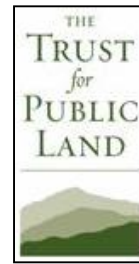
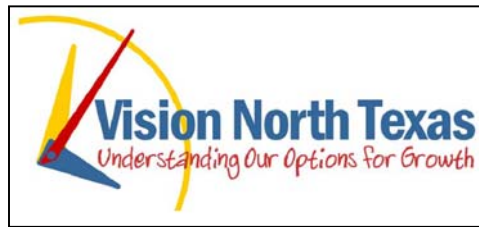


North Central Texas
Council of Governments



Vision North Texas - Greenprint Project

2007 Results Report

Table of Contents

	<u>Page</u>
Overview	1
The Vision North Texas Greenprint Project	1
Greenprint Tasks and Schedules	2
Accomplishments in 2007.....	2
1. Structure for Stakeholder Involvement.....	2
2. Southeastern Subregional Workshop.....	3
3. Regional Ecosystem Task Force Recommendations	6
4. Data Inventory and Collection	6
5. Regional Greenprint Framework Design	7
Greenprint Project Work in 2008.....	11
1. Greenprint Model Implementation	11
2. Greenprint Model Delivery and Training	11
3. Finance and Implementation Analysis.....	12
Future Greenprint Project Activities.....	13
1. Completion of Regional Model	13
2. Use of the Greenprint Tools.....	13
Appendix 1 – Advisory Group Rosters.....	15
Regional Ecosystem Task Force – Membership Roster	15
Regional Ecosystem Task Force – Membership Roster (con't)	16
Technical Advisory Team – Membership Roster	16
Greenprint Project Support	16
Appendix 2 - Sample Maps.....	17
Appendix 3 – Greenprint Data Summary	26

Overview

Vision North Texas is a private – public partnership designed to increase awareness about the growth expected in North Texas and to involve people and organizations in initiatives that accommodate that growth successfully. The project began in late 2004. Charter Sponsors are the Urban Land Institute’s North Texas District Council (ULI), the North Central Texas Council of Governments (NCTCOG) and the University of Texas at Arlington (UTA).

As part of the effort to plan for growth in the region, Vision North Texas (VNT) is working with The Trust for Public Land (TPL) to help residents and officials reach common ground on their open space priorities through an innovative approach known as **Greenprinting**. The Greenprint process utilizes Geographic Information Systems (GIS) to assemble demographic and geographic data, combined with community-based values, to develop a set of shared open space priorities within the context of regional growth. The result is a dynamic series of maps that highlights the lands whose protection could meet the multiple priorities identified by regional leaders and community members. Greenprinting begins with public involvement to define needs, and culminates in open space action plans and funding strategies.

The greenprint project began in 2007. During that year, the first phase of work for the project was completed. This report describes the greenprint project and reports on 2007 accomplishments and results.

Work on the Vision North Texas Greenprint has been made possible in part by generous support from the Harold Simmons Foundation and the EPA/ULI Smart Growth Partners Program. We appreciate this support.

The Vision North Texas Greenprint Project

The Trust for Public Land has conducted greenprint projects in communities and regions nationwide. In each case, the project is tailored to meet the needs of the local stakeholders. The Vision North Texas Greenprint project has been designed to:

- Reflect open space resources and priorities unique to north Texas communities;
- Result in a common knowledge base of regional resources and assets;
- Offer a unique blend of science and preference:
 - Stakeholders and community members identify broad conservation goals
 - Models are designed by local experts and scientists using best available regional data;
- Be conducted as part of Vision North Texas’ overall initiative to create a vision for the future growth of the region;
- Create an analytical tool that complements other regional, state and federal planning projects affecting North Texas (such as transportation planning and ‘Eco-logical’ projects);
- Provide an on-going decision support tool, maintained by NCTCOG, to support North Texas cities, counties, property owners and non-profit organizations; and

- Assist with open space acquisition and protection planning at the regional and local level.

Greenprint Tasks and Schedules

In January 2007, the North Central Texas Council of Governments (on behalf of Vision North Texas) and the Trust for Public Land signed an agreement that covers work on the first part of the VNT Greenprint Project. This first part of the greenprint project will result in the creation of a Greenprint Framework that will establish the basis for detailed greenprinting work throughout the 16-county Vision North Texas region. It also includes a detailed analysis of the VNT Southeastern Subregion, including southern Dallas County, the northern part of Ellis County and all of Kaufman County. Work on this part of the Greenprint Project began in 2007 and should be completed in 2008 (if funding is secured).

The second part of the Greenprint Project will expand the detailed greenprint analysis to include the entire, 16-county North Texas region. It will use this greenprint tool in regional environmental, transportation and other studies. It will also make the results of the greenprint analysis available to local stakeholders. This work requires additional funding, so the schedule will depend on securing these funds. The goal is to begin this work in 2008 and to complete it as quickly as possible.

Accomplishments in 2007

The primary objectives for the Vision North Texas Greenprint Project in 2007 were to:

1. Assess existing conditions and assemble baseline information
2. Establish regional open space goals and priorities
3. Translate open space goals into measurable, mappable criteria
4. Assemble the best available regional datasets to support Greenprint model implementation
5. Design the Regional Greenprint Framework

These objectives were achieved through the involvement of several groups of North Texas stakeholders and through technical work performed by the professional staff and consultants supporting Vision North Texas.

1. Structure for Stakeholder Involvement

The Vision North Texas Greenprint involves four types of stakeholder involvement. This structure for involvement was designed and implemented in 2007.

Vision North Texas Advisory Committee

The Advisory Committee provides guidance and direction for the overall Vision North Texas partnership. It is briefed quarterly on the work related to the Greenprint Project and provides advice and input on progress. During 2007, the Advisory Committee received Greenprint reports in April, June, September and December.

Regional Ecosystem Task Force

The North Texas Regional Ecosystem Task Force (RETF) represents the diverse range of stakeholders who live and work in North Texas (see Appendix 1 for roster). This committee has been asked to review the results of the public workshop, and to provide assistance in establishing a set of goals and criteria for the Greenprint model that accurately reflect the interests of communities and stakeholders throughout the North Central Texas region. As the Greenprint project continues, this committee will also be asked to review model results and advise on relative weighting of goals as model implementation progresses. In addition to its work on the Greenprint project, this committee serves as the forum for discussion of additional natural resource issues as part of the overall Vision North Texas project and other Center of Development Excellence initiatives such as the creation of a regional ecological framework.

The RETF met on July 2, 2007. Since then, individual members have provided input through surveys and other means. The RETF also met on January 17, 2008 to finalize the goals and criteria for the Greenprint framework.

Technical Advisory Team

The Greenprint Technical Advisory Team (TAT) provides expert review and advice regarding model design, rationale, content, and outcomes. The TAT is made up of 10-12 local advisors from the North Texas region with expertise in natural resource protection, water quality, habitat, storm water management, cultural assets, parks/recreation, and/or geographic information systems and data (see Appendix 1 for a roster).

The Technical Advisory Team is asked to verify the completeness and appropriateness of model criteria defined for each goal, recommend best available data sources, help ensure that defensible science is used for all models, advise on modeling assumptions, and review input data and model results for accuracy and currency.

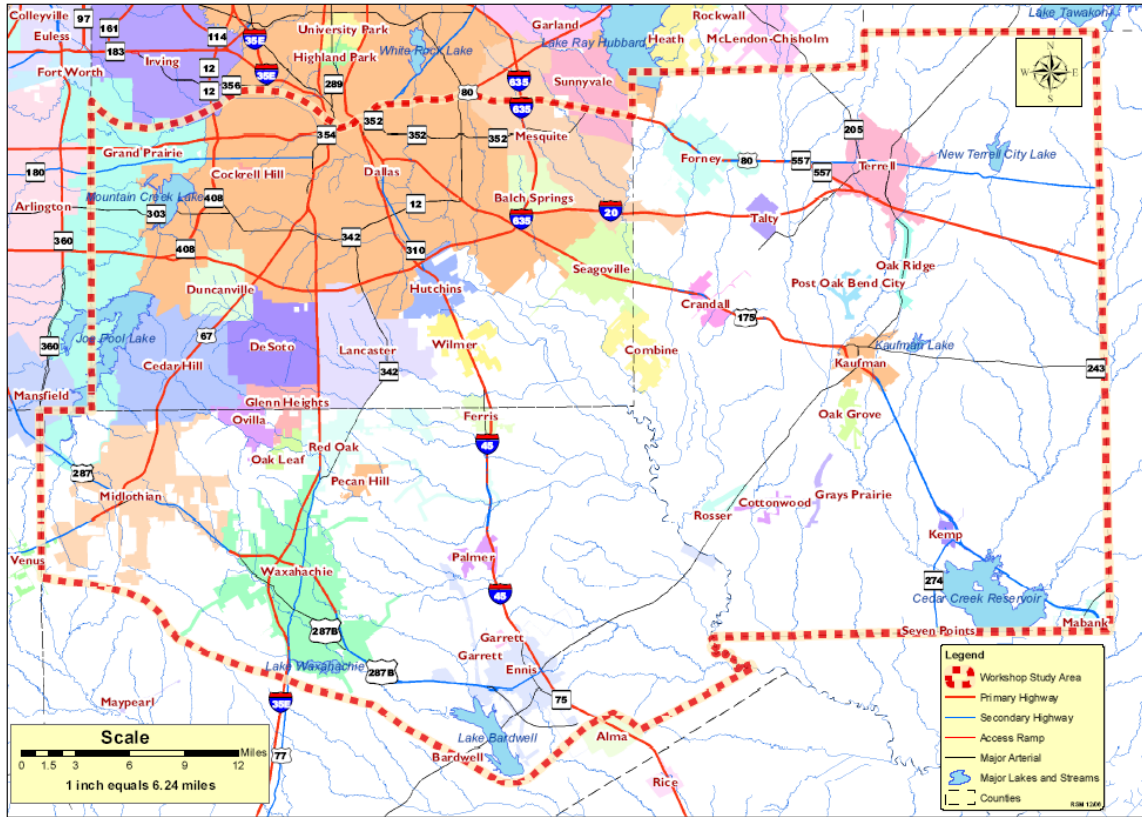
The TAT met on July 27, 2007. Since then, individual members have provided input through surveys and other means.

Subregional Stakeholders

Since the first part of the Greenprint Project includes a detailed analysis of the Southeastern Subregion, a larger group of stakeholders from this area has been involved in the Greenprint Project. These stakeholders participated in a workshop on January 27, 2007, which included greenprint discussions as well as other activities. This workshop and its results are described below.

2. Southeastern Subregional Workshop

On January 27, 2007, Vision North Texas conducted its first stakeholder workshop. The workshop addressed the Southeastern Subregion of North Texas and included participants from southern Dallas County, Kaufman County, Ellis County, and across the north central Texas region. The study area for this workshop is shown on the map on page 4.



Over 100 community leaders and residents participated in the workshop. The workshop was structured to support small group discussion and interactive assessment. Each attendee was assigned to a small working group of 8 to 10 diverse participants to consider challenges associated with regional growth including development patterns, housing, air quality, community character, economic competitiveness, education, energy consumption, health, public infrastructure, transportation, open space, and natural resources.

Each small group was asked to complete four tasks.

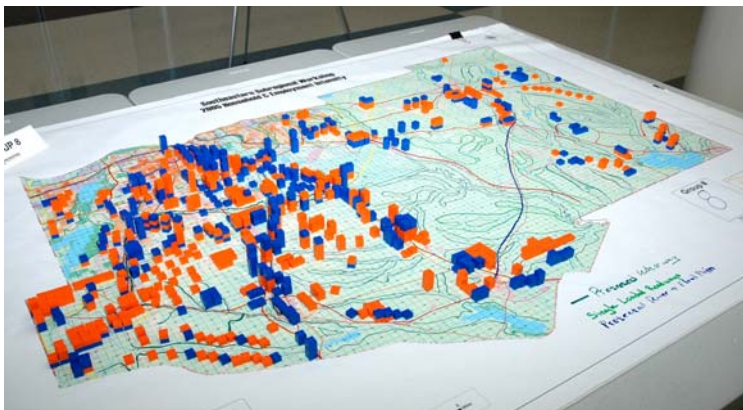
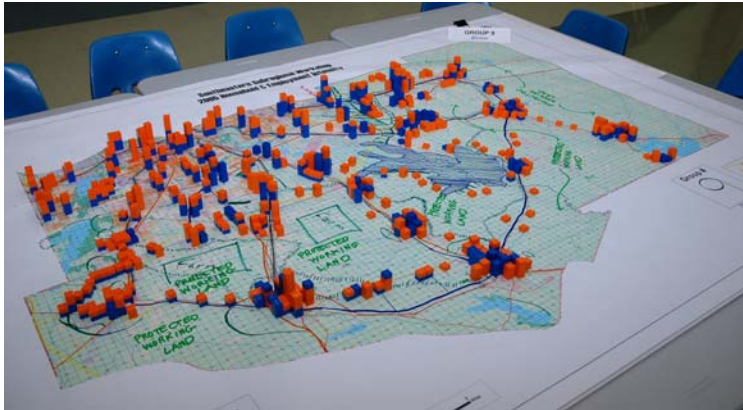
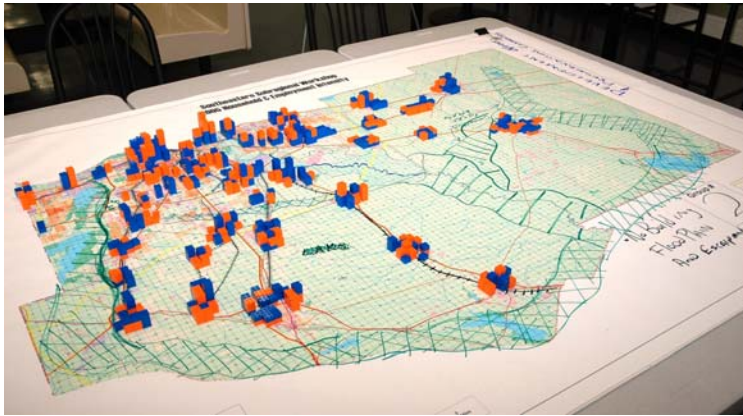
1. Brainstorm essential growth principles for the subregion
2. Interactively map out preferred patterns and forms for future growth, using assumed increases in housing and jobs across the region. Legos were used to symbolize locations and patterns of preferred growth.



3. Prioritize land conservation and recreation goals for the subregion.
4. Integrate open space priorities and conservation concepts into growth pattern scenarios, by tracing critical conservation areas on the lego maps.



The images on these pages show some of the stakeholder groups during the workshop. They also show the results of work by three of the ten workshop groups. In each of these cases, the Legos reflect the amount of future growth addressed by the workshop group (orange Legos represent new households and blue Legos represent new jobs). The groups' priority natural areas and open spaces are marked in green and blue on the maps themselves.



The following themes reflect the land conservation and open space goals identified and summarized across all ten workshop groups. These goal statements, identified by workshop participants, create the fundamental structure for the greenprint modeling process:

- Provide Connectivity via Trails
- Create New Opportunities for Recreation Access and Parks
- Protect Habitat
- Preserve Sense of Place and Cultural Assets
- Minimize Flooding Impacts
- Protect Water Quality and Water Supply
- Improve Air Quality

3. Regional Ecosystem Task Force Recommendations

The RETF met on July 2, 2007. The RETF initially developed the goals for the Greenprint project as a result of the greenprint discussions as well as other activities from Southeastern Subregional Workshop held on January 27, 2008. Since then, individual members have provided input through surveys and other means.

In addition to suggestions specific to the Greenprint model design, the Regional Ecosystem Task Force has the following specific recommendations for conservation implementation in the North Texas region. These recommendations will be used as a starting point for finance strategy and analysis work later in the project.

- Establish a restoration master plan
- Develop political good will
- Create an aggressive land conservation incentive plan
- Provide public education and outreach
 - Let youth have a voice and be involved in the process
- Master the financial tools that work in the TX culture
- Strengthen the political tools of the region

4. Data Inventory and Collection

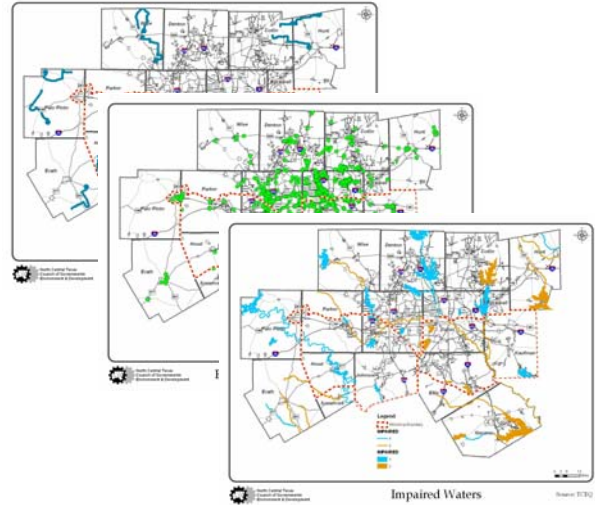
Based on the Greenprint goals and criteria listed above, an intensive data identification and collection effort was undertaken in collaboration with the Greenprint Technical Advisory Team (TAT). The TAT helped to refine and add appropriate metrics, reviewed methodology assumptions, and recommended best available data sources.

For sample maps reflecting data collection efforts, see Appendix 2. For a comprehensive assessment of required data sources for all Greenprint criteria see Appendix 3.

Key data providers for the Vision North Texas Greenprint include the following:

- North Central Texas Council of Governments
- Texas Parks and Wildlife
- US EPA - Texas Ecological Assessment Protocol
- City of Dallas

- Dallas County
- Dallas, Ellis & Kaufman County Appraisal Districts
- National Audubon Society
- Texas Natural Resource Information System
- Texas Department of Transportation
- US Geological Survey
- US Natural Resources Conservation Service
- Texas Historical Commission
- Federal Emergency Management Agency
- Texas Water Development Board
- US Fish & Wildlife Service
- Texas Nature Conservancy



As with any GIS modeling effort, results of the final analysis will only be as good as the data it is based on. The Greenprint team is committed to locate the best available data in the region, while recognizing that there will inevitably be deficiencies. Most common data collection challenges include:

- Data currency and completeness – available data was collected some time ago and does not accurately reflect current conditions, OR available data does not sufficiently characterize the metric. Updates may be required.
- Data coverage – data is only available for limited sections of the study area. The more rural regions of the study area tend to have fewer data resources.
- Lack of data – metrics were identified for which a GIS-based dataset does not exist. In this case, digitizing from aerial imagery or other data substitutions may be required.

Following is a summary of data gaps that the Greenprint team continues to investigate:

Data Currency or Completeness Issues	Data Coverage Issues	Lack of Available Data
Vegetation	Population Projections	Community Gardens
Mines/Gravel Pits	Land use	Butterfly Trails
Escarpments	Floodplains	Equestrian Trails
Wetlands	Parcels	Off-road Access
Tree Canopy	Trails	Preserve Rural Character
Birding Zones	Boating Access Locations	Historic Vegetation
	Brownfields	

5. Regional Greenprint Framework Design

The Greenprint process applies a systematic approach to translate regional values into objective metrics for modeling conservation priorities across the landscape. A set of metrics or “criteria” is identified for each goal. As part of the model implementation process, data, analysis, and maps will be associated with each criterion. This enables a

detailed characterization of each Greenprint conservation goal.

RETF and TAT advisors have provided guidance throughout the Greenprint framework design process to extend the goals identified in the Southeastern Subregional Workshop, to reflect the interests of communities and stakeholders throughout the North Central Texas region. In addition, our advisors have assisted by verifying the completeness and appropriateness of model criteria defined for each goal, and by recommending best available data sources for characterizing these criteria.

In January 2008, the Vision North Texas Regional Ecosystem Task Force convened to finalize the tasks accomplished in 2007. They provided a final review, comments, and approval of Greenprint design using the following guidelines:

- Goals are clearly and succinctly stated. Stakeholders will be able to understand and identify with this statement.
- Goals appropriately reflect the comments and spirit of the feedback received during the Southeast Subregional Workshop.
- Goals are consistent with conservation objectives for the entire North Texas region.
- Metrics listed for each goal are appropriate and complete.

The following outline reflects the land conservation and open space goals, as refined by the RETF. This framework will be used for Greenprint implementation:

Goals & Criteria

1) **Goal A: *Provide trail connections that people can use for recreation and travel between desired destinations.***

- Areas that link natural and community destinations
Will be determined based on:
 - Destinations (significant natural and cultural locations that need to be connected)
 - Opportunities (locations that make these physical connections)
 - Desirable features (trail experience)
 - Impediments (to connection)



2) **Goal B: *Foster new opportunities for recreation, access and parks.***

- Areas that provide equitable distribution of parks
Will be determined based on:
 - Gaps in regional park system service areas
 - Highest park need - population density, # kids, low income, public health
- Adaptive reuse opportunities – mined areas, gravel pits, brownfields
- Canoe and kayak access



Will be determined based on:

- Gaps in current access
- Suitable locations for new canoe/kayak locations (*appropriate water depths, landcover, parking requirements, road access, impacts to sensitive areas, etc*)

➤ Boating access

Will be determined based on:

- Gaps in current access
- Suitable locations for new boating locations

➤ Off road access

Will be determined based on:

- Gaps in current access
- Suitable locations for new off road access locations

➤ Birding zones

➤ Large, unfragmented open space areas

3) **Goal C: *Protect and enhance existing ecosystems.***

➤ Escarpment

➤ Native prairies

➤ Forest communities

- Includes Crosstimbers [*“mainly [post oak](#) (*Quercus stellata*) and [blackjack oak](#) (*Quercus marilandica*) forests interspersed with patches of open prairie”*], bottomland hardwoods, etc

➤ Sensitive habitats and endangered species

➤ Natural and ecological corridors

➤ Areas of habitat diversity

➤ Tree canopy

➤ Wetlands

➤ Large, unfragmented open space areas



4) **Goal D: *Restore vital ecosystems.***

➤ Broken connections in natural and ecological corridors

➤ Former prairie grass areas

➤ Forest communities that require restoration



5) **Goal E: *Preserve the assets that define “character of place” for the region and its communities.***

➤ Farming, agricultural areas

➤ Significant water courses

➤ Scenic vistas and environmental viewsheds

➤ Buffers between developed areas

➤ Tree canopy

➤ Historic (old) trees

➤ Archeological sites and assets

➤ Community gardens

➤ Historic districts and sites



6) **Goal F: *Protect water quality and promote natural storm water management.***

- Natural retention areas
- Native prairies
- Tree canopy
- Natural buffer zones along stream corridors and water features
- Headwaters
- Reservoirs and water supply areas
- Groundwater recharge areas
- Wetlands



7) **Goal G: *Sustain the region's watersheds, waterways and water resources.***

- Sensitive slopes and runoff areas
- Impaired streams and waterbodies
- Point and non-point sources
- Repetitive high flood loss areas



8) **Goal H: *Use natural and land assets to improve public health.***

- Areas that support air quality
May include the following (to be refined through discussion with technical advisors):
 - Tree canopy
 - Native prairies
 - Large, unfragmented open space areas
 - Highway ROW for tree plantings
 - Areas with ozone level exceedances
 - Heat island areas
- Areas that achieve public health objectives (such as reducing obesity)
May include the following (to be refined through discussions with technical advisors)
 - NCTCOG Mobility Plan information
 - Walkability (proximity of trails, paths, etc. to residential areas)
 - Compact development patterns



Greenprint Project Work in 2008

Continuing progress on the Greenprint Project during 2008 requires funding that is not yet secured. As a result, the timing of this work has not been determined. When funding is available, work will begin to address these primary objectives that are included in the current agreement between NCTCOG and TPL:

- Implement the Greenprint model based on the design and data collection completed in 2007;
- Deliver the Greenprint model to NCTCOG staff and provide training on model use and maintenance; and
- Develop Finance Strategy and Analysis for implementation of conservation priorities identified in the Greenprint.

1. Greenprint Model Implementation

The *Greenprint Model* is a customizable GIS application designed to help communities make informed decisions about land conservation priorities. The Greenprint Model provides a systematic approach for identifying and analyzing currently unprotected areas that offer the highest conservation benefit.

The model will be developed using ESRI ArcGIS Model Builder and will be structured based on the model design established in 2007. The model will be quality controlled with iterative results vetted with the Technical Advisory Team.

The Greenprint team will conduct an intensive review of initial model results with the Regional Ecosystem Task Force (RETF). Recommendations for model updates and refinements will be recorded. These recommendations will be incorporated into the model design. The Greenprint team will also lead an interactive session during this meeting to experiment with model weighting.

Model results will confirm the design of the Regional Greenprint Framework and its application to the entire 16-county region. They will also provide the basis for the detailed analysis of land conservation priorities and areas in the Southeastern Subregion.

2. Greenprint Model Delivery and Training

The complete Greenprint framework & model, including all input data, maps, and results will be delivered to NCTCOG for continued support of Greenprint analysis across the Southeastern Subregion. TPL will provide on-site training. NCTCOG will have complete access to the model. This will allow NCTCOG GIS staff to perform maintenance on the model as data and priorities change, to produce maps and property-profile reports, and to extend the model for the Southeastern Subregion with additional criteria as appropriate.

The North Texas region benefits in several ways by this approach to the future use of the Greenprint model:

- The GIS modeling tool, housed at the NCTCOG offices, will allow for identifying, prioritizing, communicating, and tracking critical lands for regional resource protection.
- Model location at NCTCOG will extend regional data archives to include GIS datasets that depict key open spaces and critical resources across the region.
- Greenprint modeling will assist in identifying open space priorities for comprehensive planning efforts.
- The model will be able to generate publication-ready reports and maps.
- It will assemble and organize years of work by organizations around the region ... to identify conservation goals, collect data, and quantify resource protection priorities ... into a single, comprehensive platform.
- It will provide resource profiles for any scale of analysis.
- It will provide an on-going decision support tool ... not just a mapping exercise.
- The results will make an objective case for conservation and public finance.
- It will be able to generate supporting statistics, reports, and maps required for grant applications.
- The model supports weighted criteria analysis to create scenarios that reflect the preferences and priorities of various conservation initiatives.
- Results can easily be compared to other conservation initiative maps, to examine common goals and to target locations across the conservation community.
- It will provide datasets and results that can be used for further research.

3. Finance and Implementation Analysis

For Greenprinting to be useful in the long term, it must benefit from good information about the potential for funding from local, state and federal sources, and it must be constrained by a realistic view of what funding is available in any given timeframe. TPL's National Conservation Finance team will conduct an analysis of potential local, state and federal programs that can provide funding to support the acquisition of new parks and greenspace. This will include research on the legal framework for creating new public funds, ballot measure history, funding projections and demographic data.

The results of the Conservation Finance research will be the background for a final implementation workshop, which will focus on the local and regional context for public finance, legally available funding mechanisms, and information on how local funds can be used to leverage state and federal funds. At this workshop, TPL's Finance team will discuss with local stakeholders funding alternatives and the political and financial feasibility of each. The result of this workshop will be a focused implementation strategy on which the stakeholders and local leaders have agreed to move forward. This workshop may involve stakeholders from the VNT Southeastern Subregion, the Regional Ecosystem Task Force and the VNT Advisory Committee.

Future Greenprint Project Activities

As noted initially, Vision North Texas expects to continue work on this Greenprint Project after the tasks included in the current agreement have been completed. The plans for the future relate to two primary objectives:

- Completion of detailed greenprint analysis throughout North Texas; and
- Use of these greenprint tools in a wide variety of regional initiatives and applications.

1. Completion of Regional Model

The work described above will make it possible to do detailed greenprinting analysis for the Southeastern Subregion of North Texas. Additional work is needed to extend this level of data, mapping and analysis to the rest of the region.

The amount, source and timing of resources will help determine how the rest of the region is included in the Greenprint model. At this time, the process might:

- Include the areas of the Trinity River Main Stem watershed that are outside the Southeastern Subregion, then
- Include the rest of the Trinity River watershed, then
- Include the areas of the region in other watersheds.

2. Use of the Greenprint Tools

There are many ways in which the Greenprint Project's results will be used in North Texas. The descriptions below suggest some of the ways this project is expected to contribute to other projects and programs over time. As noted earlier, the timing of these activities depends on the amount, source and timing of resources yet to be secured for the Vision North Texas Greenprint Project.

In Vision North Texas

During 2008 and 2009, Vision North Texas will be focused on creation of *North Texas 2050*, a new vision and set of action tools for the region. The Greenprint model will form the basis for the natural area and open space parts of this plan. The model will be used to test stakeholder priorities throughout the region. It will contribute to creation of an integrated 'regional infrastructure framework' that will be part of *North Texas 2050*.

In Other Regional Initiatives

The North Central Texas Council of Governments plays a leadership role in many programs that shape the region. As part of the organization's strategic plan for activities in 2008 and beyond, environmental and natural asset issues are increasingly important to a wide variety of programs and projects. NCTCOG expects to use the Greenprint model for initiatives such as:

- The Department of Environment & Development's "Safe, Clean and Green Watersheds" program;
- This region's implementation of the U.S. Federal Highways Administration's "Eco-logical" planning approach; and
- Action for advance identification of potential mitigation lands within the region so projects that require mitigation (such a flood protection or transportation

improvements) can meet these requirements in ways that achieve regional land conservation goals.

The availability of the Greenprint Model will enhance the region's ability to take practical and effective action to incorporate land conservation priorities into a wide range of other studies and projects over time.

By Local Governments

The Greenprint model can be made available for use by cities and counties as they carry out their own planning projects. When a community is developing a comprehensive land use plan, a parks master plan, a capital improvements program, or other similar policy documents, the data in the Greenprint model will simplify the process of analyzing environmental and conservation issues. In addition, the ability to test different stakeholder priorities will enable a community to consider the effects of various policies on their open space plans. NCTCOG, in partnership with TPL, will develop a process so that individual communities will enter into contracts for greenprint assistance related to specific local projects.

By Property Owners, Conservancies and Other Non-Profit Organizations

Many other decision-makers will find the Greenprint Project's data and modeling of great value. Working with NCTCOG, organizations such as land conservancies will be able to use greenprint results to inform their own investment priorities. Individual land owners may get assistance to identify areas to preserve and locations that are appropriate for urban development. Other non-profit and civic organizations may collaborate with NCTCOG to use greenprinting for tasks such as:

- Preparing maps of recreational amenities;
- Identifying trail and walking routes for patients in local health care facilities;
- Demonstrating the region's natural & quality of life assets to major employers considering a location in the region; or
- Establishing programs for nature-based tourism.

Appendix 1 – Advisory Group Rosters

Regional Ecosystem Task Force – Membership Roster

Monique Allen
President
Urban Progress CDC

Christopher Anderson
Director of Planning
North Texas Tollway
Authority

Judy Anderson
Texas Department of
Transportation

Susan Armstrong
Executive Director
Connemara Conservancy

Rick Bidne
Executive Vice President and
General Manager
The Las Colinas Association

Erika M. Boghici
StratMap Project Manager
Texas Natural Resources
Information System

Bonnie Bowman
League of Women Voters,
Arlington

David Bezanson
Northeast Texas Program
Director
The Nature Conservancy

Phillip Clegg
Managing Director
Red Group Developer
Services

John Davis
Urban Biologist
Texas Parks & Wildlife
Department

Francois de Kock
Senior Project Manager
Halff Associates

Robert Folzenlogen
Director of Planning &
Design
Hillwood Development

Jerome Frank
Jerome J. Frank Investments,
Inc.

Frank Gilstrap
Texas A&M University

Carol Hale
U.S. Fish & Wildlife Service

Donald Hastings
Assistant City Manager
City of Midlothian

Philip Henderson
Philip Henderson Architect

Don Herzog
President
North Texas Developer
Council

Catherine Horsey
Consultant

Steve Houser
Arborological Services

Lyssa Jenkins
Vice President of Information
and Research
Greater Dallas Chamber of
Commerce

C. Allan Jones
Director
Texas Water Resources
Institute

Michael Kawecki
U. S. Green Building Council
- North Texas

Margaret Keliher
Executive Director
Texas Business for Clean Air
(TBCA)

Adelaide Leavens
Executive Director
Streams & Valleys Fort
Worth

Rosa Lopez
Executive Director
Vecinos Unidos, Inc.

Kathy Love
Dallas County

Jarid Manos
Executive Director
Great Plains Restoration
Council

Bud Melton
Vice President
Bowman-Melton Associates,
Inc.

Nancy Nevil
Director of Sustainability and
Environmental Services
City of Plano

Fran Phillips
Gardere Wynne Sewell LLP

Mary L. Phinney
Administrator
Dallas County Park & Open
Space Program

Alan Plummer
President
Alan Plummer Associates,
Inc.

James Richards
River Legacy Foundation

Regional Ecosystem Task Force – Membership Roster (con't)

James E. Scott III

Director
Texas Natural Resources
Information System

Niels Brown

Director
The Trust for Public Land

Carol Strain-Burk

Mayor Pro Tem
City of Lancaster

Pat Taylor

Director
University of Texas
at Arlington

Steve Van Amburgh

Chief Executive Officer
Koll Development Company

Michelle Villafranca

Forester
City of Fort Worth

Robert Whelan

University of Texas at
Arlington

Willis Winters

Assistant Director
City of Dallas

Gilbert Ward

Texas Water Development
Board

J. Mark Wolf

Vice President
JH&P Architects, Inc.

Clint Wolfe

Grant and Program
Coordinator
Texas A&M Dallas

Technical Advisory Team – Membership Roster

Josh Been

University of Texas at
Arlington

Jen Ebel

Transportation Planner/
Engineer I
North Central Texas Council
of Governments

Bruce Hunter

Director, CSAM
University of North Texas

Bryan Kilburn

GIS Analyst
City of Dallas

David Morgan

Environmental Scientist
Half Associates, Inc.

Clarence Reed

Program Manager
City of Fort Worth

Gene T. Rice

Project Manager
U.S. Army Corps of
Engineers

Raghavan Srinivasan

Director
Texas Water Resources
Institute

Jim Voight

Ecologist
Alan Plummer Associates,
Inc.

Greenprint Project Support

Autumn Atta-Fynn

NCTCOG

Brenda Faber

TPL

Joel Hancock

NCTCOG

Scott Miller

NCTCOG

Niels Brown

TPL

Jack Tidwell

NCTCOG

Leo Valencia

NCTCOG

Karen Walz

Vision North Texas

Appendix 2 - Sample Maps

The following depicts example data from the GIS database that has been assembled to support Greenprint modeling and implementation. Example data is provided for each goal. For a complete list of Greenprint modeling requirements and associated datasets, see Appendix 3.

Provide Trail Connections That People Can Use For Recreation And Travel Between Desired Destinations

General Greenprint Modeling Requirements: New opportunities for trail connections including walking, biking, equestrian trails, and nature trails.

Example Data Shown: NCTCOG veloweb and utility corridors, and TXDOT rail

Foster New Opportunities for Recreation, Access and Parks

General Greenprint Modeling Requirements: Existing recreation sites, park needs, new opportunities for recreation, adaptive reuse locations

Example Data Shown: Existing parks, trinity access points and golf courses from NCTCOG, rare and declining bird sitings from Cornell University's "ebird" site (possible locations for new birding zones), mined areas from USGS (possible locations for adaptive reuse and reclamation)

Protect And Enhance Existing Ecosystems

General Greenprint Modeling Requirements: Areas of unique, critical, and/or diverse habitat

Example Data Shown: EPA's Texas Ecological Assessment Protocol – habitat diversity assessment

Preserve The Assets That Define "Character Of Place" For The Region And Its Communities

General Greenprint Modeling Requirements: Historic, scenic, and cultural assets

Example Data Shown: Cemeteries, historic areas, and archeological areas of significance from Texas Historical Commission

Protect Water Quality And Promote Natural Storm Water Management

General Greenprint Modeling Requirements: Floodplains, soils, landcover, wetlands, streams, reservoirs, and aquifers & recharge areas

Example Data Shown: Major/minor aquifers from TWDB, wetlands from NLCD, and other water features from NHD

Sustain The Region's Watersheds, Waterways And Water Resources

General Greenprint Modeling Requirements: Streams, reservoirs, soils, point sources, impaired waters

Example Data Shown: TCEQ impaired surface waters, EPA NPDES permit sites, and NRCS SSURGO soils

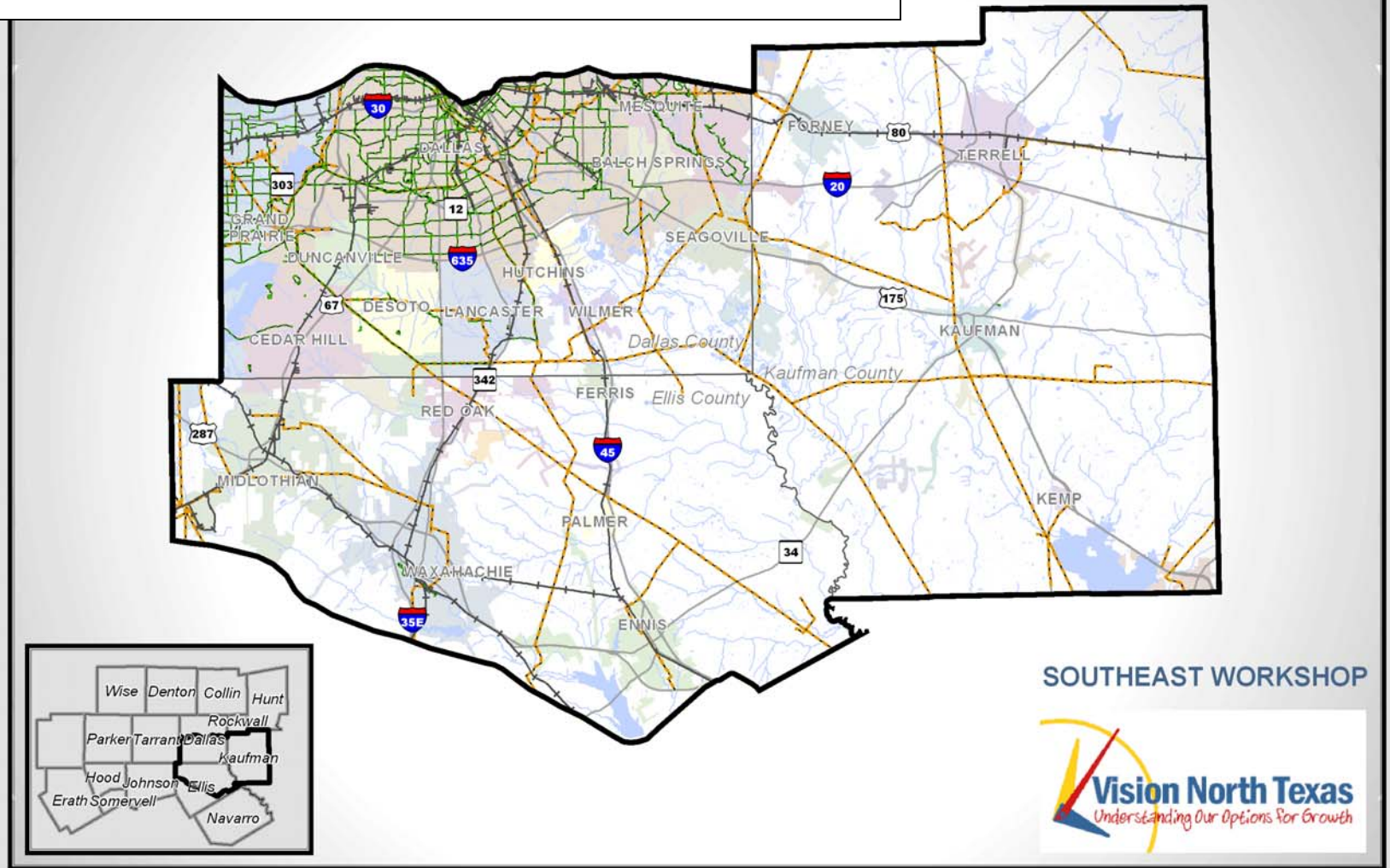
Use Natural And Land Assets To Improve Public Health

General Greenprint Modeling Requirements: Landcover – identify types both beneficial and detrimental to improved air quality

Example Data Shown: Tree canopy (beneficial) and agricultural land (detrimental) both obtained from USGS

**Provide Trail Connections That People Can Use For Recreation and Travel
Between Desired Destinations**

Example Data Shown: NCTCOG veloweb and utility corridors, and TXDOT rail



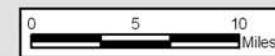
SOUTHEAST WORKSHOP



Provide trail connections that people can use for recreation and travel between desired destinations



—+— Rail — Trail — Utility Corridor

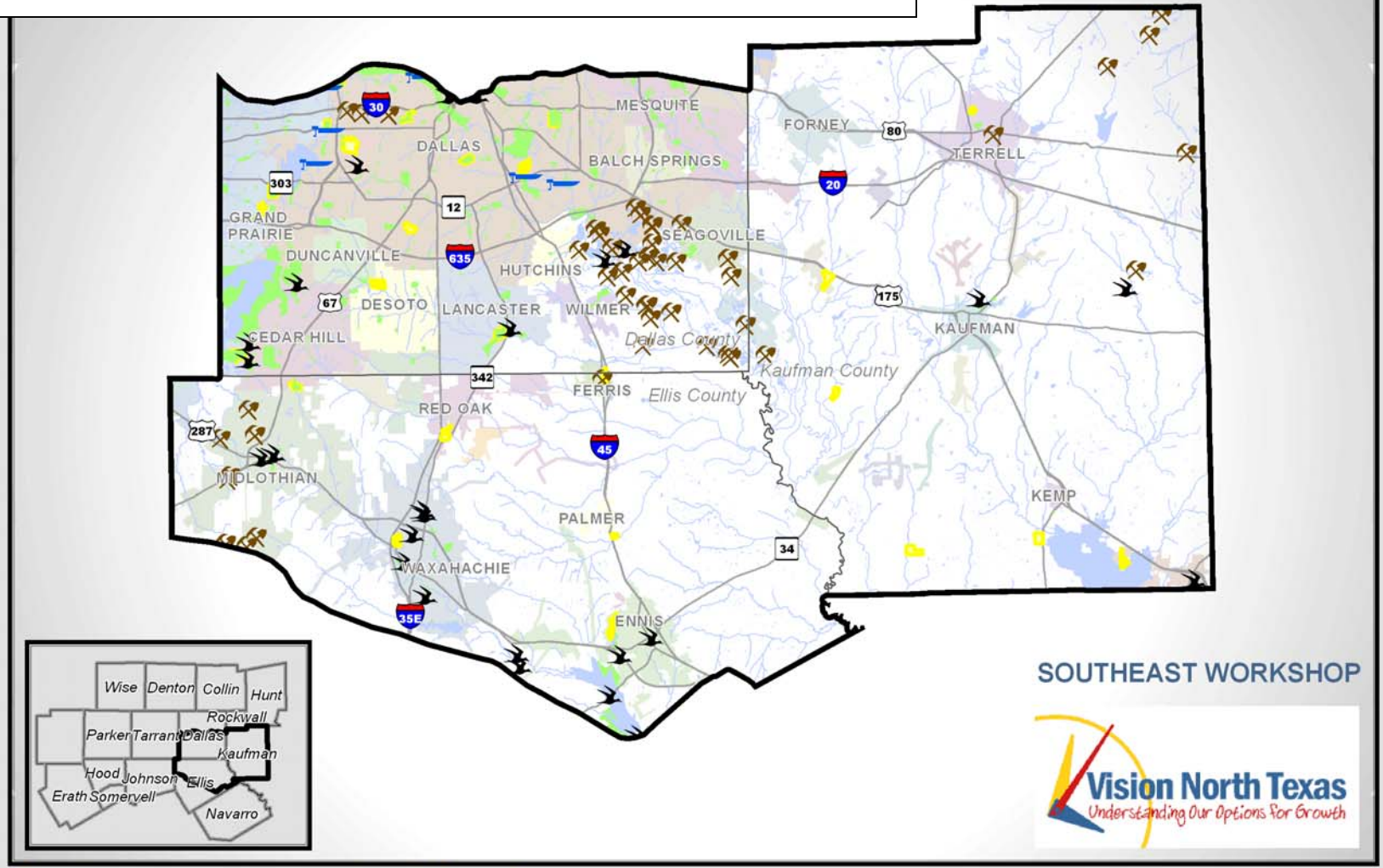


Source: TXDOT, NCTCOG.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Foster New Opportunities for Recreation, Access and Parks

Example Data Shown: Existing parks, trinity access points and golf courses from NCTCOG, rare and declining bird sitings from Cornell University’s “ebird” site (possible locations for new birding zones), mined areas from USGS (possible locations for adaptive reuse and reclamation)



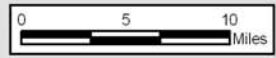
SOUTHEAST WORKSHOP



Foster new opportunities for recreation, access and parks



- Mined Areas
- Rare/Declining Bird Sitings
- Trinity Access Points
- Parks
- Golf Courses

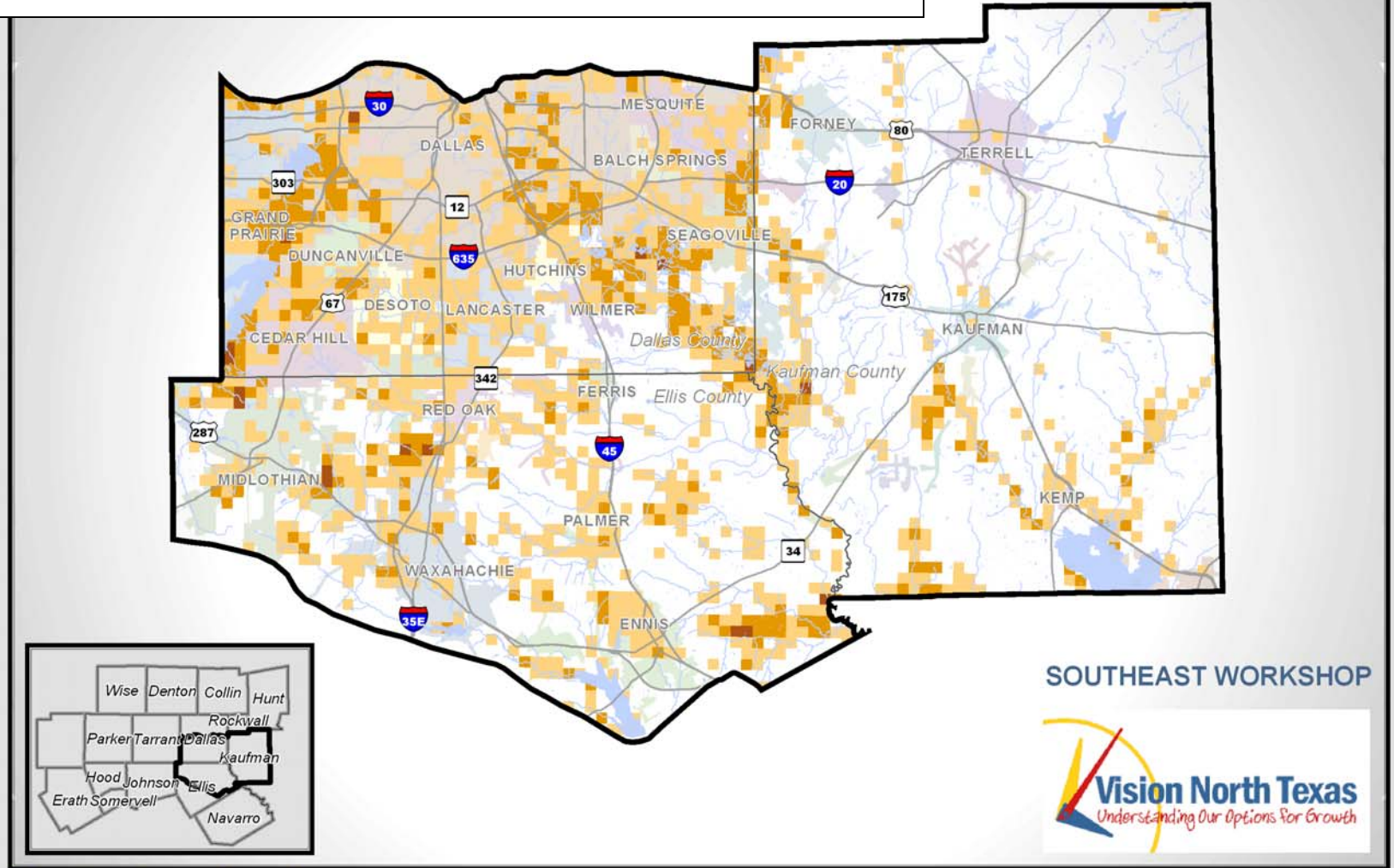


Source: Cornell, USGS, NCTCOG.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

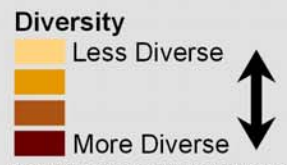
Protect and Enhance Existing Ecosystems

Example Data Shown: EPA's Texas Ecological Assessment Protocol – habitat diversity assessment



Protect and enhance existing ecosystems

North Central Texas Council of Governments Environment & Development

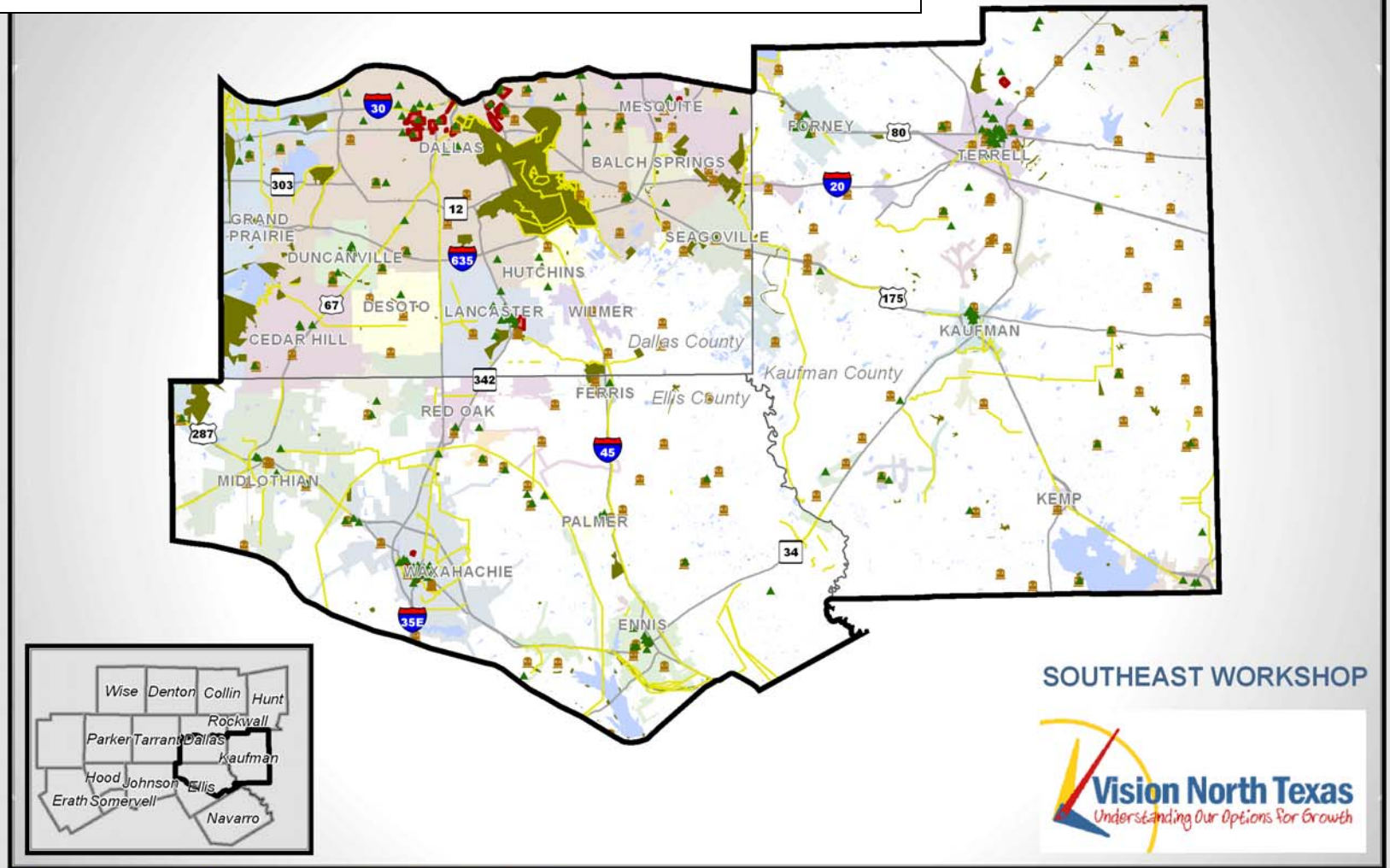


Source: EPA.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Preserve the Assets That Define “Character of Place” For the Region

Example Data Shown: Cemeteries, historic areas, and archeological areas of significance from Texas Historical Commission



SOUTHEAST WORKSHOP

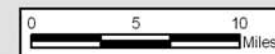


Preserve the assets that define “character of place” for the region



North Central Texas
Council of Governments
Environment & Development

- ▲ Historical Marker
- Cemetery
- Historical Region
- Archeology Project Area
- Archeology Project Line

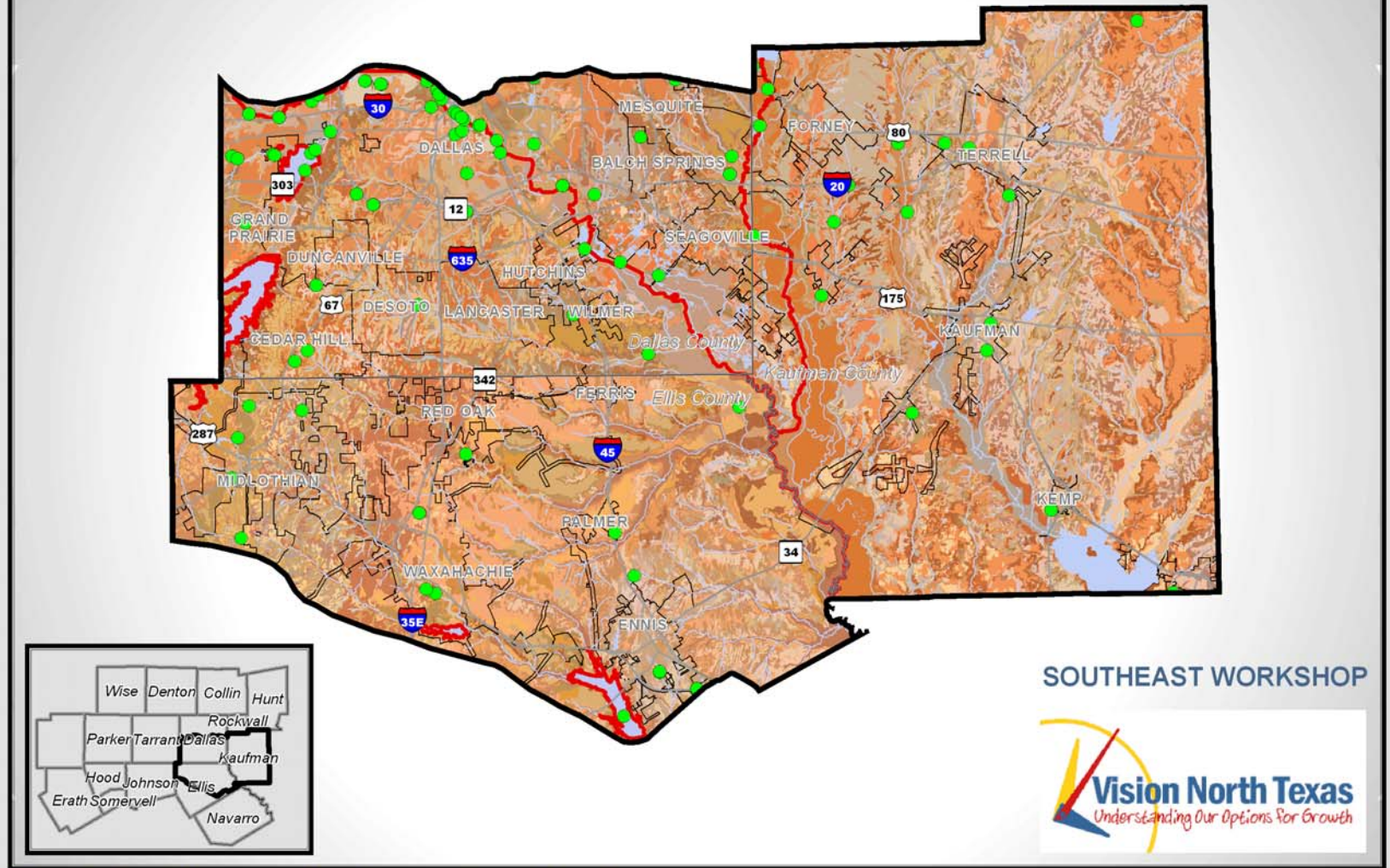


Source: THC.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Sustain the Region's Watersheds, Waterways and Water Resources

Example Data Shown: TCEQ impaired surface waters, EPA NPDES permit sites, and NRCS SSURGO soils



SOUTHEAST WORKSHOP



Sustain the region's watersheds, waterways and water resources



- Point Sources
- Impaired Streams
- Impaired Lakes
- Ssurgo Soils

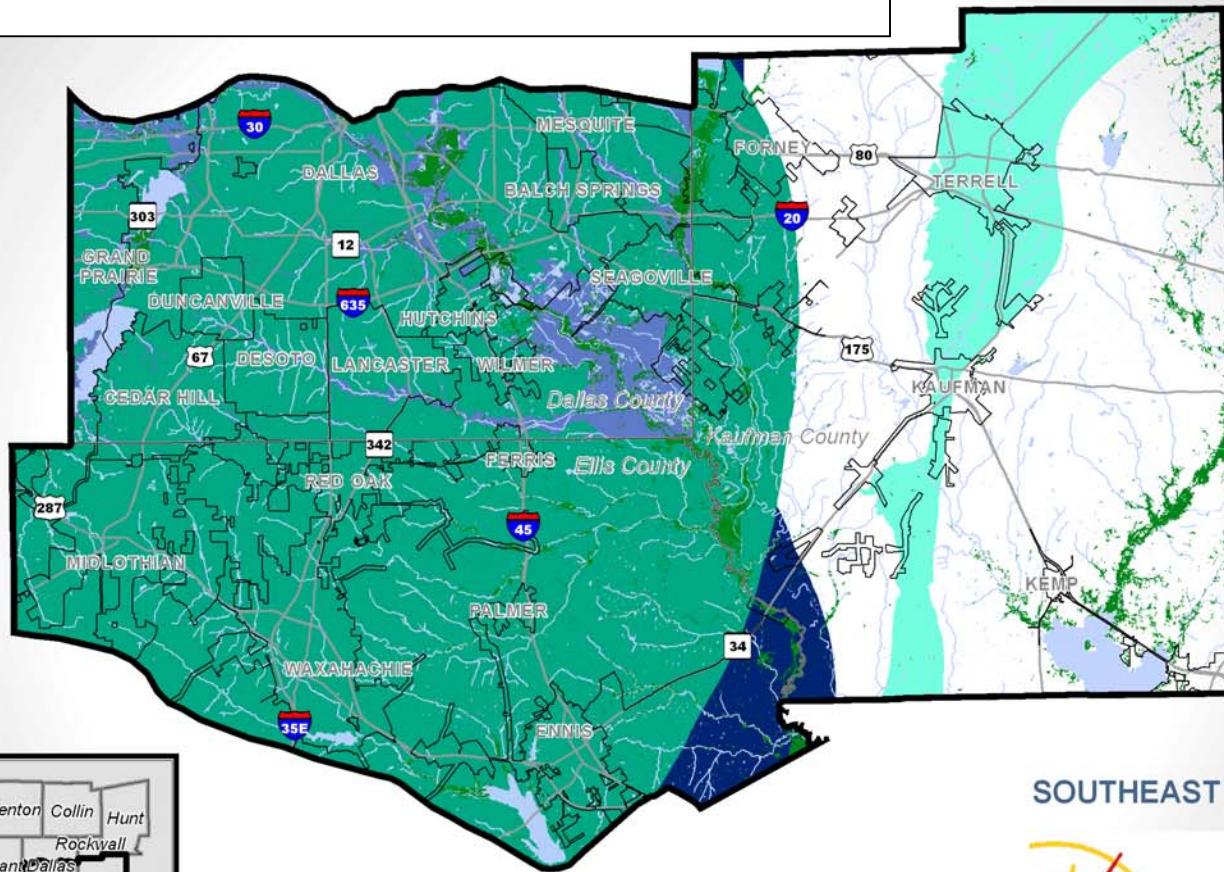


Source: EPA, TCEQ, USDA.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Protect Water Quality and Promote Natural Storm Water Management

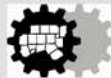
Example Data Shown: Major/minor aquifers from TWDB, wetlands from NLCD, and other water features from NHD



SOUTHEAST WORKSHOP



Protect water quality and promote natural storm water management



North Central Texas
Council of Governments
Environment & Development

	Wetland		Minor Aquifers
	100 Year Floodplain		Nacatoch
	Major Aquifer		Woodbine
	Trinity		

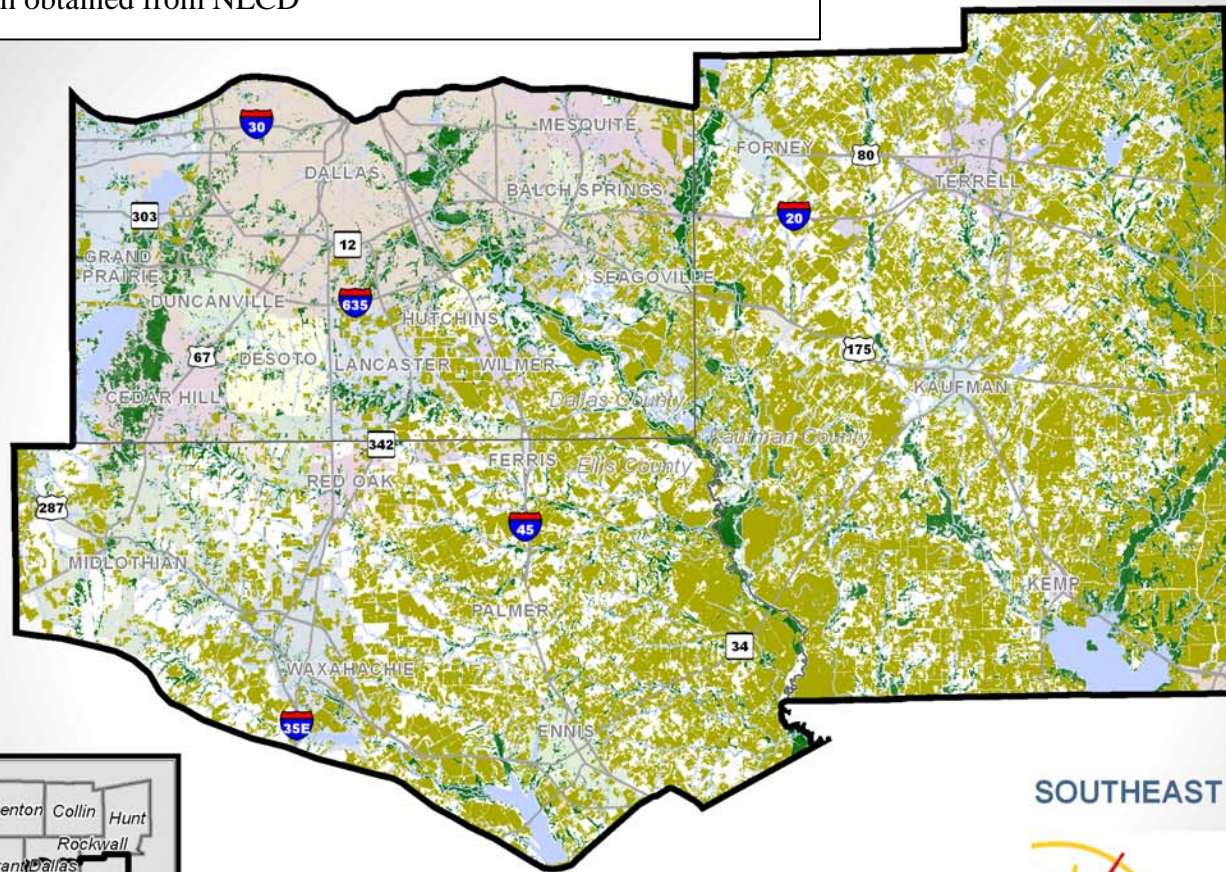


Source: NLCD, TWDB, FEMA.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Use Natural and Land Assets to Improve Public Health

Example Data Shown: Tree canopy (beneficial) and agricultural land (detrimental) both obtained from NLCD



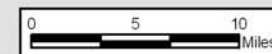
SOUTHEAST WORKSHOP



Use natural and land assets to improve public health



North Central Texas Council of Governments Environment & Development



Source: NLCD, 2001.

This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only.

Appendix 3 – Greenprint Data Summary

Vision North Texas - Greenprint Data Summary

The Greenprint Data Summary provides the highlights of data and sources for each Greenprinting goal. The data summary has been ongoing to reflect the input of our Regional Ecosystem Task Force and Technical Advisory Team.

Goal A: Provide trail connections that people can use for recreation and travel between desired destinations.

- Veloweb - Existing and Planned Trails (NCTCOG)
- Cultural and Scenic Destinations (THC)
- Water Features (NHD)
- Land Use (NCTCOG)
- Land Cover (NLCD)
- Tree Canopy (NLCD)
- Roads (NCTCOG)
- Parks (NCTCOG)
- Utility Corridors (NCTCOG)
- Existing and Abandoned Railroads (TXDOT)
- Features - commercial, government, schools, landmarks, activity centers, major employers (NCTCOG)

Goal B: Foster new opportunities for recreation, access and parks.

- Parks (NCTCOG)
- Population Projections (NCTCOG)
- Demographic Estimates – income, population (Census)
- Golf Courses (NCTCOG)
- Mines/Gravel Pits (USGS, MSHA)
- Brownfields (Dallas and Fort Worth only)
- Birding (Ebird)
- Canoe and Kayak Access (TPWD)
- Boating Access (TPWD)
- Land Use (NCTCOG)

Goal C: Protect and enhance existing ecosystems.

Goal D: Restore vital ecosystems.

- Land Cover (NLCD)
- Sensitive Habitats and Endangered Species (TPWD, EPA)
- Species/Habitat Diversity (EPA)
- Tree Canopy (NLCD)
- Wetlands (NLCD)
- Slope – escarpment (NCTCOG)
- Water Features (NHD)

- Sustainability Index – more sustainable where fewer human disturbances (EPA)
- Protected Lands - land acquired by conservancies or subject to conservation easements (TNC)

Goal E: Preserve the assets that define “character of place” for the region and its communities.

- Agriculture Exemption (County Appraisal Districts)
- Historic Sites (THC, and local communities)
- Cemeteries (THC)
- Land Use (NCTCOG)
- Water Features (NHD)
- Land Cover (NLCD)
- Tree Canopy (NLCD)
- Archeology Sites (THC)
- Digital Elevation Model - viewsheds (NCTCOG)

Goal F: Protect water quality and promote natural storm water management.

- Floodplain (FEMA)
- Ssurgo Soils (NRCS)
- Wetlands (NLCD)
- Land Cover (NLCD)
- Tree Canopy (NLCD)
- Water Features (NHD)
- Precipitation (TWDB)
- Aquifers (TWDB)

Goal G: Sustain the region’s watersheds, waterways and water resources.

- Aquifers (TWDB)
- Wetlands (NLCD)
- Water Features (NHD)
- Watersheds (USGS)
- Impaired Water Features – section 303(d) Clean Water Act (TCEQ)
- Designated Water Uses – public water supply, aquatic life, contact recreation, etc. (TCEQ)
- Point NPDES Permits (EPA)
- Non-point Sources (Purdue L-THIA Impervious Model)
- Slope (NCTCOG)
- Repetitive High Flood Loss Areas (FEMA)

Goal H: Use natural and land assets to improve public health.

- Tree Canopy (NLCD)
- Land Cover (NLCD)
- Veloweb - Existing and Planned Trails (NCTCOG)
- Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area (NCTCOG)
- Areas with ozone level exceedances – D/FW SIP (TCEQ)

- Heat Island Areas – impervious surfaces (NLCD)

Acronyms and Abbreviations

EPA – Environmental Protection Agency

FEMA – Federal Emergency Management Agency

NCTCOG – North Central Texas Council of Governments

NHD – National Hydrography Dataset from USGS

NLCD – National Land Cover Dataset from USGS

NPDES - National Pollutant Discharge Elimination System

NRCS - Natural Resources Conservation Service

SIP – State Implementation Plan

TCEQ – Texas Commission on Environmental Quality

TNC – Texas Nature Conservancy

TPWD – Texas Parks and Wildlife

TWDB – Texas Water Development Board

TXDOT – Texas Department of Transportation

USGS - U.S. Geological Survey