

# Florida Transportation Modeling Newsletter

June 2009

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### An Update on the Model Task Force

As a result of travel restrictions, the MTF committees and the MTF Leadership Group have been meeting via teleconference and web meetings. During the fall of 2008, the Model Advancement, Data, Transit, and Geographic Information Systems Committees met via teleconference to discuss priorities for research topics and funding to be considered by the full MTF.

The MTF Leadership Group, which includes the tri-chairs and committee chairs, met in the fall 2008 and spring 2009 to discuss and compile research priorities, as well as discuss restructuring of the FSUTMS modeling training series. The MTF Leadership Group developed a web survey that listed the priorities from the committees and asked participants to rank them. The MTF conducted the survey via the web through May 22, 2009, and survey priority results will be posted in the next issue of this newsletter. The FDOT Systems Planning Office is evaluating opportunities to hold an in-person full MTF meeting during the fall of 2009.

**Meeting presentation material and minutes from the committee meetings are available at: [http://www.fsutmsonline.net/index.php?/model\\_task\\_f/mtfdocs/](http://www.fsutmsonline.net/index.php?/model_task_f/mtfdocs/)**

### MTF Data Committee Update

*By Gary Kramer, Data Committee Chairperson*

The Data Committee held a teleconference on October 17, 2008, to discuss these items:

- Activity-based modeling research efforts
- National Household Travel Survey (NHTS) Add-on status
- Quarterly Census Employment and Wages (QCEW) Database
- Data committee priorities

The committee recommended priorities to be presented to the MTF Leadership. The priorities included these topics:

- Coordination with the Traffic Analysis Zone Upload (TAZ-UP) Program
- Review of QCEW data, keeping in mind confidentiality issues
- Review of NHTS data as it relates to the LRTP Update schedule

Gary Kramer noted that if traffic micro-simulation is integrated with the four-step travel demand models, the Data Committee should be involved as it will be very data-intensive, with turning movement counts and other traffic information.

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## **MTF Transit Committee Update**

*By Larry Foutz, Transit Committee Chairperson*

The Transit Committee held a teleconference on November 20, 2008, to hear presentations on these items:

- Transit Model Application
- Florida Transit Surveys Applied Research
- Existing Transit Survey Efforts: Miami-Dade MPO, District 4 and Tri-Rail

An FTA-approved survey was recently conducted for Miami-Dade Transit and will be analyzed by the end of summer 2009. District 4 will be surveying Broward County Transit and PalmTran to complete the transit surveys for the Southeast Regional Planning Model (SERPM). With completion of these efforts, plus model network refinements completed the previous year, the several on-going “New Starts” efforts in South Florida should be producing defensible ridership forecasts.

The Transit Committee discussed priorities for the near future:

- Continue working with the transit properties to conduct surveys
- Move toward implementation of time-of-day modeling across the state.

Another item of discussion: the Transit Committee may become the Modal Committee and start working on development of an integrated freight model that can be a part of the FSUTMS framework.

## **MTF GIS Committee Update**

*By Lina Chen Kulikowski, GIS Chairperson*

The GIS Committee held a teleconference on November 20, 2008, to hear presentations on these items:

- ArcGIS integration into the Cube platform and a briefing on Cube Enterprise Geodatabase and ArcView extension for Cube Voyager
- Development of the Prototype GIS System for transportation model networks in FSUTMS
- Turnpike Enterprise use of TeleAtlas GIS data for transportation modeling

The GIS Committee set research priorities for the topics listed below at a teleconference held on December 09, 2008.

- Geodatabase framework for CUBE
- Model visualization
- Additional GIS tools to enhance model usefulness
- GIS training for modelers
- Model network enhancement
- PCWALK enhancement using GIS

On January 22, 2009, the GIS Committee (with support from Citilabs, Inc.) conducted a half-day webinar titled “Cube GIS Functionalities for FSUTMS Users.” On March 17, 2009, the GIS Committee held a one-hour teleconference with Citilabs to review the beta version of the Cube ArcGIS extension “SUGAR.” SUGAR fully integrates ArcGIS functionality with travel demand modeling.

## **MTF Model Advancement Committee Update**

*By Wilson Fernandez, Model Advancement Committee Chairperson*

The Model Advancement Committee held a teleconference on November 24, 2008, to hear presentations on these topics (PowerPoint presentations available online at [www.fsutmsonline.net](http://www.fsutmsonline.net)):

- Activity-Based Modeling Research Findings
- ITS Sketch Planning Tool

The Committee set priorities for the MTF Leadership as follows:

- Support Tampa Bay activity-based model (ABM) as a large-area test case and identify and support a separate MPO that includes a small- to midsize-area test case.
- Identify incremental improvements to existing 4-step models as the long-term improvements identified for the Tampa Bay ABM may be 18 to 24 months away from completion.

The Model Advancement Committee welcomes Wilson Fernandez, Miami-Dade MPO, as the new Chair.

## ITS Evaluation Tools Modeling Workshop

### ITS Evaluation Tool Training and Implementation

By Dr. Mohammed Hadi, Ph. D., P.E., Lehman Center for Transportation Research, FIU

The November 2008 issue of the *Florida Transportation Modeling Newsletter* reported on research for a Florida Intelligent Transportation Systems (ITS) evaluation tool (FITSEVAL) that allows the assessment of benefits and costs of deploying fourteen different types of systems. FITSEVAL uses the script language of Cube.

The ITS tool research project was completed in December 2008. The project development team has made ITS presentations in Orlando, Fort Myers, and Fort Lauderdale, and has held webinars to disseminate information about the project to both the transportation planning and ITS communities. A number of Florida MPO regions are considering implementation of this tool as part of their regional demand forecasting models.

The FDOT Systems Planning office will deliver a free training course on the implementation and use of the tool on June 22-25 in Orlando.

#### Registration Information

Click on this link to view information about the workshop and to register: [http://www.fsutmsonline.net/modeling\\_training.aspx](http://www.fsutmsonline.net/modeling_training.aspx)

The hotel rate and group code information is as follows:

- New Date:** June 22 – 25, 2009  
**Time:** Monday 1:00 PM – Thursday 12:00 PM  
**Location:** Embassy Suites Orlando – International Drive/  
Jamaican Court  
8250 Jamaican Court, Orlando, FL 32819  
**Hotel Rate:** \$99.00 (Block rate available through 6/8/09)  
**Group Code:** FDOT  
**Reservations:** 1-800-327-9797  
**Cancellations:** 24 hours prior to reservation date

Please contact Diana Fields if you have any questions.  
FDOT Systems Planning Office  
Phone: (850) 414-4901  
E-mail: [diana.fields@dot.state.fl.us](mailto:diana.fields@dot.state.fl.us)

#### FLORIDA TRANSPORTATION MODELING NEWSLETTER

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# The FSUTMS Modeling Training Series...A New Beginning

By Terry Corkery, FDOT Systems Planning Office

Here at the Systems Planning Modeling Section, one of our most visible responsibilities is our modeling training program. Our free FSUTMS workshops have provided foundational and advanced training for the Florida modeling community since the 1980's. Along the way, we have incrementally improved our workshops in response to participant feedback. But rather than continuing to build upon our existing training workshops, FDOT is initiating sweeping changes to the entire program structure, as well as the course materials.

The new Modeling Section leadership and staff (see page 15) has restructured the FSUTMS training series into two primary tracks: a Model Appliers track and a Model Developers track. The Appliers track is intended for modelers who primarily use travel demand models for model analysis, such as corridor studies and traffic impact analyses. The Developers track offers advanced modelers training in scripting and validation. The training series also includes a Model Reviewers track for participants who need to know the theories and capabilities of travel demand modeling, but do not need to "sit in the pilot's seat" and run the models.

The courses will focus on the types of projects modelers encounter, with modeling theory mixed into the agenda along the way. This approach differs from our previous workshops that generally taught the underlying theories module by module, before delving into specific applications. A course catalogue will describe each workshop by track and anticipated level of difficulty. The catalogue lists dates, times, locations, and registration instructions for both the in-person workshops and a new series of training webinars. Other knowledge-sharing opportunities, including a new FSUTMS Web Presentation Series, are featured at the end of the catalogue.

The schedule of workshops will vary year to year, based on anticipated needs of the modeling community, and we will not offer every course every year. Information about the new fiscal year training program will be available online beginning in July 2009: [http://www.fsutmsonline.net/modeling\\_training.aspx](http://www.fsutmsonline.net/modeling_training.aspx).

For more information on the FSUTMS modeling training series, please email Terry Corkery at [terrence.corkery@dot.state.fl.us](mailto:terrence.corkery@dot.state.fl.us).

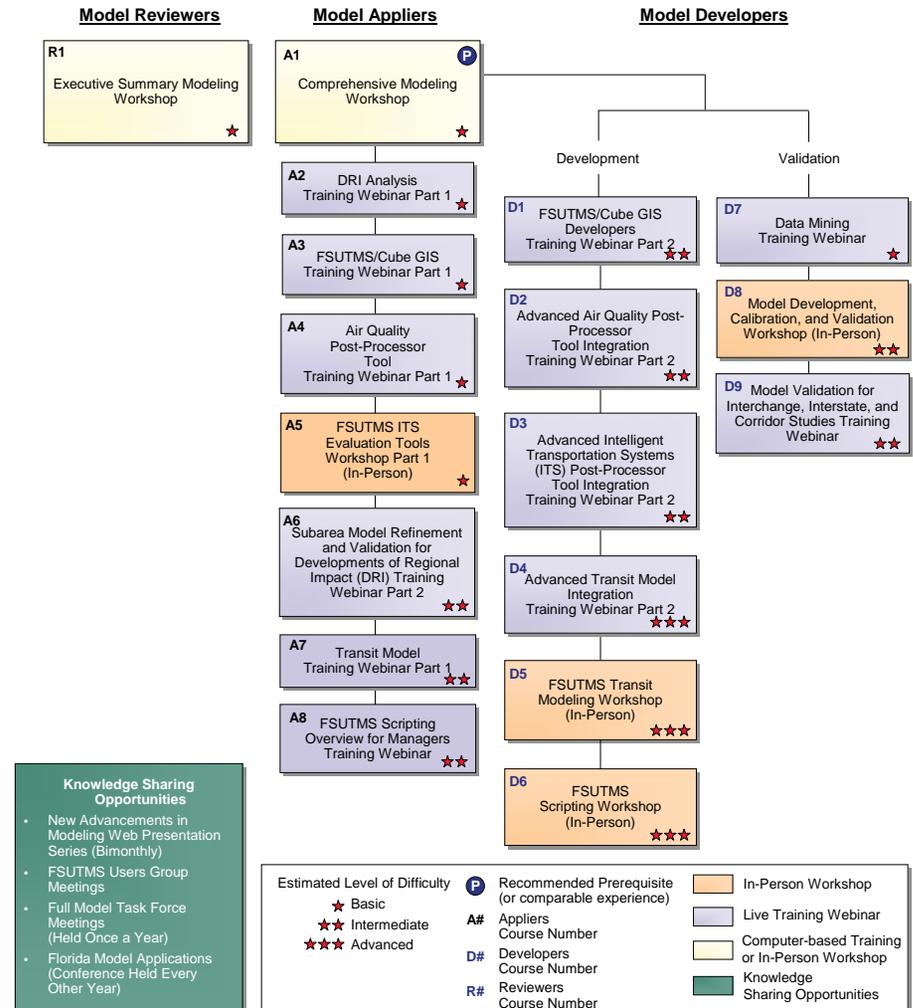


Figure 1. Restructured FSUTMS Modeling Training Series

# 2009 Workshops

## The Florida NHTS Add-On Program - Update

By Krishnan Viswanathan, Cambridge Systematics, Inc. and Adella Santos, USDOT

The focus of the National Household Travel Survey (NHTS) is to gain a better understanding of travel behavior for passenger vehicles. The motivation behind Florida's participation in the NHTS Add-on program is to achieve a more statistical representative sample of households' travel behavior patterns throughout the state. This in turn should provide a greater level of confidence in assessments of future travel patterns and supportive data for future transportation projects for federal and state funding.

The NHTS data is a tool for the urban transportation planning process. The NHTS provides data on personal travel behavior, trends in travel over time, a source of four-step model parameters, national benchmarks for the comparison to local data, and data for a wide range of transportation planning applications. Details about Florida's participation in the add-on program, the sampling plan, and additional questions are available in the February 2008 (Vol. 37) edition of this newsletter. This article provides the current data collection and availability status.

### Current Status

The data collection phase of the 2008 National Household Travel Survey is now complete. In conjunction with the national study, the State of Florida Add-On program began the data collection phase in mid-March 2008. The data collection phase includes a multi-stage process consisting of mail-out operations, telephone recruitment interviews, telephone retrieval interviews for multiple household members, online and interactive geo-coding, appointment scheduling, and repeated contact attempts across various time periods.

Table 1 shows the current status of the household interview process. As of May 18, 2009, Westat has interviewed 103 percent of the sample households.

Table 1. NHTS Add-On Current Overall Status

Category	FL
Total Target Sample Size	14,000
Useable Households (as of 4/30/09)	14,374
% of Completion Goal	102.7%

One of the goals of the sampling plan is to ensure that each MPO has adequate statistically significant samples. Figure 1, on page 6, shows the completion percent by MPO as well as for rural counties. As of May 18, 2009, most MPOs have met their sample targets. Table 2 shows the percent complete by region in the original sampling plan. As shown in Table 2 the data contractor, Westat, has achieved and in most cases exceeded the target completion in all regions.

Table 2. NHTS Sample Size Completion

Region	Number of Households	Sample Size		
		Target	Completed (5/18/09)	Percent Complete
1	545,158	1,200	1,262	105.2%
2	613,890	1,234	1,223	99.1%
3	424,149	1,200	1,234	102.8%
4	2,150,666	4,116	4,156	101.0%
5	1,040,095	2,000	2,055	102.8%
7	1,196,954	2,250	2,282	101.4%
8	370,209	2,000	2,162	108.1%
Total	6,341,121	14,000	14,374	102.7%

### Next Steps

May 1st was the official cut-off date for data collection, but data collection will continue for a couple of additional weeks for respondents who scheduled appointments after the cut-off date.

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After data collection, the NHTS team will work closely with Westat on the data processing task, especially with open-ended (OE) responses and geo-coding research. Most OE responses can be re-coded into a designated response category. Another task is geo-coding. Although a great many origin and destination addresses were already incorporated in the program during the interview, there were many times the respondent could not provide an exact address. When this occurred, the interviewer collected the nearest intersection or landmark in OE format.

The final numbers may change slightly as FHWA and Westat go through the quality assurance and data review process over the next couple of months. Credit goes to Westat's interviewers who despite hang-ups or disgruntled respondents persevered in their pursuit to complete the household interview. The NHTS team is planning to provide guidance in working with and using the data.

The delivery schedule is as follows:

- Mid-May to August will be the data processing period.
- Confidential location (Geo-code) files will be provided to Add-on states directly in August.
- Add-On data files are scheduled to be delivered by October 5th.

- All final documentation will be included with data delivery by October 5th. The codebook has been updated with detailed variable explanations.
- The NHTS will be working very hard to try and have the Public Use file available in January 2010. (Just in time for TRB's annual conference.)

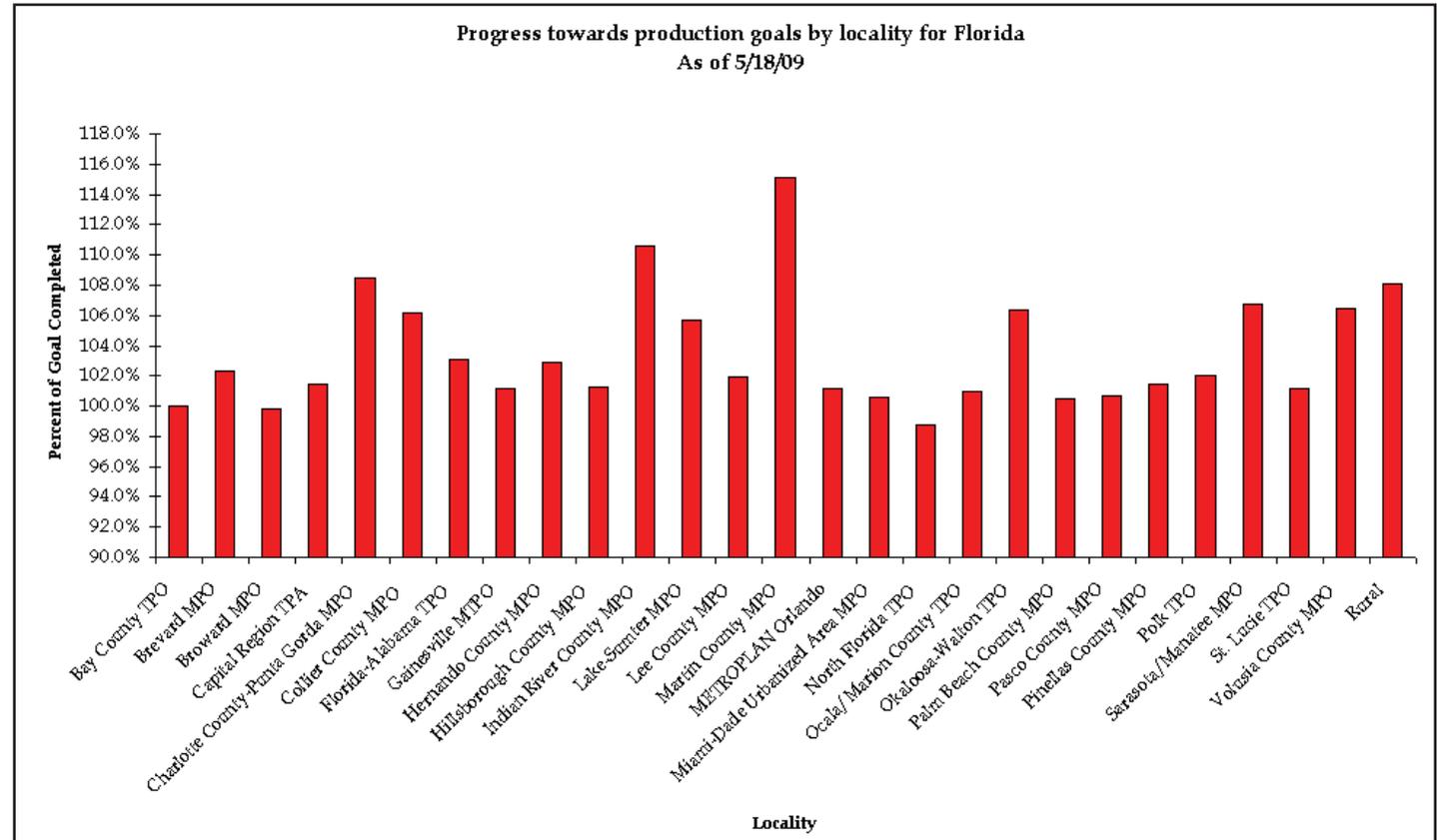


Figure 1. Data Collection Completion Percent by MPO and for Rural Counties

## Air Quality Analysis Returns to Florida

### Background

The U.S. Environmental Protection Agency (EPA) has issued a new eight-hour ozone National Ambient Air Quality Standard (NAAQS) of 0.075 parts per million (ppm) to replace the existing 0.08 ppm standard. Florida, as well as other states, has submitted monitoring that established the design values for ozone in each county. The official designation process is not yet complete.

The Florida Department of Environmental Protection (DEP) has begun coordinating with the FDOT, metropolitan planning organizations (MPOs), regional planning councils (RPCs), and counties throughout the state in anticipation of the EPA designating several MPOs as ozone nonattainment areas based on the new standard.

### Schedule and Impacted Areas

In March 2009, the EPA required all states to provide a list of counties designated as ozone nonattainment areas based on the 2006-2008 ozone monitoring data. The state of Florida submitted the counties listed below:

- Escambia
- Santa Rosa
- Bay
- Sarasota
- Manatee
- Hernando
- Pasco
- Pinellas
- Hillsborough

The EPA may utilize 2007-2009 ozone monitoring data (based on availability) to finalize the ozone nonattainment area designations. Based on the new data, EPA may remove or add some counties to the list.

The EPA will release the official ozone nonattainment designations in March 2010. In the past, designations have had an effective date of 90 days later (approximately June 2010). Upon the effective date, the EPA expects each impacted nonattainment area to demonstrate conformity within one year of designation (approximately June 2011).

Many MPOs are in the process of updating their long range transportation plans (LRTPs). Figure 1 lists the travel demand models used throughout Florida, and illustrates the most recent information on LRTP update schedules for each MPO in Florida, regardless of anticipated nonattainment status.

As for anticipated ozone nonattainment areas, the Florida-Alabama, Bay County, and Sarasota-Manatee County MPOs will adopt their LRTPs by the end of 2010. The Hernando, Pasco, Pinellas, and Hillsborough County MPOs will adopt their LRTPs by the end of 2009. Each ozone nonattainment area will have one year from its effective designation date to demonstrate conformity with a Conformity Determination Report (CDR) approved by the U.S. DOT (approximately June 2011).

### Air Quality Post-Processor

The FDOT System Planning Office, to support the impacted MPOs relative to the calculation of ozone emissions in coordination with LRTP updates, is developing an air quality post-processor within FSUTMS/Cube Voyager. The air quality post-processor will automatically calculate nitrogen oxides (NOx) and volatile organic compounds (VOCs); the pollutants that make up ozone, within the FSUTMS/Cube Voyager modeling platform.

Without an air quality post-processor, the EPA would require nonattainment areas to run MOBILE6 to calculate emissions factors and require manual calculations of emissions in Excel or Access. The air quality post-processor will provide a streamlined and consistent methodology for each of the nonattainment areas in Florida.

The previous FSUTMS/Tranplan platform included the EMIS module based on the FORTRAN programming language. EMIS automatically calculated emissions using Mobile6. The new FSUTMS air quality post-processor is being developed within the current FSUTMS/Cube Voyager platform and will likely use MOVES to calculate emissions factors.

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	Model Name	2005	2006				2007				2008				2009				2010					
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
1	Bay County TPO Model <sup>3</sup>																						2035	
2	Broward County MPO Model <sup>4</sup>																							2035
3	Capital Region TPA Model (Tallahassee area)																							2035
4	Collier/Lee County MPO Model																							2035
5	D-1 Districtwide Model																							
6	D-5 Districtwide Model																							2035
7	Desoto County Model																							
8	Florida-Alabama TPO Model (Pensacola Area) <sup>3</sup>																							2035
9	Gainesville/Alachua County MPO Model																							2035
10	Glades County Model																							
11	Hardee County Model																							
12	Hendry County Model																							
13	Highlands County Model																							
14	Miami-Dade MPO Model <sup>4</sup>																							2035
15	Northeast Regional Planning Model/NFTPO LRTP <sup>2</sup>																							2035
16	Northwest Florida Regional Planning Model <sup>3</sup>																							2035
17	Okaloosa-Walton TPO Model (Ft. Walton Beach) <sup>3</sup>																							2035
18	Okeechobee County Model																							
19	Orlando (Metroplan) MPO Model																							
20	Palm Beach MPO Model <sup>4</sup>																							2035
21	Polk County TPO Model																							2035
22	Putnam County Model <sup>2</sup>	No plans to update County model																						
23	Sarasota/Manatee/Charlotte MPO Model																							2035
24	Southeast Regional Planning Model/Regional LRTP <sup>4</sup>																							2035
25	Tallahassee-Leon County City QRS Model	No plans to update																						
26	Tampa Bay Regional Planning Model (TBRPM) <sup>5</sup>																							2035
27	Treasure Coast Regional Planning Model <sup>1</sup>																							2035
28	Florida Statewide Model																							

Model Validation/Calibration Effort
Long-Range Transportation Plan Update
Educated guess based on latest adoption/completion time

<sup>1</sup> Unable to verify plan to update  
<sup>2</sup> The NERPM will include Baker and Putnam - NFTPO includes Clay, Duval, Nassau, and St. Johns Counties  
<sup>3</sup> Northwest Florida RPM will be used to update 3 LRTPs (Bay, FATPO, Oka-Walton) but plans not simultaneous  
<sup>4</sup> Southeast Florida RPM will be used to update 3 LRTPs (Broward, Miami-Dade, Palm Beach) simultaneously  
<sup>5</sup> TBRPM includes Hernando, Hillsborough, Pasco, Pinellas MPOs and Citrus County

Figure 1. Schedule Of Florida MPO LRTP Updates

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MOBILE6 is the currently approved air quality model provided by EPA. However, the EPA has released its second demonstration version of MOVES, its new air quality modeling platform. The final release of MOVES is expected in December 2009.

The air quality post-processor accepts emissions factors from MOBILE6 or MOVES as a look-up table, and applies this input to link-level Vehicle Miles Traveled (VMT) in the FSUTMS/Cube Voyager model to calculate emissions for each pollutant. FDOT is currently evaluating MOVES and comparing its functionalities to MOBILE6.

Since the EPA will require the use of MOVES within two years of its final release, it is likely that emissions factors from MOVES will provide input into the FSUTMS air quality post-processor. In addition, one of the added benefits of MOVES is the ability to create emissions factors for greenhouse gases. FDOT will run MOBILE6 or MOVES to create the first set of emissions factors during development of the air quality post-processor.

Figure 2 illustrates the proposed process for calculating emissions within FSUTMS/Cube Voyager. FDOT will coordinate closely with the DEP, MPOs, RPCs, and counties on the modeling process and MOBILE6 or MOVES input parameter assumptions for the purpose of developing the post-processor.

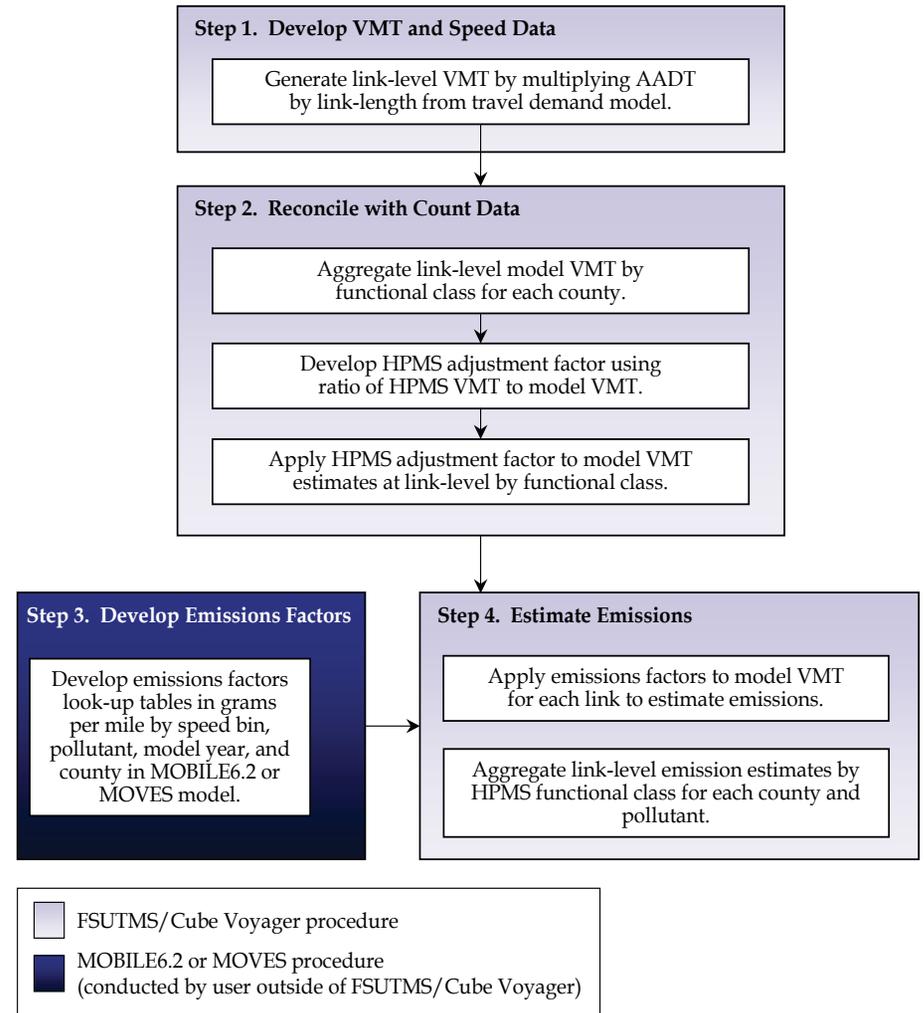


Figure 2. Proposed Process For Calculating Emissions in FSUTMS/Cube Voyager Air Quality Post-Processor

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Table 1 below lists each of the core-based statistical areas (CBSAs) anticipated to be ozone nonattainment areas and the corresponding FSUTMS/Cube Voyager models. Three FSUTMS models will most likely include the air quality processor over time: the Tampa Bay Regional Planning Model, the Northwest Florida regional planning model, and the Sarasota-Manatee-Charlotte model.

The Systems Planning Office will coordinate closely with its FDOT districts and the MPOs to develop and implement the air quality post-processor. MPOs with LRTPs due in December 2009 will likely apply the air quality post-processor after the development of the LRTP, but in time for the conformity determination deadline. MPOs with LRTPs due for adoption in December 2010 will be able to demonstrate conformity using the air quality post-processor at the same time as adoption of their LRTPs.

Ozone Nonattainment Area	Counties	MPO	FSUTMS Model
Pensacola-Ferry Pass-Brent CBSA	Escambia	Florida-Alabama TPO	Northwest Florida Regional Model
	Santa Rosa		
Panama City-Lynn Haven CBSA	Bay County	Bay County TPO	
Tampa-St. Peteresburg-Clearwater CBSA	Hernando	Hernando MPO	Tampa Bay Regional Planning Model (FDOT D7)
	Pasco	Pasco MPO	
	Pinellas	Pinellas MPO	
	Hillsborough	Hillsborough MPO	
Sarasota-Bradenton-Venice CBSA	Sarasota	Sarasota-Manatee MPO	Sarasota-Manatee-Charlotte Model
	Manatee		

*Table 1. FSUTMS Models That Include Anticipated Ozone Nonattainment Areas*

After finalizing the air quality post-processor, the FDOT Systems Planning Office will conduct two training webinars as part of the FSUTMS Modeling Training Series. The first webinar will focus on the application of the air quality post-processor. The second webinar will focus on the integration of the air quality post-processor into individual models.

For further information on the development of the air quality post-processor, please contact Diana Fields, FDOT Systems Planning Office, at [diana.fields@dot.state.fl.us](mailto:diana.fields@dot.state.fl.us).

## FSUTMS Standard Report Generation Program Available for Testing and Feedback

By: Albert Gan, Lehman Center for Transportation Research at FIU

The Lehman Center for Transportation Research at Florida International University has developed a desktop program for generating FSUTMS standard reports. The prototype application is designed to generate a set of 42 different standard reports based on the report templates originally developed for the Systems Planning Office. The reports display selected model inputs and outputs using a combination of tables, charts, and maps. Multiple reports are included for each of the five modeling steps: generation, distribution, modal split, highway assignment, and transit assignment.

The standard report program provides a user-friendly interface to allow the user to quickly select from a list of reports to display. Multiple reports from different scenarios can be opened at the same time for easy comparisons. Figure 1 shows two sample reports being displayed side-by-side comparing modal split results from two project scenarios.

The program provides a standalone GIS interface that allows the user to freely define map areas for inclusion in map reports. For users who like to use the maps in an external program like ArcMap, the program provides a function to export all available map layers into a Geodatabase file. An MXD file defining the related map settings is also generated.

The complete installation package of the prototype program is available for download at [http://www.fsutmsonline.net/standard\\_reports/index.htm](http://www.fsutmsonline.net/standard_reports/index.htm). For testing purposes, the package comes with a sample set of input and output files based on the Olympus Training Model. Program documentation, test instructions, original report templates, and contact information are all available at the same download page.

The program must be customized by the developer for it to work with individual FSUTMS models because the file structures of different FSUTMS models vary. FDOT is considering expanding the prototype to include a conversion program that will allow a user who is familiar with a specific FSUTMS model to define input data equivalencies, thus allowing the program

to understand and retrieve the needed data for the reports. The conversion program may also be used for other applications with similar needs.

FDOT is seeking feedback from the user community with regard to the functionalities of the program, the contents of the reports included, and any additional reports that a user would like to see included.

For further information on the development of the FSUTMS reporting tool, please contact Frank Tabatabaee, FDOT Systems Planning Office, at [frank.tabatabaee@dot.state.fl.us](mailto:frank.tabatabaee@dot.state.fl.us).

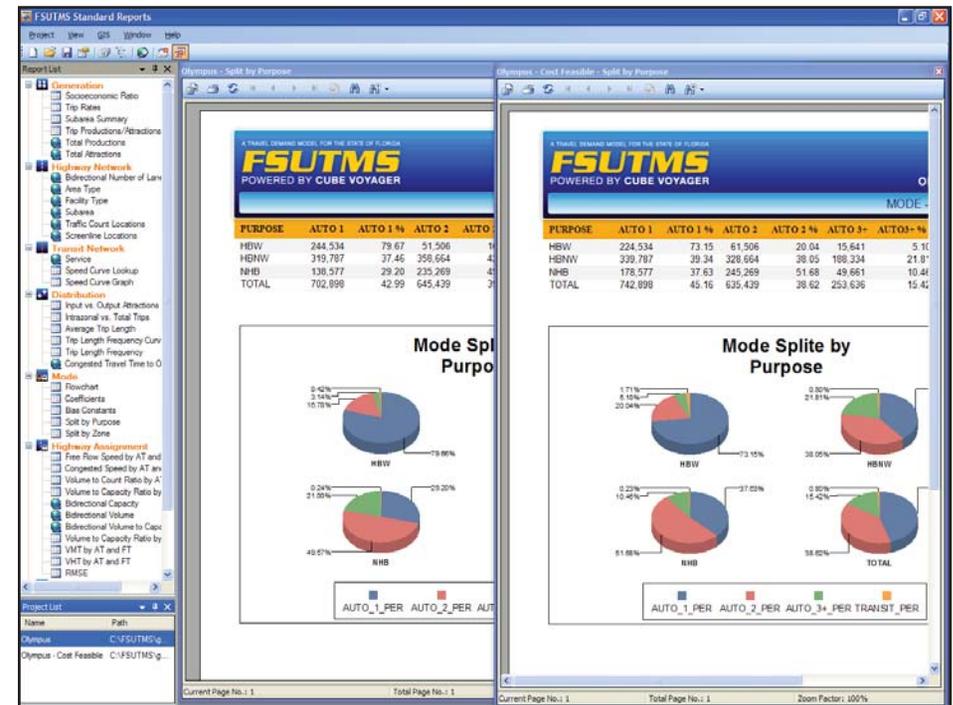


Figure 1. Reports displayed side-by-side for scenario result comparison.

## Florida Statewide Model Development

The FDOT Systems Planning Office is pleased to announce that work on the Florida Statewide Model (FLSWM) is entering its final validation phase. The statewide model evaluates alternative investment scenarios developed for Florida statewide plans. Based on the Cube Voyager platform and a Geographic Information System (GIS) multimodal transportation network, the FLSWM includes base year and future year analysis, an open-structure four-step model that allows for easy implementation of updates and interface with other transportation planning data sources. The FLSWM complements existing metropolitan planning organization (MPO) models by integrating local and regional government model data.

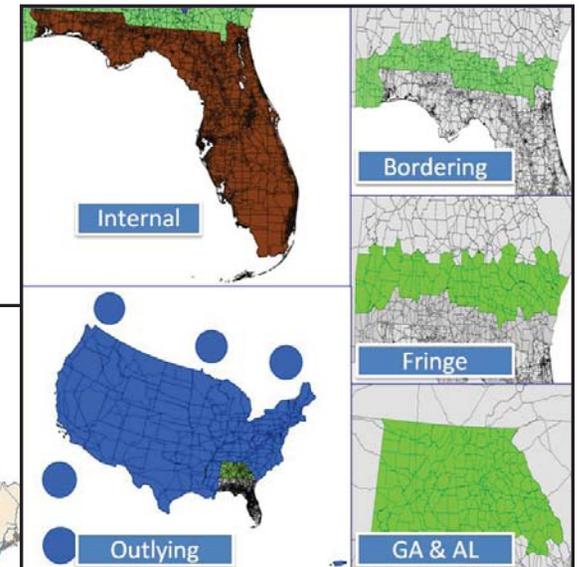
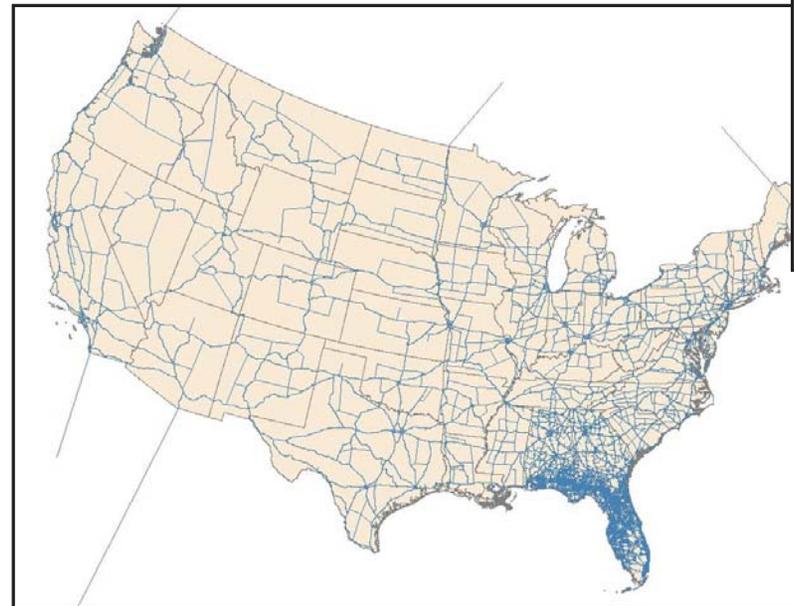
### Statewide Model Development

The FLSWM's development over the past two years has been structured to ensure a quality product using state-of-the-art practices. The FLSWM was conflated from various data sources at the county, MPO, state, and federal levels to create a comprehensive network for both passenger travel and freight movement. This conflation of roadway networks involved the integration of MPO model networks for urban areas, TeleAtlas GIS networks for rural areas and the National Transportation Atlas Database's National Highway Planning Network (NHPN) for roadways outside of Florida.

The NHPN system was divided into three areas, with decreasing detail further from Florida: border, fringe, and national. The NHPN system has two subset attributes, the Strategic Highway Network (STRAHNET) and the National Highway System (NHS), that allow for this drawdown in detail while maintaining important links. The NHS is approximately 160,000 miles of roadway deemed important to the nation's economy while the simpler STRAHNET, a derivative of NHS, comprises 61,000 miles of public

highway that were identified by the Department of Defense as a minimum to public highway infrastructure. Special attention was given to ensure each conflated network's attributes were retained to allow for later integration with other model networks. Roadway Characteristics Inventory (RCI) and Florida Traffic Information (FTI) databases provided roadway attribute data including functional class, number of lanes, annual average daily traffic (AADT), truck percentages, travel speeds, and more.

Starting from scratch, the network-based transportation analysis zone (TAZ) structure was developed with an emphasis on integrating Census TAZ, MPO model, National Household Travel Survey (NHTS), and special generator boundaries. The FLSWM includes refinements based on hydrographic data, municipalities, and aerial photo analyses.



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Additionally, the TAZs were adjusted to fit a zonal hierarchy, with TAZs increasing in size to reflect the decreasing level of detail required. Five levels of detail were used:

- Internal Florida zones (5,403)
- Bordering Florida zones (228)
- Fringe area zones (130)
- Outlying zones in Georgia and Alabama (236)
- Outlying area zones or zones outside of the fringe area (185)

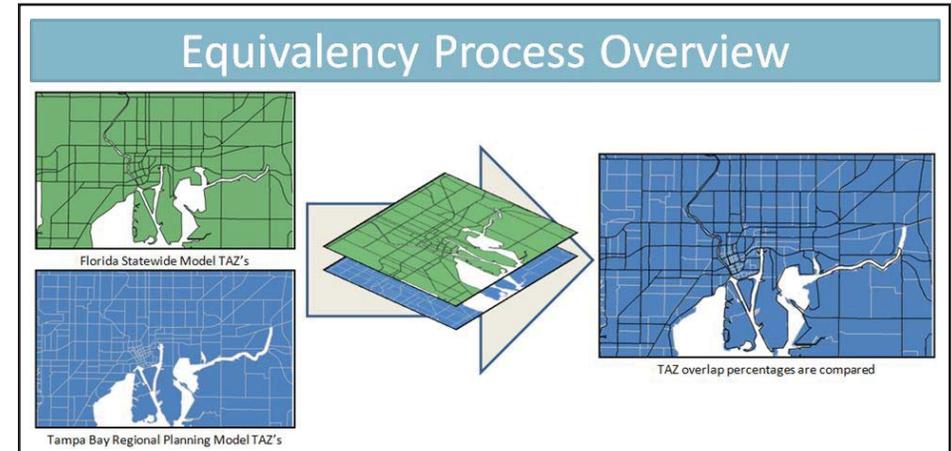
The final product resulted in 6,305 TAZs representing Florida, the United States, and neighboring countries and is able to be conflated with the upcoming NHTS survey result data from the Federal Highway Administration.

The FSUTMS format for socioeconomic data was selected as the standardized zonal data format due to its prevalence within the state. Socioeconomic data standardization from MPOs, rural areas, and areas external to the state required an approach incorporating data from numerous sources and formats. An example of this challenge is the Tampa Bay Regional Planning Model (TBRPM), Treasure Coast Regional Planning Model (TCRPM) and the South East Regional Planning Model (SERPM), each of which is a lifestyle planning model, but with many dissimilarities between their inputs. The sources of socioeconomic data included:

- TAZ-oriented models from Metropolitan Planning Organizations
- Lifestyle socioeconomic data
- Census Block Group data for rural areas
- InfoUSA employment data for rural areas
- Woods and Poole data supplementing county-level information and providing future-year forecasts

With networks standardized into the FSUTMS socioeconomic format, the next step involved transferring the socioeconomic data from varying network GIS sources through the use of equivalency tables, including MPO and Census TAZs, to the FLSWM TAZ layers. The sources were conflated in ArcGIS by overlaying each of the TAZ layers. Centroids were created

from the FLSWM TAZs and then used to identify which TAZ from the other conflated layers contained this TAZ. With the TAZs identified within the FLSWM TAZ, the next step was to appropriate the amount of overlap that a FLSWM TAZ had for a conflated TAZ layer. The percentage of TAZ within the FLSWM TAZ determined the amount of conflated TAZ data to use.



### Validation Efforts

The FLSWM is currently in the validation phase of the project in an effort to demonstrate that the networks are appropriately representative of the highway system and are sufficiently robust to be used for the kinds of evaluations desired from the model. Having developed the model from a GIS network and database, the comparison of data from GIS, empirical, districts, local MPO, and other databases has provided a plethora of validation statistics due to the ability to tie these sources directly to network links.

For further information on the Florida Statewide Model, contact Vladimir Majano at [vladimir.majano@dot.state.fl.us](mailto:vladimir.majano@dot.state.fl.us).

### **The Panhandle Transportation Applications and FSUTMS Users' Group**

Resides in the Panhandle of Northwest Florida. Sixteen counties are represented, including four MPO/TPO urban areas and two planning councils. Meetings, when scheduled, are usually held on the same day as the quarterly MPO meetings and are held at the Washington County Public Library, 1444 Jackson Avenue (U.S. Hwy. 90), Chipley, FL from 1:30 p.m. to 3:00 p.m. A notice will be sent to members prior to users' group meetings. For additional information, please contact Linda Little by email: [linda.little@dot.state.fl.us](mailto:linda.little@dot.state.fl.us). No meetings are scheduled at this time.

### **The Northeast Florida Transportation Applications Forum**

Jointly organized by the FDOT, District 2 Planning Office and the First Coast Metropolitan Planning Organization. The meetings are held at the First Coast MPO facility on 1022 Prudential Drive in downtown Jacksonville. The meetings are open to the public and private sector. Professionals are encouraged to either bring their own lunch or order pizza by the slice. For additional information concerning the Forum, please contact Milton Locklear by email: [milton.locklear@dot.state.fl.us](mailto:milton.locklear@dot.state.fl.us). Scheduled meeting dates:

Thursday, September 24, 2009

### **The Southwest Florida Users' Group**

Meets at the Charlotte County-Punta Gorda MPO, 1105 Taylor Road, Suite G, Punta Gorda. For additional information, please contact Jim Baxter at (863) 519-2562. No meetings are scheduled at this time.

### **The Tampa Bay Applications Group (TBAG)**

A transportation planning users' group which meets quarterly to hear speakers address technical issues on travel demand modeling and project applications. Previous meeting topics, newsletters and presentations are available on the [www.tbrta.com](http://www.tbrta.com) website under TBAG Archives. The meetings are brown bag and are held at the Florida Department of Transportation, District 7 Office, 11201 N. McKinley Drive, Tampa, Florida, 33612 from 12:00 p.m. to 2:00 p.m.

The meetings are free and open to all transportation planning professionals. If you are interested in receiving meeting notices, the TBAG newsletter and other users' group information, please contact Danny Lamb by email: [daniel.lamb@dot.state.fl.us](mailto:daniel.lamb@dot.state.fl.us). Scheduled meeting dates:

August 20, 2009  
October 29, 2009  
December 3, 2009

### **Southeast Florida FSUTMS Users' Group**

Promotes understanding and proper application of FSUTMS to the solution of transportation planning and engineering problems. The goal of the group is to enhance the accuracy and reliability of local travel demand models. Membership shall be granted any time during the year to interested individuals involved in FSUTMS applications. General membership meetings will be held quarterly. Special meetings may be held at such other times as considered necessary by the members. Meetings are tentatively scheduled to be held at the FDOT-D4 Headquarter first floor Auditorium from 9:30 AM to noon. For additional information, please contact Derek Miura at FDOT District 4 at (954) 777-4653. Scheduled meeting dates:

Friday, August 7, 2009  
Friday, November 6, 2009

### **The Central Florida Transportation Planning Group**

Meets quarterly to provide presentations on travel demand modeling, transportation planning, and growth management topics. The meetings are brown bag and all are welcome. The meetings are held at the FDOT, District 5 Urban Office, Lake Apopka Conference Room, 133 South Semoran Boulevard, Orlando, Florida 32807 from 12:00 p.m. 2:00 p.m. For additional information, please contact Betty McKee by email: [betty.mckee@dot.state.fl.us](mailto:betty.mckee@dot.state.fl.us).

August 24, 2009  
November 19, 2009

# Users' Groups

# Introducing the FDOT Systems Planning Office Modeling Section



Systems Planning Office Manager  
**Ed Hutchinson**



Systems Traffic Models Section Manager  
**Vidya Mysore**



Training, Outreach,  
Model Task Force Support,  
Growth Management  
**Terry Corkery**



Air Quality, GIS  
**Diana Fields**



Model Advancement,  
Transit, Statewide Model  
**Vladimir Majano**



Data Collection,  
Programming, GIS  
**Frank Tabatabaee**

# Meet the Staff