Smart Growth
for Dallas

*Data-driven decisions for the future of Dallas'
parks, open spaces, and green infrastructure*

Dallas Park and Recreation Board
March 10, 2016

THE TRUST FOR PUBLIC LAND

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TEXAS TREES FOUNDATION

Agenda

I. Welcome and Introductions

II. Program Overview

III. Live Demo: Decision Support Tool

The Trust for Public Land Climate-Smart Cities:
"Healthy, Connected Chattanooga"

IV. Community Engagement

buildingcommunityWORKSHOP:
People Organizing Place (POP)

V. Urban Heat Island

The Texas Trees Foundation

VI. How can this be used in Dallas?

VII. Questions and Discussion

I. WELCOME & INTRODUCTIONS

About The Trust for Public Land

The **Trust for Public Land** works across the country to create new parks and protect land for people, ensuring healthy, livable communities for generations to come.

Since our founding in 1972, we've created and protected more than 5,000 special places across the country. More than 7 million people live within a 10-minute walk of a place that we have created or protected. We have helped generate nearly $60 billion in public funding for parks and natural areas through ballot measures supported by nearly 100 million voters in 37 states.

About Our Partners

The **buildingcommunityWORKSHOP** is a Texas based nonprofit community design center seeking to improve the livability and viability of communities through the practice of thoughtful design and making. We enrich the lives of citizens by bringing design thinking to areas of our city where resources are most scarce.

The Texas Trees Foundation preserves, beautifies, and expands parks and other public natural green spaces, public streets, boulevards, and rights-of-way by planting trees and encouraging others to do the same through educational programs that focus on the importance of building and protecting the "urban forest" today as a legacy for generations to come.

II. PROGRAM OVERVIEW
Smart Growth for Dallas

WITH A GROWING POPULATION AND BOOMING ECONOMY, DALLAS STANDS ON THE CUSP OF A NEW ERA IN ITS HISTORY.

Through optimism and collaboration

our city is busy

re-creating

our public spaces in the most

extraordinary

ways imaginable.

BUT CHALLENGES STILL REMAIN…
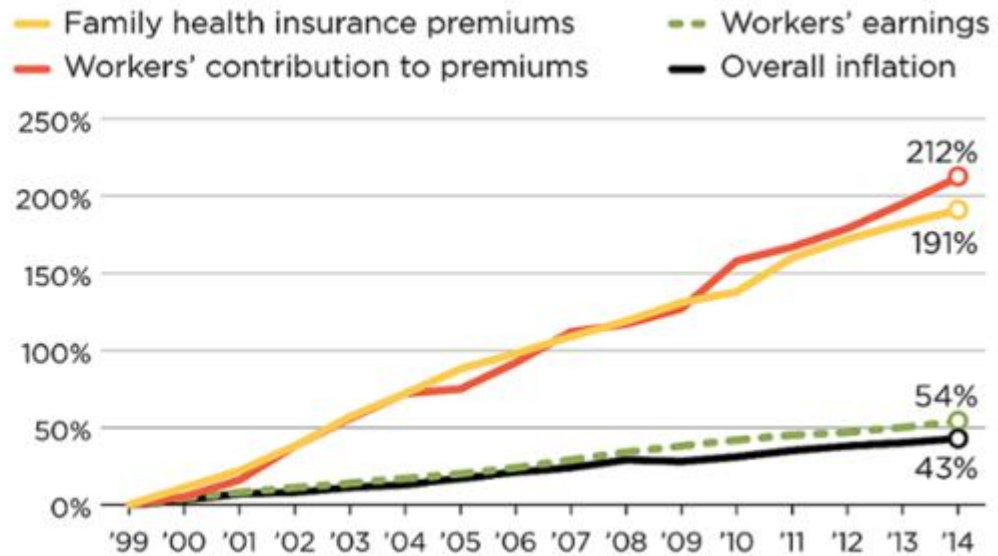
BUT CHALLENGES STILL REMAIN…

The Dallas Morning News

Texas workers' health insurance costs near highest in nation

Galloping U.S. health care costs

Cumulative increases in health insurance premiums, workers' contributions to premiums, inflation, and workers' earnings, 1999-2014

SOURCE: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2014; Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 1999-2014; Bureau of Labor Statistics, Seasonally Adjusted Data from the Current Employment Statistics Survey, 1999-2014 (April to April)

— Family health insurance premiums
— Workers' contribution to premiums
-- Workers' earnings
— Overall inflation

250%
212%
200%
191%
150%
100%
54%
50%
43%
0%
'99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14

THE TEXAS TRIBUNE

In DFW, Struggle to Save Water and Prepare for Growth

The Dallas Morning News

Dallas officials to get update on bike lanes, 'complete streets' efforts

2011 File Photo/David Woo

Lowest Greenville was the site of one of the most notable "complete streets" redos. The number of lanes has dropped, parking has been added, sidewalks widened and crosswalks enhanced.

TexasMonthly

Boom With A View

THE PERIL AND PROMISE OF BEING ONE OF THE FASTEST-GROWING CITIES IN TEXAS.

The Dallas Morning News

Poverty is eating at Dallas' core

DALLAS BUSINESS JOURNAL

$1B 'Plan for Growth' in South Dallas

WFAA 8 abc
WFAA.com

Portion of Loop 12 to be closed for a week after floods

Flooding in Dallas. Friday, May 29, 2015. *(Photo: WFAA)*

Dallas' green areas could be used creative and unique in designing an addressing the city's biggest *economic* **social** and *ecological* challenges of today.

15

WITH DALLAS' GROWTH ONLY ACCELERATING, NOW IS THE TIME TO LAY THE FRAMEWORK FOR SMART, DATA-DRIVEN DECISIONS ABOUT OUR CITY'S FUTURE.

Introducing:

Smart Growth
for Dallas

Data-driven decisions for the future of Dallas'
parks, open spaces, and green infrastructure

Key Deliverables

Community Engagement

Identification of High-Priority Parcels

Interactive Decision Support Tool

Feasibility Study for Demonstration Project

Building on local success…

In collaboration with bcWORKSHOP, Texas Trees Foundation, and others, we developed *Smart Growth for Dallas* to be the "next step" that continues the work already underway in Dallas.
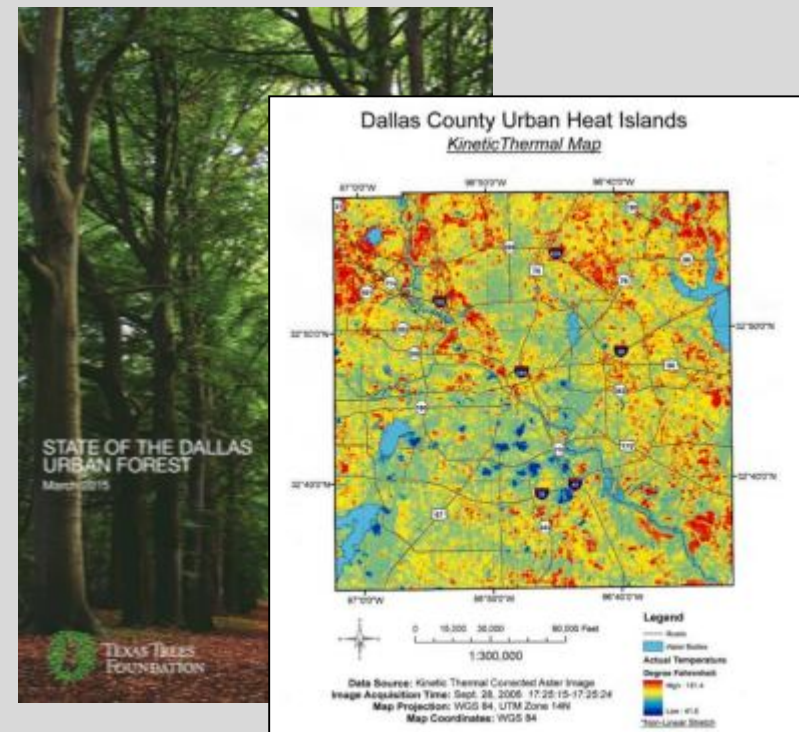
bcWORKSHOP
Race and the Control of Public Parks

Texas Trees Foundation
State of the Dallas Urban Forest

…using a proven framework.

Smart Growth for Dallas deploys The Trust for Public Land's innovative **Climate-Smart Cities** methodology in our local context. This program uses four strategies to help cities improve their climate resiliency:

We've successfully deployed this program in cities across the country, including:

- Chattanooga, TN
- Boston, MA
- Boston, MA
- New York, NY
- Los Angeles, CA
- Kirkland, WA

Community Engagement

- ## COMMUNITY MEETINGS
  Series of large and small-format meetings across the city to frame objectives, gather non-GIS data, and share results of program.

- ## TECHNICAL ADVISORY COMMITTEE
  Composed of representatives from the project partners, City of Dallas staff, and community stakeholders. Will provide expert input regarding planning objectives, data sources, and priorities.

- ## STORY WEBSITE
  Interactive mapping website of Dallas' parks, open spaces, and green assets. Will share results of Smart Growth for Dallas in a variety of formats, including videos featuring Dallas residents and park users.

# GIS-Based Analysis & Mapping

- IDENTIFY HIGH-PRIORITY PARCELS
  - *City-scale map identifying areas of high-opportunity, based on analysis of triple-bottom line objectives.*
  - *List of specific high-priority parcels that meet criteria for acquisition or green infrastructure intervention.*
  - *Economic valuation of parcels identified in report will be available for a select number of parcels*

- DECISION SUPPORT TOOL
  - *Interactive web-based platform to provide customizable map-based analysis of land in Dallas, based on identified economic, social, and ecological objectives.*
  - *Provides extensive data and priority modeling results at the parcel level*
  - *Users may identify high-value parcels, analyze parcels against spatial data, and make individual parcel reports*

Demonstration Project Feasibility Study

- A PLAN TO MOVE FORWARD
  With the results of the GIS analysis in-hand, we'll contribute our expertise in project design and development, green infrastructure planning, real estate, and fundraising to help implement on-the-ground smart growth strategies.
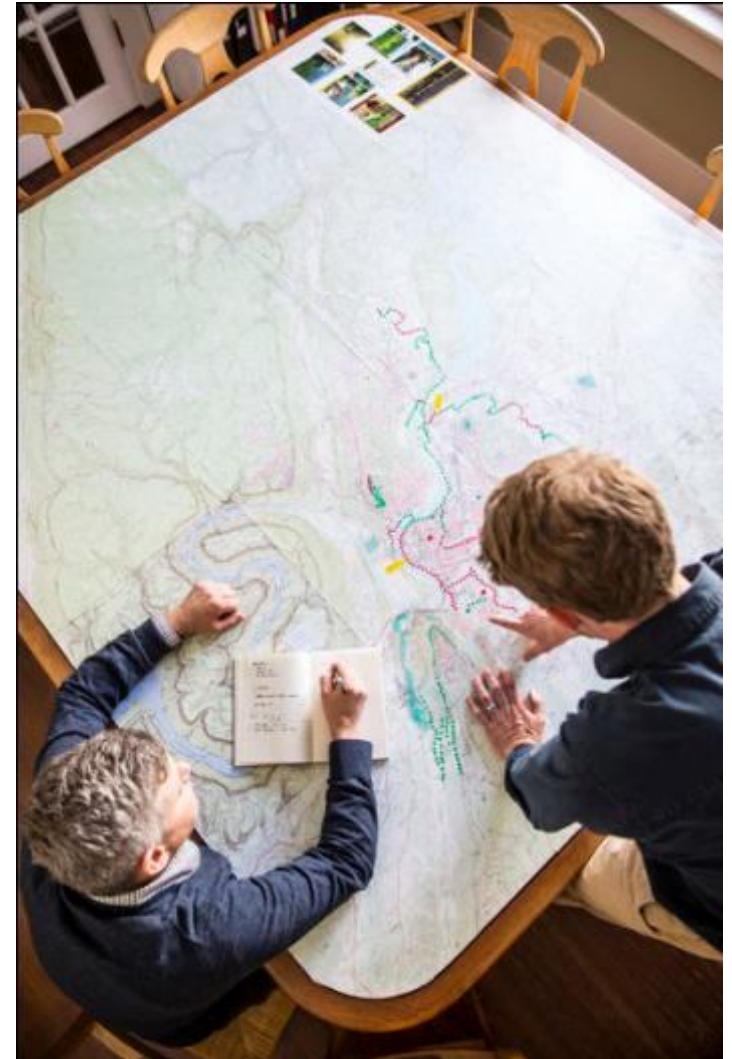
Our "Triple Bottom Line" Strategy

*Using **community engagement** and **GIS analysis** to optimize future green asset investments based on **economic**, **social**, and **ecological** objectives*
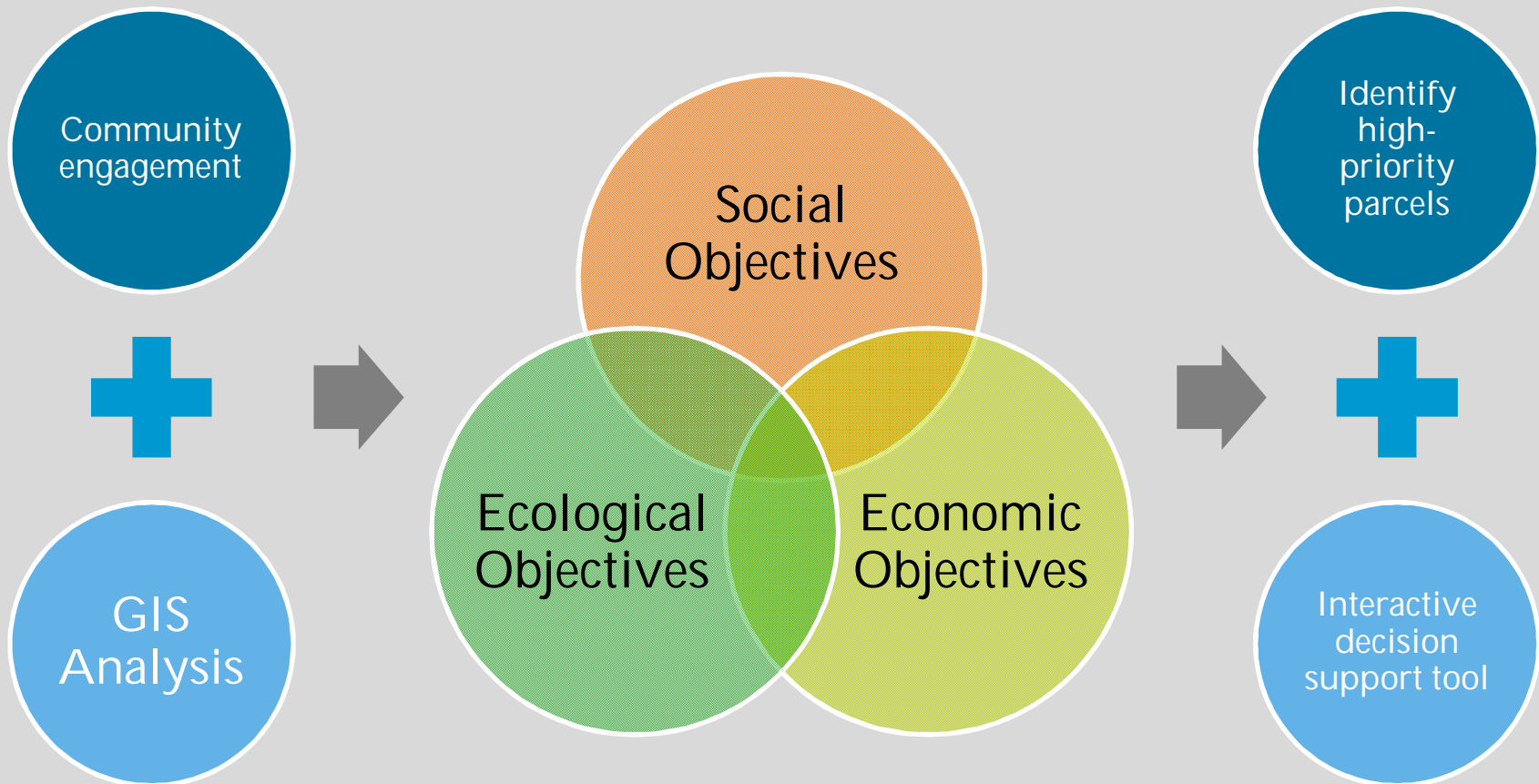
Ecological Objectives

- ABSORB
  Identify high-priority areas where parks, open space, and green infrastructure have potential to absorb stormwater and improve water quality in our creeks, lakes, and the Trinity River

- COOL
  Work with The Texas Trees Foundation & Georgia Tech to identify priority areas where heat island has a disproportionate effect on vulnerable populations

- PROTECT
  Identify optimum locations for additions to green buffers along the Trinity River and its tributaries, improving flood protection and reducing flood risk

Social Objectives

- ACTIVATE
  Analyze current strengths and gaps in park facility usage and activation, to identify targets for future investment of green assets.

- CONNECT
  Identify priority locations for deployment of green assets to improve connectivity between parks, trails, bike lanes, transit networks, residential, and employment centers.

- EDUCATE
  Identify education campuses with need for increased green space or park access.

Social Objectives *(continued)*

- EQUITY
  Identify opportunities for green asset investments to reduce barriers between social groups, improve park access for vulnerable and underserved populations, and make Dallas' parks and open space more equitable.

- HEALTH
  Identify highest priority neighborhoods for increased access to active recreation features for city residents, supporting more active and healthy lifestyles.

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Economic Objectives

- RECREATION VALUE
  Use a survey of residents and GIS analysis to quantify the economic value of recreation benefits that may be provided by creating a park on a specific parcel of land.

- HEALTH VALUE
  Calculate the economic value of medical care cost savings that may be realized by Dallas residents through their likely usage of a new park.

- PROPERTY VALUE
  Calculate the added market value that the creation of a park could bring to existing nearby residential properties.

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III. LIVE DEMO
"Healthy Connected Chattanooga"
Decision Support Tool

IV. COMMUNITY ENGAGEMENT
buildingcommunityWORKSHOP

Community Engagement

- Citywide Community Engagement
  - Informing the broader community of project process, objectives, schedule, & opportunities for participation
  - Collect information to inform the filtering of prioritized new park and park redevelopment opportunities in Phase 1

- Seven meetings
  - Spread across the city, guidance from partners and DPARD on locations

- Report on findings
  - Identification of new GIS data needed for Phase 2, guidance for the Technical Advisory Committee

Community Engagement

- Local Community Engagement:
  - Focused to gather information not captured in GIS analysis or not yet considered for GIS analysis
  - Gather stories about the relationship between parks and neighborhoods

- 20 meetings
  - Spread across the city with a variety of audiences: neighborhood groups, friends of parks groups, park users, Parks Department staff, service providers

- Report on findings
  - Identification of new GIS data needed for Phase 2, guidance for the Technical Advisory Committee

Citywide Public Presentation

- Share the findings of the program

- Seven meetings
  - Spread across the city in similar locations to the launch of the program

- Public website
  - Share the process and results in an accessible manner
 - Inform on how the program results are implemented

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Storytelling

- Short Film on the program and process
  - Reporting our and sharing stories

- Neighborhood Stories
  - Share stories about the connections between parks and neighborhoods, either importance

- People Organizing Place website of Dallas Parks
  - Share park features, stories, Friends Groups, etc.
  - Mapping new or desired park features

Storytelling – peopleorganizingplace.org
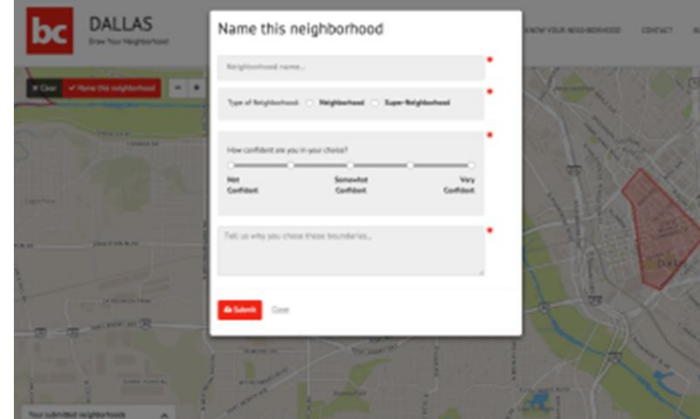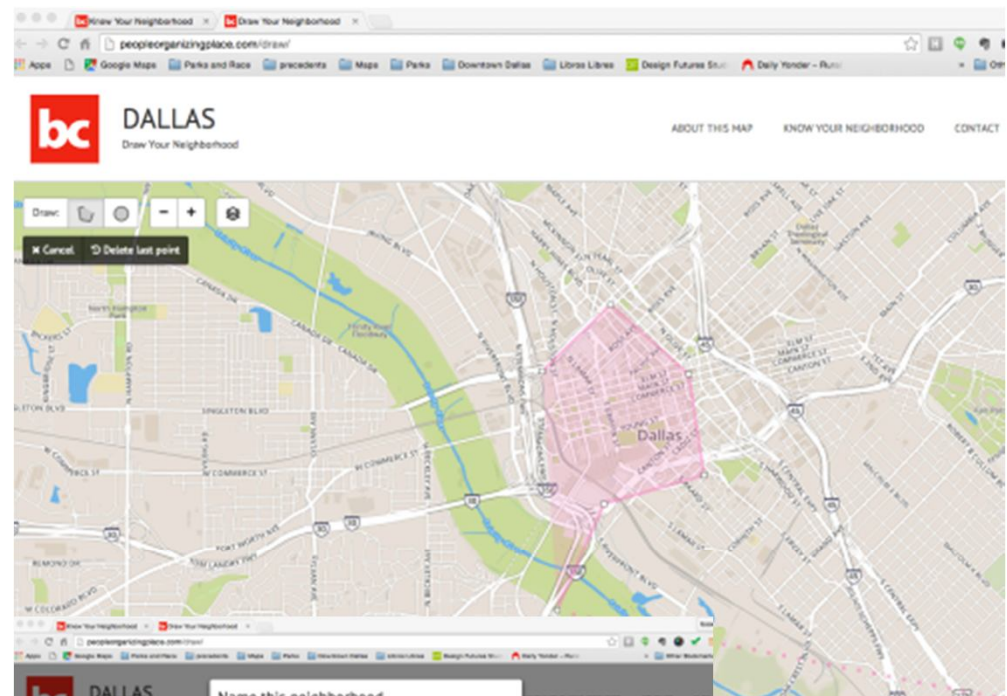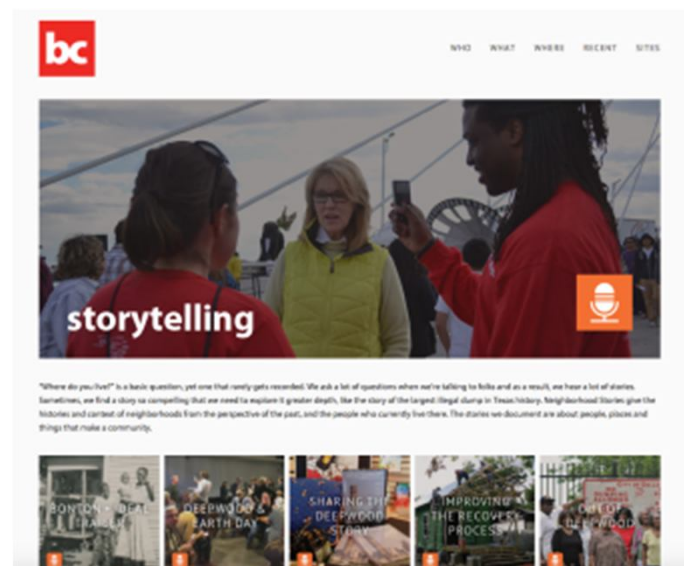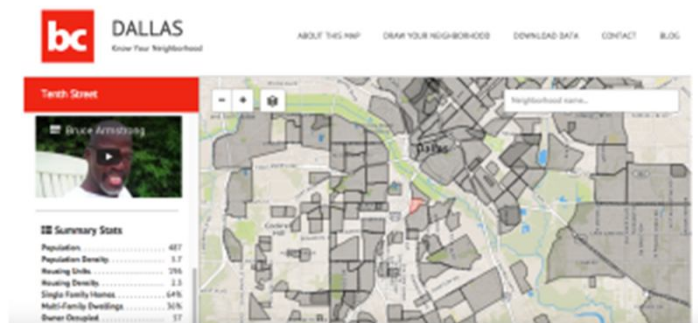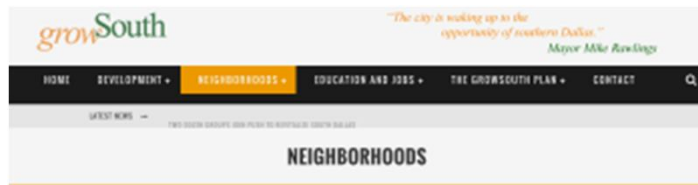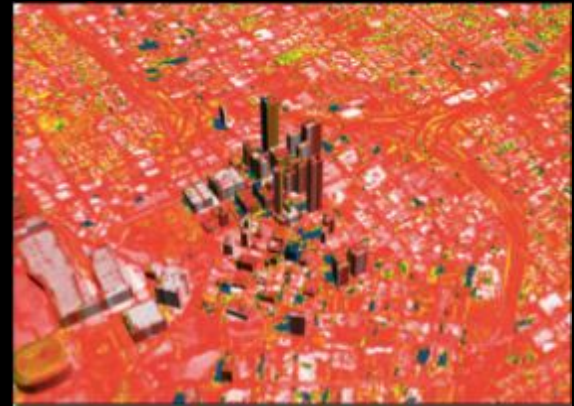
V. URBAN HEAT ISLAND
The Texas Trees Foundation

Green is the New Black: Managing Rising Heat Trends in Dallas

Matt Grubisich
Texas Trees Foundation
www.texastress.org

anomaly

risk

response

38

Drivers of the urban heat island

1. Loss of natural vegetation

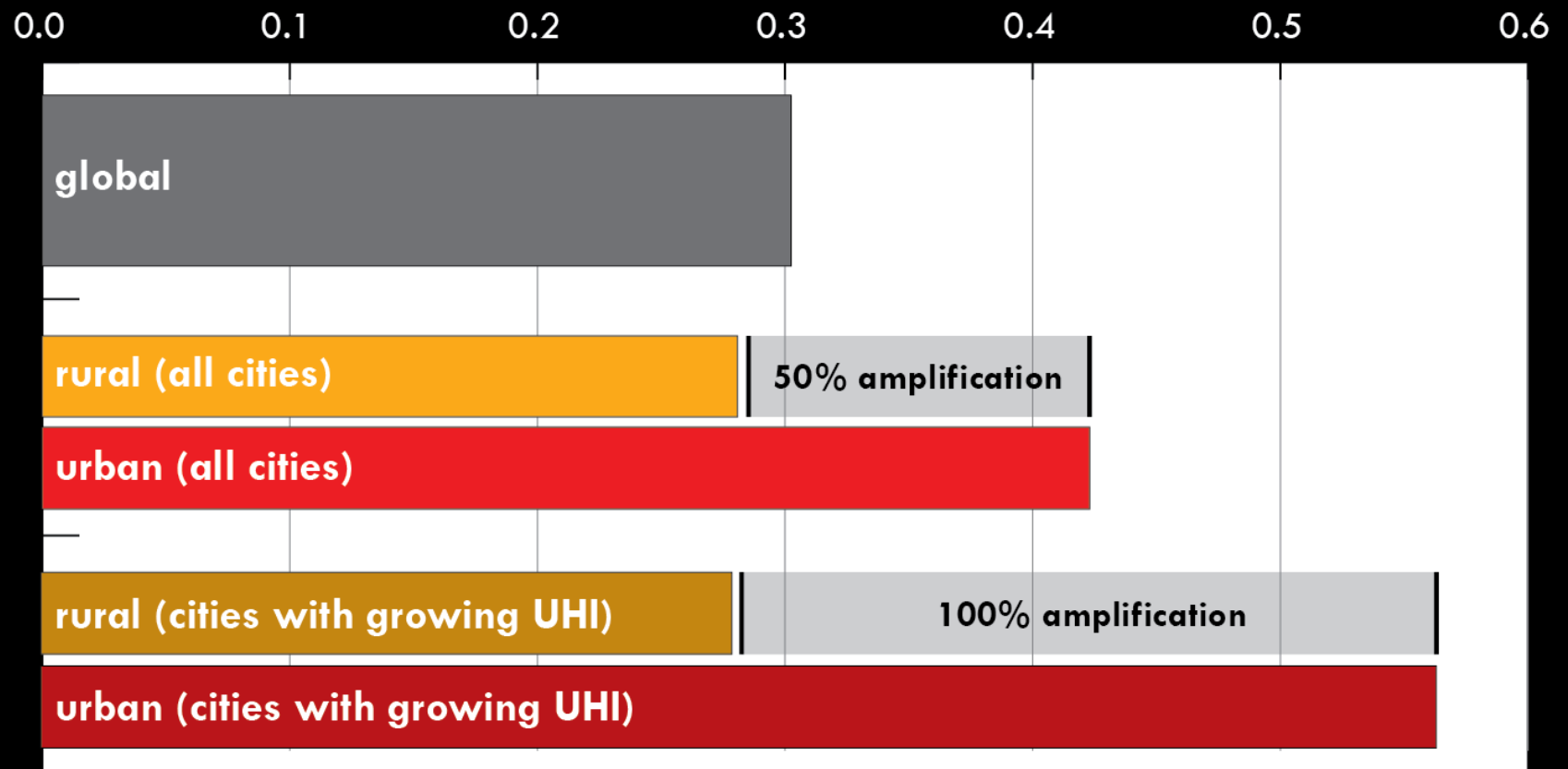2. Replacement of vegetation with impervious materials

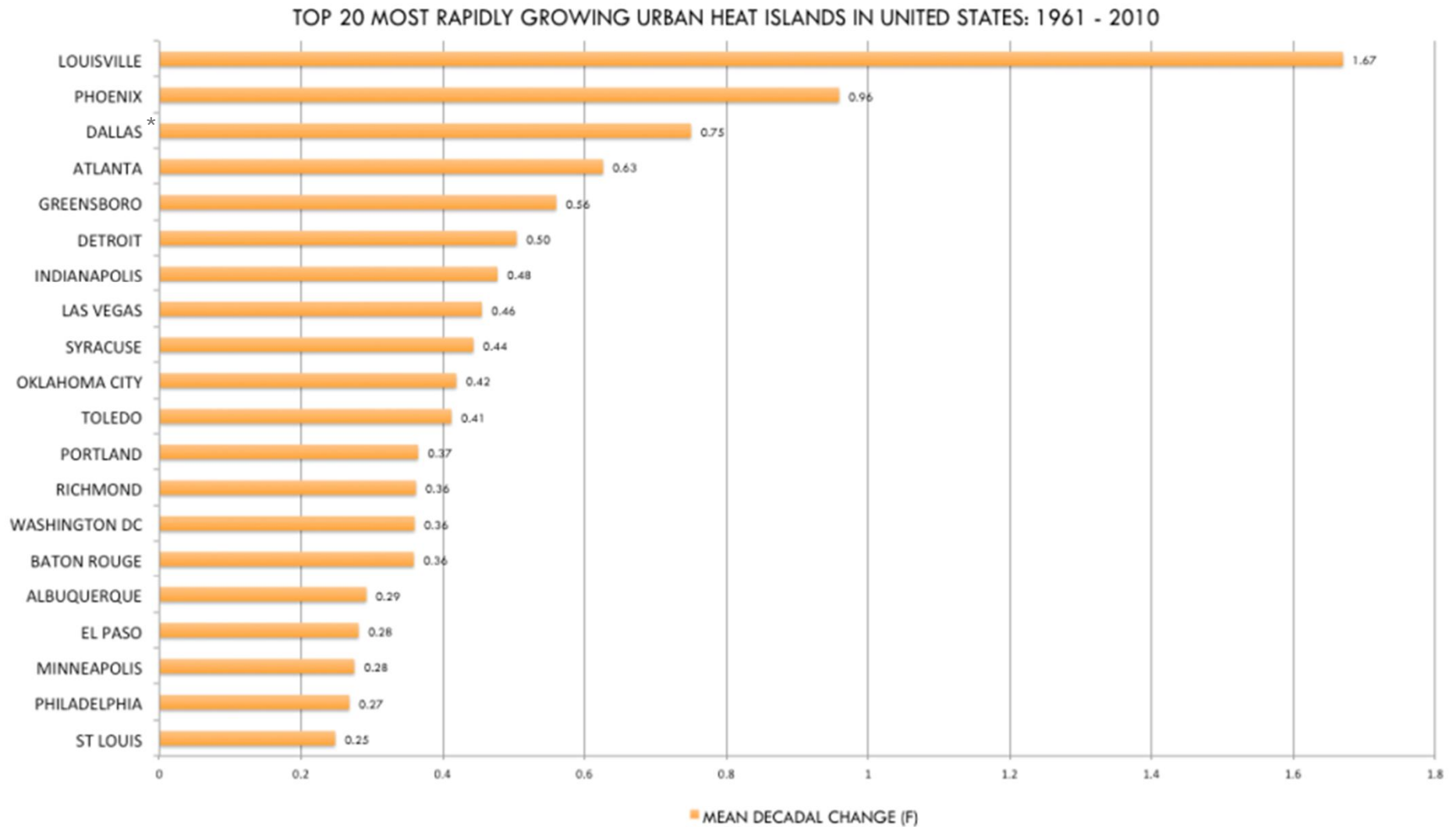3. Waste heat from vehicles, industry, building air conditioning

4. Trapping of heat by building "canyons"

global vs. urban rates of warming (°F/decade): 1961-2010

TOP 20 MOST RAPIDLY GROWING URBAN HEAT ISLANDS IN UNITED STATES: 1961 - 2010

City	Mean Decadal Change (F)
LOUISVILLE	1.67
PHOENIX	0.96
DALLAS *	0.75
ATLANTA	0.63
GREENSBORO	0.56
DETROIT	0.50
INDIANAPOLIS	0.48
LAS VEGAS	0.46
SYRACUSE	0.44
OKLAHOMA CITY	0.42
TOLEDO	0.41
PORTLAND	0.37
RICHMOND	0.36
WASHINGTON DC	0.36
BATON ROUGE	0.36
ALBUQUERQUE	0.29
EL PASO	0.28
MINNEAPOLIS	0.28
PHILADELPHIA	0.27
ST LOUIS	0.25

■ MEAN DECADAL CHANGE (F)

SOURCE: URBAN CLIMATE LAB, GEORGIA INSTITUTE OF TECHNOLOGY

warming in excess of rural trend (°F/decade)
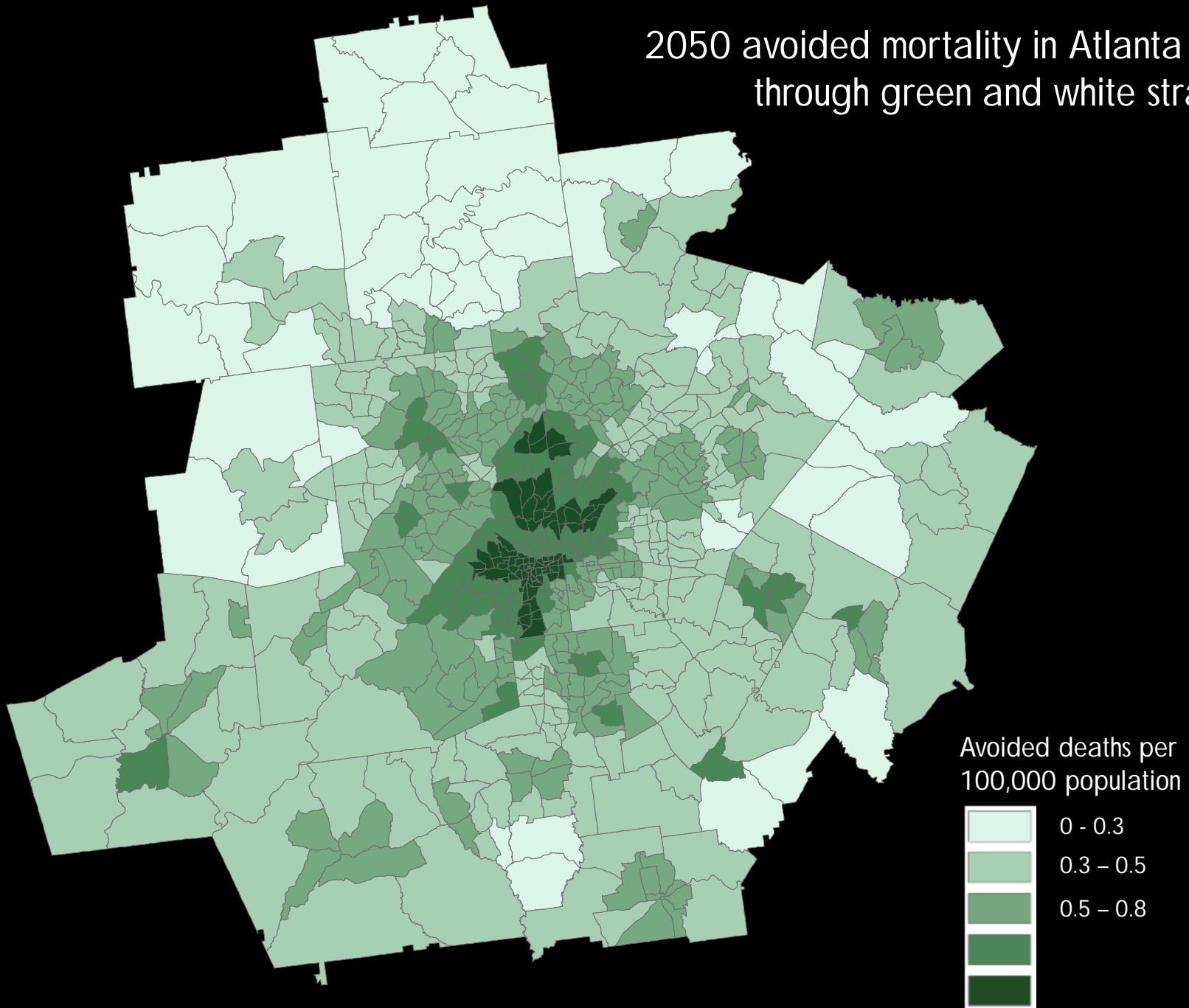
Climate-responsive design

Jason Vargo

hot neighborhood

cool neighborhood

71 buildings
(39 houses)

36.4%
(footprint/block)

difference between the blocks in average LST
7.1 °C
(12.7 °F)

57 buildings
(35 houses)

22.0%
(footprint/block)

Temperature change from trees and green roofs

+ 0.10 F

no change

- 0.1 F

- 0.9 F

- 1.25 F

- 1.80 F
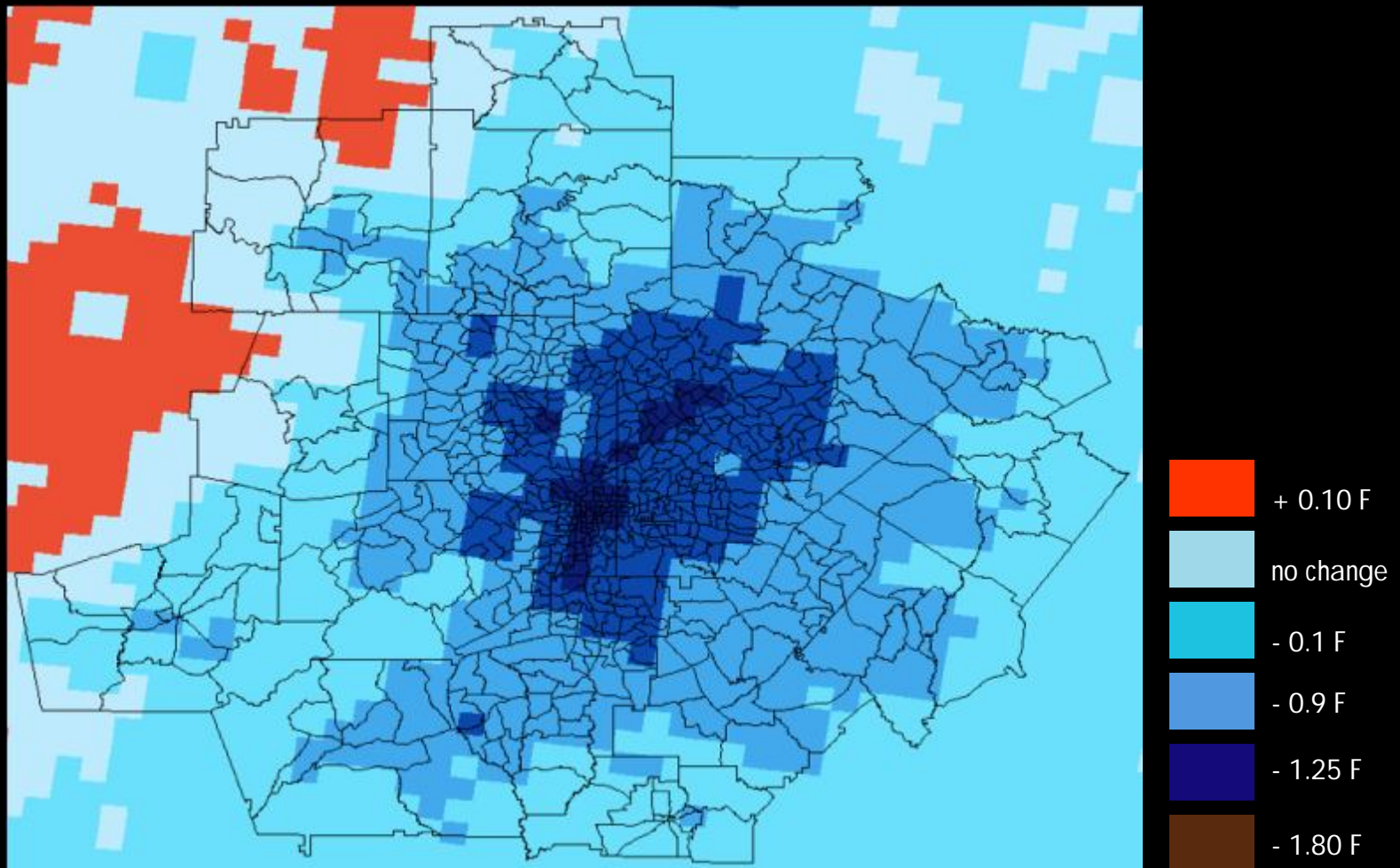
2050 avoided mortality in Atlanta Region
through green and white strategies

Avoided deaths per
100,000 population
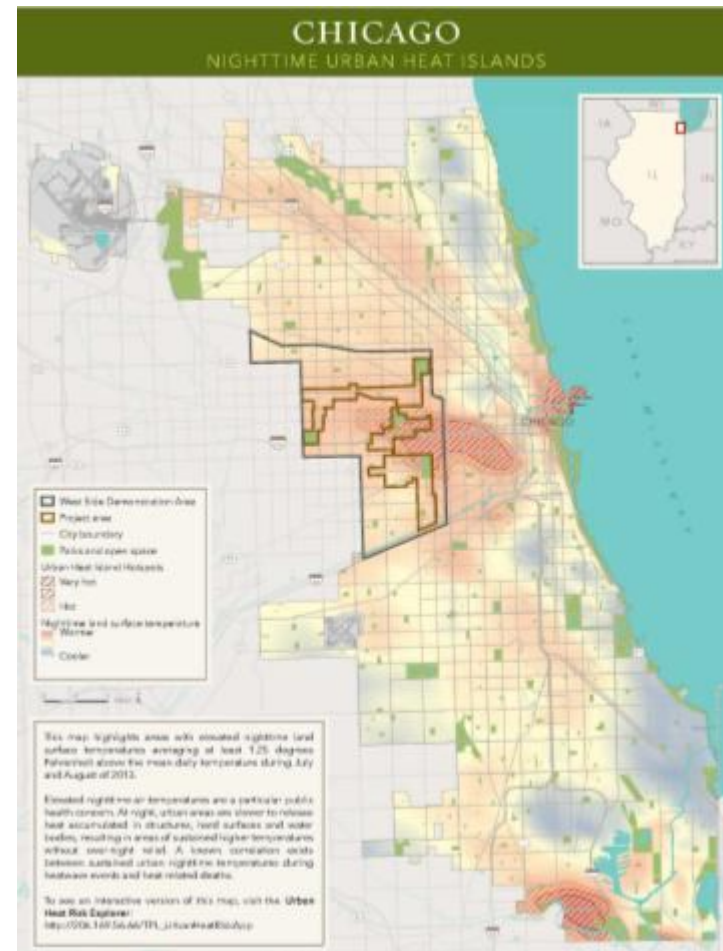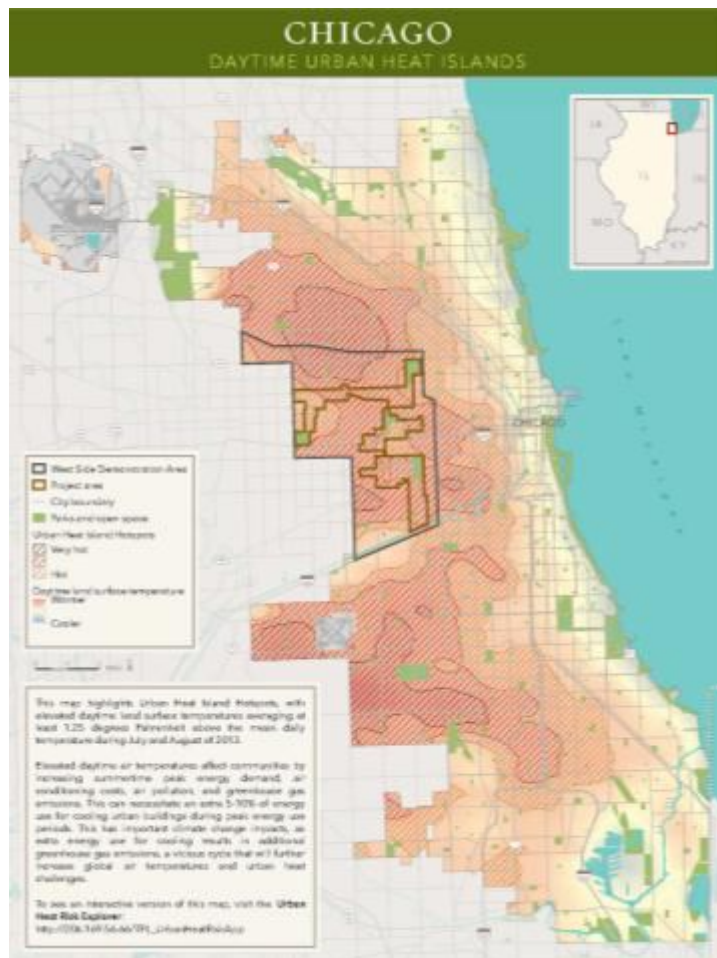
0 - 0.3

0.3 – 0.5

0.5 – 0.8

VI. HOW CAN DALLAS USE THIS?

Use Case: Site Selection
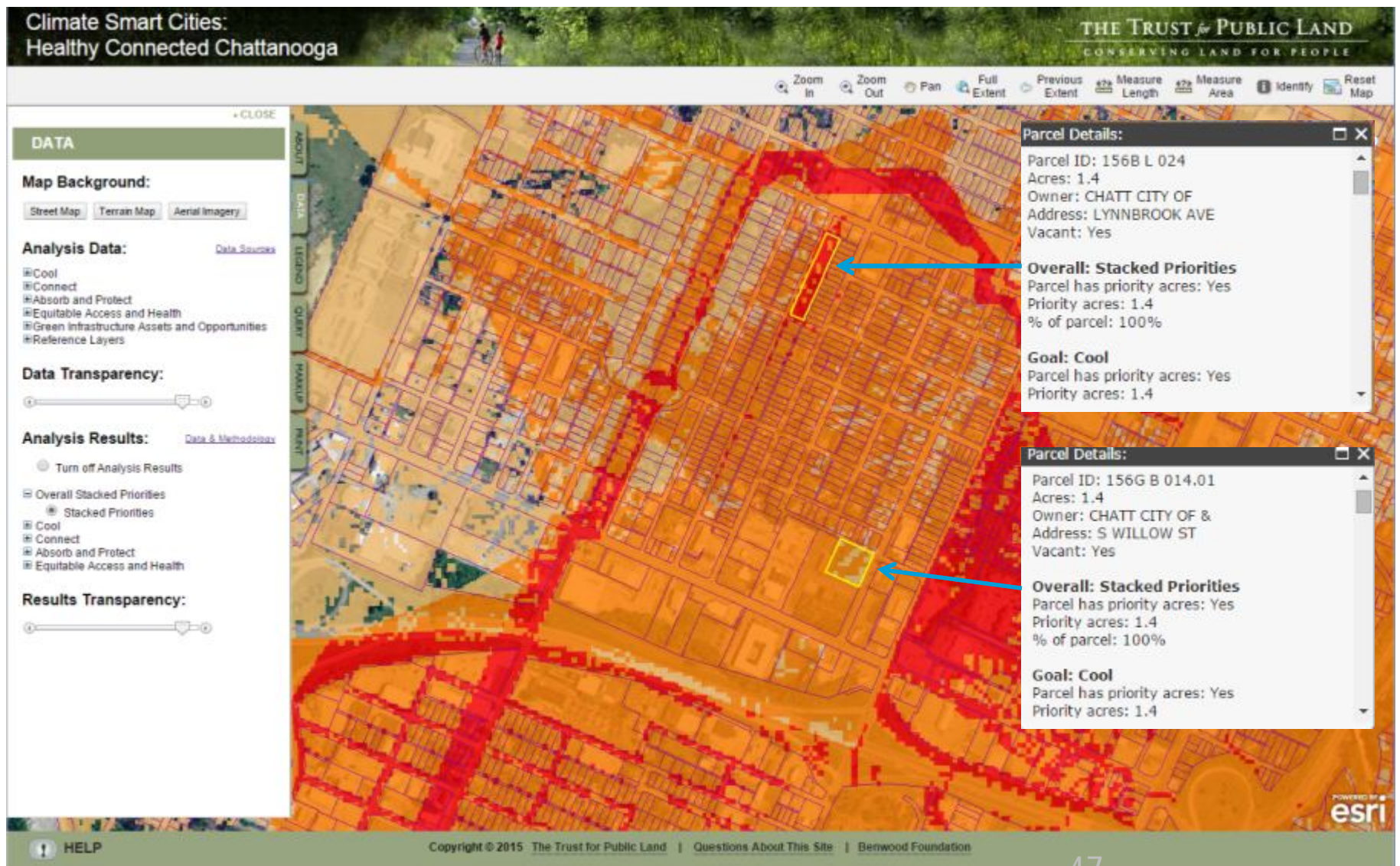
Use Case: Making the Case - Chicago

Use Case: Making the Case – New Orleans

CLIMATE-SMART CITIES: NEW ORLEANS
STACKED PRIORITIES FOR COOL CRITERIA

49

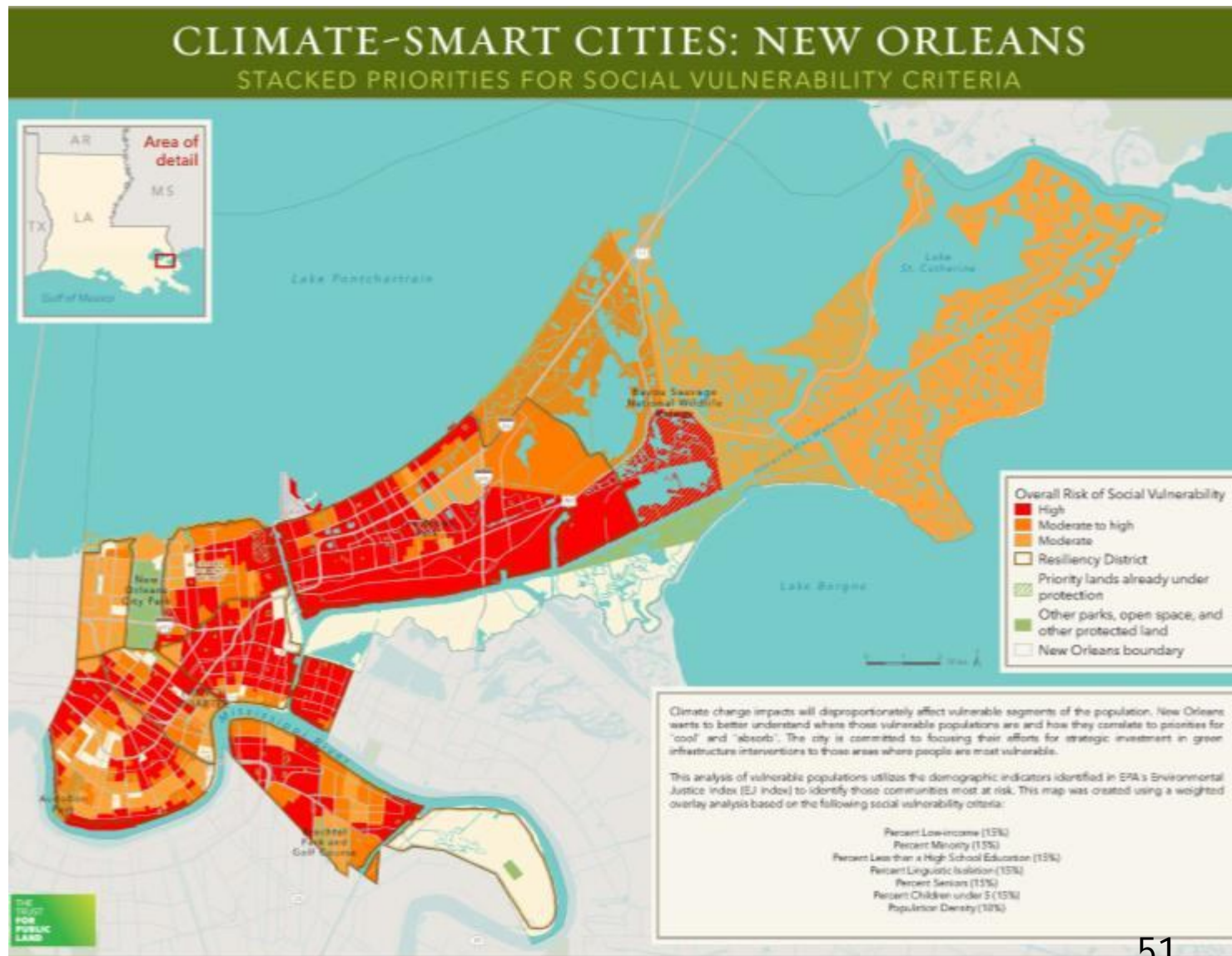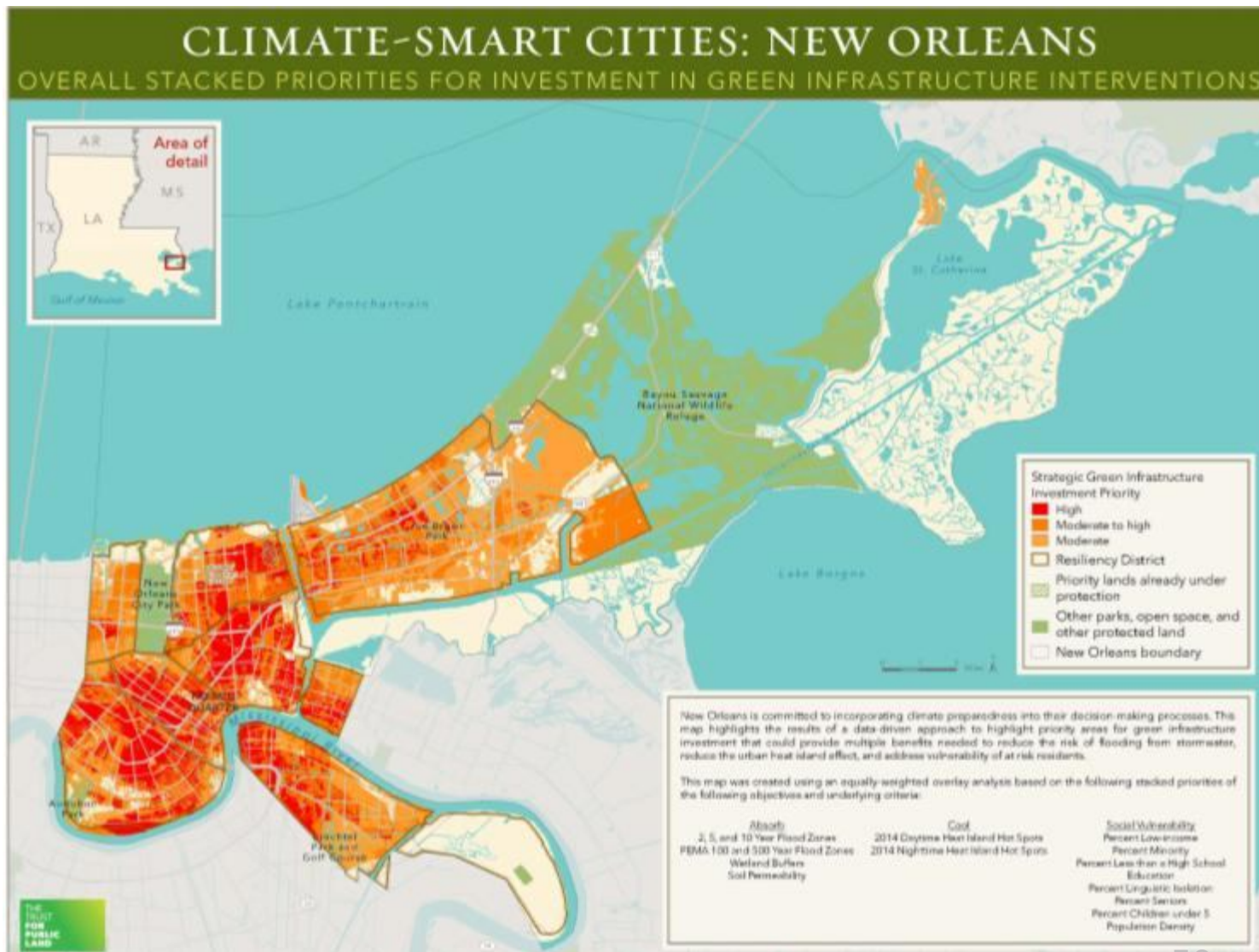# Use Case: Making the Case – New Orleans

Use Case: Making the Case – New Orleans

CLIMATE-SMART CITIES: NEW ORLEANS
STACKED PRIORITIES FOR SOCIAL VULNERABILITY CRITERIA
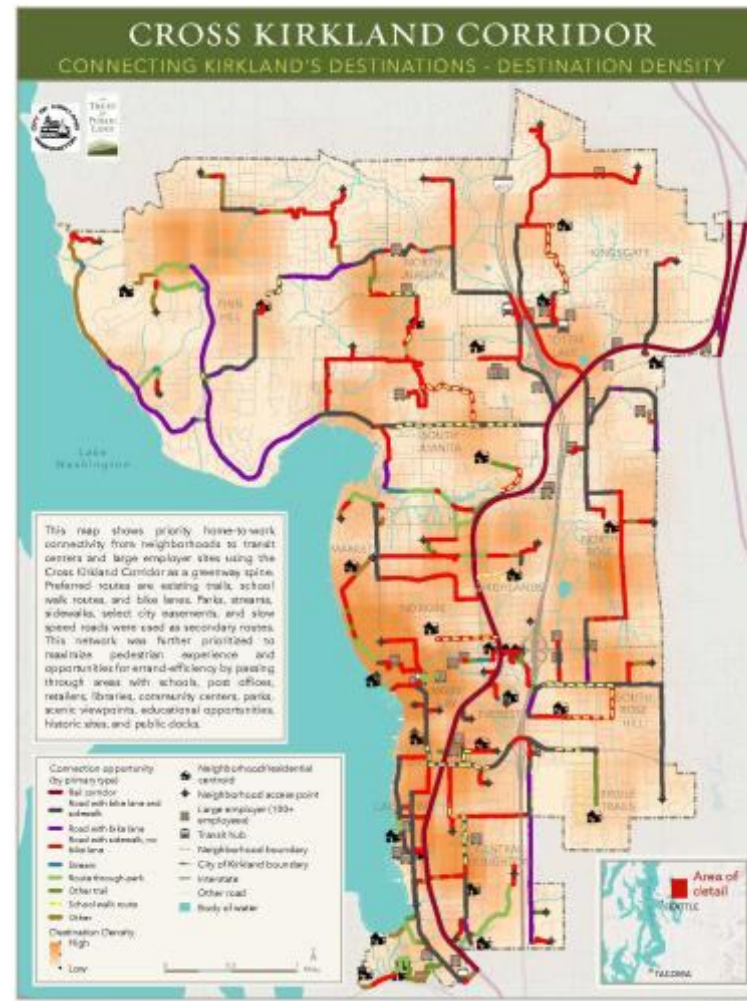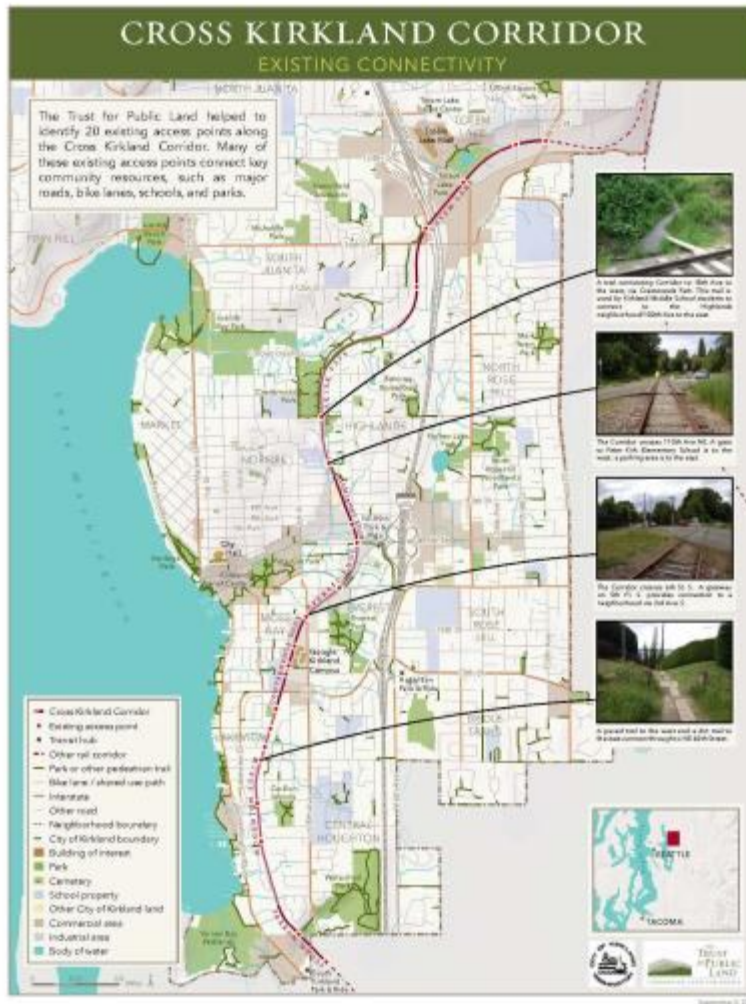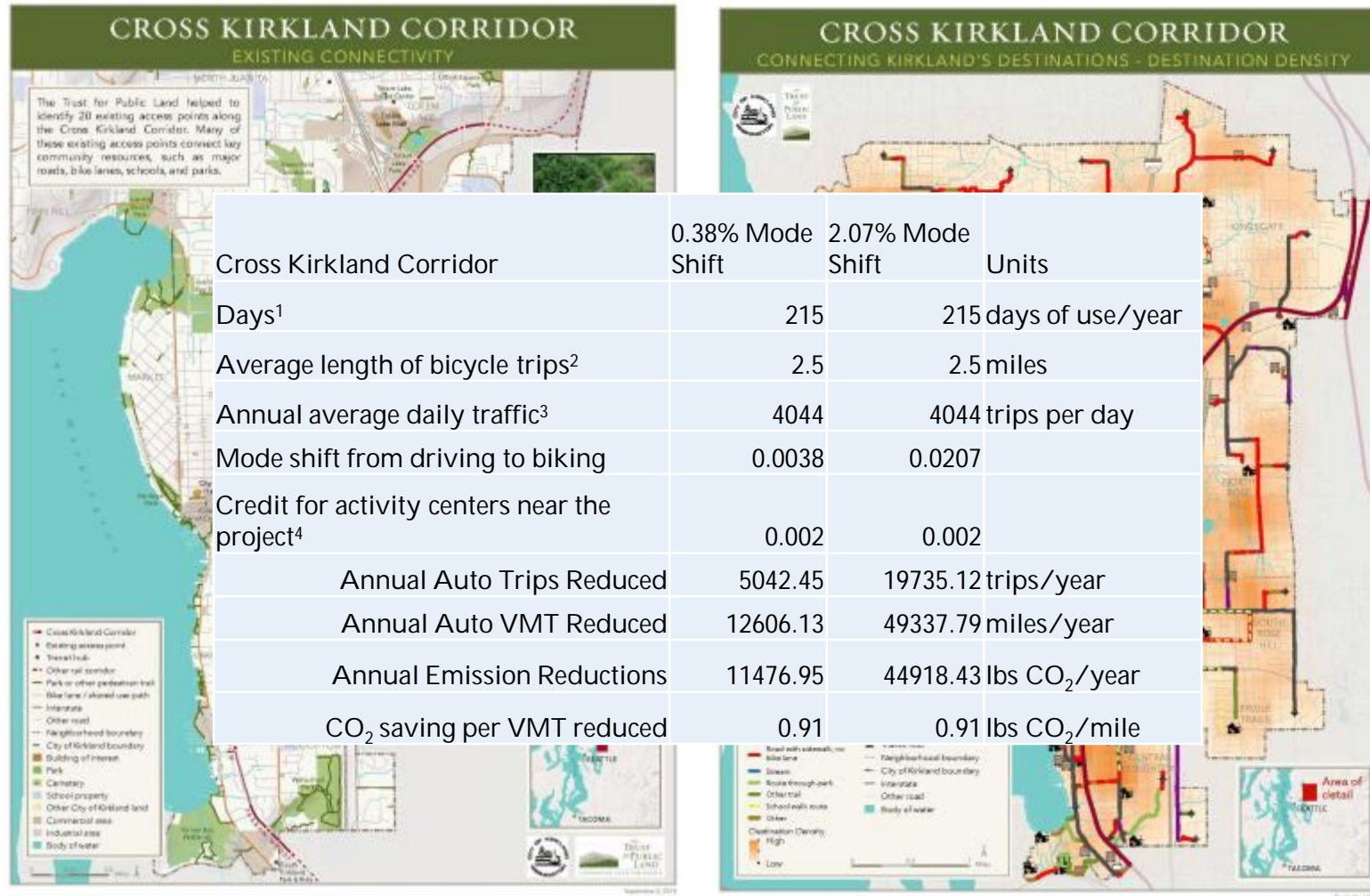
Use Case: Making the Case – New Orleans

Closer Look: Cross Kirkland Corridor Analysis

Closer Look: Cross Kirkland Corridor Analysis

Cross Kirkland Corridor	0.38% Mode Shift	2.07% Mode Shift	Units
Days[1]	215	215	days of use/year
Average length of bicycle trips[2]	2.5	2.5	miles
Annual average daily traffic[3]	4044	4044	trips per day
Mode shift from driving to biking	0.0038	0.0207	
Credit for activity centers near the project[4]	0.002	0.002	
Annual Auto Trips Reduced	5042.45	19735.12	trips/year
Annual Auto VMT Reduced	12606.13	49337.79	miles/year
Annual Emission Reductions	11476.95	44918.43	lbs CO_2/year
CO_2 saving per VMT reduced	0.91	0.91	lbs CO_2/mile

VII. QUESTIONS & DISCUSSION

Contact Us

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