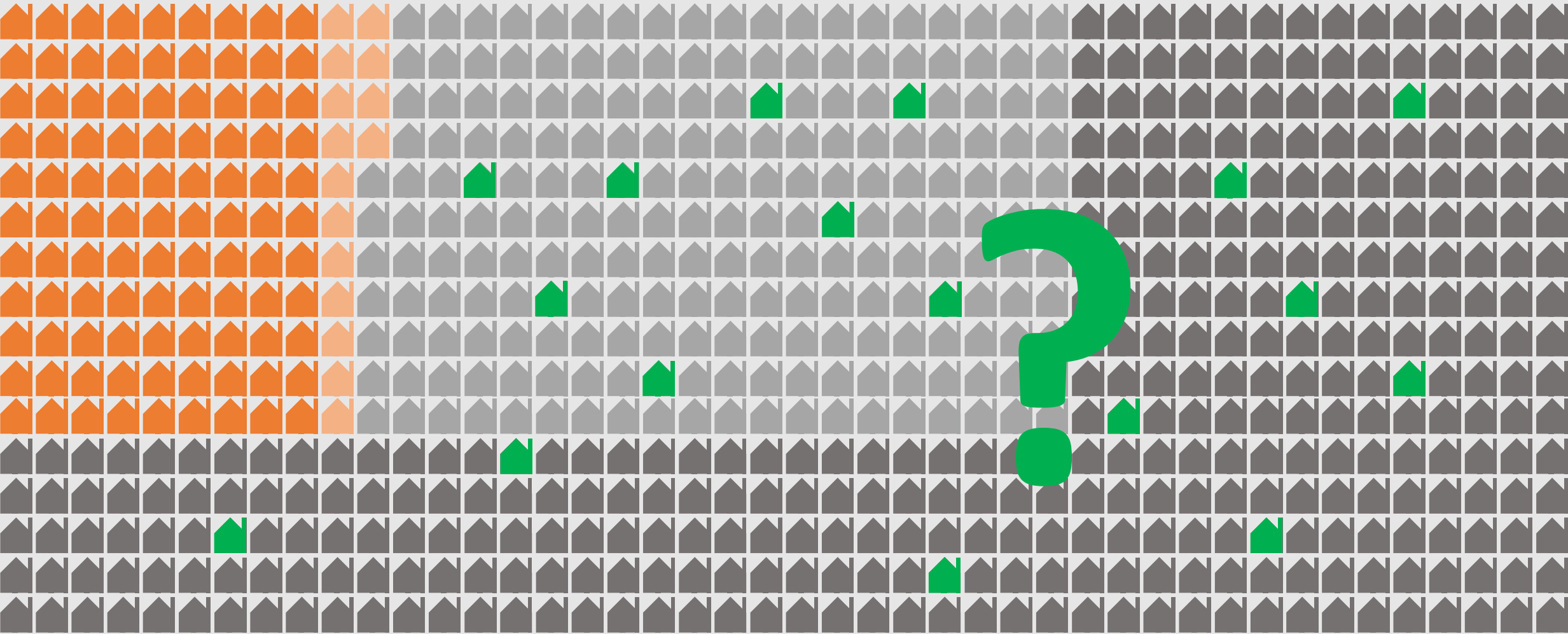




# Annual House Deconstructions – Post Ordinance



# Demolition Site Control Requirements (Lead/Asbestos) – July 2018





# Outcomes



# Certified Deconstruction Contractors



Good Wood Deconstruction & Salvage



Northwest Deconstruction Specialists



ReBuilding Center



3-Diamond Construction



# Deconstruction Training

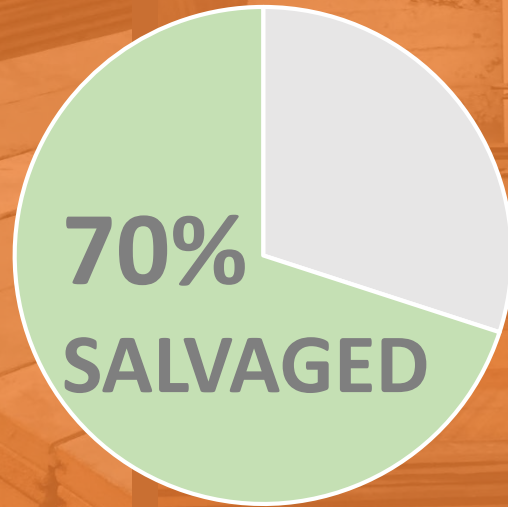
- Trained over 30 people
- Contractor training
- Workforce training





# Materials

**BUILDING MATERIAL**



**5m**





# Reuse



Bars



Furniture

Restaurants



# Net Environmental Benefits (Decon vs Demo)



## Average Per House Benefit

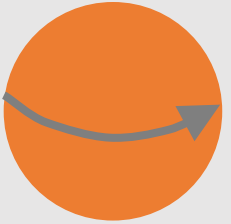


= 689 gallons gas

## Annual Total Benefit



= 1,501,716 miles driven



= 60 times around planet

# Growth Rings...

Portland  
Milwaukee  
San Francisco/Bay Area  
Denver  
Pittsburgh  
San Antonio  
Austin  
Phoenix  
Minneapolis  
Philadelphia  
Seattle

- US EPA
- Building Materials Reuse Association (BMRA)
- Oregon DEQ
- University Students (West Coast, Mid West, East Coast)



# Contact Information



**Shawn Wood**  
City of Portland  
[Shawn.Wood@portlandoregon.gov](mailto:Shawn.Wood@portlandoregon.gov)  
503-823-5468