



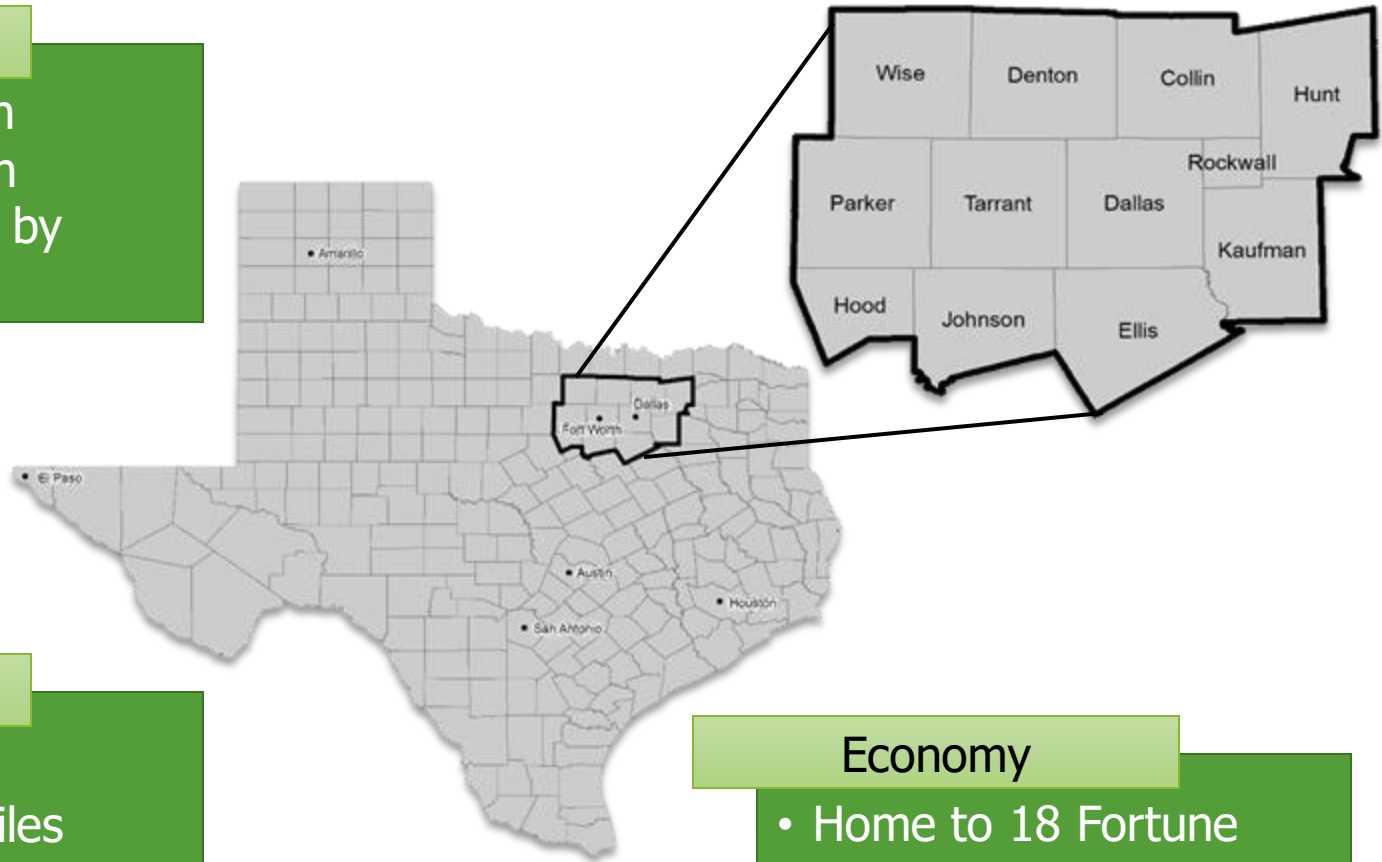
Implementing Eco-Logical in North Central Texas (SHRP2 C06)

Kendall Wendling
Transportation Planner
North Central Texas Council of Governments

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

SYSTEM PLANNING

Metropolitan
Transportation
Planning

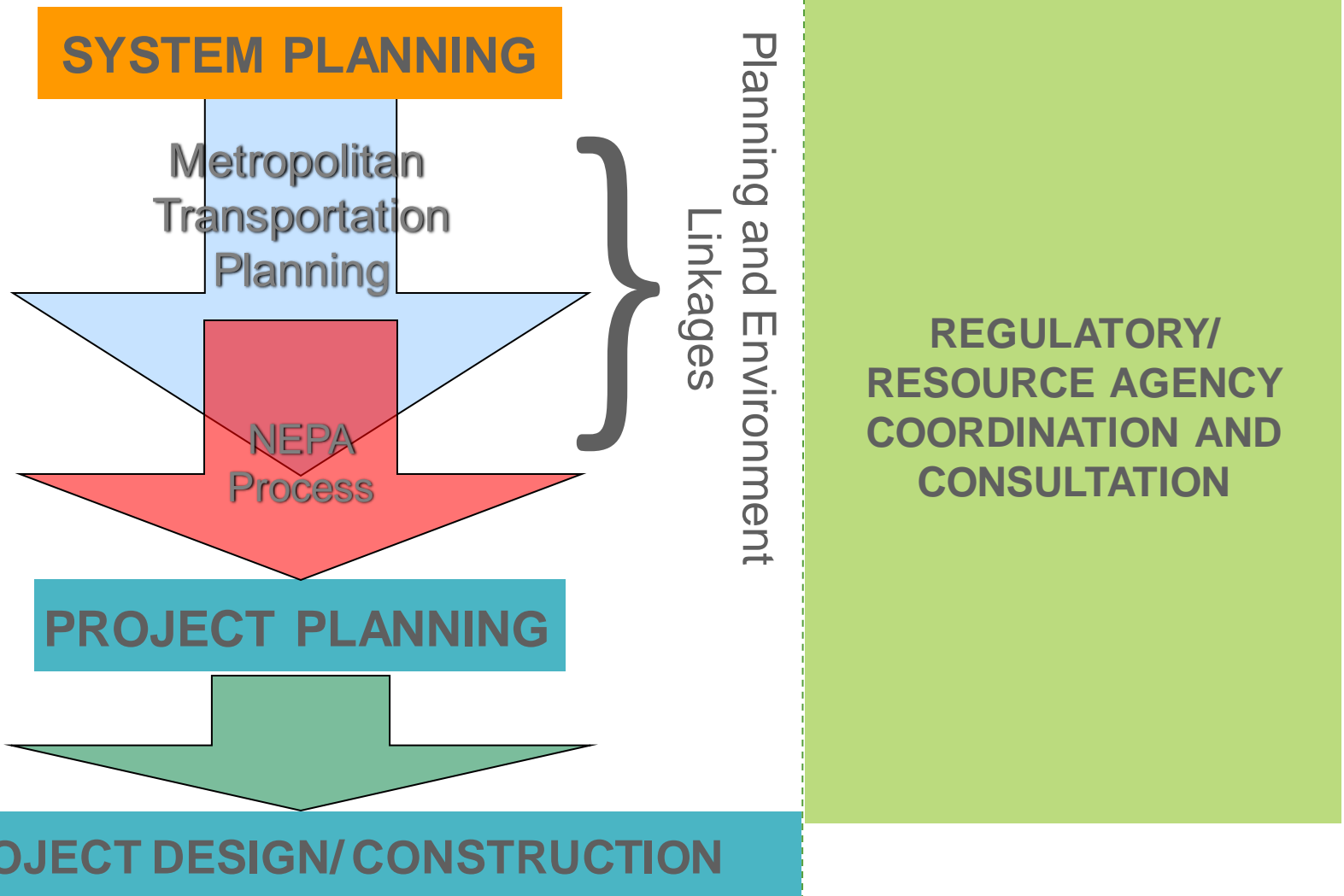
NEPA
Process

PROJECT PLANNING

PROJECT DESIGN/CONSTRUCTION

**REGULATORY/RESOURCE
AGENCY REVIEW**

Enhanced Transportation Project Development Process



Planning & Environmental Linkages

Resource Agency Consultation & Coordination

- TRACES
- USACE/NCTCOG Agreement

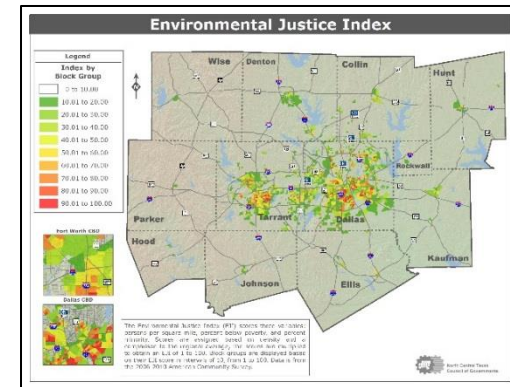
Planning Analyses

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

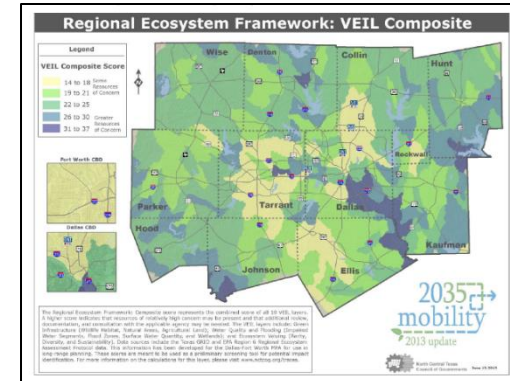
Data Tools

NEPAssist

Environmental Justice Index



Regional Ecosystem Framework



FHWA Eco-Logical Grant

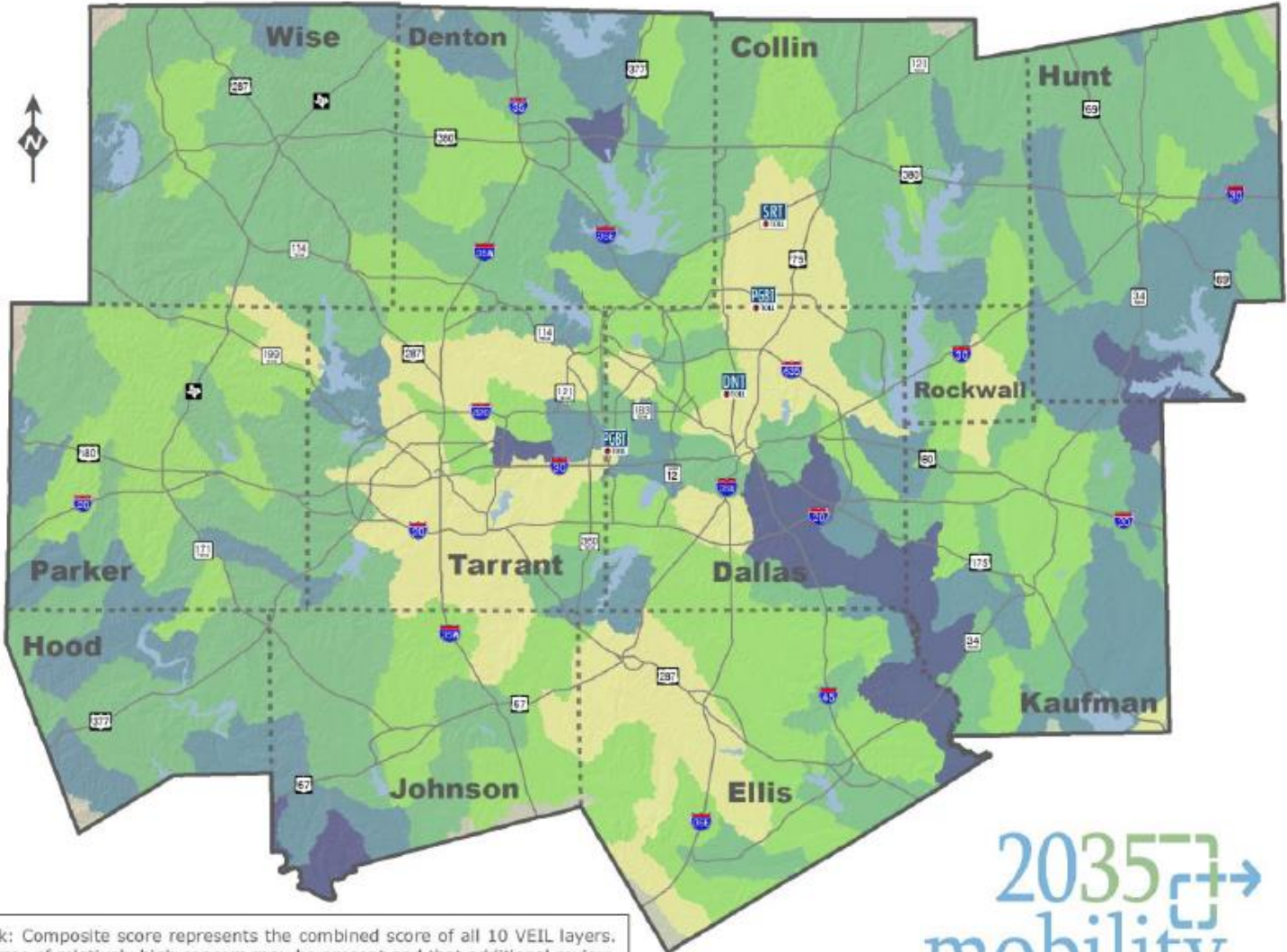
Project Focus

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
<ul style="list-style-type: none">• Wildlife habitat• Natural areas• Agricultural land	<ul style="list-style-type: none">• Impaired water segments• Flood zones• Surface water quantity• Wetlands	<ul style="list-style-type: none">• Rarity• Diversity• Sustainability

Regional Ecosystem Framework: VEIL Composite



Fort Worth CBD



Dallas CBD



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.





Environmental Considerations

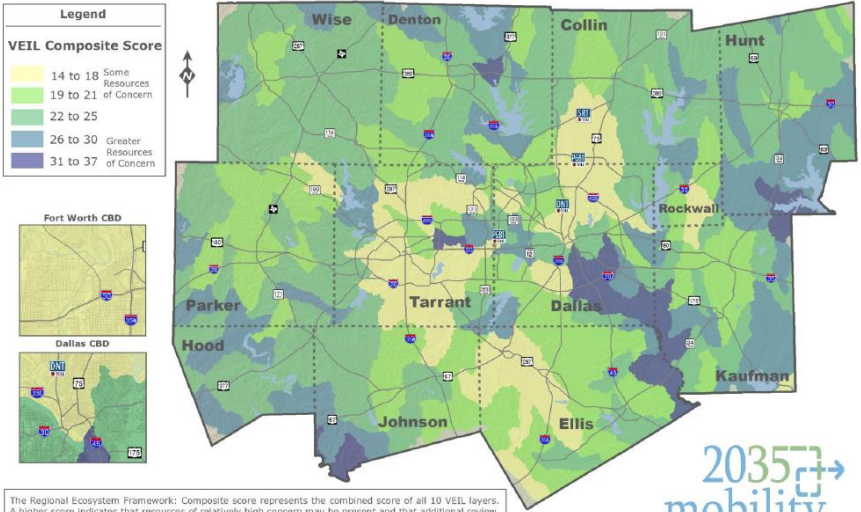
Exhibit C.14: Mobility 2035 – 2013 Update Transit Recommendations Environmental Scoring Results Table

Mobility 2035 – 2013 Update Transit Scoring Results Table (Preliminary Screening Tool for Potential Impact Identification)

ID	Category	From	To	Facilities*		Water*		Ecology*		Other*		Hydrologic Unit Code Related Indicators**		Other Water Related Indicators**		Land Cover**		
				N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
1	Blue Line Rowlett Ext	Downtown Garland	Rowlett	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	Blue Line UNT Ext	Jardbether	UNT South Campus	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3	Cleburne Line	Fort Worth ITC	City of Cleburne	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4	Cotton Belt	DFWIA Terminal AS	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
6	A-Train	City of Denton	Trinity Mills	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
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	Y	Y	Y	Y	Y
8	Mansfield Line	Midlothian	Fort Worth ITC	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	McKinney Line	Parker Road (Plano)	McKinney North	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10	Midlothian Line	Red Bird Lane	Midlothian Central	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

*Data source and Y/N values provided by EPA Regional NEPAAssist.
 **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 2 miles around each corridor.
 ***EPA NEPAAssist 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 NEPAAssist.
 ■ 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.

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 Value (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.

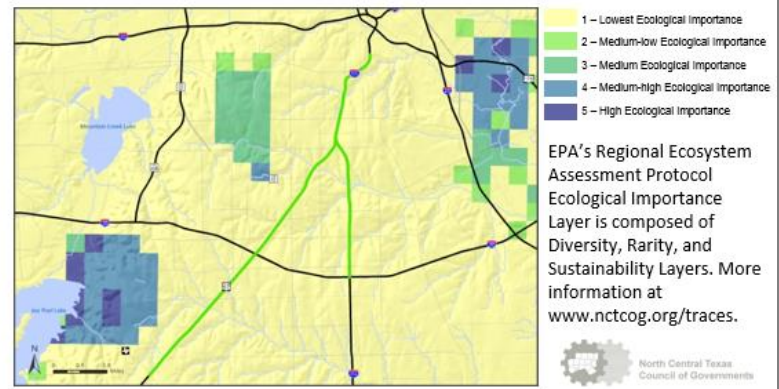


NCTCOG Regional Ecosystem Framework Score* (Range: 14 - 37)

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.

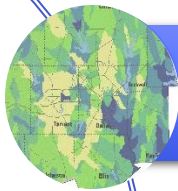
Ecological Importance in Corridor



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

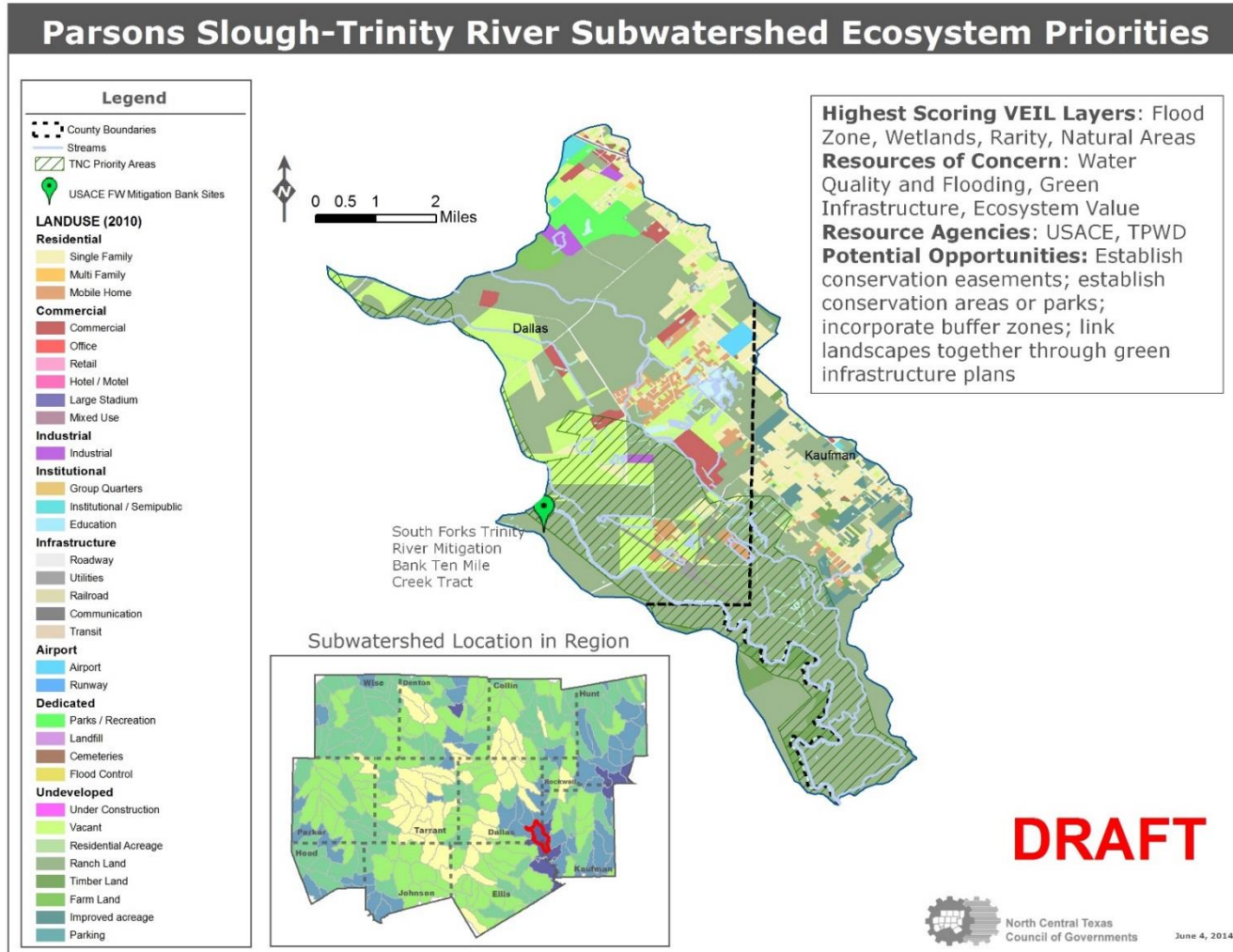
MITIGATION



Implement a Regional Shared Value Mitigation Program

Planning Emphasis

Update REF and Identify Mitigation Focus Areas



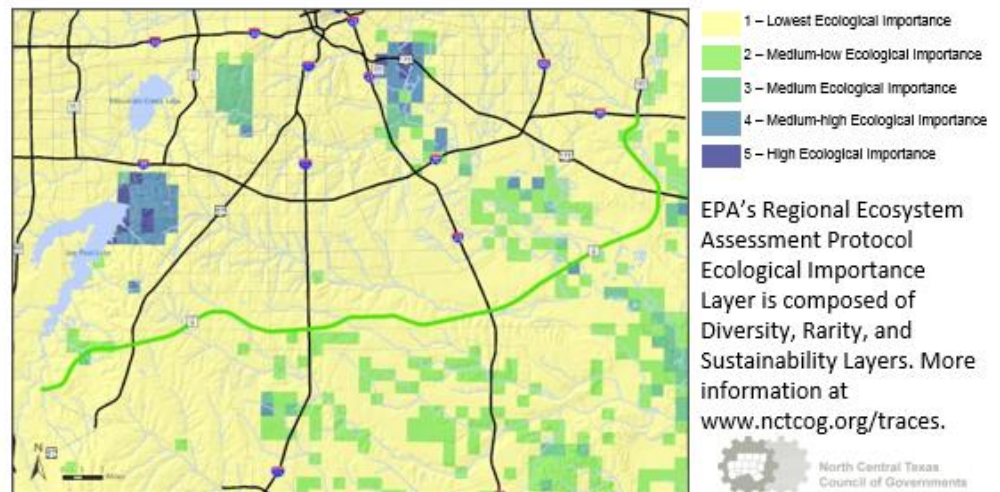
Project-Level Emphasis

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

Ecological Importance in Corridor



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

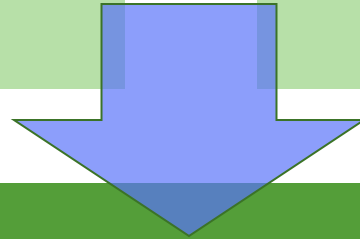
Desired Outcomes

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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