Regional Models of Cooperation

Enhanced Data Sharing, Systems, and Tools

Efficiency through technology and collaboration









U.S. Department of Transportation Federal Transit Administration U.S. Department of Transportation Federal Highway Administration

URN LEF

Purpose & Background

Promote cooperation and coordination across MPO and State boundaries to develop a regional approach to transportation planning

Supported by:

- Planning Emphasis Area (PEA) Fiscal Year 2016
- Every Day Counts (EDC-3)



Why is Enhanced Coordination Needed?



Regional Models of Cooperation Webinar Series

- 1. Regional Models of Cooperation Overview (Jan 27, 2015)
- 2. Air Quality Planning (August 25, 2015)
- 3. Regional Transit Planning (October 16, 2015)
- 4. Safety Planning (December 10, 2015)
- 5. Congestion Management (February 11, 2016)
- 6. Data Sharing Systems and Tools (April 28, 2016)
- 7. Joint Planning Products (June 9, 2016)
- New Technologies and Business Models (August 11, 2016)
- 9. Multimodal Planning Cooperation Across Jurisdictions (October 13, 2016)
- 10. Freight Planning (December 8, 2016)



Today's Speakers

• Brian Gardner

FHWA Office of Planning

• Kendall Wendling North Central Texas Council of Governments

• Terry Corkery

Florida Department of Transportation



RMOC: Data Sharing & Tools Overview

Brian Gardner FHWA Office of Planning April 28, 2016

EDC2 Geospatial Tools for Data Sharing

- Discussions with 22 transportation agencies
- Case studies describing agencies' experiences
- Two follow-on peer exchanges in Denver, CO and Raleigh, NC



States interviewed (dark shade indicates interviewed State)

https://www.gis.fhwa.dot.gov/documents/GeoSpatialToolsForDataSharingCaseStudies.htm

Geospatial Cooperation Case Studies

- Maricopa Association of Governments (MAG)
- Community Planning Association of Southwest Idaho (COMPASS)
- Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and the City of Cincinnati
- San Diego Geographic Information Source (SanGIS) and the San Diego Association of Governments (SANDAG)
- West Central Florida MPO Chairs Coordinating Committee (CCC) and the Tampa Bay Area Regional Transportation Authority (TBARTA)

https://www.gis.fhwa.dot.gov/documents/Regional_Models_Geospatial_Cooperation.htm













Data-Sharing Challenges



Contact Information and Links

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FHWA GIS in Transportation Program gis.fhwa.dot.gov

Every Day Counts www.fhwa.dot.gov/everydaycounts

Geospatial Tools for Data Sharing Case Studies

https://www.gis.fhwa.dot.gov/documents/GeoSpatialToolsForDat aSharingCaseStudies.htm

Brian Gardner

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Geospatial Cooperation Case Studies

https://www.gis.fhwa.dot.gov/documents/Regional Models Geo spatial Cooperation.htm

Eco-Logical www.environment.fhwa.dot.gov/ecological/eco_index.asp

American Association of State Highway and Transportation Officials GIS for Transportation Symposium

www.gis-t.org/



Enhanced Data Sharing, Systems, and Tools: Dallas-Fort Worth Area Experience

Regional Models of Cooperation Webinar April 28, 2016



North Central Texas Council of Governments

Regional Perspective



Eco-Logical at NCTCOG



Regional Ecosystem Framework (REF)

NCTCOG REF is composed of 10 ecological layers

Categories

GREEN INFRASTRUCTURE

- Wildlife habitat
- Natural areas
- Agricultural land

WATER CONSIDERATIONS*

- Impaired water segments
- Flood zones
- Surface water quantity
- Wetlands





REF Composite Map Structure



Green Infrastructure Layers







Water Considerations Layers



Ecosystem Value Layers

C







REF Composite Map











Fort Worth CBD





North Central Texas Council of Governments



March 2016

The Regional Ecosystem Framework: Composite score represents the combined score of all 10 REF 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 REF 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 Ecosystem 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/REF.

Sharing REF Data

Data Categories

- Historic
- Land Use/Land Cover
- Outdoor Recreation and Conservation Areas
- Water Features
- NCTCOG REF

Data Sources

- Environmental Protection Agency
- Federal Emergency Management Agency
- National Park Service
- Natural Resources Conservation Service
- US Army Corps of Engineers
- US Fish & Wildlife Service
- US Geological Survey
- Texas Commission on Environmental Quality
- Texas DOT
- Texas Historical Commission
- Texas Parks and Wildlife Department
- National Conservation Easement Database
- The Nature Conservancy



REF Website Demo



REF Interactive Viewer



ESRI ArcGIS Online Mapping Platform

- Cost approximately \$10,000
 - Budgeted 300 hours in staff time
 - Purchased ESRI data credits

Key Takeaways

- Data organization is critical
- Methodology to create spatial layers should be documented
- Be transparent when incorporating feedback from stakeholders



Transportation Resource Agency Consultation and Environmental Streamlining (TRACES) Builds consensus on environmental and transportation connections in transportation planning process

Planning and Environmental Linkages (PEL) Working Group Works with TxDOT environmental coordinators to streamline project delivery

Technical Advisory Committee

Provides input on selecting wetland data sources and factors to use to identify potential mitigation sites

Conservation Stakeholder Group

Discusses challenges and opportunities shared by conservation



groups, resource agencies, and NCTCOG

REF Application





27

Other, Unknown, Non

Wildlife Management Areas

Existing Mitigation Banks

Existing Conservation Easements

Water, Streams

Flood Control Infrastructure

0 05 1

REF Application

Resource Category	Scoring Question	Mobility 2040 Transit Project
		Dallas Streetcar: Cedar Springs to Zang Blvd.
Water	Within 1.0 miles of the 100 year flood plain?	Ν
	Within 1.0 miles of an Impaired Water Segment?	Ν
	Within 1.0 miles of an NLCD wetland?	Y
	Surface Water Percent	1
Ecology	Within 1.0 miles of a federal/state park or wildlife area?	Ν
	Within a Priority Conservation Area as designated by The Nature Conservancy?	Ν
	Within 1.0 miles of an area with an REF Diversity score of 5?	Ν
	Within 1.0 miles of an area with an REF Rarity score of 5?	N
	Within 1.0 miles of an area with an REF Ecosystem Sustainability score of 5?	Ν
Land Cover	% Wildlife Habitat	5
	% Agriculture	2
	% Wetlands	1



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.

Benefits

Created one-stop shop for region-specific environmental data

Built partnerships with non-traditional agencies

Started conversation about using common spatial data for both planning and NEPA

Interactive nature of Website leads to more feedback and knowledge of data updates



Lessons Learned

Resource & Regulatory Agencies

- Offer to compile or digitize data
- Rely on their expertise
- Speak a common language

TxDOT

- Show how ecological data can enhance their existing feasibility study process
- Create template showing how REF data could be used in corridor study (next step)

Consultants

• Promote use of REF Website to streamline their work



Contact Information

Project Info: <u>www.nctcog.org/ref</u>

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REGIONAL MODELS OF COOPERATION STATE OF FLORIDA

Terry Corkery, FDOT April 28, 2016



Agenda

Florida Model Task Force Organization of the MTF MTF Activities ■ FSUTMS Platform Training ■ Research Data Sharing





Florida Models





Travel Demand Model Uses

- MPO Plans
 Corridor Plans
 PD&E Studies
- Final Design Plans



- Interchange Justification Reports
- Comprehensive Plans
- Development Traffic Impact Analyses
- Toll Feasibility Studies



Florida Model Task Force

Who supports all these models?

- FDOT Central Office model standards and outreach
- FDOT District Offices model development, validation
- MPOs LRTPs, socioeconomic data, validation
- Consultants lead or support technical analysis
 Universities research





Florida Model Task Force

- Model Task Force Membership
 - 8 FDOT Districts
 - 27 MPOs
 - Public Transit Agencies
 - Model Users' Groups
 - FHWA
 - Consultants (non-voting)





Model Task Force

• Mission:

To advance model development and applications to serve the transportation planning needs of the Department and local governments.

• Operation:

The Model Task Force will operate in a responsive, consistent, and credible manner to establish standardized and uniform modeling practices.



Model Task Force

Full Model Task Force Panel discussions on relevant topics Research presentations Committees Data Transit • GIS Model Advancement Freight





MTF Research



MTF: Benefits

- Meeting of the Florida Modeling Community
- Gives a voice to model users
- A steering group setting the direction of Florida's continually evolving standard model structure
- Essential to maintaining a standard model





FSUTMS

- Florida Standard Urban Transportation Model Structure
- Consistent and uniform modeling platform
 - Establishes modeling framework
 - Procedures
 - Techniques
- Cube Voyager main modeling engine
 Cube Avenue (Mesoscopic Model)





FSUTMS

- Standard Development of:
 - User interface
 - Directory Structure
 - File Naming Convention
 - Input/Output files and Database Field Names
 - Default Model Parameters/Coefficients
 - Network Coding Standards
 - Model Structure and Applications
 - Output Reports





FSUTMSOnline.net

WELCOME TO THE OFFICIAL WEB PORTAL FOR FLORIDATRANSPORTATION MODELING

BLOG ADMIN | PROFILE | CONTROL PANEL | LOGOUT | HELF

HOME

Enter keywords

Home

Model Task Force

FSUTMS Standards

Newsletters

Training and Meeting Registration

Model Download

On-Board Survey Resource

Travel Data 🔳

Research Projects

User Groups

Technical Support

Discussion Forum

Phote Galle



Transportation. It is designed to serve as a central location for the exchange and sharing of data. information and ideas among the transportation modelers in Florida. We hope you will find it uset and visit often.

Read More | Posted by Terry Corke

QUICK LINKS FDOT Home Systems Planning Office Systems Traffic Modeling FSUTMS Launcher

FSUTMS Online Training

Citilabs

NEWS AND EVENTS

MTF Directions

- Continue to support the Florida Modeling Community
 - Research
 - Discussion
 - Information
- Model Improvements



- Advances in modeling techniques
- Translate research into applications
- Semi-annual Meetings



Further Information

FSUTMSOnline.net

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Thank You







Questions?

- Please enter your questions into the Q&A Pod on your screen
 - The moderator will direct your question to the appropriate presenter.
 - Slides from today' presentation are available in the download pod
- For more information on the Regional Models of Cooperation initiative, please visit: http://www.fhwa.dot.gov/planning/regional_models/



Thank You!

• For more information on the Regional Models of Cooperation initiative, please visit:

http://www.fhwa.dot.gov/planning/regional_models/

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