

Smart Growth *for* Dallas

*Using data and GIS to improve the social, economic,
and environmental resilience of Dallas*

Dallas Park and Recreation Board

November 1, 2018



About Our Partners



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.

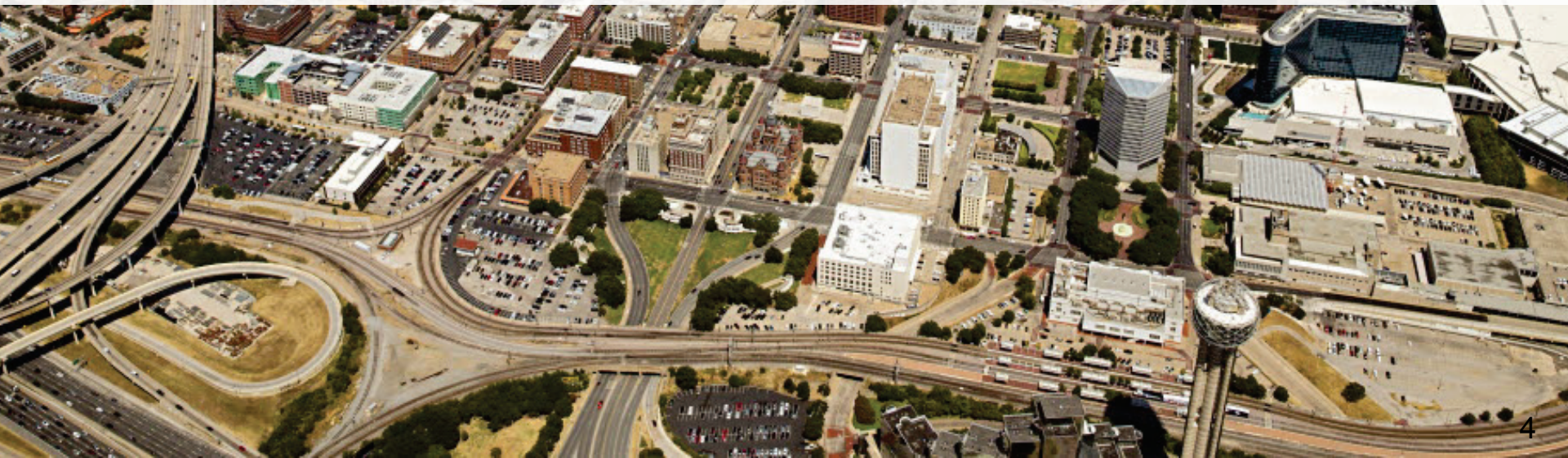


The **Texas Trees Foundation** preserves, beautifies, and expands parks and other public natural green spaces, public streets, boulevards, and rights-of-way by planting trees and encouraging others to do the same through educational programs that focus on the importance of building and protecting the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



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.



How can “green assets” improve Dallas’ resilience?

- Retain stormwater runoff
- Cool neighborhoods in the summertime heat
- Protect neighborhoods from flooding
- Safe routes to school and work
- Increase active recreation for 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 neighbors

Using the power of GIS mapping...



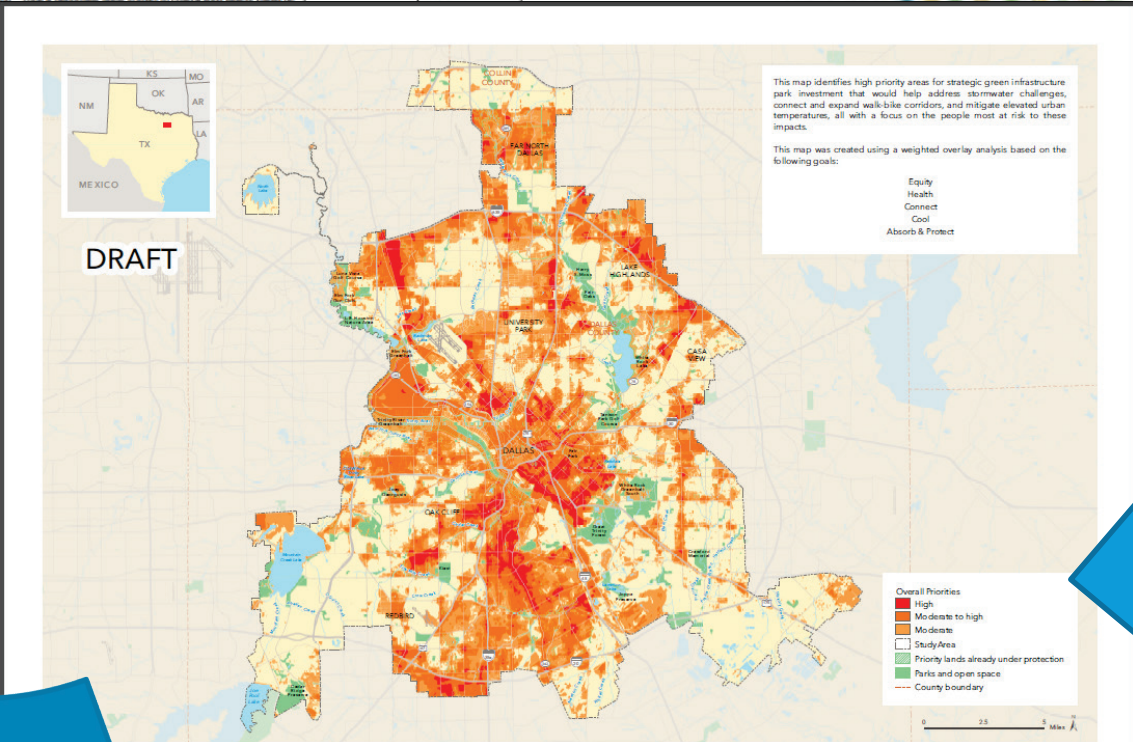
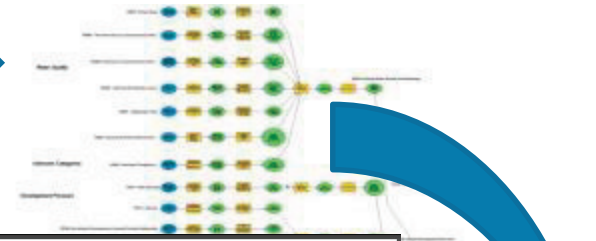
GIS can tell us things like:

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

Data, data, data!

CLIMATE-SMART CITIES: NEW YORK CITY
 Risk of Coastal Flooding, Critical Infrastructure, Social Vulnerability and Green Infrastructure Suitability Indicators Assessment
 Model Criteria
 February 11, 2015

Goal	Criteria	Criteria Weights	Data Prioritization (scale: 0-5)	Methodology	Data (Description, Code)	Data Source
Risk of Coastal Flooding	Current Flood Zones	25%	100-Year Zone = 5 500-Year Zone = 4	This model assigns coastal flooding risk priorities based on 2013 Flood Advisory Zones developed by FEMA. The Flood Advisory Zones take into consideration a combination storm surge, wave setup, and overland wave action. A combination storm surge, wave setup, and overland wave action.	2013 Flood Advisory Zones	Federal Emergency Management Agency (FEMA)
	2020 New Flood Zone Areas	10%	100-Year Zone = 5 500-Year Zone = 4			
	2050 New Flood Zone Areas	10%	100-Year Zone = 5 500-Year Zone = 4			



Overall Priorities

CLIMATE-SMART CITIES: SMART GROWTH FOR DALLAS

July 14, 2015. Special thanks to the following data providers: GIS Bureau of the City of Dallas, Texas Dept. of Transportation, Dallas Area Rapid Transit, Texas Natural Resource Conservation Service (USFWS), FEMA, Texas Tree Foundation. Copyright © The Trust for Public Land. The Trust for Public Land and the Trust for Public Land are federally registered marks of The Trust for Public Land. Information on this map is provided for purposes of discussion and visualization only. www.tpl.org



The Technical Advisory Team

1. Collaboratively develop **conceptual framework** for our Decision Support Tool
2. Place each of our Smart Growth for Dallas **planning objectives** (Connect, Cool, Absorb, Protect, Equity, and Health) in the Dallas context using a “current conditions report” to frame the discussion
3. **Identify criteria** (location-based characteristics) for each planning objective and the most appropriate data sources needed to develop those criteria
4. **Identify potential datasets** for inclusion in our GIS models
5. **Identify use cases and design parameters** to maximize usefulness of Decision Support Tool for users

The Technical Advisory Team

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
- UT Dallas
- Dallas County
- ...and more



Analysis for 315,000 parcels of land

DallasParcelTable

Search Sheet

Home Insert Page Layout Formulas Data Review View

Normal Page Layout Custom Views Ruler Formula Bar Zoom 100% Unfreeze Panes Freeze Top Row Freeze First Column Split View Record Macro

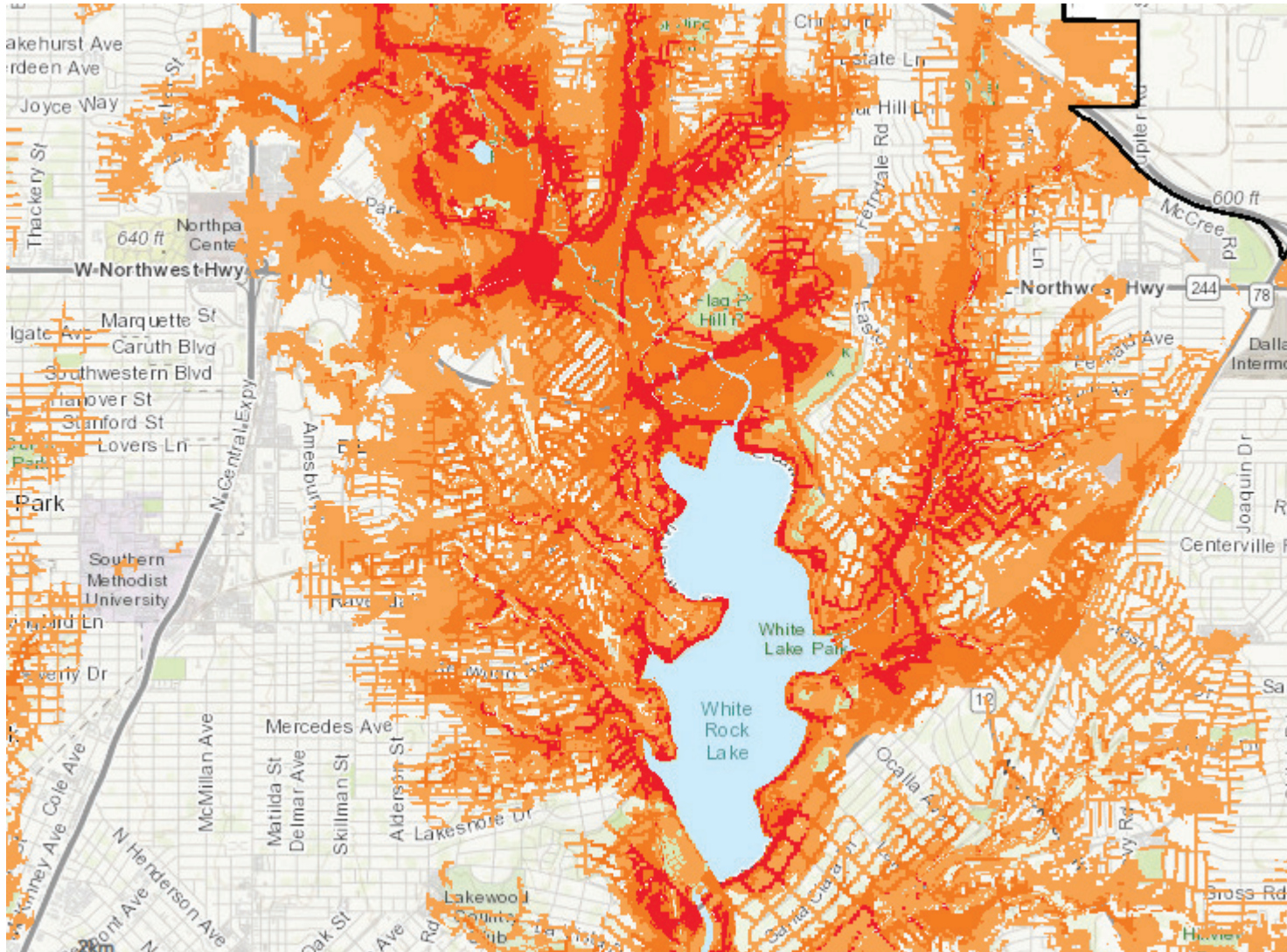
R1

General Info			Filtering Criteria							Priority Results						
TPL_ID	ObjID	ACCT	Council District	Park Adjacent?	School Parcel?	Publicly Owned?	Park Parcel?	Structure Present?	Park Access?	Vacant Parcel?	Parcel Acres	EQ02: Acres	EQ02: Pct	EQ02?	EQ03: Acres	
73	1	000000010883	12	0	0	0	0	1	1	0	2.288	0.000	0.000	No	0.00	
74	2	000000010892	12	0	0	0	0	1	0	0	4.582	0.000	0.000	No	0.00	
75	3	000000010976	12	0	0	0	0	1	0	0	1.416	0.000	0.000	No	0.00	
80	4	000000011620	12	0	0	0	0	1	1	0	0.808	0.000	0.000	No	0.80	
81	5	000000011621	12	0	0	0	0	0	1	1	0.685	0.000	0.000	No	0.68	
82	6	000000011819	12	0	0	0	0	1	0	0	0.255	0.000	0.000	No	0.00	
83	7	000000011828	12	0	0	0	0	1	0	0	0.263	0.000	0.000	No	0.00	
84	8	000000011837	12	0	0	0	0	1	0	0	0.260	0.000	0.000	No	0.00	
85	9	000000011846	12	0	0	0	0	1	0	0	0.253	0.000	0.000	No	0.00	
86	10	000000011855	12	0	0	0	0	1	0	0	0.256	0.000	0.000	No	0.00	
87	11	000000011864	12	0	0	0	0	1	0	0	0.255	0.000	0.000	No	0.00	
88	12	000000011873	12	0	0	0	0	1	0	0	0.283	0.000	0.000	No	0.00	
89	13	000000011882	12	0	0	0	0	1	0	0	0.294	0.000	0.000	No	0.00	
90	14	000000011891	12	0	0	0	0	1	0	0	0.270	0.000	0.000	No	0.00	
91	15	000000011908	12	0	0	0	0	1	0	0	0.380	0.000	0.000	No	0.00	
92	16	000000011917	12	0	0	0	0	1	0	0	0.351	0.000	0.000	No	0.00	
93	17	000000011926	12	0	0	0	0	1	0	0	0.341	0.000	0.000	No	0.00	
94	18	000000011935	12	0	0	0	0	1	0	0	0.370	0.000	0.000	No	0.00	
95	19	000000011944	12	0	0	0	0	1	0	0	0.444	0.000	0.000	No	0.00	
96	20	000000011953	12	0	0	0	0	1	0	0	0.368	0.000	0.000	No	0.00	
97	21	000000011962	12	0	0	0	0	1	0	0	0.317	0.000	0.000	No	0.00	
98	22	000000011971	12	0	0	0	0	1	0	0	0.393	0.000	0.000	No	0.00	
99	23	000000011980	12	0	0	0	0	1	0	0	0.320	0.000	0.000	No	0.00	
100	24	000000011999	12	0	0	0	0	1	0	0	0.321	0.000	0.000	No	0.00	
101	25	000000012006	12	0	0	0	0	1	0	0	0.303	0.000	0.000	No	0.00	
102	26	000000012015	12	0	0	0	0	1	0	0	0.339	0.000	0.000	No	0.00	
103	27	000000012024	12	0	0	0	0	1	0	0	0.317	0.000	0.000	No	0.00	
104	28	000000012033	12	0	0	0	0	1	0	0	0.268	0.000	0.000	No	0.00	
105	29	000000012042	12	0	0	0	0	1	0	0	0.286	0.000	0.000	No	0.00	
106	30	000000012051	12	0	0	0	0	1	0	0	0.303	0.000	0.000	No	0.00	
107	31	000000012060	12	0	0	0	0	1	0	0	0.304	0.000	0.000	No	0.00	
108	32	000000012079	12	0	0	0	0	1	0	0	0.223	0.000	0.000	No	0.00	

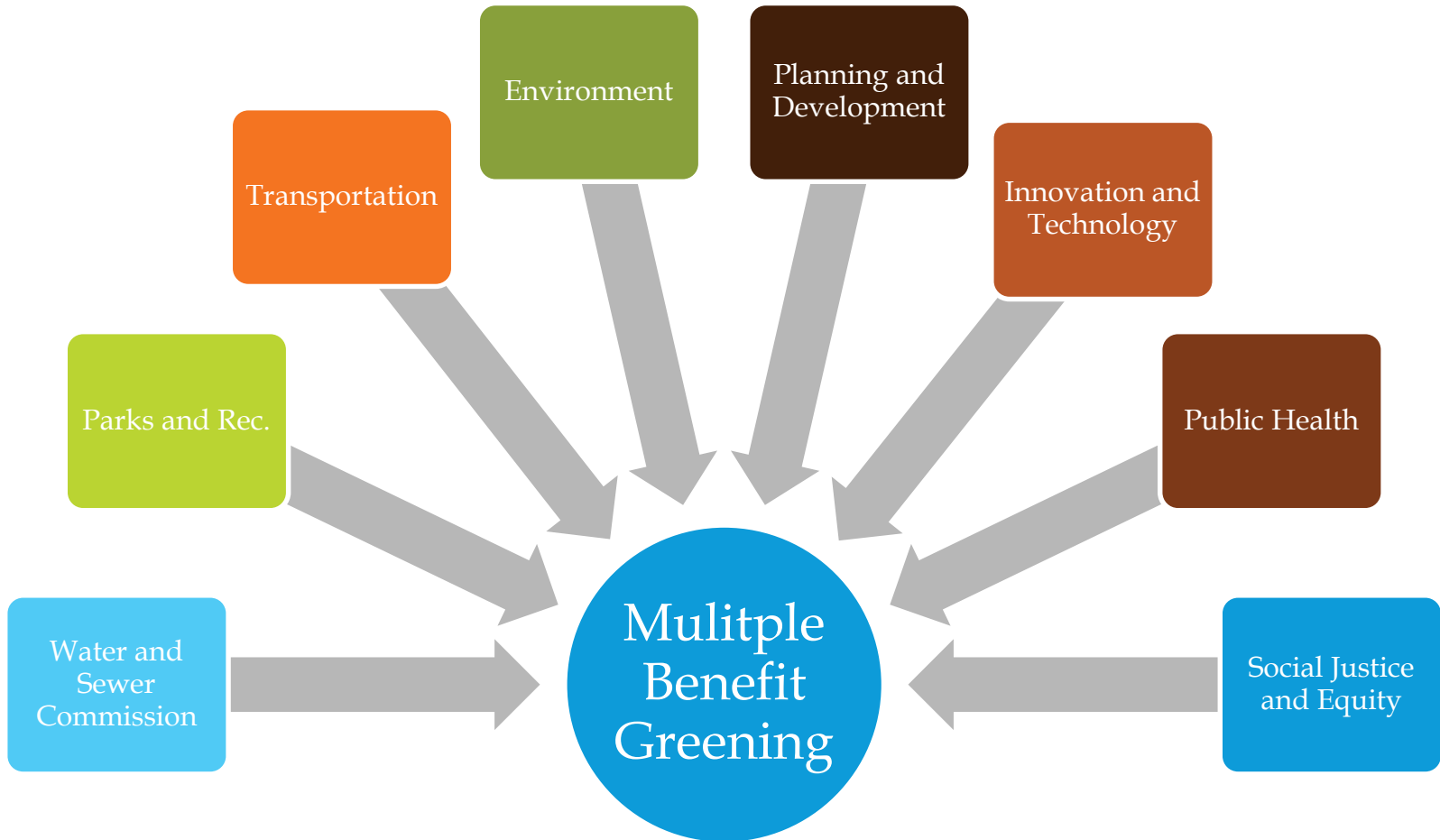
DallasParcelTable

Saving DallasParcelTable.xlsx 100%

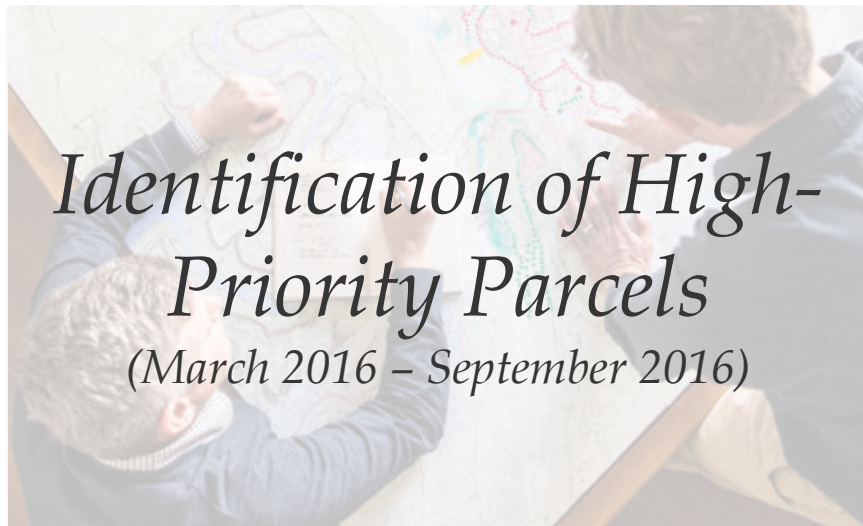
Mapping priority zones for green investments



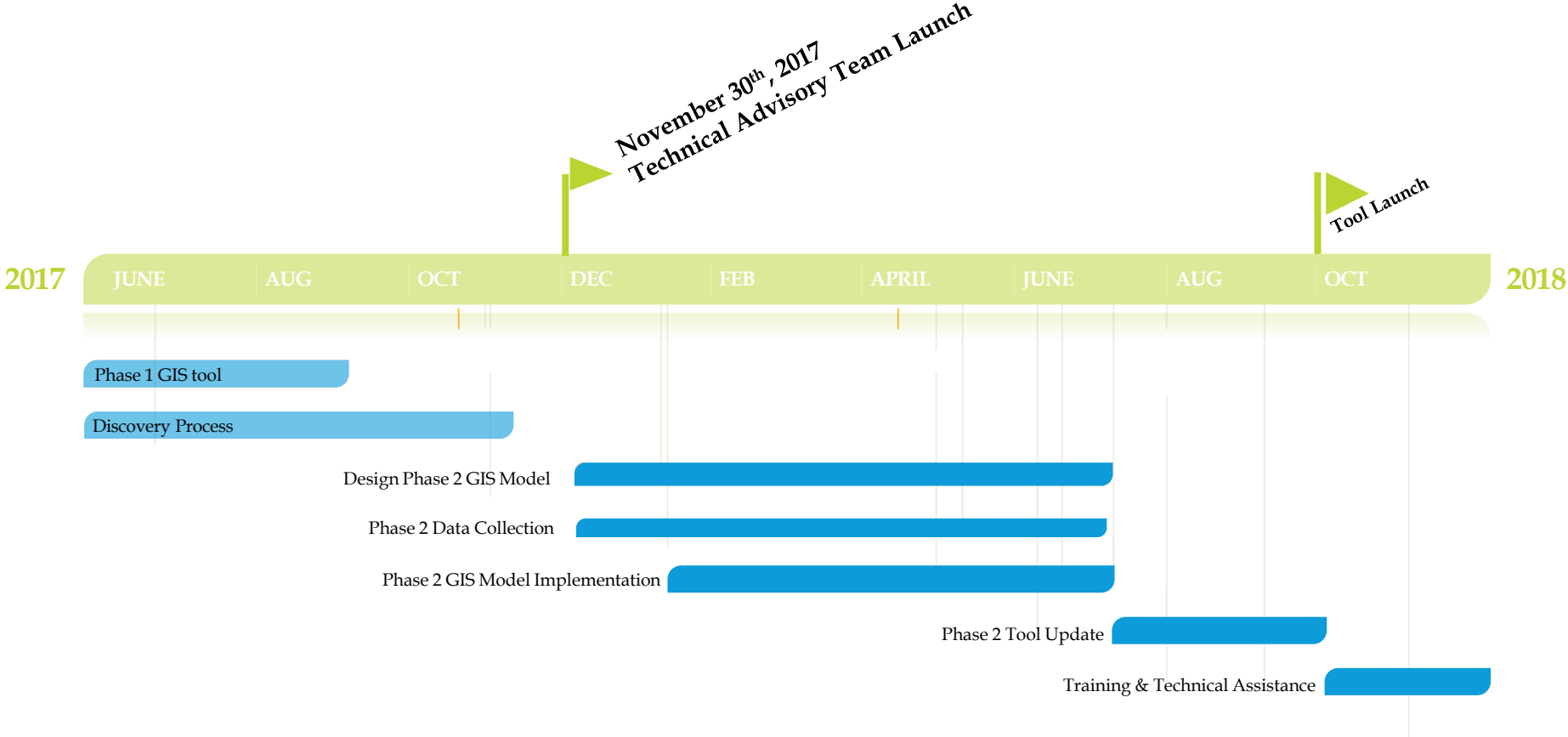
Program Objective: Help Dallas identify and prioritize methods to improve its social, economic, and environmental resiliency



Key Deliverables and Timeline



Development of “Decision Support Tool”



The “Decision Support Tool”

The screenshot displays the 'Smart Growth for Dallas Decision Support Tool' interface. At the top left, logos for 'bc TEXAS TREES FOUNDATION' and 'THE POINT FOR PUBLIC LAND' are visible, along with 'Dallas Park & Recreation'. The main title 'Smart Growth for Dallas Decision Support Tool' is centered at the top. A search bar on the right contains the text 'Enter an address or place'. In the top right corner, there are links for 'Help' and 'Logout'. The left sidebar contains a menu with the following items: 'Group Parcel Selection', 'Query Data', 'Layers', 'Scenario Tool', 'Project Impact Tool', 'Draw', 'Print', and 'Bookmarks'. Below the menu, there are input fields for 'Title: Smart-Growth Dallas', 'Format: JPG', and 'Layout: Letter - Landscape', along with 'Settings' and 'Print' buttons. The main map area shows a geographic view of the Dallas area with a red and orange overlay representing the smart growth analysis. The map includes labels for various cities and landmarks such as Coppell, Carrollton, Richardson, Garland, Irving, Grand Prairie, and Mesquite. A scale bar at the bottom left indicates 5km and 4mi. The Esri logo is in the bottom right corner.

Live Demonstration of Tool

https://web.tplgis.org/Smart_Growth_Dallas/

The screenshot displays the 'Smart Growth for Dallas Decision Support Tool' interface. At the top left, there are logos for 'bc TEXAS TREES FOUNDATION' and 'THE TRUST FOR PUBLIC LANDS'. The title 'Smart Growth for Dallas Decision Support Tool' is centered at the top. To the right of the title is a search bar with the placeholder text 'Enter an address or place'. Further right are 'Help' and 'Logout' links. The left sidebar contains a list of navigation options: 'Group Parcel Selection', 'Query Data', 'Layers', 'Scenario Tool', 'Project Impact Tool', 'Draw', 'Print', and 'Bookmarks'. Below these options are fields for 'Title' (set to 'Smart-Growth Dallas'), 'Format' (set to 'JPG'), and 'Layout' (set to 'Letter - Landscape'). There are also 'Settings' and 'Print' buttons. The main map area shows a heatmap of smart growth potential over the Dallas area, with colors ranging from light orange to dark red. The map includes a scale bar (0 to 4 miles) and a 'Basemaps' dropdown menu. The map is overlaid on a street grid and includes various city names like Coppell, Carrollton, Irving, and Grand Prairie.

Contact Us



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