Smart Growth for Dallas

DALLAS PARK AND RECREATION BOARD

April 7, 2022

Connecting everyone to the outdoors™

PS 156 Waverly and LS 392 Brooklyn, NY
We saw these barren asphalt schoolyards and we recognized an amazing opportunity to reinvent them as vibrant city parks.
Photo by: Joe Martinez

Our mission:

Connecting everyone to the outdoors

TRUST FOR PUBLIC LAND™

Connecting everyone to the outdoors™

From neighborhood parks to national parks, we've put more than

9 million people within a 10-minute walk of a park.

Creating more parks for Texans

Since 1979, The Trust for Public Land has protected more than **43,000 acres** of Texas's most important natural places, including over **2,000 acres right here in North Texas.**

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Joppa Preserve | Dallas

256 acres

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Eagle Mountain Lake Park | Fort Worth

396 acres

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Sheri Capehart Nature Preserve | Arlington

58 acres

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South Oak Cliff Renaissance Park | Dallas

1.8 acres

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Judge Charles R. Rose Community Park | Dallas

40 acres

WHAT IS SMART GROWTH FOR DALLAS?

Smart Growth for Dallas is an initiative to improve the social, economic, and environmental resilience of Dallas through the strategic use of parks, trails, trees, and greenspaces.

Social Challenges
Environmental Challenges
Economic Challenges

Parks are great for cities, and their residents too!

COMBAT URBAN HEAT

Neighborhoods with more parks can be **6°F** cooler than those without

IMPROVE HEALTH

People with increased greenspace exposure have lower rates of stroke, hypertension, dyslipidaemia, asthma, and coronary heart disease

CLEAN WATER

Parks and trees filter pollutants out of stormwater runoff

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Multi-benefit parks strengthen cities

- Retain stormwater runoff
- Cool neighborhoods in the summertime heat
- Provide buffer against flooding
- Safe routes to school and work
- Increase active recreation of nearby residents
- Grow the local economy through rejuvenating forgotten or overlooked areas of the city
- Diversify mobility options through walking and cycling paths
- Clean pollution from the air
- Create a sense of place and community for nearby neighbors

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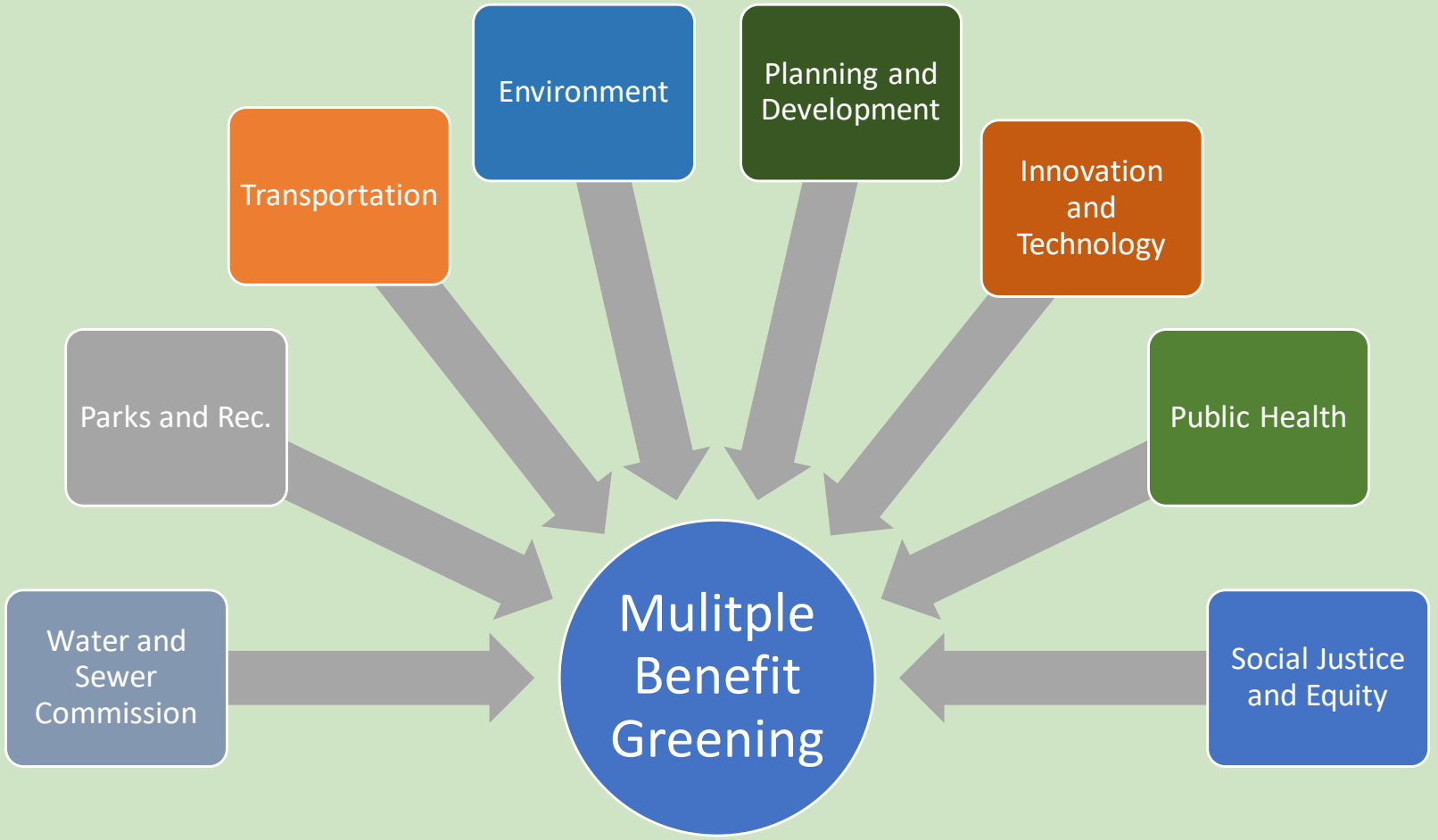
Program Objective: Help identify opportunities for multi-benefit greening



Developed in Partnership

Guided by community experts

Over 100 participants, representing dozens of departments and organizations:

- Park & Recreation
- Dept. of Transportation
- Planning + Urban Design
- Trinity Watershed Management
- Office of Environmental Quality
- Communication & Information Services
- City Manager's Office
- Urban Forestry Advisory Committee
- Dallas ISD
- Office of Resilience
- City Plan Commission
- DART
- NCTCOG
- SMU
- Texas A&M AgriLife Extension
- The Nature Conservancy
- UT Dallas
- Dallas County
- …and more

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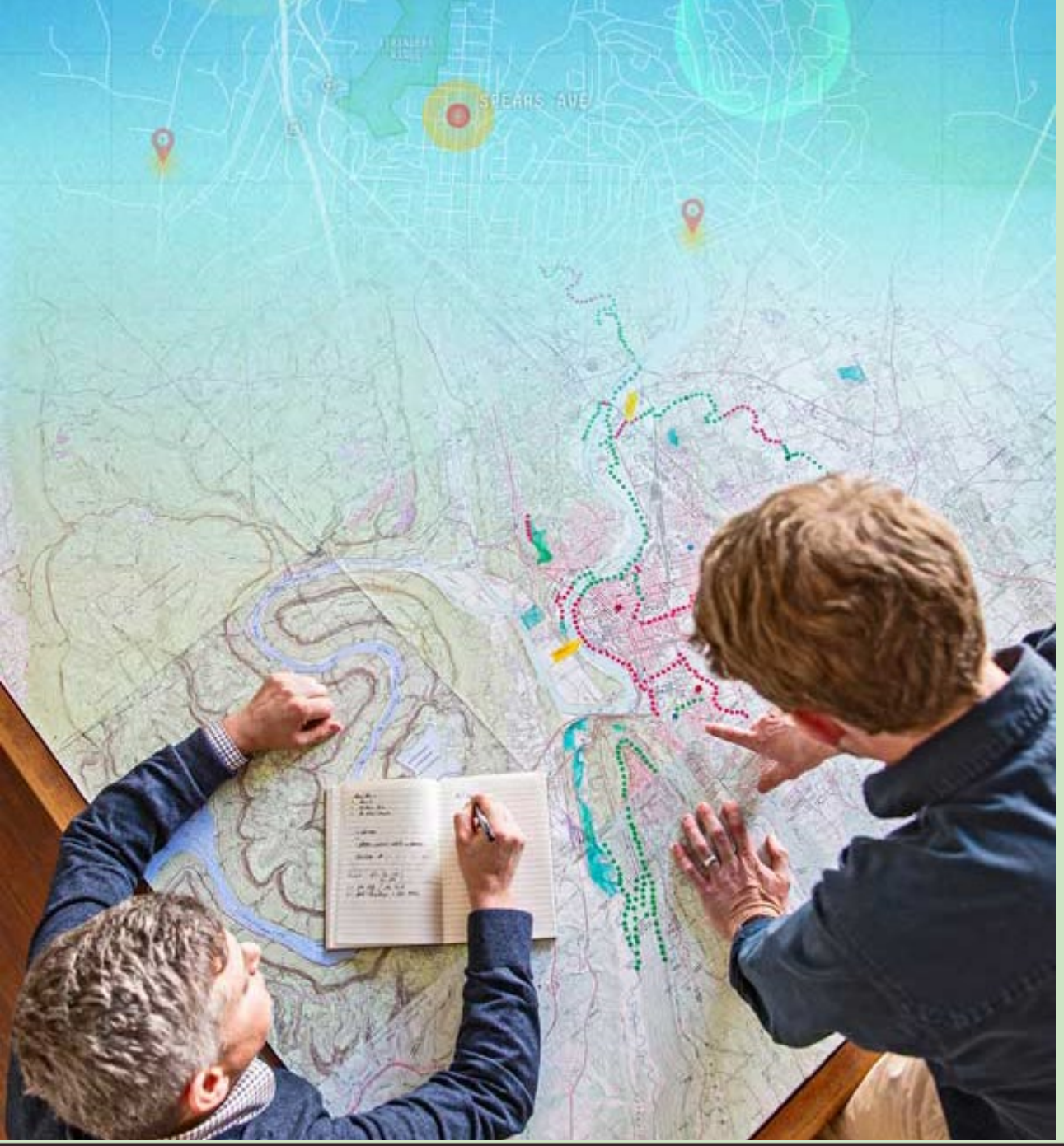

Using GIS to find the best places for parks

GIS can tell us things like:

- Who owns land parcels
- Percentage canopy cover
- Poverty rate in an area
- Prevalence of asthma
- Soil type
- Flood zone
- Demographic data
- …and more

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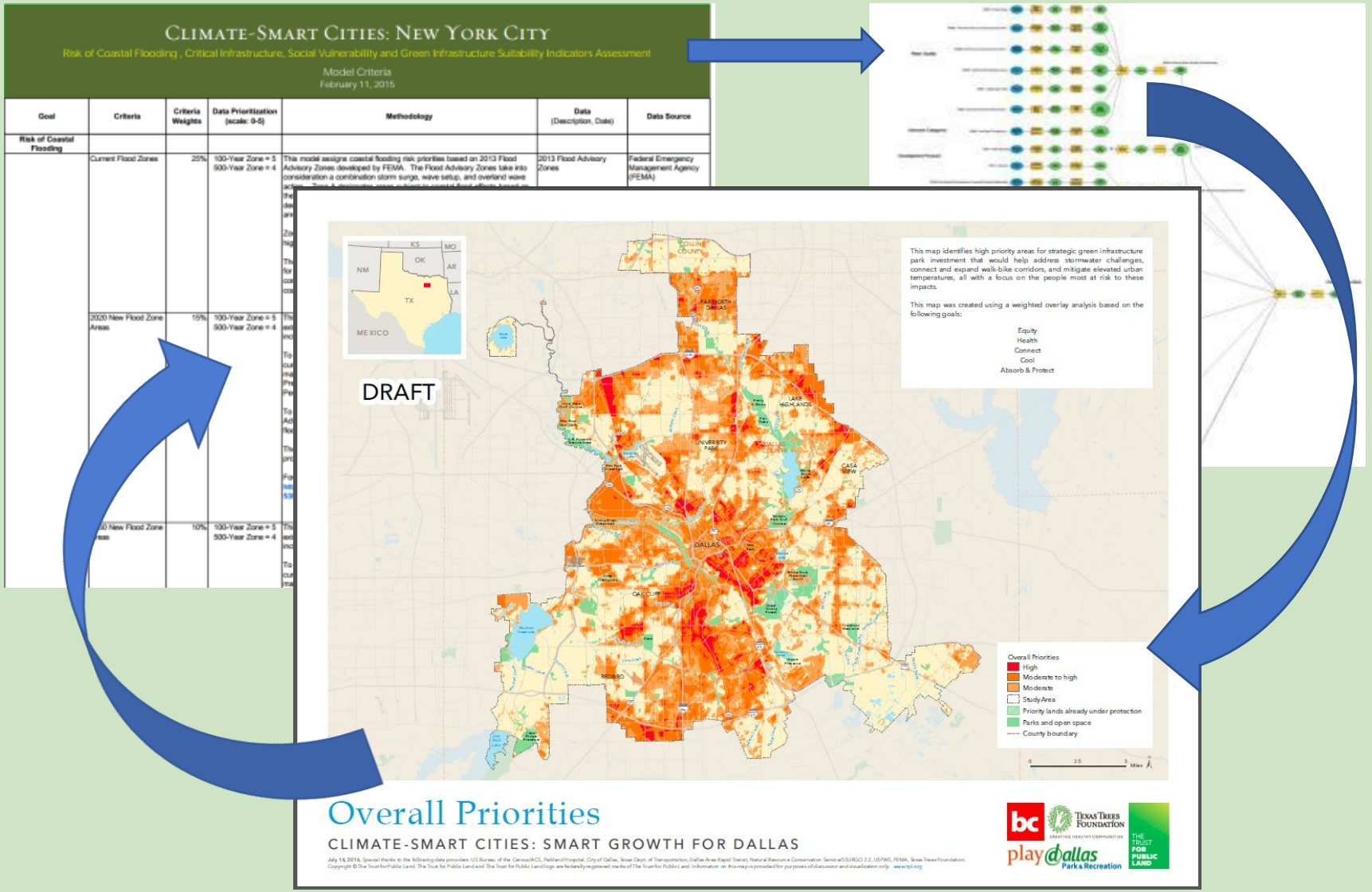
Data-informed and strategic decisions



Our five planning objectives:

Smart Growth for Dallas seeks to identify areas where parks, trails, and green assets can address five key planning objectives:

CONNECT	COOL	ABSORB/ PROTECT	HEALTH	EQUITY
Improve pedestrian safety and connectivity with trails, bicycle lanes, and links to transit	Reduce the urban heat island effect through trees, parks, and open space	Capture stormwater and buffer against flooding through green infrastructure	Improve public health with active recreation and parks	Maximize impact by working in neighborhoods of highest need

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Smart Growth Priority Models

CONNECT

- Fill in bikeway and trail gaps
- Improve bicycle & pedestrian safety (vision zero)
- Create connections to transit
- Create connections to popular destinations
- Create connections to jobs
- Connect neighborhoods to trails and parks
- Bike friendly pathways
- Increase active transportation opportunities in areas poorly served by public transit
- Improve walkability near schools

COOL

- Urban heat islands - air temperature
- Urban heat islands - land surface temperature
- Increase tree canopy over hot surfaces
- Increase high albedo roofs & surfaces
- Tree gaps in parks, open space and trails
- Street tree gap
- Plant trees in vegetated medians

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Smart Growth Priority Models

ABSORB/ PROTECT

- Reduce stormwater runoff
- Improve water quality
- Reduce stormwater discharge from parking lots
- Enhance existing roadside GSI
- High percent impervious surface by watershed
- Localized water sinks
- Protect wetlands, waterbodies and streams
- Preserve floodways & floodzones
- Protect escarpment areas
- Restore natural land cover near waterbodies

EQUITY

- Low income households
- Single parent households
- Seniors over 64
- Children under 5
- Population with less than a high school education
- Linguistic isolation
- Minority population (Percent People of Color)
- Access to a vehicle
- People with disabilities
- Population density
- Park gaps
- Walkability to grocery stores

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Smart Growth Priority Models

HEALTH

Data sharing agreement + Partnership with DFW Hospital Council

Census tract level data:

- Respiratory Disease - Pediatric Asthma
- Respiratory Disease - Adult Asthma
- Respiratory Disease - Chronic Obstructive Pulmonary Disease
- Diabetes
- Cardiovascular Disease - Heart Disease
- Cardiovascular Disease - Stroke
- Obesity
- Depression/Anxiety
- Increase tree canopy near Medical Facilities

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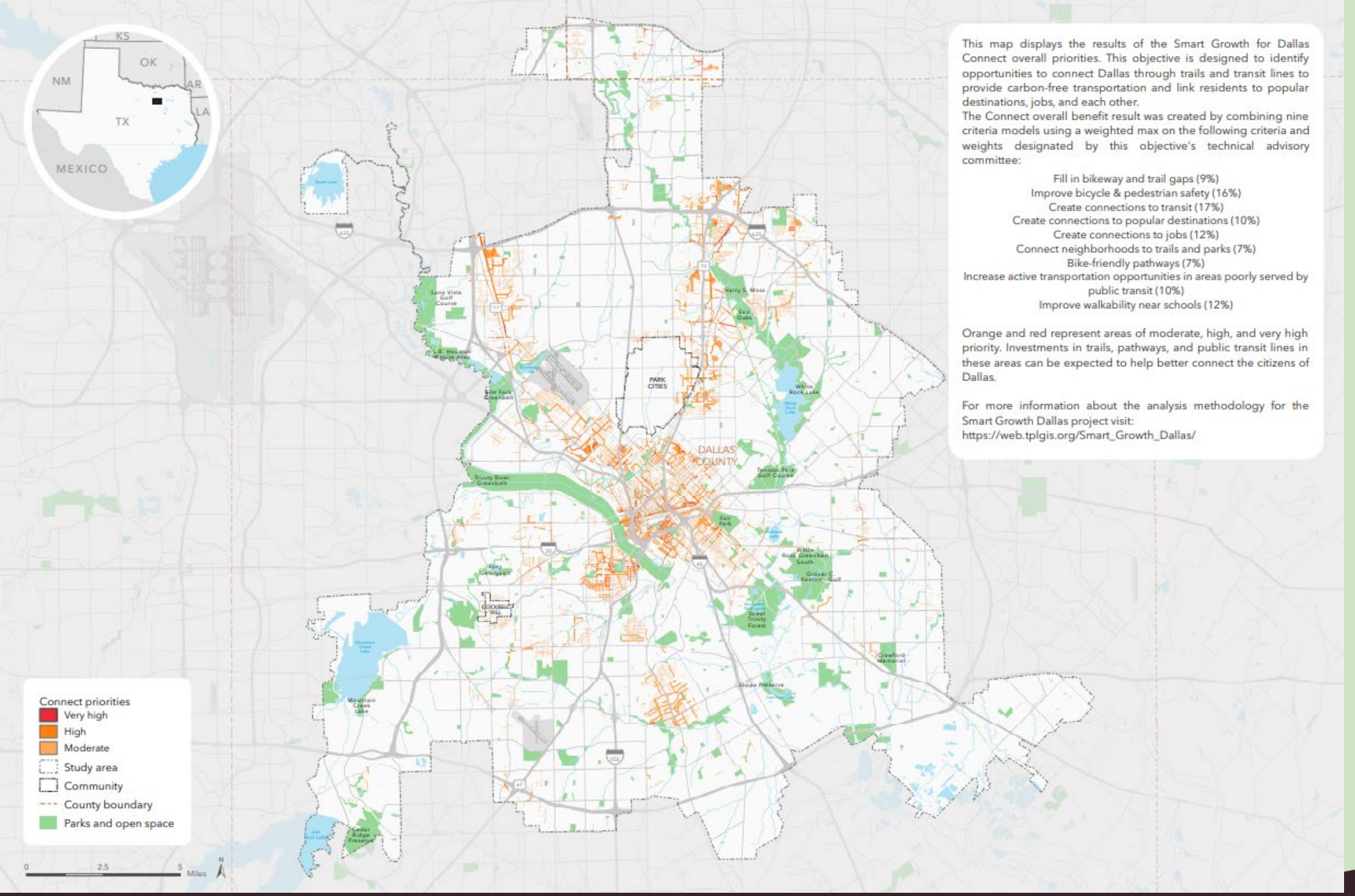

This map displays the results of the Smart Growth for Dallas Connect overall priorities. This objective is designed to identify opportunities to connect Dallas through trails and transit lines to provide carbon-free transportation and link residents to popular destinations, jobs, and each other.

The Connect overall benefit result was created by combining nine criteria models using a weighted max on the following criteria and weights designated by this objective's technical advisory committee:

Fill in bikeway and trail gaps (9%)
Improve bicycle & pedestrian safety (16%)
Create connections to transit (17%)
Create connections to popular destinations (10%)
Create connections to jobs (12%)
Connect neighborhoods to trails and parks (7%)
Bike-friendly pathways (7%)
Increase active transportation opportunities in areas poorly served by public transit (10%)
Improve walkability near schools (12%)

Orange and red represent areas of moderate, high, and very high priority. Investments in trails, pathways, and public transit lines in these areas can be expected to help better connect the citizens of Dallas.

For more information about the analysis methodology for the Smart Growth Dallas project visit:
https://web.tplgis.org/Smart_Growth_Dallas/

CONNECT

Improve pedestrian safety and connectivity with trails, bicycle lanes, and links to transit

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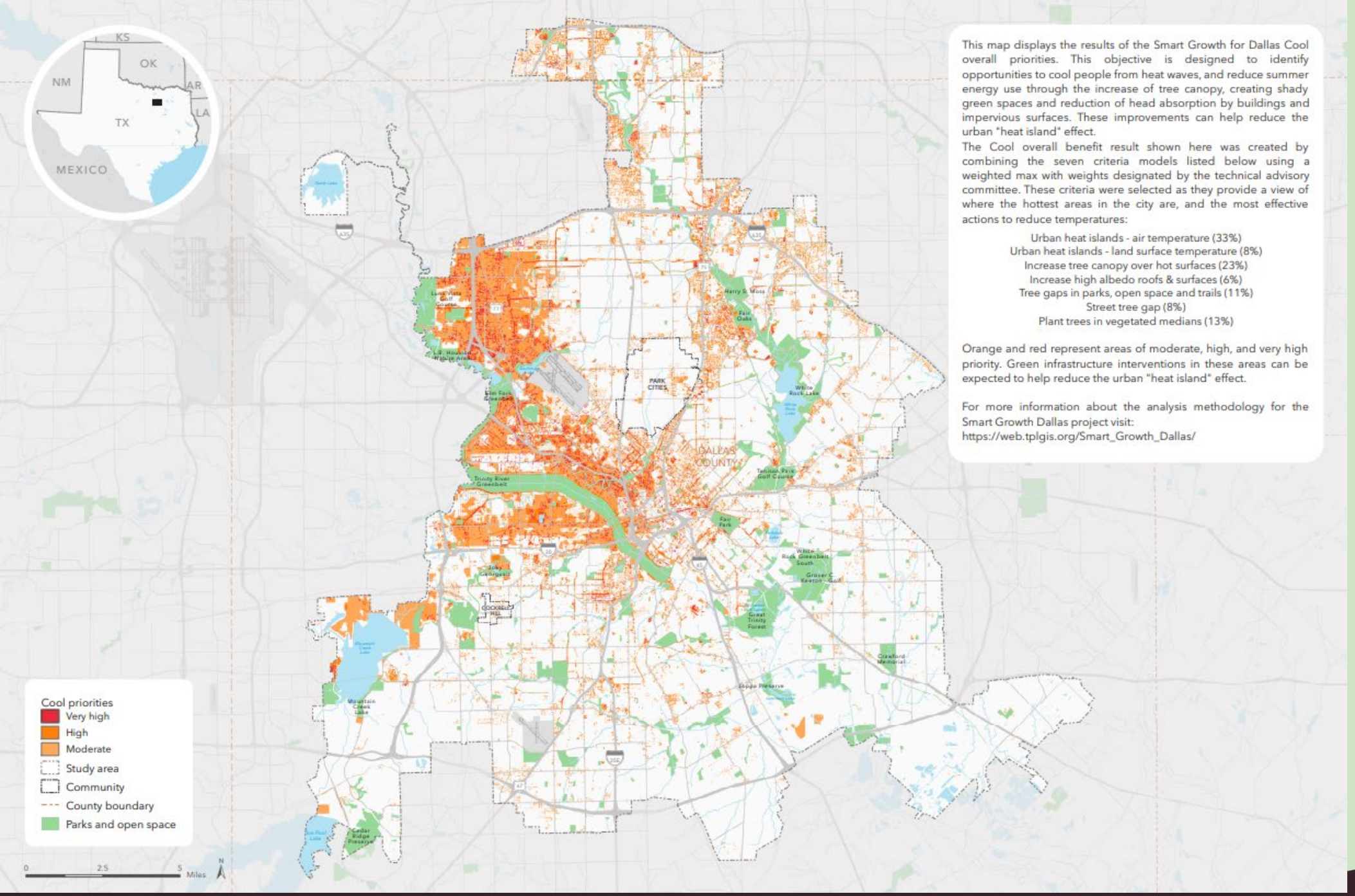

This map displays the results of the Smart Growth for Dallas Cool overall priorities. This objective is designed to identify opportunities to cool people from heat waves, and reduce summer energy use through the increase of tree canopy, creating shady green spaces and reduction of head absorption by buildings and impervious surfaces. These improvements can help reduce the urban "heat island" effect.

The Cool overall benefit result shown here was created by combining the seven criteria models listed below using a weighted max with weights designated by the technical advisory committee. These criteria were selected as they provide a view of where the hottest areas in the city are, and the most effective actions to reduce temperatures:

Urban heat islands - air temperature (33%)
Urban heat islands - land surface temperature (8%)
Increase tree canopy over hot surfaces (23%)
Increase high albedo roofs & surfaces (6%)
Tree gaps in parks, open space and trails (11%)
Street tree gap (8%)
Plant trees in vegetated medians (13%)

Orange and red represent areas of moderate, high, and very high priority. Green infrastructure interventions in these areas can be expected to help reduce the urban "heat island" effect.

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COOL

Reduce the urban heat island effect through trees, parks, and open space

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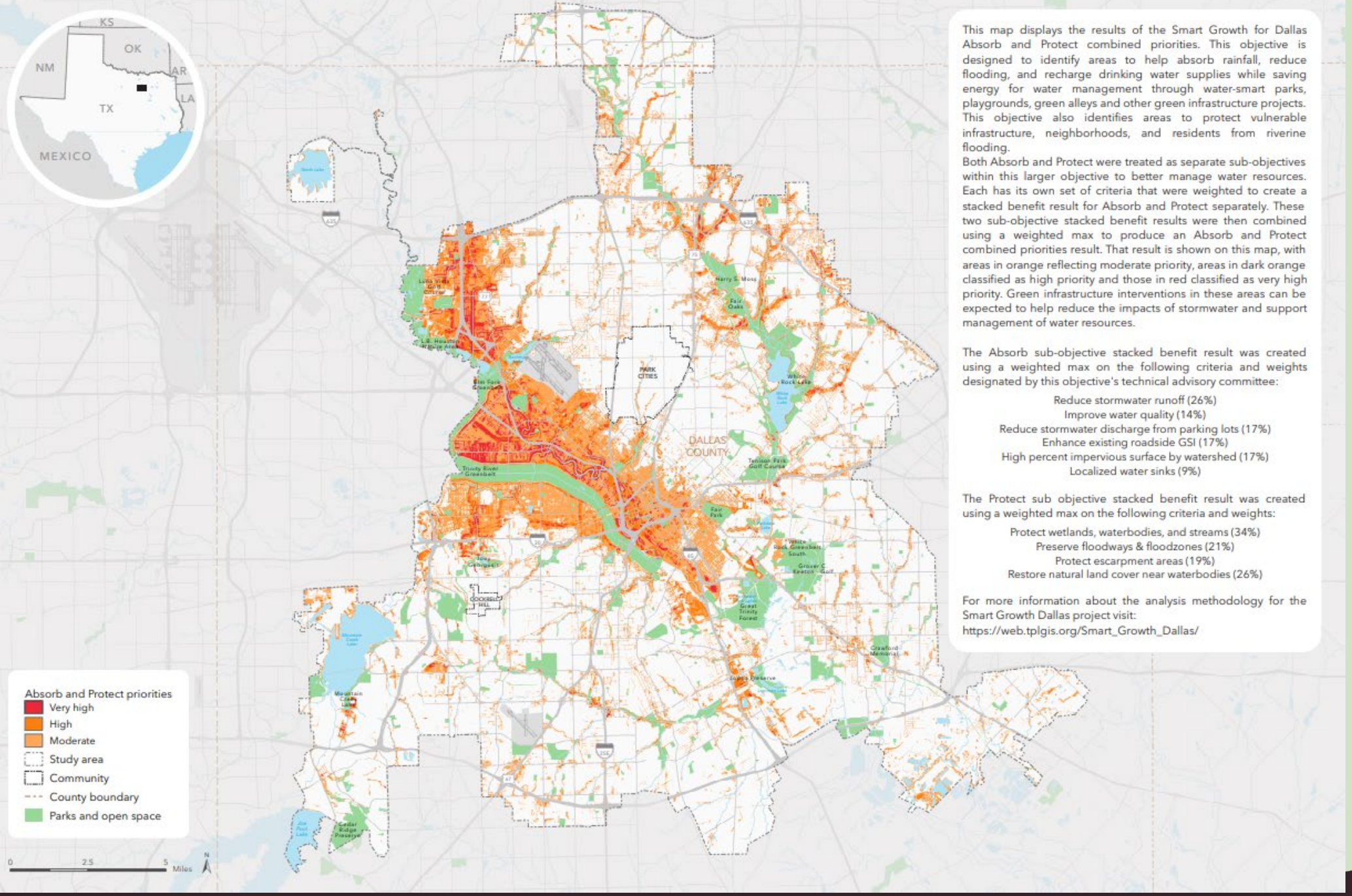

This map displays the results of the Smart Growth for Dallas Absorb and Protect combined priorities. This objective is designed to identify areas to help absorb rainfall, reduce flooding, and recharge drinking water supplies while saving energy for water management through water-smart parks, playgrounds, green alleys and other green infrastructure projects. This objective also identifies areas to protect vulnerable infrastructure, neighborhoods, and residents from riverine flooding.

Both Absorb and Protect were treated as separate sub-objectives within this larger objective to better manage water resources. Each has its own set of criteria that were weighted to create a stacked benefit result for Absorb and Protect separately. These two sub-objective stacked benefit results were then combined using a weighted max to produce an Absorb and Protect combined priorities result. That result is shown on this map, with areas in orange reflecting moderate priority, areas in dark orange classified as high priority and those in red classified as very high priority. Green infrastructure interventions in these areas can be expected to help reduce the impacts of stormwater and support management of water resources.

The Absorb sub-objective stacked benefit result was created using a weighted max on the following criteria and weights designated by this objective's technical advisory committee:

Reduce stormwater runoff (26%)
Improve water quality (14%)
Reduce stormwater discharge from parking lots (17%)
Enhance existing roadside GSI (17%)
High percent impervious surface by watershed (17%)
Localized water sinks (9%)

The Protect sub objective stacked benefit result was created using a weighted max on the following criteria and weights:

Protect wetlands, waterbodies, and streams (34%)
Preserve floodways & floodzones (21%)
Protect escarpment areas (19%)
Restore natural land cover near waterbodies (26%)

For more information about the analysis methodology for the Smart Growth Dallas project visit:
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ABSORB/ PROTECT

Capture stormwater and buffer against flooding through green infrastructure

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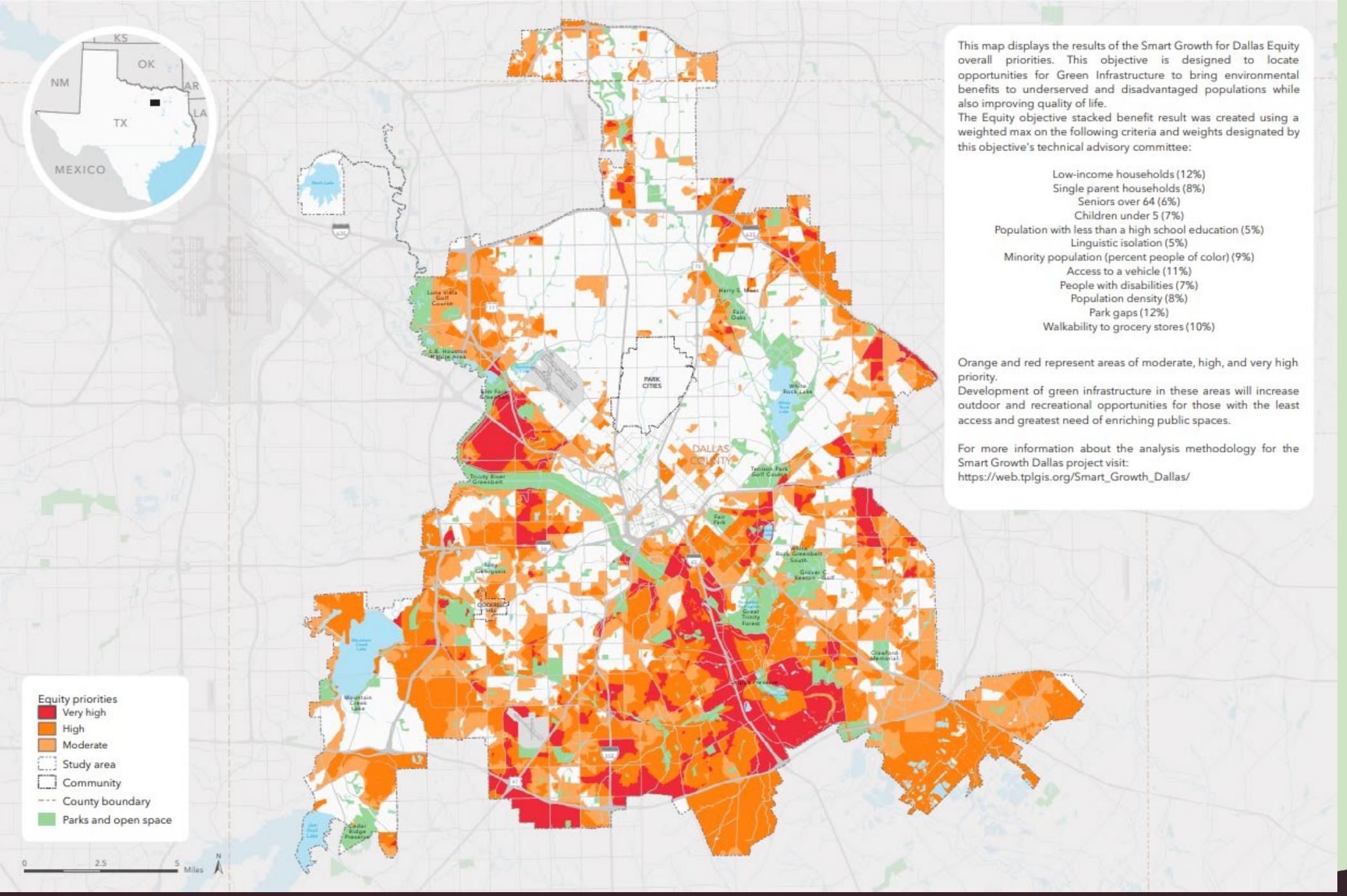

This map displays the results of the Smart Growth for Dallas Equity overall priorities. This objective is designed to locate opportunities for Green Infrastructure to bring environmental benefits to underserved and disadvantaged populations while also improving quality of life.
The Equity objective stacked benefit result was created using a weighted max on the following criteria and weights designated by this objective's technical advisory committee:

Low-income households (12%)
Single parent households (8%)
Seniors over 64 (6%)
Children under 5 (7%)
Population with less than a high school education (5%)
Linguistic isolation (5%)
Minority population (percent people of color) (9%)
Access to a vehicle (11%)
People with disabilities (7%)
Population density (8%)
Park gaps (12%)
Walkability to grocery stores (10%)

Orange and red represent areas of moderate, high, and very high priority.
Development of green infrastructure in these areas will increase outdoor and recreational opportunities for those with the least access and greatest need of enriching public spaces.

For more information about the analysis methodology for the Smart Growth Dallas project visit:
https://web.tplgis.org/Smart_Growth_Dallas/

EQUITY

Maximize impact by working in neighborhoods of highest need

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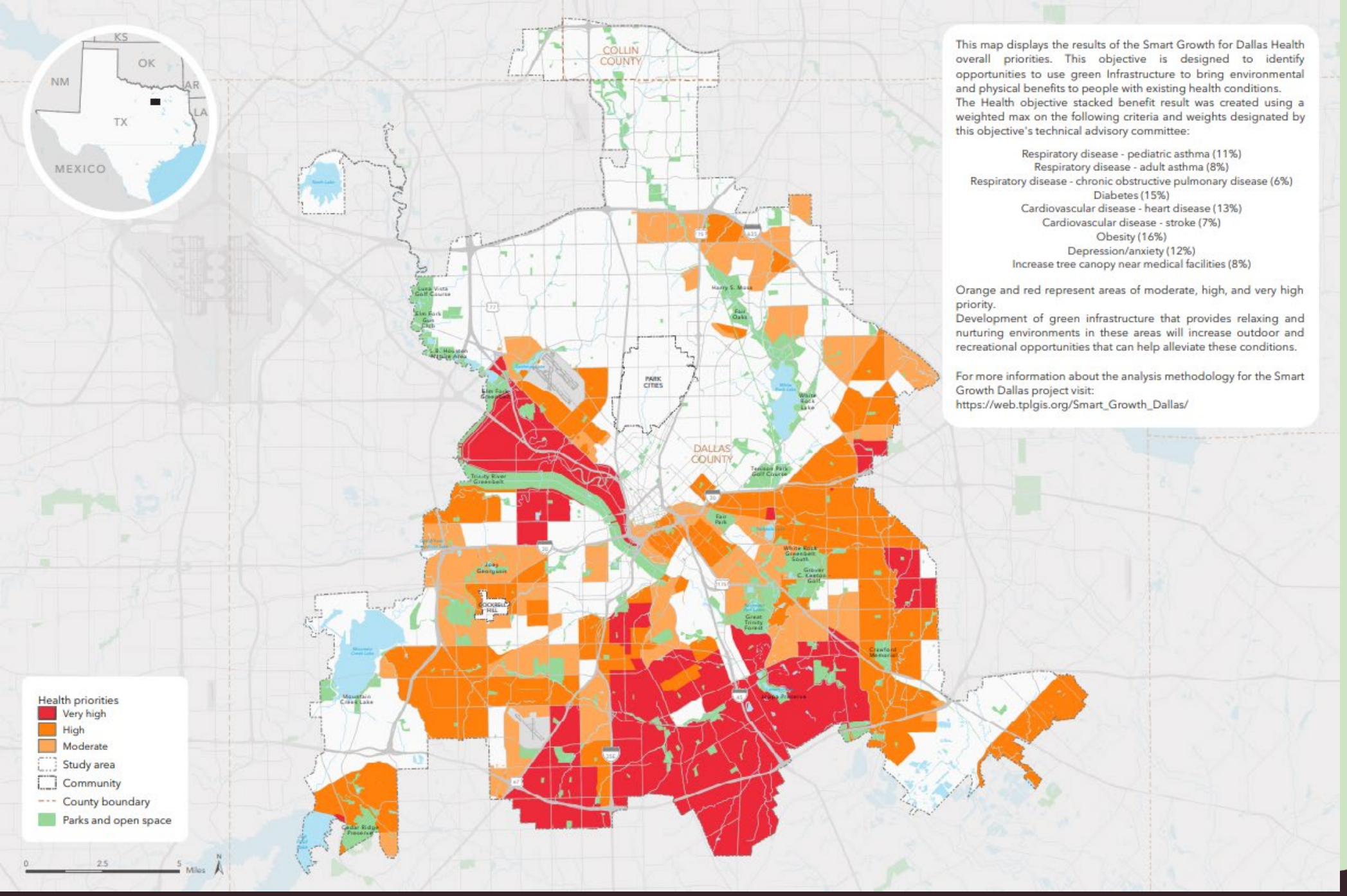

This map displays the results of the Smart Growth for Dallas Health overall priorities. This objective is designed to identify opportunities to use green Infrastructure to bring environmental and physical benefits to people with existing health conditions.
The Health objective stacked benefit result was created using a weighted max on the following criteria and weights designated by this objective's technical advisory committee:

Respiratory disease - pediatric asthma (11%)
Respiratory disease - adult asthma (8%)
Respiratory disease - chronic obstructive pulmonary disease (6%)
Diabetes (15%)
Cardiovascular disease - heart disease (13%)
Cardiovascular disease - stroke (7%)
Obesity (16%)
Depression/anxiety (12%)
Increase tree canopy near medical facilities (8%)

Orange and red represent areas of moderate, high, and very high priority.
Development of green infrastructure that provides relaxing and nurturing environments in these areas will increase outdoor and recreational opportunities that can help alleviate these conditions.

For more information about the analysis methodology for the Smart Growth Dallas project visit:
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HEALTH

Improve public health with active recreation and parks

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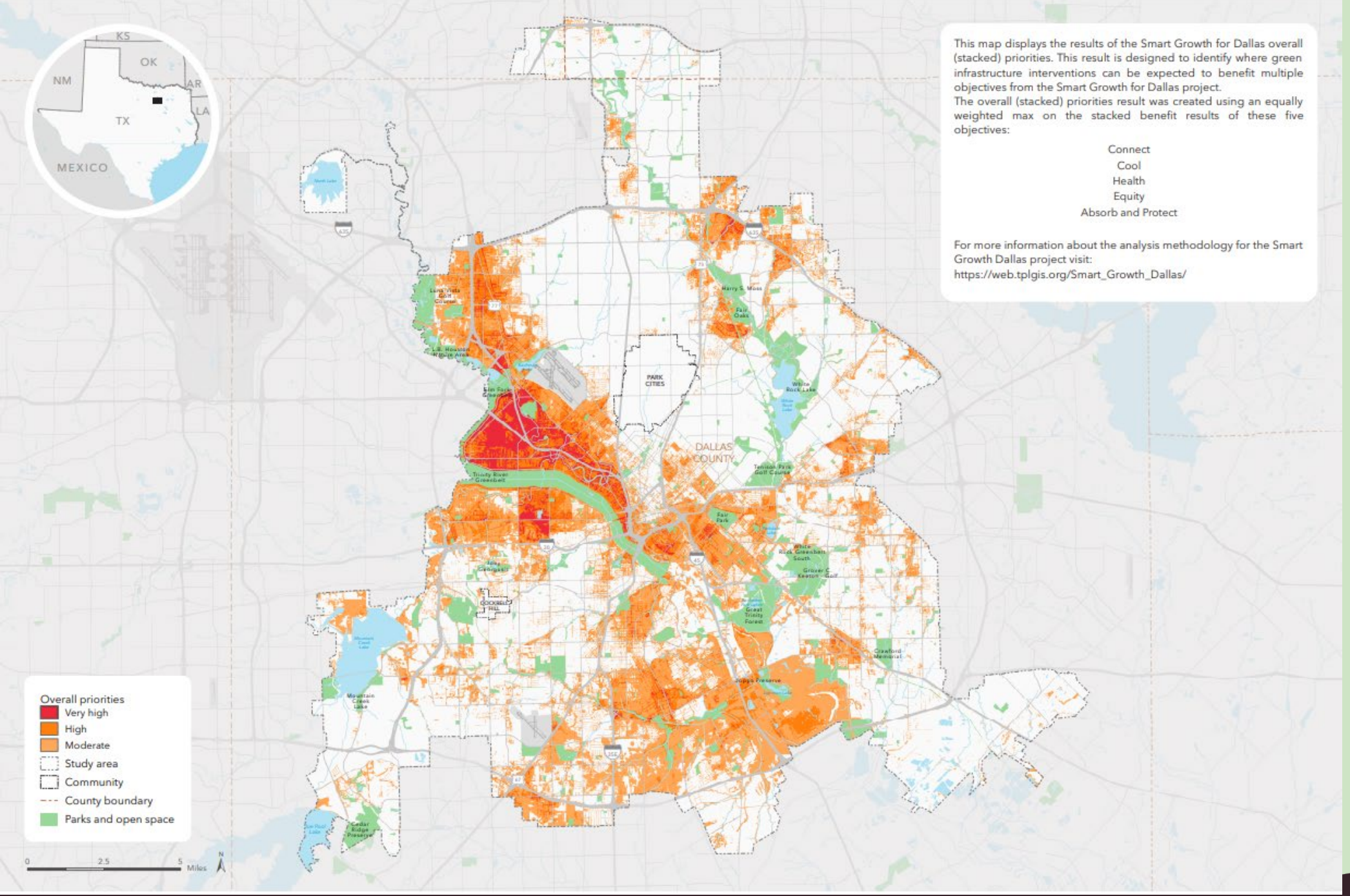

OVERALL PRIORITIES

Cool
Connect
Absorb/Protect
Equity
Health

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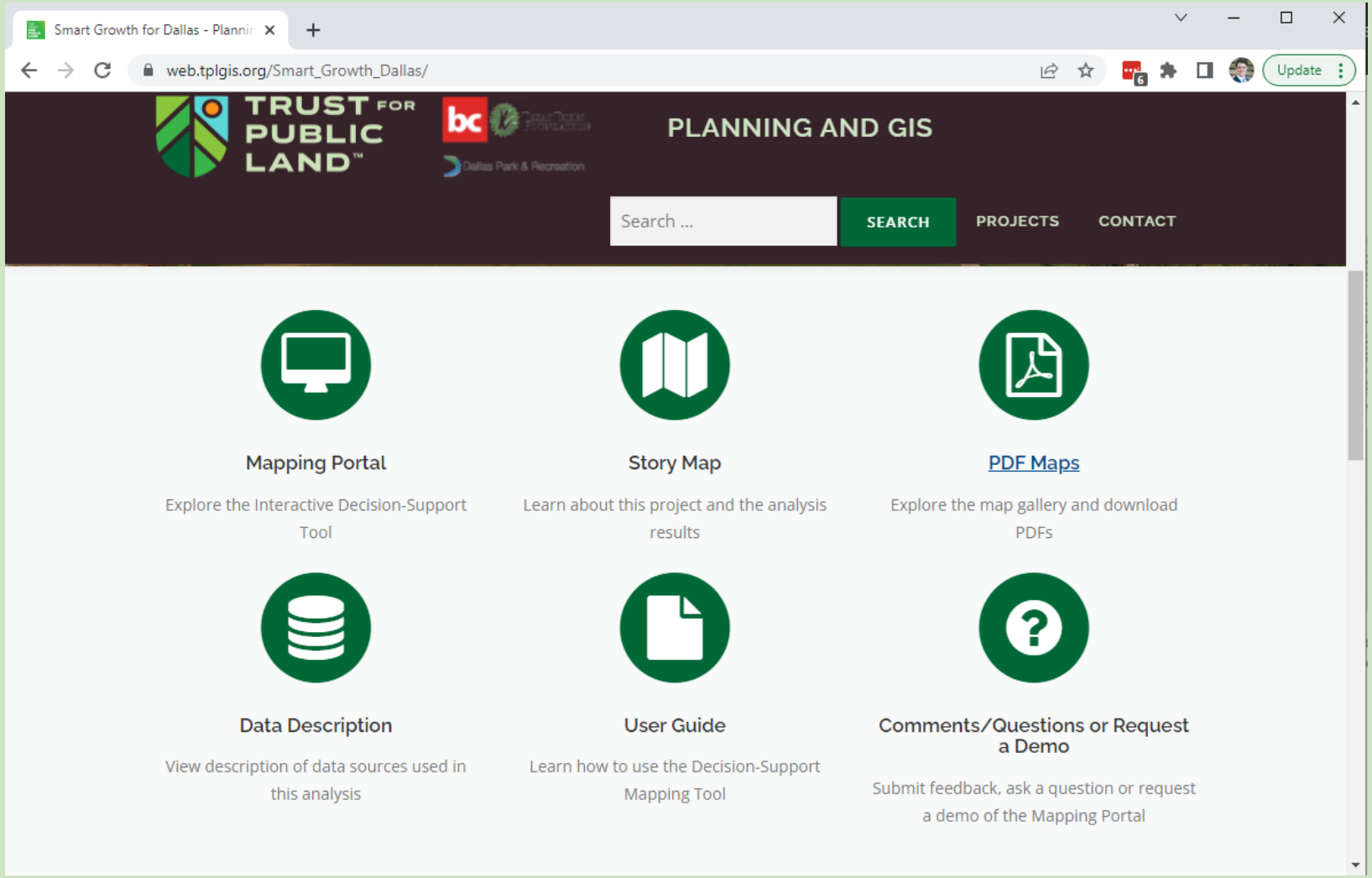
www.SmartGrowthForDallas.org



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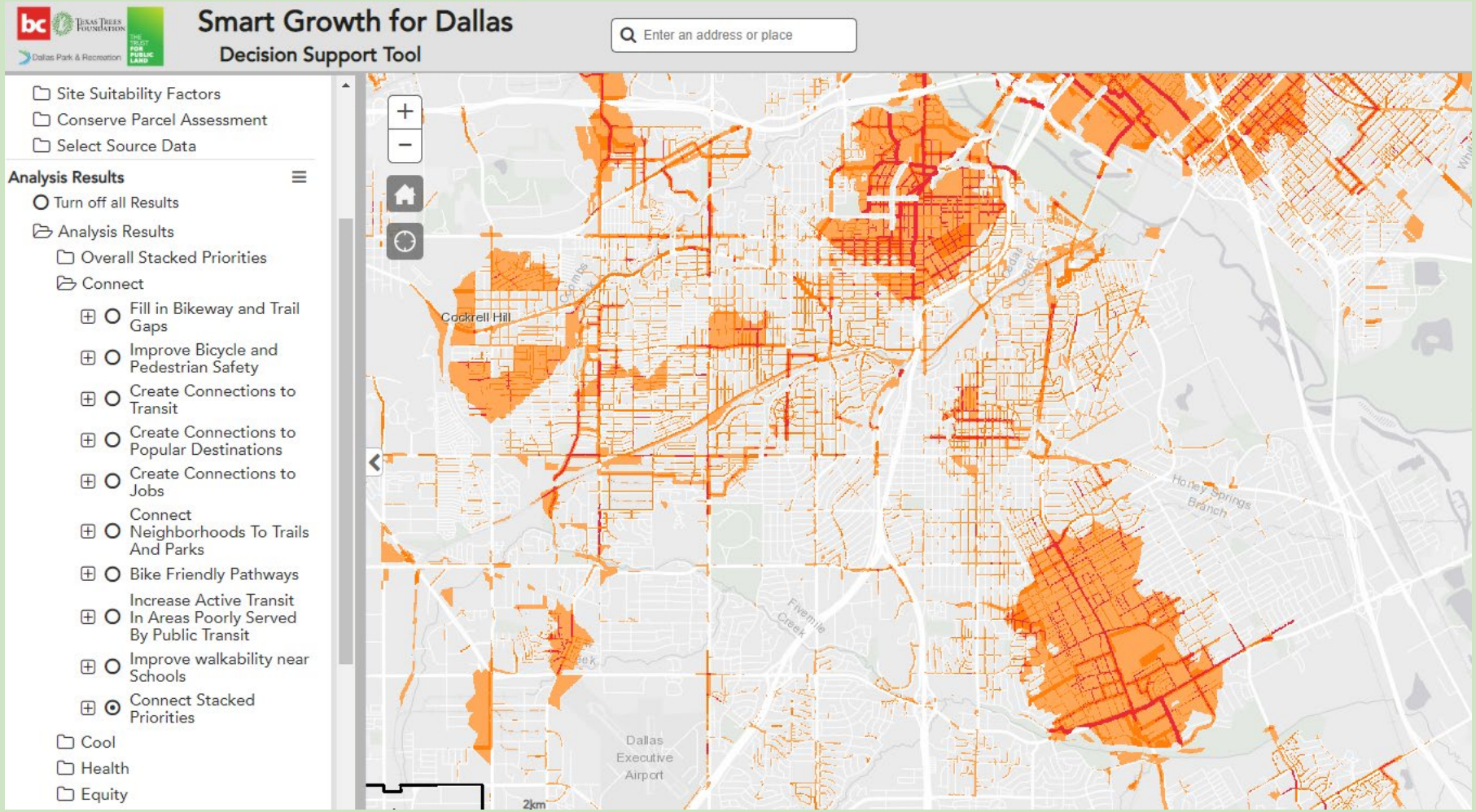
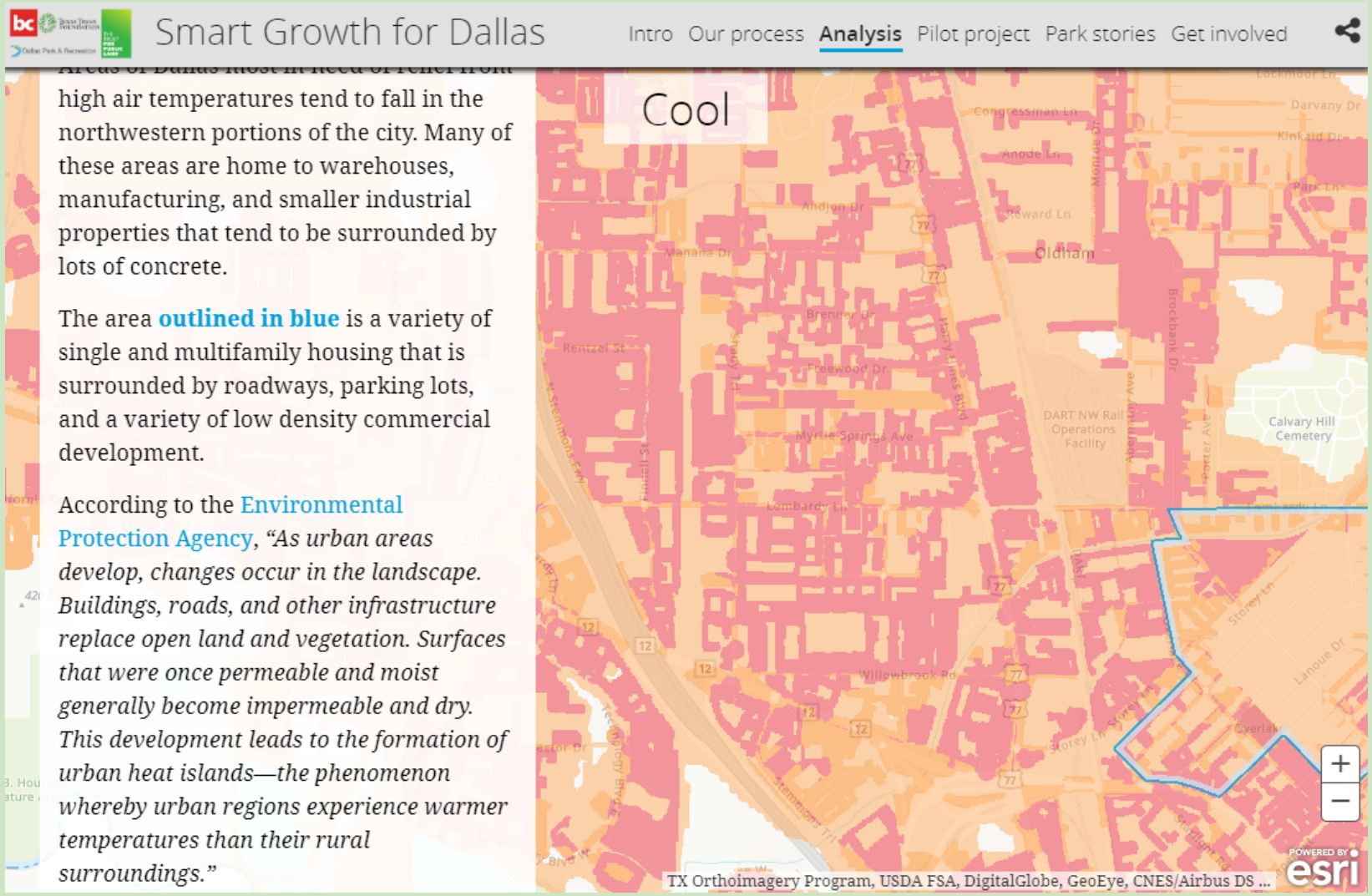
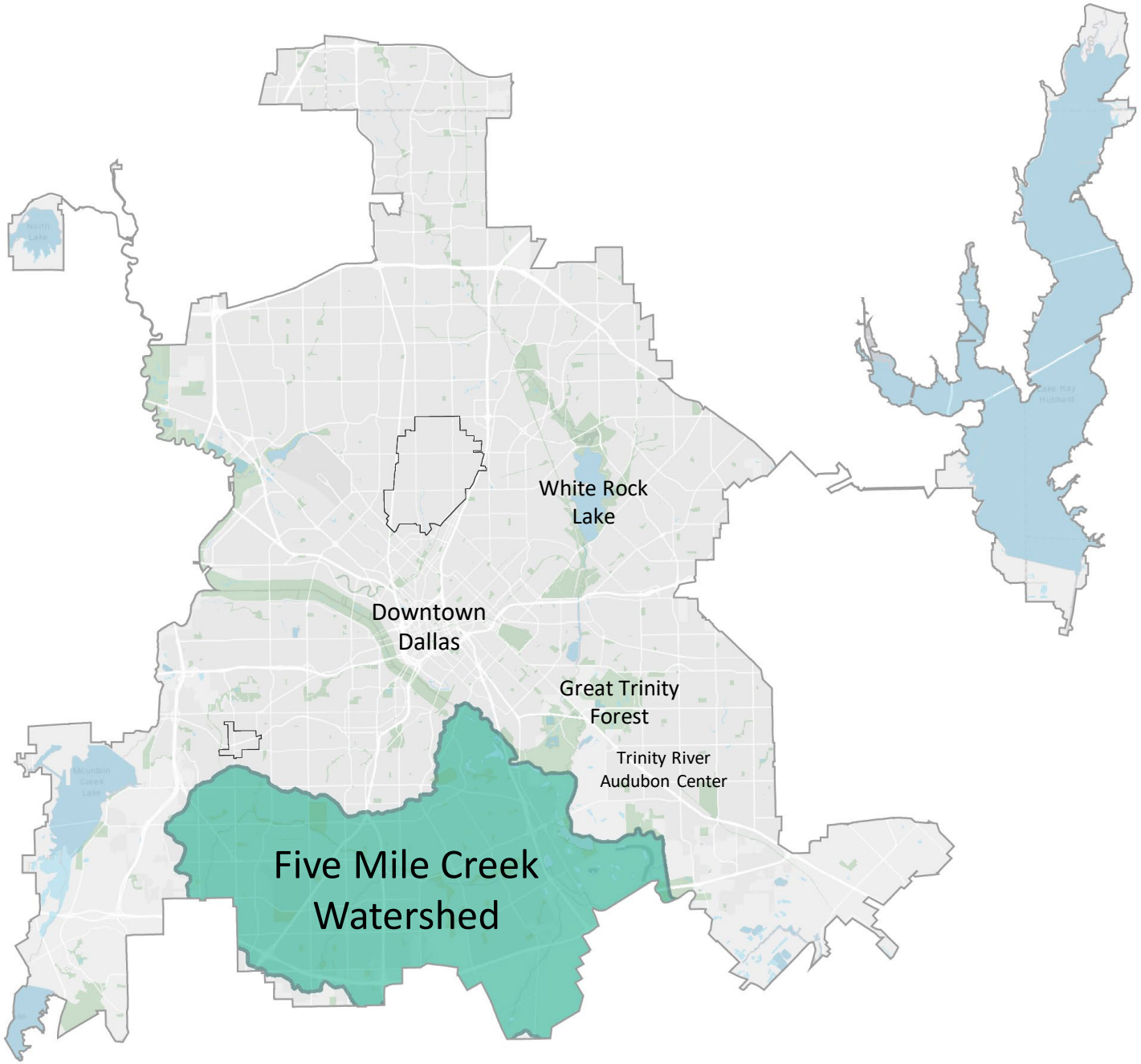


The Stories Behind the Data

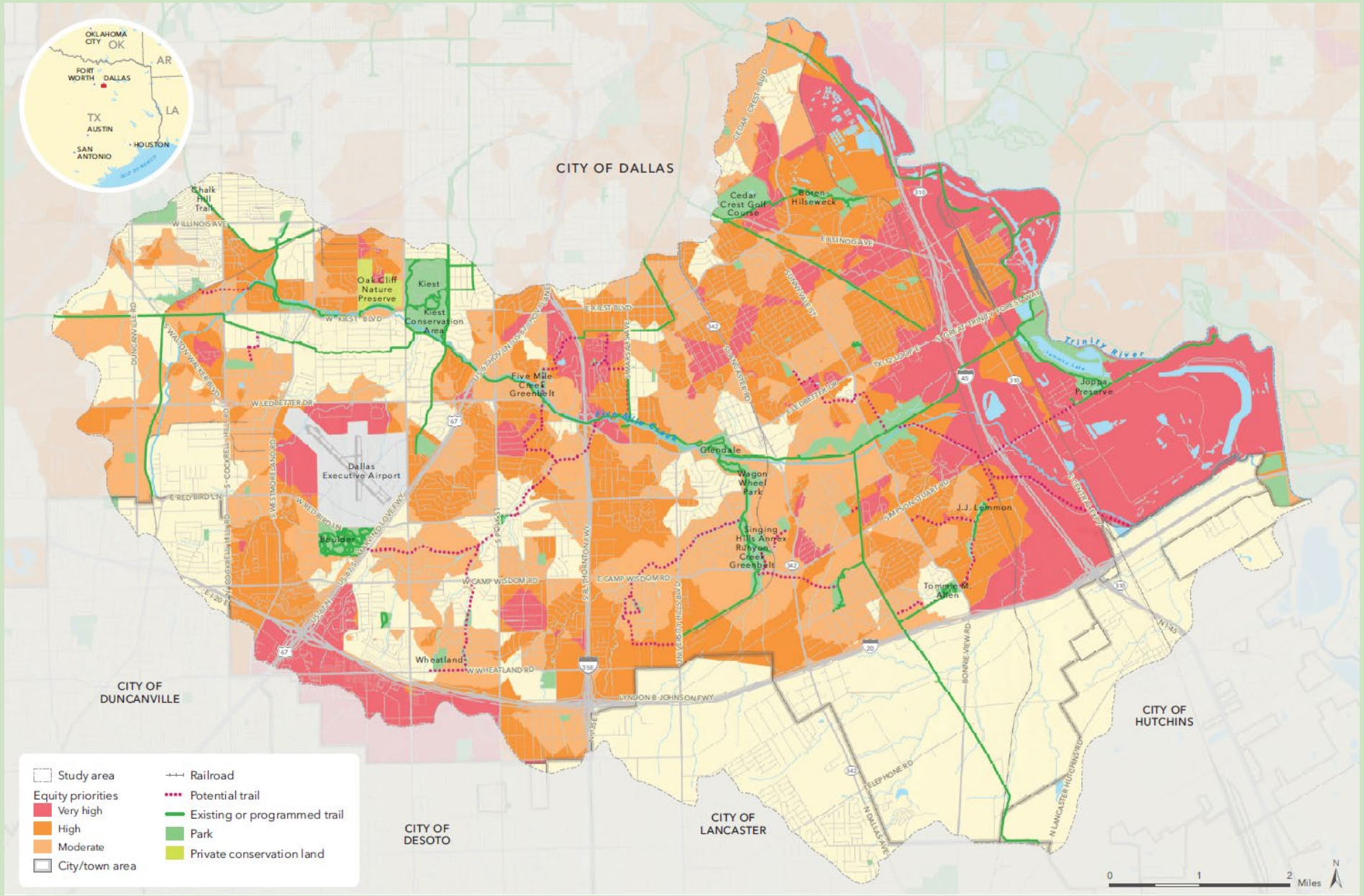


What can we do with all this data?



Five Mile Creek

Watershed Location



Equity Indicators

The Five Mile Creek Greenbelt will play an important role in building a more equitable park system – and city. This map identifies areas classified as "moderate" to "high" priority on the Smart Growth for Dallas Equity analysis.

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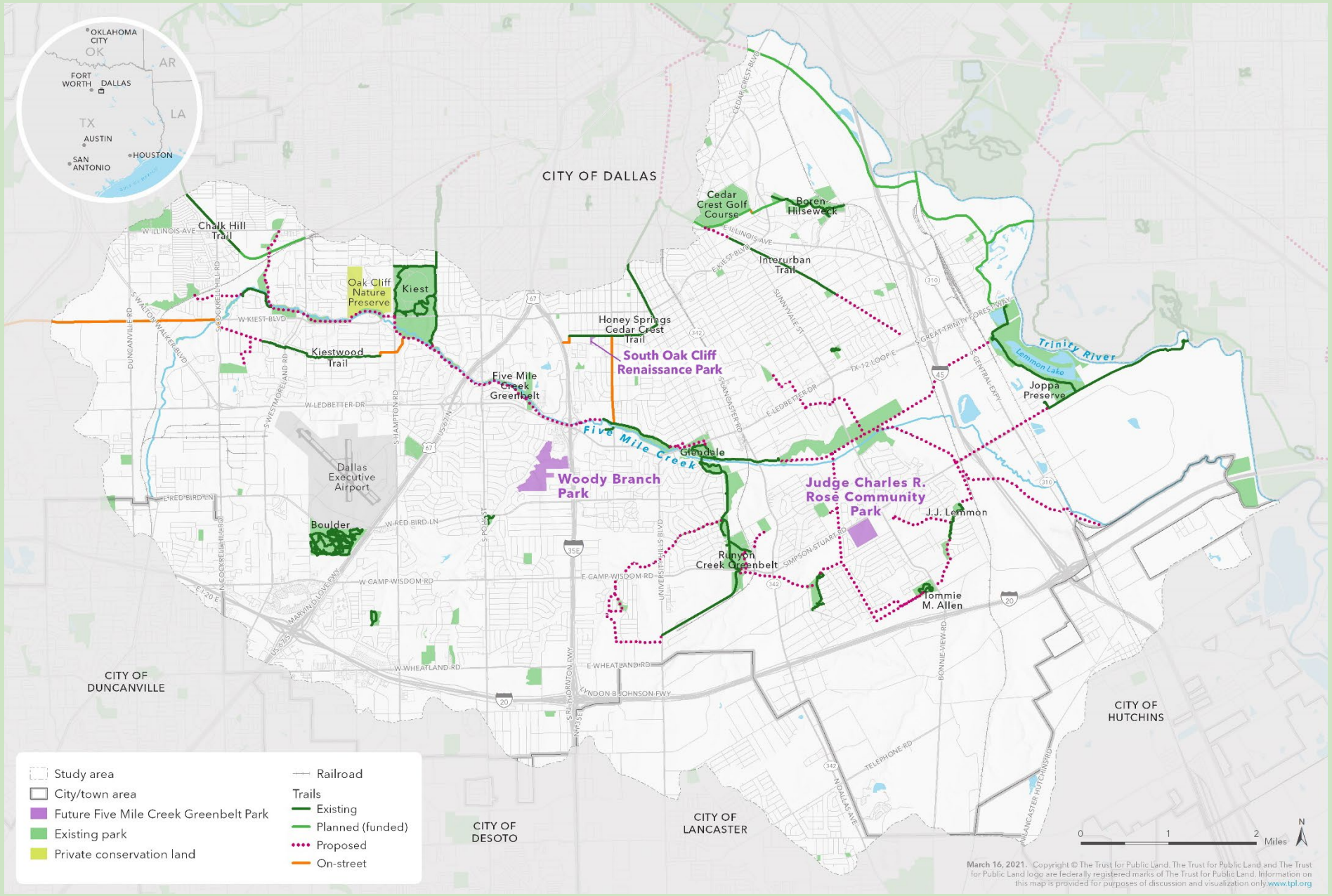

Our Vision

An interconnected series of trails, parks, and greenspaces following the main stem and tributaries of Five Mile Creek. This greenbelt network will provide new recreational opportunities and unparalleled access to the natural beauty of the hills and valleys of Southern Dallas.

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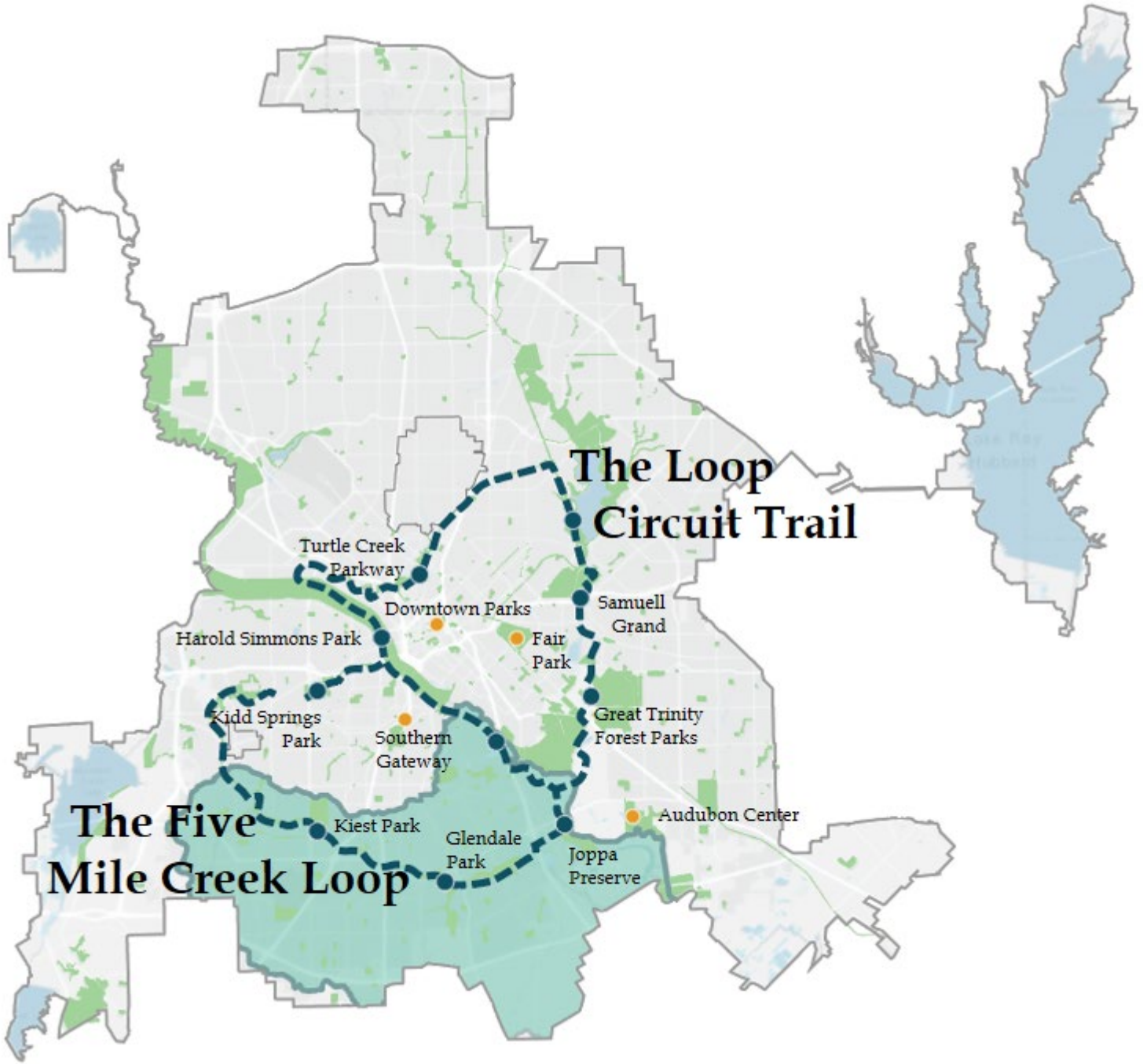

Five Mile Creek

Connection to other trails

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Thank you

Robert Kent | Texas State Director | Robert.Kent@tpl.org