Implementing Eco-Logical in North Central Texas
(SHRP2 C06)

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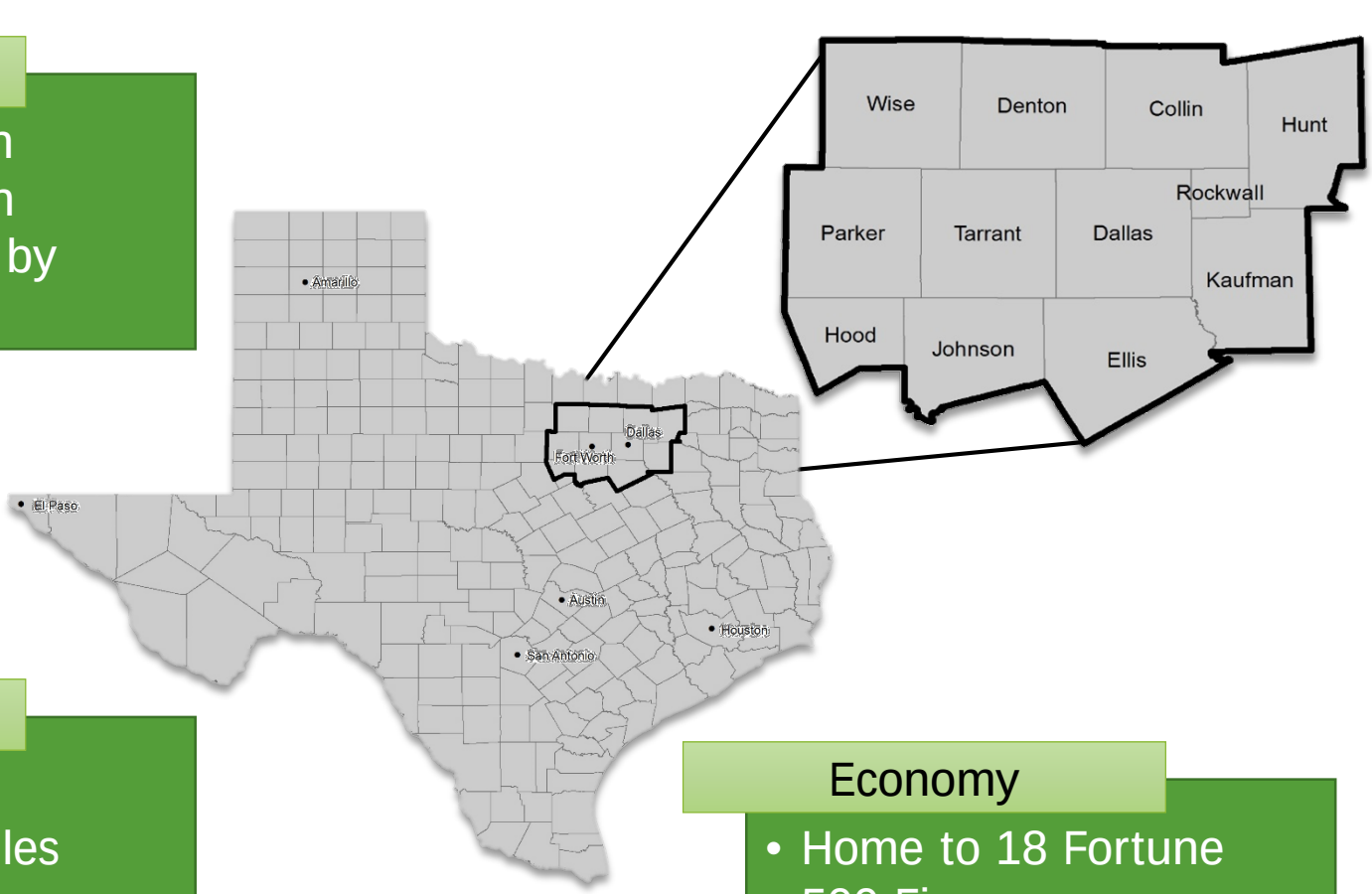
Regional Perspective

Population

- 2012: 6.7 million
- 2035: 9.8 million
- 4th Largest MSA by Population



Area

- 12 counties
- 9,441 square miles
- 2nd Largest Metropolitan Planning Area

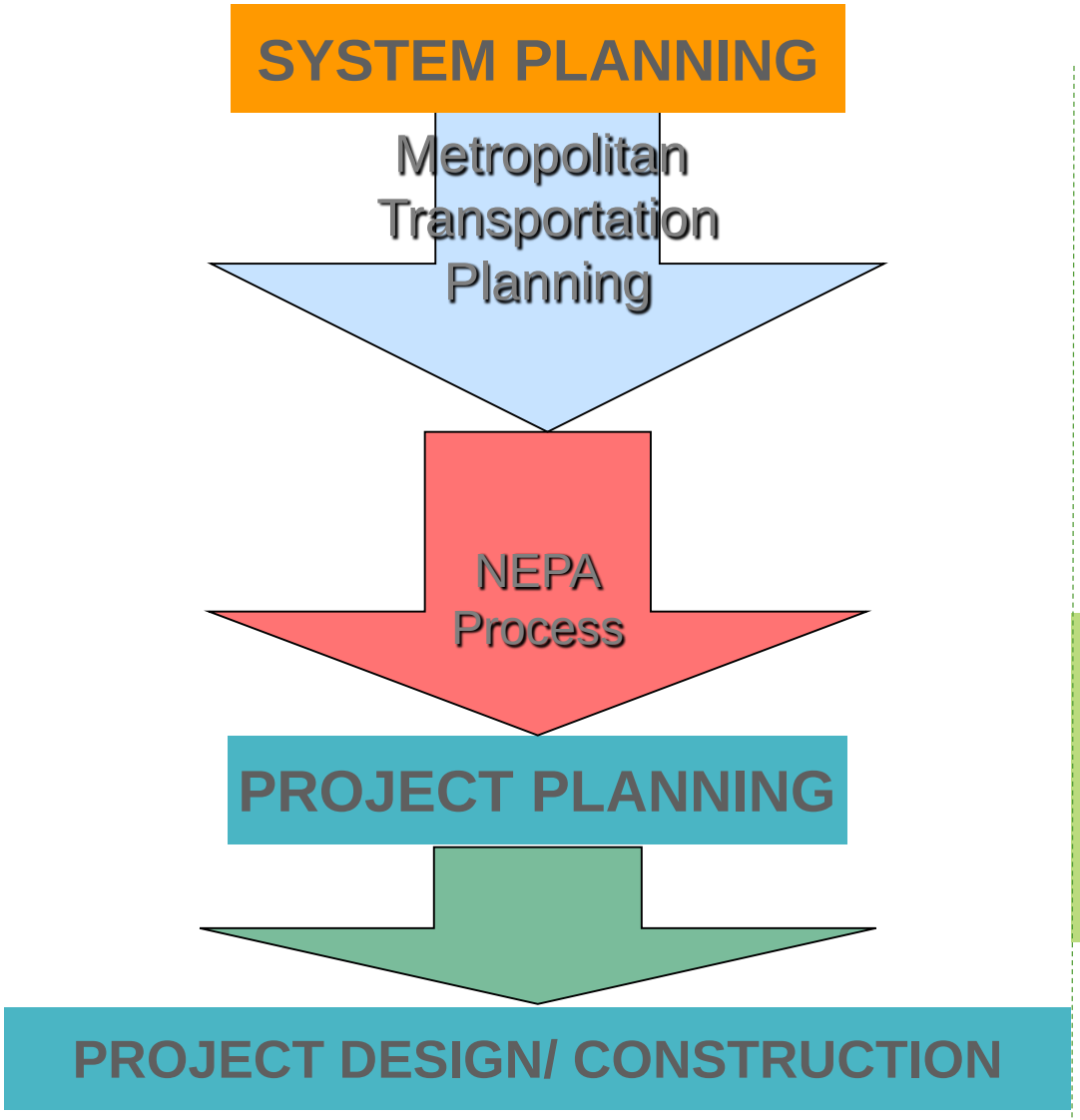
Economy

- Home to 18 Fortune 500 Firms
- Ranked 6th in Gross Metropolitan Product

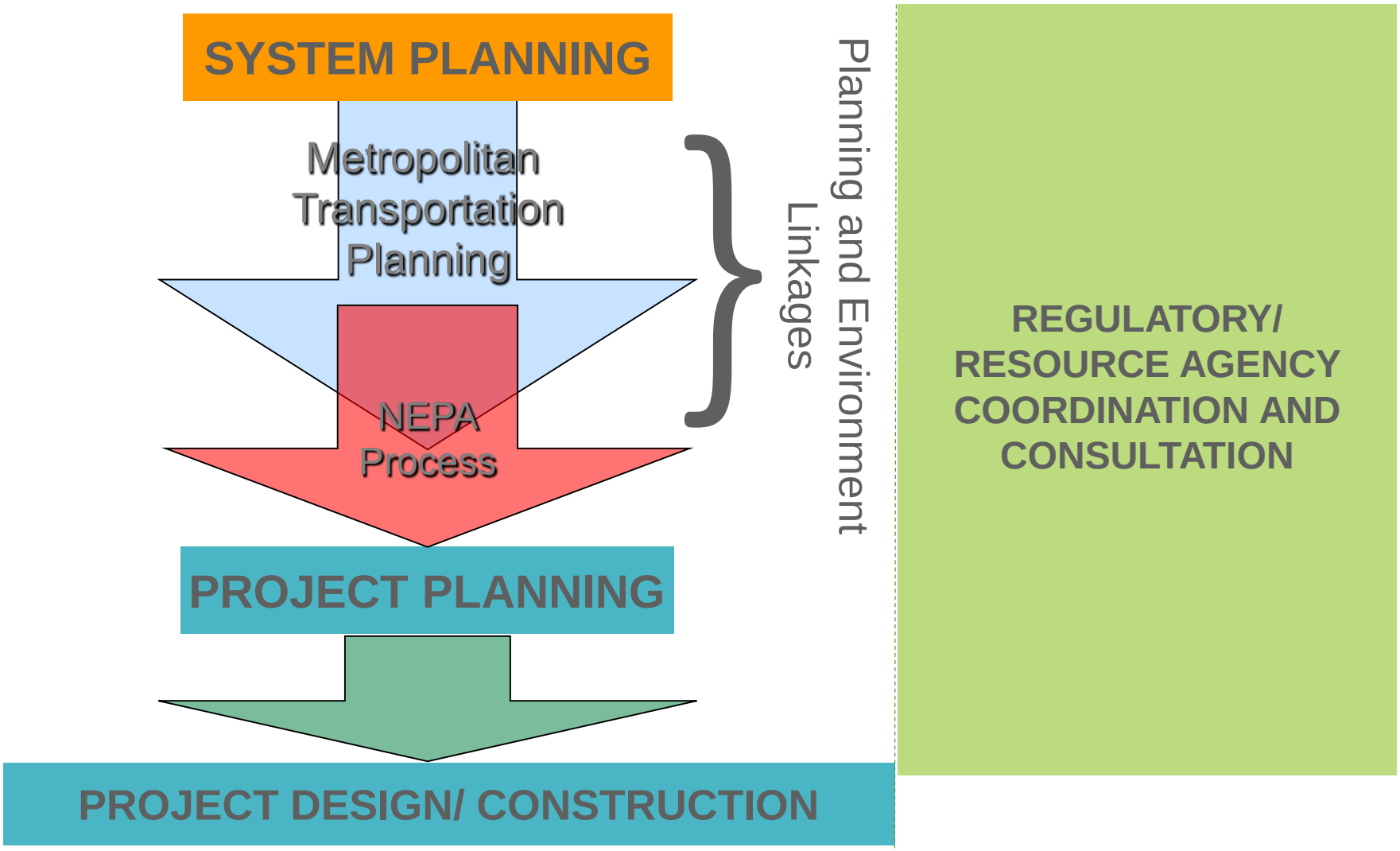
DFW Long-Range Planning Context

- Needs Exceed Available Revenue
- Can't Build Our Way Out of Congestion
- Use Sustainable Development to Reduce System Demand & Provide Multimodal Options
- Emphasis on Environmental and Quality of Life Issues
- Maximize Existing System
- Invest Strategically in Infrastructure

Traditional Transportation Project Development Process



Enhanced Transportation Project Development Process



Planning & Environmental Linkages

Resource Agency Consultation & Coordination

- TRACES
- USACE/NCTCOG Agreement

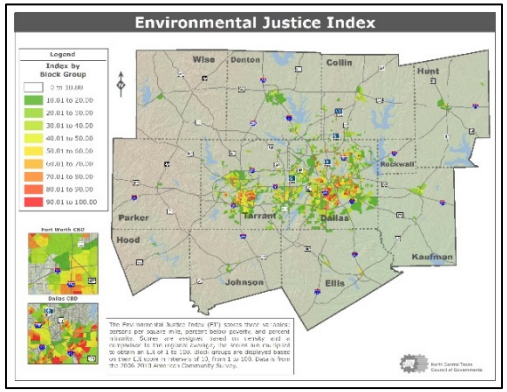
Planning Analyses

- Regional Toll Analysis
- Mobile Source Air Toxins (MSAT) Analysis
- Environmental Justice Analysis
- MTP Project Environmental Scoring

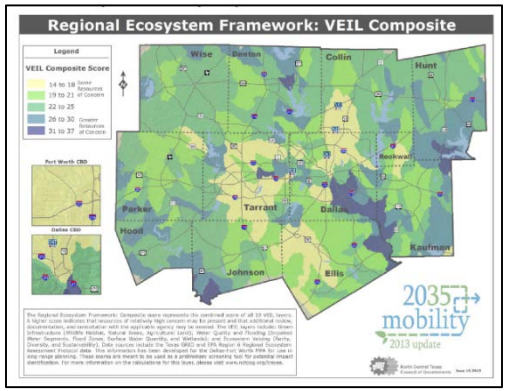
Data Tools

NEPAssist

Environmental Justice Index



Regional Ecosystem Framework



FHWA Eco-Logical Grant

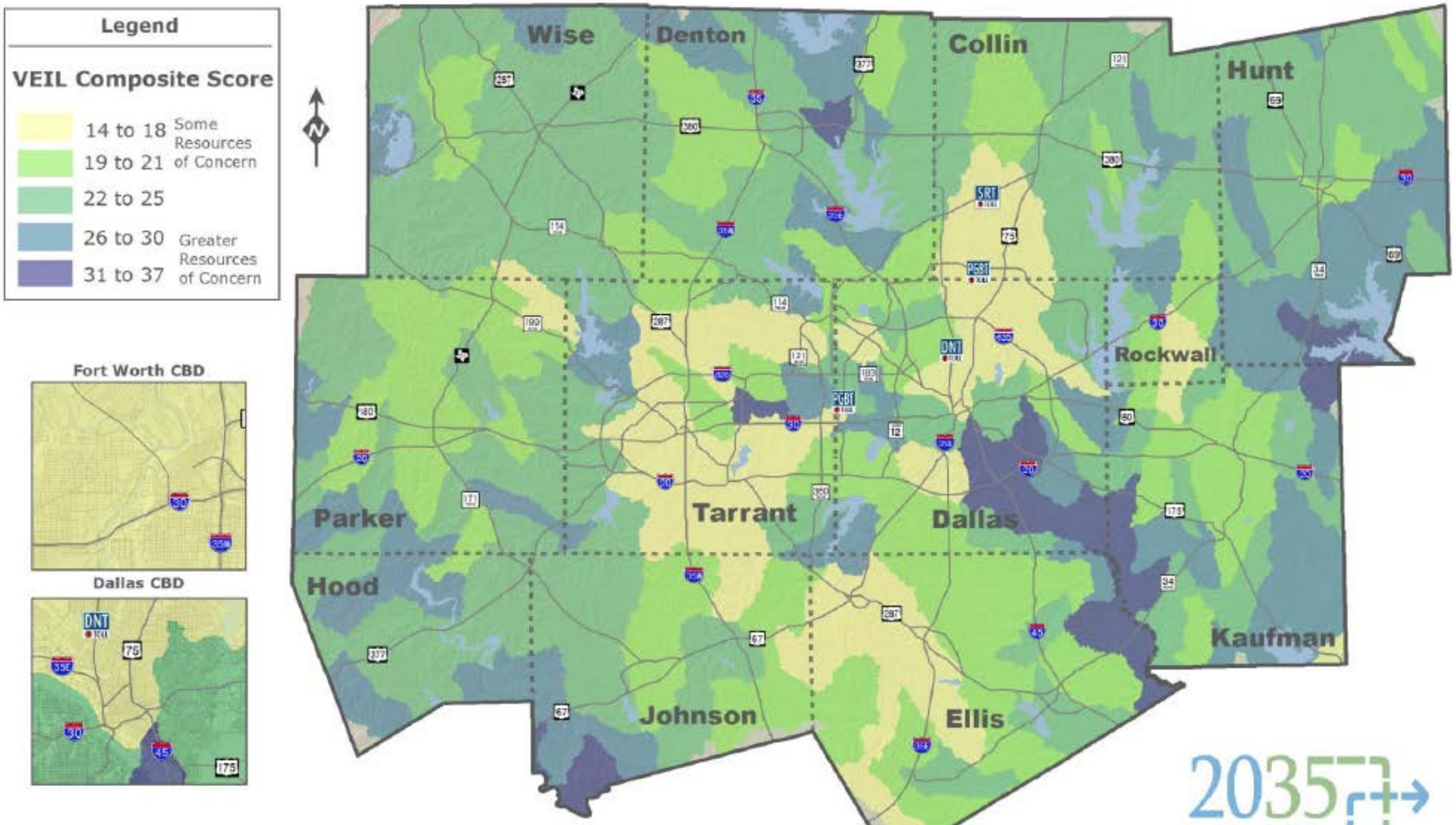
Project Focus

Develop Regional Ecosystem Framework (REF) to help identify, assess, and avoid environmental impacts of proposed infrastructure projects and to enhance multi-agency understanding of critical resource protection areas.

Vital Ecosystem Information Layers (VEIL)

Green Infrastructure	Water Considerations	Ecosystem Value
• Wildlife habitat • Natural areas • Agricultural land	• Impaired water segments • Flood zones • Surface water quantity • Wetlands	• Rarity • Diversity • Sustainability

Regional Ecosystem Framework: VEIL Composite



The Regional Ecosystem Framework: Composite score represents the combined score of all 10 VEIL layers. A higher score indicates that resources of relatively high concern may be present and that additional review, documentation, and consultation with the applicable agency may be needed. The VEIL layers include: Green Infrastructure (Wildlife Habitat, Natural Areas, Agricultural Land); Water Quality and Flooding (Impaired Water Segments, Flood Zones, Surface Water Quantity, and Wetlands); and Ecosystem Valuing (Rarity, Diversity, and Sustainability). Data sources include the Texas GRID and EPA Region 6 Regional Ecosystem Assessment Protocol data. This information has been developed for the Dallas-Fort Worth MPA for use in long-range planning. These scores are meant to be used as a preliminary screening tool for potential impact identification. For more information on the calculations for this layer, please visit www.nctcog.org/traces.

2035 mobility 2013 update

North Central Texas Council of Governments

June 13, 2013

Environmental Considerations

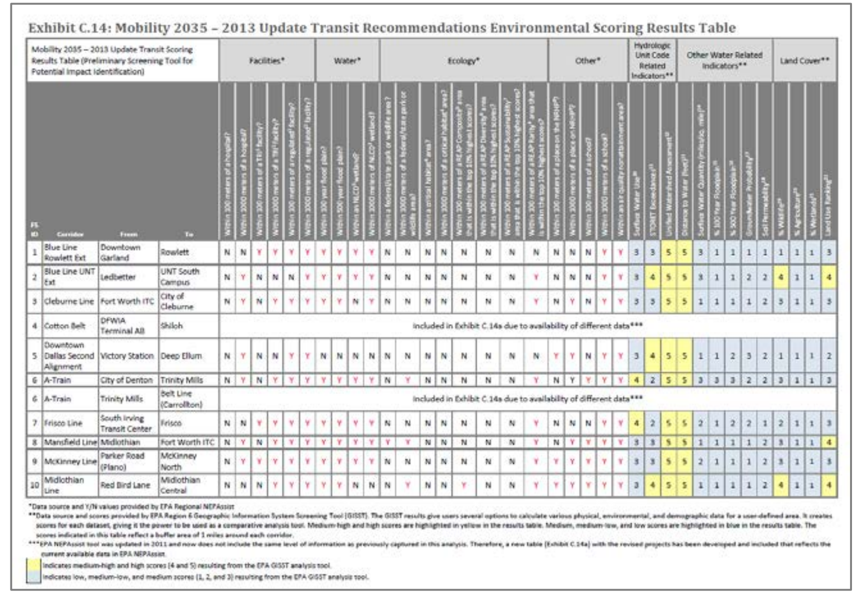


Exhibit C.14: Mobility 2035 – 2013 Update Transit Recommendations Environmental Scoring Results Table

Mobility 2035 – 2013 Update Transit Scoring Results Table (Preliminary Screening Tool for Potential Impact Identification)				Facilities*						Water*				Ecology*								Other*					Hydrologic Unit Code Related Indicators**			Other Water Related Indicators**						Land Cover**			
FS ID	Corridor	From	To	Within 300 meters of a hospital?	Within 3000 meters of a hospital?	Within 300 meters of a TRI facility?	Within 3000 meters of a TRI facility?	Within 300 meters of a regulated facility?	Within 3000 meters of a regulated facility?	Within 100 year flood plain?	Within 500 year flood plain?	Within an NLCD wetland?	Within 3000 meters of NLCD wetland?	Within a federal/state park or wildlife area?	Within 3000 meters of a federal/state park or wildlife area?	Within a critical habitat area?	Within 3000 meters of a critical habitat area?	Within 300 meters of a REAP Composite area that is within the top 10% highest scores?	Within 300 meters of a REAP Diversity area that is within the top 10% highest scores?	Within 300 meters of a REAP Sustainability area that is within the top 10% highest scores?	Within 300 meters of a REAP Rarity area that is within the top 10% highest scores?	Within 300 meters of a place on the NRHP?	Within 3000 meters of a place on NRHP?	Within 300 meters of a school?	Within 3000 meters of a school?	Within an air quality nonattainment area?	Surface Water Use	STORET Exceedances	Unified Watershed Assessment	Distance to Water (Feet)	Surface Water Quantity (miles/sq. mile)	% 100 Year Floodplain	% 500 Year Floodplain	Groundwater Probability	Soil Permeability	% Wildlife	% Agriculture	% Wetlands	Land Use Ranking
1	Blue Line Rowlett Ext	Downtown Garland	Rowlett	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y	3	3	5	5	3	1	1	1	1	1	1	1	3
2	Blue Line UNT Ext	Ledbetter	UNT South Campus	N	Y	N	N	N	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	N	N	N	Y	Y	3	4	5	5	3	1	1	2	2	4	1	1	4
3	Cleburne Line	Fort Worth ITC	City of Cleburne	N	Y	N	Y	Y	Y	Y	Y	N	Y	N	N	N	N	N	N	N	Y	N	Y	N	Y	Y	3	3	5	5	1	1	1	1	2	3	1	1	3
4	Cotton Belt	DFWIA Terminal AB	Shiloh	Included in Exhibit C.14a due to availability of different data***																																			
5	Downtown Dallas Second Alignment	Victory Station	Deep Ellum	N	Y	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	Y	3	4	5	5	1	1	2	3	2	1	1	1	2
6	A-Train	City of Denton	Trinity Mills	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	N	N	N	Y	N	Y	Y	Y	Y	4	2	5	5	3	3	3	2	2	3	1	1	3
6	A-Train	Trinity Mills	Belt Line (Carrollton)	Included in Exhibit C.14a due to availability of different data***																																			
7	Frisco Line	South Irving Transit Center	Frisco	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	N	N	N	Y	Y	4	2	5	5	2	1	2	2	1	2	1	1	3
8	Mansfield Line	Midlothian	Fort Worth ITC	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	Y	N	Y	Y	Y	Y	3	3	5	5	1	1	1	1	2	3	1	1	4
9	McKinney Line	Parker Road (Plano)	McKinney North	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	3	3	5	5	2	1	1	1	2	3	1	1	3
10	Midlothian Line	Red Bird Lane	Midlothian Central	N	N	N	Y	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	3	4	5	5	1	1	1	1	2	4	1	1	4

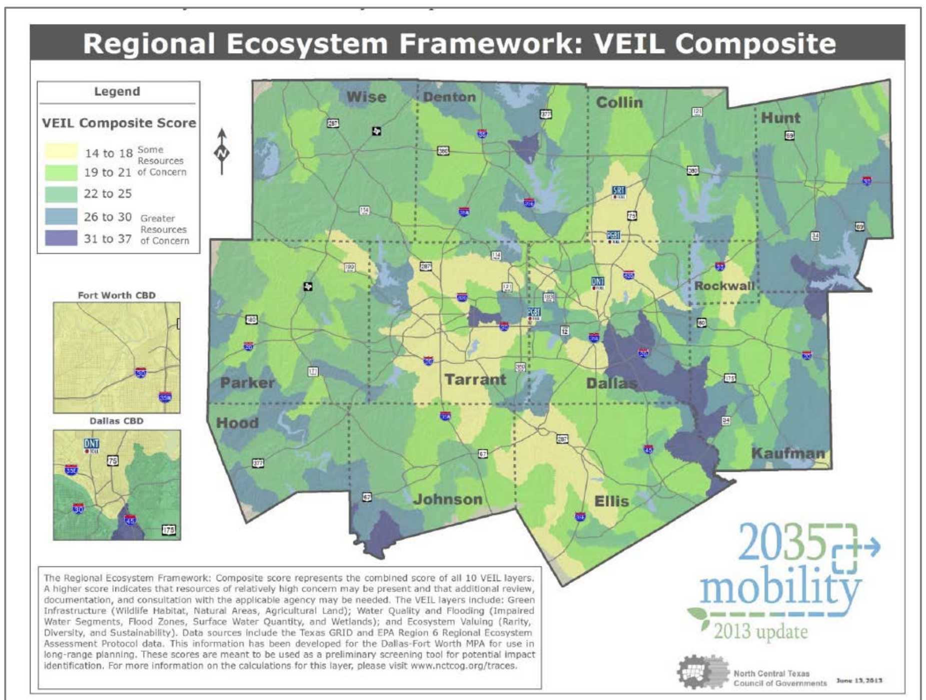
*Data source and Y/N values provided by EPA Regional NEPAssist

**Data source and scores provided by EPA Region 6 Geographic Information System Screening Tool (GISST). The GISST results give users several options to calculate various physical, environmental, and demographic data for a user-defined area. It creates scores for each dataset, giving it the power to be used as a comparative analysis tool. Medium-high and high scores are highlighted in yellow in the results table. Medium, medium-low, and low scores are highlighted in blue in the results table. The scores indicated in this table reflect a buffer area of 1 miles around each corridor.

***EPA NEPAssist tool was updated in 2011 and now does not include the same level of information as previously captured in this analysis. Therefore, a new table (Exhibit C.14a) with the revised projects has been developed and included that reflects the current available data in EPA NEPAssist.

Indicates medium-high and high scores (4 and 5) resulting from the EPA GISST analysis tool.

Indicates low, medium-low, and medium scores (1, 2, and 3) resulting from the EPA GISST analysis tool.

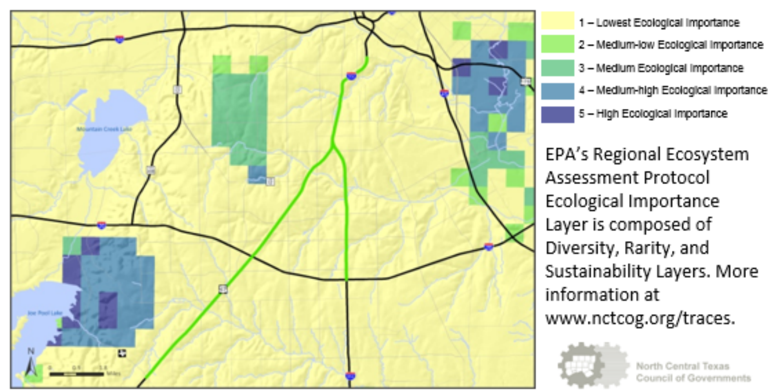


NCTCOG Regional Ecosystem Framework Score* (Range: 14 - 37)

SUBWATERSHED NAME	REF COMPOSITE SCORE
Headwaters Fivemile Creek	17
Headwaters Tenmile Creek	19
Turtle Creek-Trinity River	22

*Lower REF score indicates less resource vulnerability, higher score indicates more resource vulnerability.

Ecological Importance in Corridor



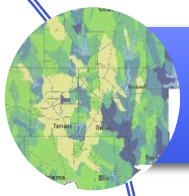
EPA's Regional Ecosystem Assessment Protocol Ecological Importance Layer is composed of Diversity, Rarity, and Sustainability Layers. More information at www.nctcog.org/traces.

North Central Texas Council of Governments

Implementing Eco-Logical

2013: Received SHRP 2 Lead Adopter Incentive Implementation Assistance Funds

PLANNING



Update REF and Identify Mitigation Focus Areas

PROJECT

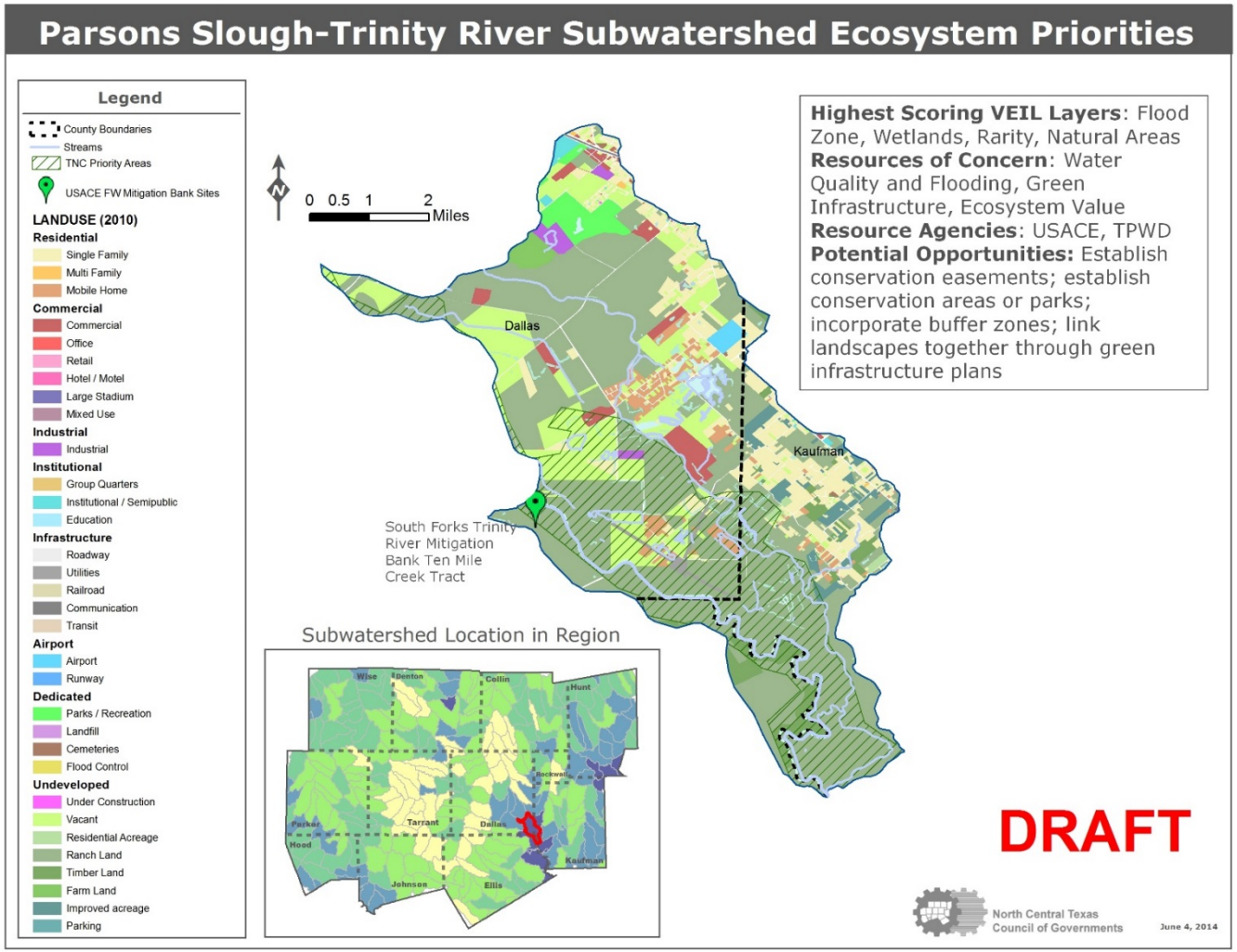
Apply REF to Corridor Feasibility Study

MITIGATION

Implement a Regional Shared Value Mitigation Program

Planning Emphasis

Update REF and Identify Mitigation Focus Areas

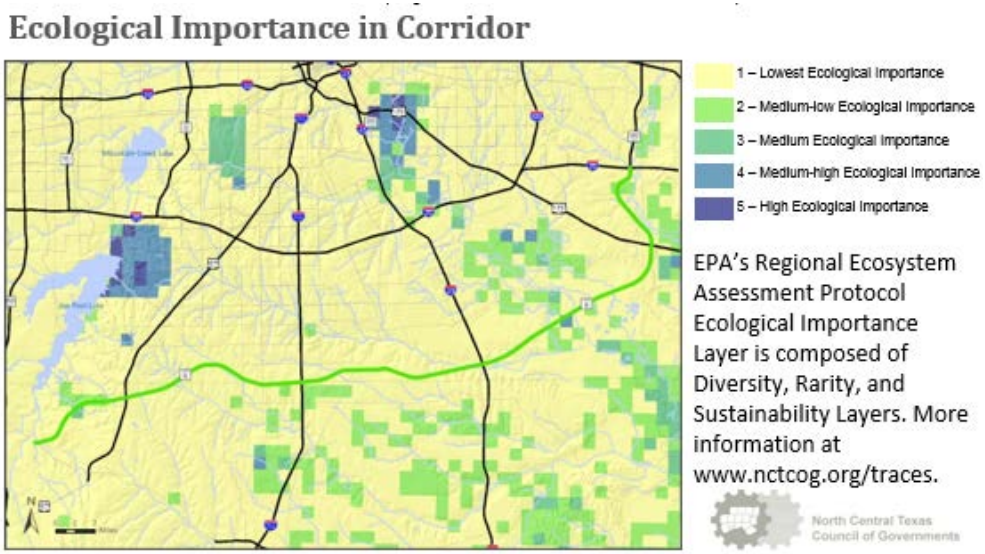


Project-Level Emphasis

Apply REF to Corridor Feasibility Study

Loop 9 Corridor

- Determine feasibility of using REF as tool to address conservation needs and potential mitigation strategies for a corridor in the pre-NEPA stages
- Create Corridor Conservation and Restoration/Enhancement Vision
- Recommend Improvements to REF
- Create regional process for using REF in corridor studies



Mitigation Emphasis

Regional Shared Value Mitigation Program

Effort to simultaneously expedite transportation projects and enhance resource stewardship through a programmatic mitigation approach.

- Develop Potential Mitigation Project Database
- Prioritize Shared Value Mitigation Projects
- Provide Feedback to REF
- Reserve Funds for Pilot Program

Coordination with TxDOT

Planning

- Use of Regional Ecosystem Assessment Protocol (REAP) data
- Participation in development of first iteration of REF

Project-Level

- Strong relationship between NCTCOG and TxDOT districts
- TxDOT taking on approval of environmental documents
- USACE Section 214 Agreement
- *Involvement in applying REF to Loop 9 Corridor Study*

Mitigation

- Provided funds for mitigation research
- *Involvement in SVM program approach*

Integration of Geospatial Tools and Data

SHRP2 C40: Eco-Plan

- NCTCOG staff tested Eco-Plan
- Would be helpful as one-stop shop for environmental data

Data Coordination

Requesting environmental data from project partners

- Local governments
- Resource and regulatory agencies
- Non-governmental organizations
- Private sector

Desired Outcomes

Relationships

- Maintain relationship with TxDOT
- Strengthen relationships with resource and regulatory agencies

Resources

- Use REF in planning process
- Coordinate transportation and resource agency goals

Enhanced Ecosystem Approach

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