Creating a Regional Ecosystem Framework (REF)

Featuring Florida’s Environmental Transportation Decision Making (ETDM) Tool

Presenter
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Moderated by
Bill Ostrum, FHWA
Under SAFETEA-LU, the Surface Transportation Environment and Planning Cooperative Research Program (STEP) sought to:

- Improve understanding of the complex relationship between surface transportation, planning and the environment.
- Refine the scope of transportation research through outreach and in consultation with stakeholders.
- Develop more accurate models for evaluating transportation control measures and system designs for use by State and local governments.
- Improve the understanding of transportation demand factors.
- Develop indicators of economic, social, and environmental performance of transportation systems to facilitate alternatives analysis.
FHWA Research Program for Environment and Planning

Under MAP-21, FHWA will:

- Develop a Performance Management approach to transportation investments.
- Minimize the costs of transportation planning and environmental decisionmaking processes, highway infrastructure, and operations.
- Improve transportation planning and environmental decisionmaking coordination and processes.
- Minimize and reduce the potential impact of highway infrastructure, operations, and surface transportation on the environment.
- Improve construction techniques and their related emissions.
- Reduce the impact of highway runoff on the environment.
- Improve the modeling of factors that contribute to the demand for transportation.

Integrated Eco-Logical Framework (IEF)

- Integrate transportation and ecological decisionmaking.
- Identify potential impacts to environmental resources very early in the planning process.

Courtesy of Volpe Center
Steps of the IEF (and the Eco-Logical approach)

1. Build and strengthen collaborative partnerships
2. Integrate natural environment plans
3. **Create a Regional Ecosystem Framework (REF)**
4. Assess effects
5. Establish and prioritize ecological actions
6. Develop crediting strategy
7. Develop programmatic consultation, biological opinion, or permit
8. Implement agreements, adaptive management, and deliver projects
9. Update REF
Why create an REF?

A REF helps agencies:

– Develop a joint understanding of locations and potential impacts of proposed transportation projects.

– Identify ecologically significant areas, regions to avoid, and mitigation opportunities.

– Plan at a scale that makes sense for ecosystem resources and transportation corridors.
Purpose of the REF

Answer these questions:

• How do we want to use the REF?
• Who is at the table, and what are their priorities?
• What types and scale of data is available?
• What expertise and technology is available?
• What might be secondary uses of the REF?
Steps to Develop an REF

1. Overlay maps
   a) Infrastructure plans – including LRTP, TIP, or STIP
   b) Conservation plans
   c) Natural and cultural resources

2. Define region

3. Describe REF in writing

Courtesy of EPA Region 6
Steps to Develop an REF

1. Overlay maps

2. Define region
   a) What is your joint planning area?
   b) Factors to help determine your planning area:
      • Geo-political boundaries
      • Socioeconomic factors
      • Watershed or habitat boundaries

3. Describe REF in writing
Steps to Develop an REF

1. Overlay maps
2. Define region
3. Write out high-level conservation goals
   a) Opportunity areas for mitigation
   b) Priorities for conservation and avoidance
   c) Consider ecosystem credits
   d) Convene stakeholders to address opportunities and priorities
Constraints and Considerations

• Scale of data
  – Fine scale for assessing project-level effects
  – Coarse scale for high-level planning purposes

• Compatibility of data

• Types of data, plans, and projects to include

• User-friendly format
Creating a Regional Ecosystem Framework (REF) and Florida’s Efficient Transportation Decision Making (ETDM) Tool

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Efficient Transportation Decision Making (ETDM) Process

ETDM and Environmental Screening Tool (EST) Overview

Eco-Logical Webinar Series
January 24, 2013
Previous Project Delivery Process

- Mobility Planning
- FDOT 5-Year Work Plan
- PD&E
- Design
- Permits

FDOT/MPO

FDOT

AGENCIES

• Minimal or No Consideration of Potential Effects/Costs
• Planning Input Often Not Conveyed to Project Development

A 5-year gap before NEPA begins

Late agency involvement
ETDM Process

- A way of planning and developing *qualifying* transportation projects that expedites project delivery without sacrificing the quality of the human and natural environments.

- Enables agencies and the public to provide early input to FDOT and MPOs about the potential effects of proposed transportation projects:
  - Open communication and transparent decision documentation
  - Earlier/Better definition of issues, feasibility, and potential costs
  - No re-education at the permitting stage
  - Expected reduction in late project challenges and litigation – meaningful dispute resolution mechanisms

- Helps satisfy streamlining objectives of MAP-21 and SAFETEA-LU, and other FHWA initiatives like Every Day Counts (EDC)
Qualifying Projects

◆ Roadway Projects
  • Additional through lanes that add capacity to an existing road
  • A new roadway, freeway, or expressway
  • A highway providing new access to an area
  • A new or reconstructed arterial highway (e.g. realignment)
  • A new circumferential or belt highway bypassing a community
  • Addition of interchanges or major interchange modifications to a completed freeway or expressway
  • A new bridge providing new access to an area; bridge replacements (i.e. not Programmatic Categorical Exclusions [PCE] listed in the PD&E Manual, Part 1, Chapter 2 Class of Action Determination)

◆ Public Transportation
  • Rail – non-passenger rail on the SIS, new commuter rail, or new freight rail extending beyond current footprint
  • Transit – new facility, new terminal, New Start project extending beyond current footprint
ETDM Process Overview

- Needs Plans
- Long-Range Cost-Feasible Plans
- Project Development
- Design

Community Outreach

- Planning Screen (45 days)
- Programming Screen (45 days)
- NEPA Approvals & Permits

Early Agency and Community Involvement

Earlier Permits
ETDM Participants

More than 30 state, federal, and local agencies and tribal governments

Federal Highway Administration (FHWA)
Federal Transit Agency (FTA)
US Army Corp of Engineers (USACE)
US Coast Guard (USCG)
US Environmental Protection Agency (USEPA)
USDA Natural Resources Conservation Service (NRCS)
US Fish & Wildlife Service (USFWS)
US Forest Service (USFS)
National Marine Fisheries Service (NMFS)
National Park Service (NPS)
Seminole Tribe
Miccosukee Tribe
County Governments
Regional Planning Councils (RPCs)
Metropolitan Planning Organizations (MPOs)

Florida Department of Environmental Protection (FDEP)
Florida Department of Economic Opportunity (FDEO)
Florida Department of Transportation (FDOT)
Florida Fish and Wildlife Conservation Commission (FFWCC)
Northwest Florida Water Management District (NWFWMD)
South Florida Water Management District (SFWMD)
Southwest Florida Water Management District (SWFWMD)
St. Johns River Water Management District (SJRWMD)
Suwannee River Water Management District (SRWMD)

ETAT: Environmental Technical Advisory Team
What decisions are supported through Screening Process?

- Class of Action Determination
- PD&E Study Scope of Work
- Lead, Cooperating, and Participating Agencies
- Eliminate Alternatives
- Technical Studies that can be advanced
ETAT Responsibilities

What do we need from the ETAT?

- Identify important resources and why they are important
- Actionable comments
- Help us minimize and avoid impacts
- Identify potential mitigation opportunities
- Confirm or clarify DOT preliminary environmental discussions describing anticipated involvement with environmental resources
- Provide information **not** in the Tool
- Tell us what you need – be specific
- Identify a potential controversy
- Provide suggestions

- Coordinate internally to provide complete response on behalf of their agency
- Confirming their understanding of the project’s purpose.
- Use your agency resources to:
  - Fill in the gaps in the data, or
  - Agree that the data is valid
- Convey personal knowledge
  - of the area
  - of the resource
- Identify activities we can complete between screening events to answer any questions
- Tell us about any plans for resources
Issues ETAT Comment On

- Aesthetic Effects
- Air Quality
- Basemap
- Coastal and Marine
- Contamination
- Economic
- Farmlands
- Floodplains
- Historic and Archaeological Sites
- Infrastructure
- Land Use Changes
- Mobility
- Navigation
- Noise
- Recreation Areas
- Relocation Potential
- Section 4(f) Potential
- Social
- Special Designations
- Water Quality and Quantity
- Wetlands
- Wildlife and Habitat
Environmental Screening Tool

Data is integrated from multiple sources into one statewide library.

Step 1 Data Entry

The Technology System
Entry portal for Internet-accessible Environmental Screening Tool

Step 2 GIS Analysis

Project effects to the natural and human environment are analyzed.

Automated Graphic and Tabular Results

Agency and public concerns are communicated.

Step 3 Project Review

View Data and Comments

General Public

Resource Agencies and Community Liaisons

Comments and Recommendations

Evaluation results are summarized and stored.

Step 4 Summary Reports

- Summary of Effects
- Commitments
- Responses

Color-coded degree of effect by technical issue
ENVIROMENTAL SCREENING TOOL

Project Purpose:

Plan Consistency:

GIS Analysis Results:

Resource Data:

Maps:

Previous Commentary:

Summary Reports
Contents, Tools, and Search

Active Project (change)
- 11487 - SR 836 Southwest Extension
  - Alternative #1
  - Alternative #2
  - Alternative #3
  - Alternative #4

Wildlife and Habitat (change)
- Projects
- Administrative
- Baso
- Coastal
- Conservation
  - CLIP V2
    - CLIP Opportunities
    - Core Input Layers
      - Aquifer Recharge (CLIP v2)
      - Landscape Integrity Index (CLIP v2)
      - Natural Floodplain (CLIP v2)
      - Priority Natural Communities (CLIP v2)
      - Rare Species Habitat Priorities (CLIP v2)
      - Significant Surface Waters (CLIP v2)
      - Wetlands (CLIP v2)
    - Final CLIP V2
      - CLIP Priorities (CLIP v2)
    - Priority Output Layers
      - Aquatic preserves
      - FWCC Management Areas
      - Florida Ecological Greenways Network Core
      - Florida Forever
      - Florida Managed Areas (FNAI)
      - Managed Burn Zones (Lake Wales Rd)
      - National Marine Sanctuaries
      - National Parks Projects
      - National Parks and Seashores
      - National Wildlife Refuges
      - Potential Habitat Richness
      - Priority Strategic Habitat Conservation Area
      - Public Land

Edit Map Features
- Communities
- Transportation Projects

View Ancillary Data
- NRS Photos
- Video Log
- Project Attachments

Location and Measurement
- Street View
- Measure

Query
- Query Database
- Select From Map
- Buffer

Search Tips
Searches selected map layers by project, key words, or by latitude and longitude coordinates. Click a link from the results list to zoom to the location on the map.

Selecting Everything will search from the following layers:
- Projects
- Cities
- FDOT Districts
- Water Management Districts
- Counties
- ZIP Codes
- Street Address
- Latitude/Longitude
- Map Layers (searches for layers by name and description in the table of contents)
- Communities
Access to GIS layers, tools, and analyses
Street Viewer

Google Maps Streetview

Location and Measurement

Street View

Measure

Click here to open Google Street View in a new window.

1501 County Road 700, Frostproof, Florida
Address is approximate

4984 County Road 700, Fort Meade, Florida
Address is approximate
Map Tools

Video Log Viewer Application

Roadway ID: 87270000
Dir: North
Mile Pt: 5.075
View: Right

Click this button to find Video Log for info above

Roadway Name: SR-8/SR9A/I-95
Frame Date: 03/01/2011
Frame: 10

Play Speed: 1 fps

Message: Roadway Segment
Questions about data or images -
Questions about a malfunction of
FDOT Service Desk@dot.state.fl.us

Disclaimer: This product is intended for general informational uses only and surveying purposes. This information or data is provided with the understanding
that no responsibility is assumed for either expressed or implied. Changes to these images may be made periodically.

Query Builder

Query criteria:

DESCRIP = '3RD MT TABOR MISS BAPT CHURCH'

Get Unique Values

Statewide Visible Map Extent
Execute Clear
### Community Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>2010</th>
<th>2009</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Pop</td>
<td>2,919</td>
<td>2,576</td>
<td>2,576</td>
</tr>
<tr>
<td>Total Households</td>
<td>1,027</td>
<td>996</td>
<td>996</td>
</tr>
<tr>
<td>Avg Persons per Acme</td>
<td>1.72</td>
<td>1.71</td>
<td>1.72</td>
</tr>
<tr>
<td>Avg Persons per Family</td>
<td>2.48</td>
<td>2.75</td>
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<tr>
<td>Under 18</td>
<td>630</td>
<td>693</td>
<td>693</td>
</tr>
<tr>
<td>65 or higher</td>
<td>360</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Median Age</td>
<td>44</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Total Units</td>
<td>1,002</td>
<td>962</td>
<td>962</td>
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<tr>
<td>Total Single Family</td>
<td>684</td>
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<tr>
<td>Total Multi-Family</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Total Renter Units</td>
<td>98</td>
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<tr>
<td>Total Owner Units</td>
<td>529</td>
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<tr>
<td>$94,800.00</td>
<td>$189,800.00</td>
<td>$270,380.00</td>
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<tr>
<td>Median Household Value</td>
<td>46</td>
<td>45</td>
<td>45</td>
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<tr>
<td>Number of Households who Have a Vehicle</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Tools
- Reports
- Project Dossiers
- Advance Notification Package
- Project Effects
- Reminders
- Agency Participation
- Community Coordination
- Performance Management
- Invoicing
- Project Tracker
- Document Review

### Other Information

Map of Miami Beach showing a section of the area. The map includes streets and landmarks such as 907, 121st ST, and West Ave, with highlighted areas possibly indicating specific locations or zones. The map is likely used for planning or informational purposes, providing geographical context for the community statistics presented in the table.
ETAT provide a Degree of Effect (DOE)

a. Identify resources & level of importance

b. Assess effects

- Direct
- Indirect
- Cumulative

c. Identify potential severity of effects with detailed comments
Summary Report

● Preliminary and Final
  • Resource to Project Managers
  • Feedback document summarizing project review
    ▪ Summary DOEs
    ▪ Accepted P&N
    ▪ Project Scope

● Final
  • Signed Class of Action
Lessons Learned & Best Practices

- Be inclusive – the EST and ETDM process is the result of practitioners getting together to figure out a better way to do things
- Plan for change – there are always opportunities to do better or be more efficient – seek continuous improvement
- Best available - until the next best available
- People, communication, and relationships drive the outcomes
Questions?

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