

USDA Forest Service

# URBAN FOREST CONNECTIONS

*webinar series*

Second Wednesdays | 1:00 – 2:15 pm ET

[www.fs.fed.us/research/urban-webinars](http://www.fs.fed.us/research/urban-webinars)

● This meeting is being recorded. If you do not wish to be recorded, please disconnect now.

USDA is an equal opportunity provider and employer.



# UNEARTHING POTENTIAL: VACANT LAND CHALLENGES, SOLUTIONS, AND OPPORTUNITIES



**Kevin Schronce**

*Lead Planner  
City of Flint, Michigan*



**Amber Knee**

*Program Manager, Philadelphia  
LandCare Program  
Pennsylvania Horticultural Society*



**Michelle Kondo**

*Social Scientist  
USDA Forest Service*

Michelle C. Kondo, Ph.D.

*Research Social Scientist*

USDA Forest Service

Northern Research Station @usfs\_nrs

Philadelphia Field Station #phillyfieldstation

[michelleckondo@fs.fed.us](mailto:michelleckondo@fs.fed.us)

@MichelleCKondo

# Vacant Land in the US

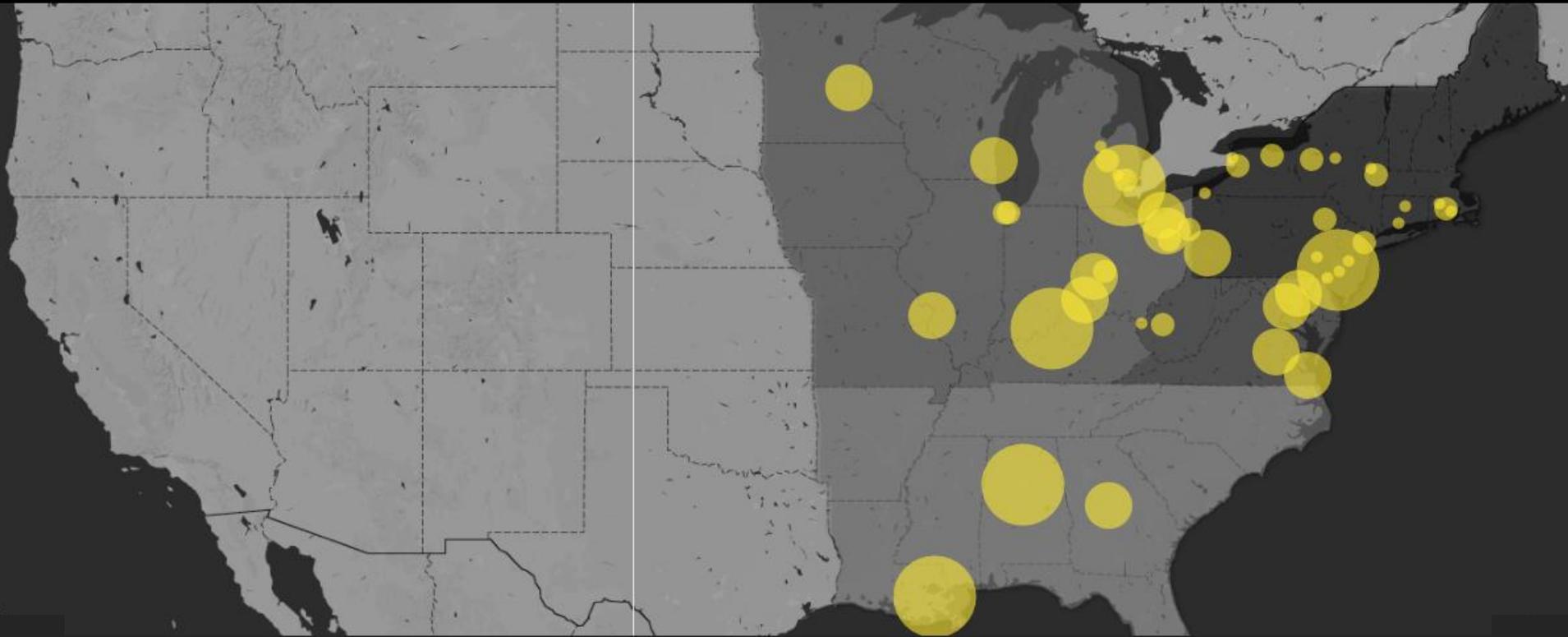


# Vacant land in the US

- Declining populations
- Foreclosures
- Brownfields

# WHERE ARE LEGACY CITIES?

Legacy Cities by Geographic Size



  
<20 sq. mi.

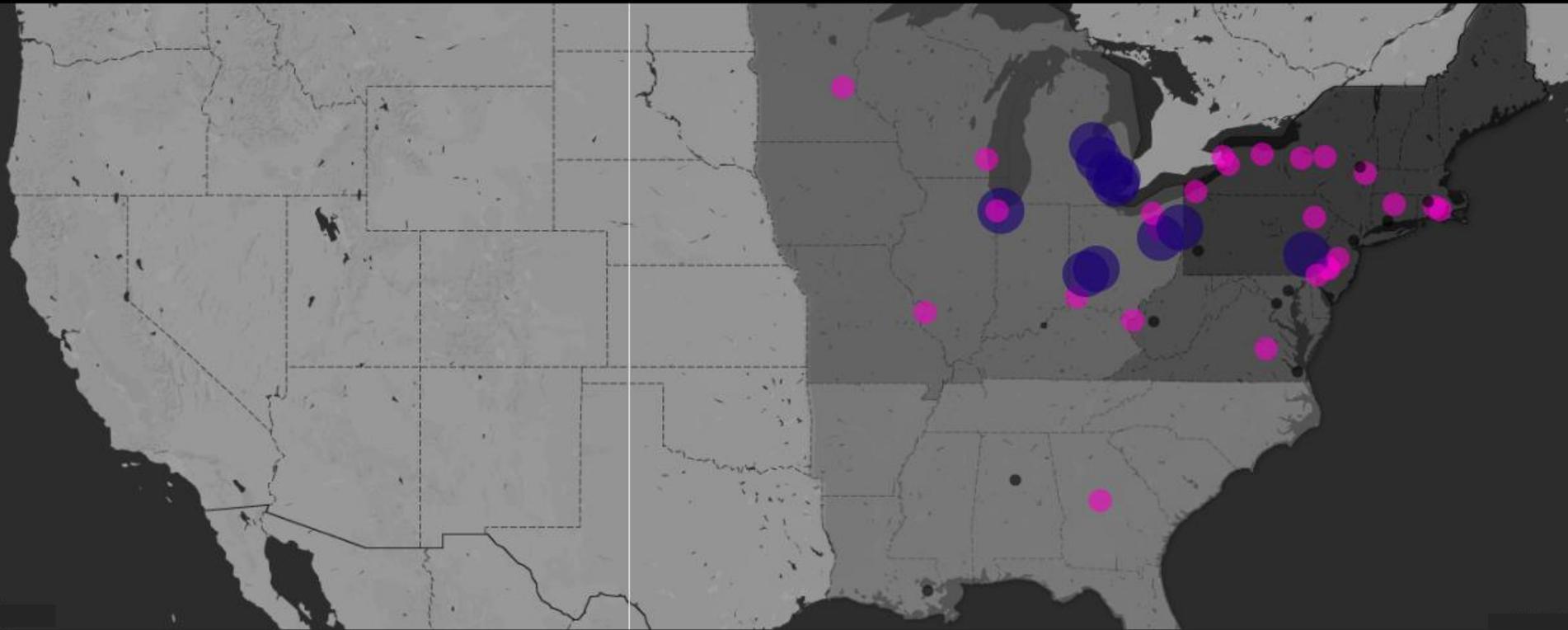
  
20-50 sq. mi.

  
50-100 sq. mi.

  
>100 sq. mi.

# WHO IS BEING LEFT BEHIND?

Changes in Poverty (2000-2010)



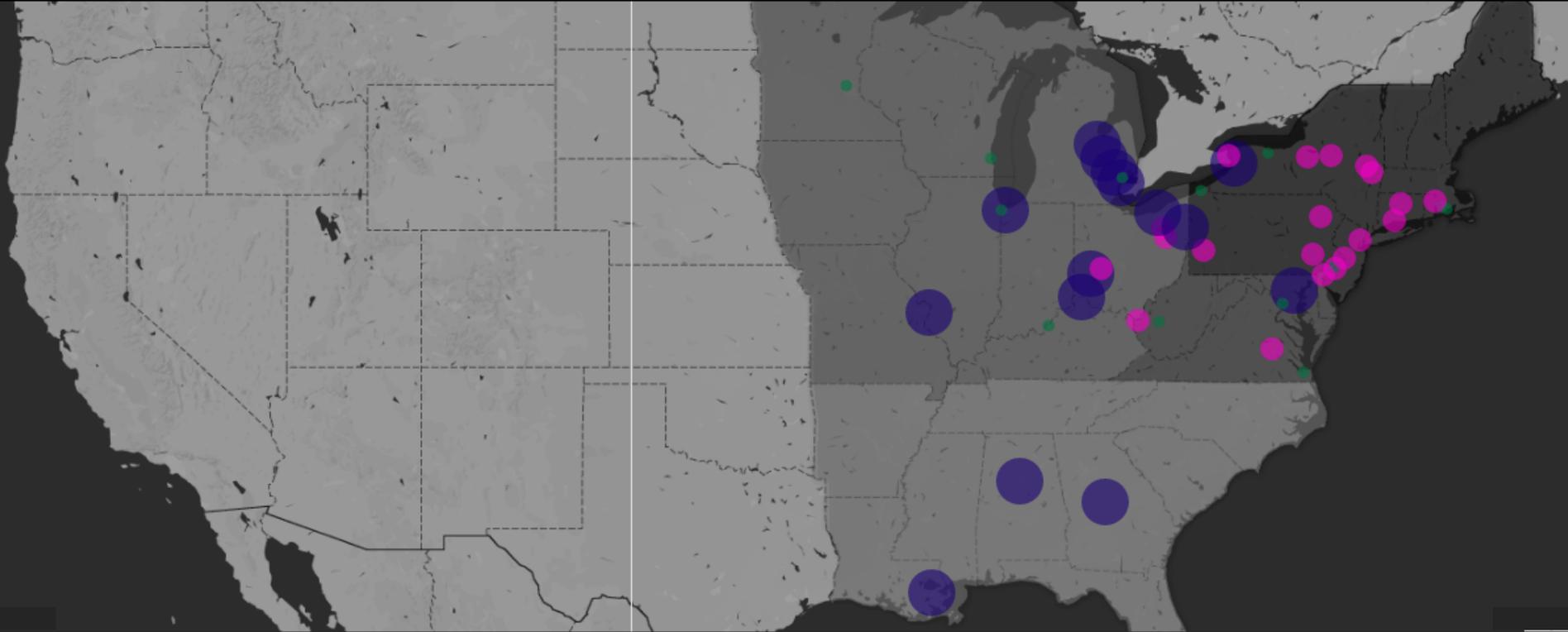
1% - 5% Decrease

0% - 5% Increase

>5% Poverty Increase

# WHAT'S THE PHYSICAL CONDITION?

Residential Vacancy in Cities (2010)



 <10% Vacancy

 10% - 15% Vacancy

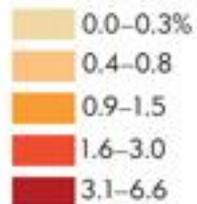
 >15% Vacancy

# In the West: Foreclosures & Brownfields

## Foreclosures, by county

January–September 2007

(As a percentage of estimated total housing units in 2006)

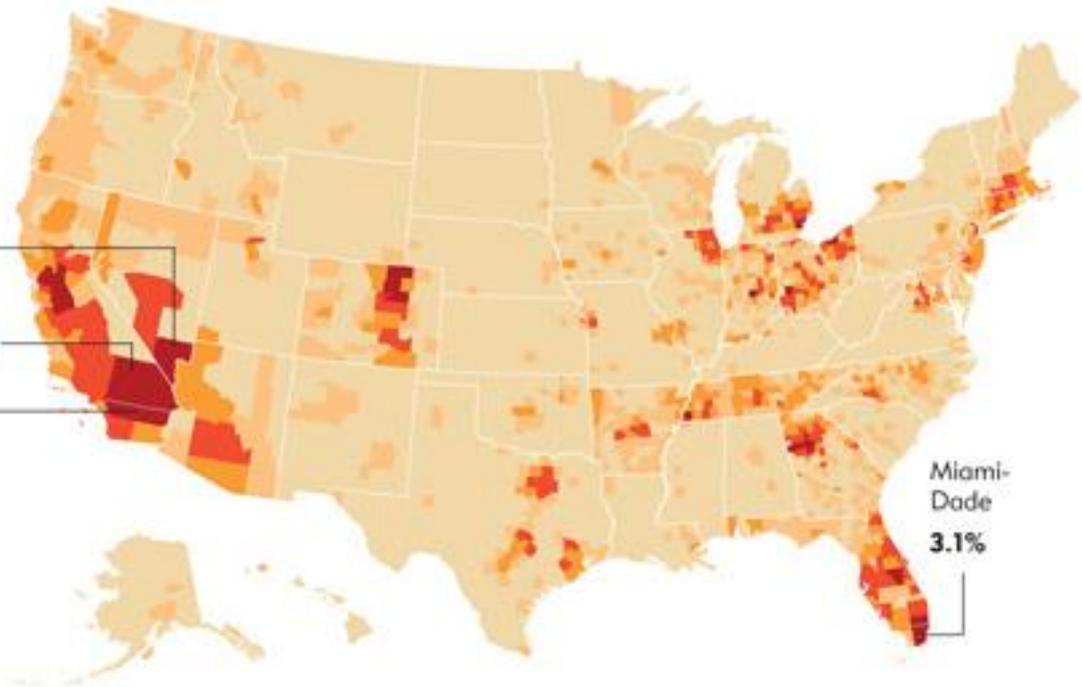


Clark **4.5%**

San Bernardino **3.7%**

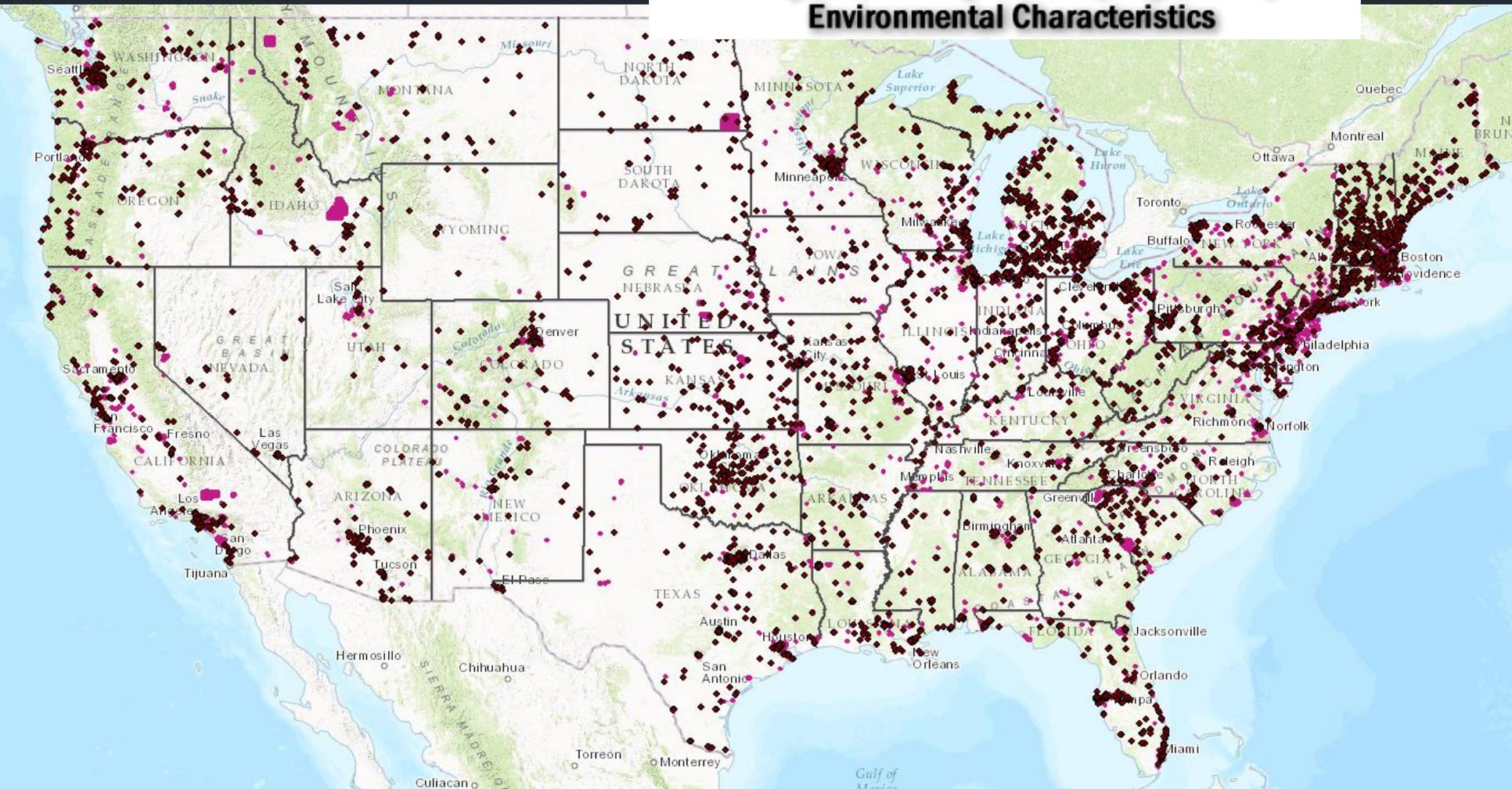
Riverside **4.1%**

Miami-Dade  
**3.1%**



# In the West: Foreclosures & Brownfields

Columbia University Superfund Research Program Online Mapping Project  
**NPL Superfund Footprint: Site, Population, and  
Environmental Characteristics**



US EPA Brownfields & National Priority List (NPL) Sites

<http://superfund.ciesin.columbia.edu/sfmapper>

# Vacant Land Typologies

## Residential



Pennsylvania Horticultural Society

## Commercial



<http://chicago.cbslocal.com>  
Scott Olson/AFP/Getty Images

## Industrial



<https://nextcity.org>  
Mike Linksvayer on Flickr



<http://www.zdnet.com>



<http://www.businessinsider.com>



<http://planphilly.com>

# Vacant Land Costs

- Lost household wealth
- Maintenance costs
- Remediation costs
- Uncollected property taxes
- Court / adjudication costs
- Public safety
- Public health

Michelle C. Kondo, Ph.D.

*Research Social Scientist*

USDA Forest Service

Northern Research Station @usfs\_nrs

Philadelphia Field Station #phillyfieldstation

[michelleckondo@fs.fed.us](mailto:michelleckondo@fs.fed.us)

@MichelleCKondo

# Research on Vacant Land and Public Health and Safety

# Vacant Land and Health, Crime and Violence

Vacant



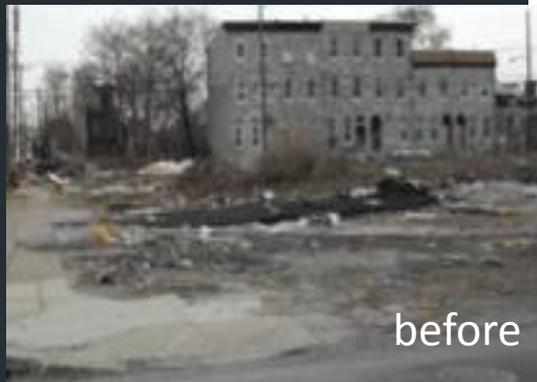
- Trash dumping
- Rodents
- Pathogens
- Illicit activity
- Fear, anxiety, stress, depression

Cleaned, greened & maintained

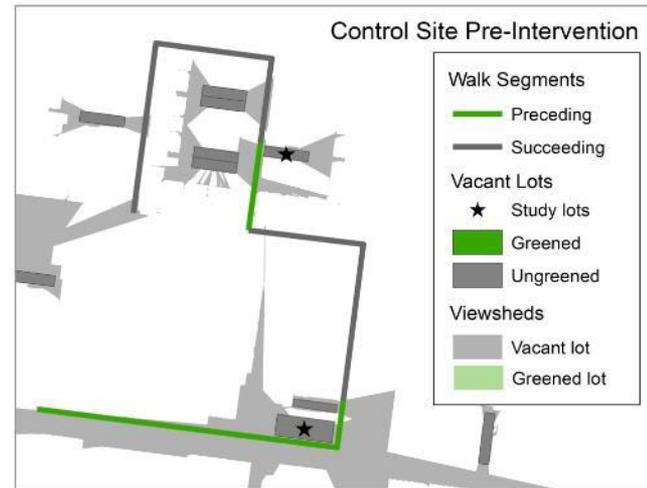
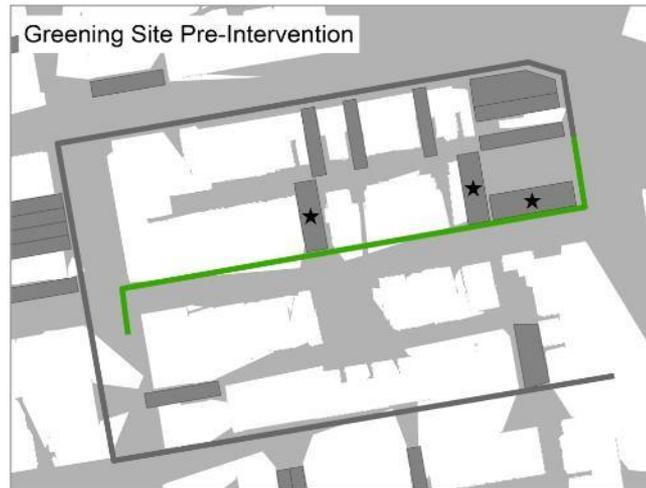


- Reduced stress, fear
- Reduced crime and violence
- Improved public health

# Does vacant-lot clean & green impact stress levels (HR) of nearby residents?



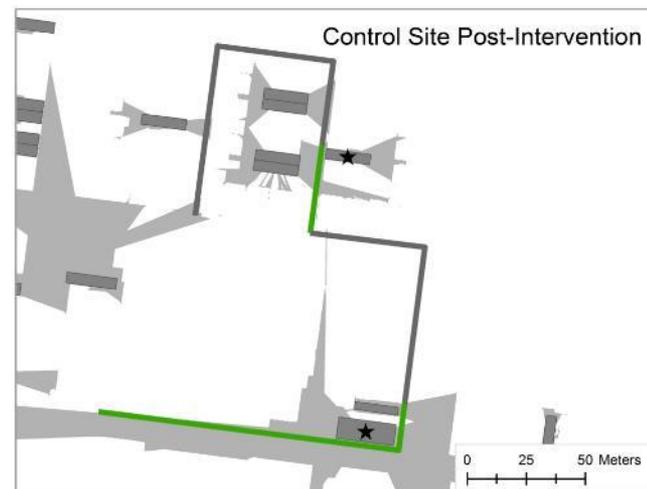
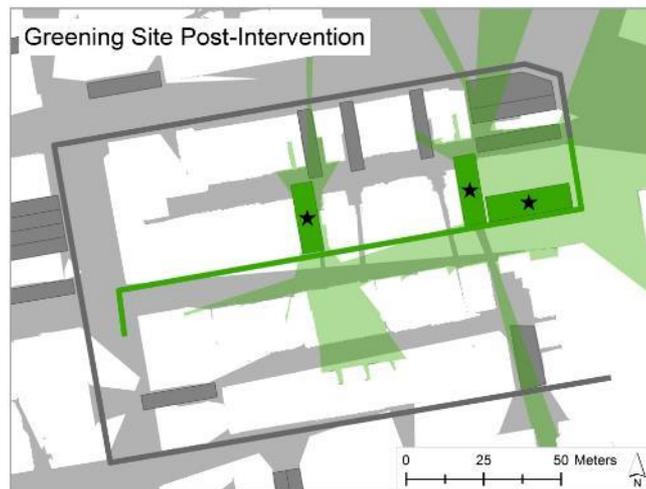
before



Photos:  
Pennsylvania Horticultural Society



after



South, Kondo, Cheney, Branas (2015) Neighborhood blight, stress, and health: A walking trial of urban greening and ambulatory heart rate. *American Journal of Public Health* 105(4):909-913.

# Does vacant-lot clean & green impact stress levels (HR) of nearby residents?

- 12 participants
- Compared average heart rates:
  - pre-post greening
  - within- vs. out-of-view
  - preceding vs. succeeding greened lots
- Results: heart rate decreased when in view of vacant lots
- -15.6 bpm (Greened site) vs. -1.7 bpm (Control site)



# Vacant Lot Greening & Crime

An evaluation of the *Landcare* Program in Philadelphia 1999-2008

- Crime & health outcomes near 4,436 “cleaned-and-greened” lots compared to near 13,308 untreated vacant lots
- Reductions in gun assaults city-wide, & in vandalism in W Phila
- Less stress and more exercise in some parts of the city

# Doors and Windows Treatment & Crime

An evaluation of effects of Doors & Windows treatment on crime in Philadelphia, PA (2011-2014)

Results: significant reductions in assaults, gun assaults, nuisance crimes



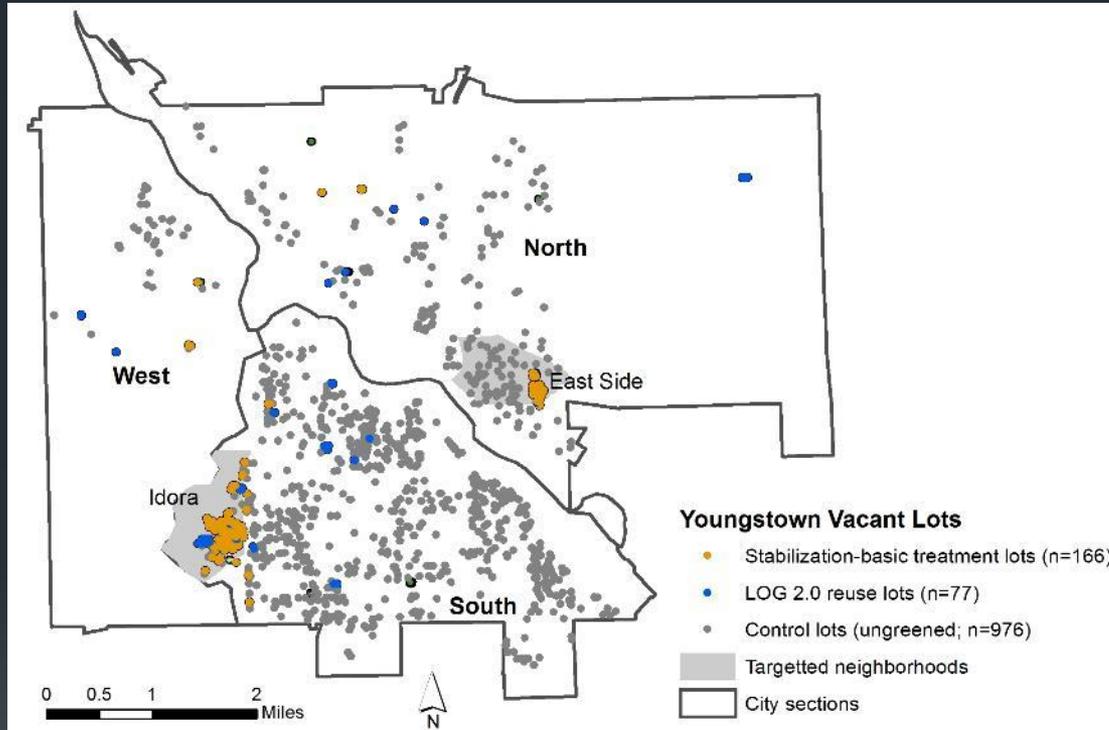
# Does community-engaged greening of vacant lots influence violence?

- Increased participation by neighborhood residents
- Improved community pride
- Removed locations for criminal activity
- Visible signs of care and ownership

# Vacant Lot Greening & Crime

An evaluation of the *Lots of Green* (LOG) Program in Youngstown, OH 2010-14

- 244 greened lots randomly matched with 959 control vacant lots



LOG 1.0: "clean & green"



LOG 2.0: "community reuse"



Youngstown Lots of Green Overview Report

# Vacant Lot Greening & Crime

An evaluation of the *Lots of Green* (LOG) Program in Youngstown, OH 2010-14

- Reductions in burglaries and robberies (all lots & community reuse lots; reductions in assaults and violent felonies (community reuse lots)
- Spill-over crime-reduction effects into neighboring areas, especially with community reuse lots

LOG 1.0: “clean & green”



LOG 2.0: “community reuse”



Youngstown Lots of Green Overview Report

# Vacant-lot greening with community engagement trial in Flint, Youngstown & Camden

- Is community empowerment a vital component for establishing busy streets and preventing youth violence?
- Experimental design to compare youth-engaged greening versus professionally implemented greening



<http://yvpc.sph.umich.edu/>

# Vacant Land and Health, Crime and Violence

Vacant



- Trash dumping
- Rodents
- Pathogens
- Illicit activity
- Fear, anxiety, stress, depression

Cleaned, greened & maintained



- Reduced stress, fear
- Reduced crime and violence
- Improved public health