

# OREGON MODELING STEERING COMMITTEE 2005 ANNUAL REPORT

This report summarizes the activities completed in calendar year 2005 to accomplish the mission of the Oregon Modeling Steering Committee (OMSC). It summarizes progress on the five-year Strategic Implementation Plan completed in June 2002. These documents are available on the ODOT website at <http://www.odot.state.or.us/tddtpau/modeling.html>

## **MISSION STATEMENT**

The OMSC updated its mission statement in 2005. It is the mission of the Oregon Modeling Steering Committee to:

- Improve the state-of-the-practice and promote state-of-the-art land use and transportation modeling in the state of Oregon.
- Serve as a consensus forum and support group to coordinate the land use-transportation modeling efforts of federal, state, regional and local agencies.

It also updated specific goals and objectives that guide the OMSC in meeting its mission. The OMSC approved the following goals in 2005:

*Goal 1: Support to Decision-makers* – Provide technical information and analyses to support informed decision-making.

*Goal 2: Communication and Coordination* – Provide a forum for exchange of ideas and to encourage use of and share current and future technology

*Goal 3: Technical Excellence* – Support research, development and application of models at the local, regional and statewide level, to improve and expand capabilities, integration and use of transportation models statewide.

*Goal 4: Education and Training* – Proactively promote and educate modelers on the capabilities of transportation modeling as an analytical tool to support decision-making, through coursework, training, symposiums and case studies. Inform policy-makers of analysis as an objective technical support for decision-making.

*Goal 5: Peer Coordination and Support* – Serve as a technical and professional support group to members, agencies, local governments, consultants and others to further transportation modeling knowledge and expertise, and to maximize resources.

## **MEMBERSHIP**

The OMSC is composed of technical and policy representatives of the following organizations. For 2005, the following representatives were members of the OMSC:

- OR Department of Administrative Services-Office of Economic Analysis (OEA) - Dae Baek/Tom Potiowsky
- OR Department of Economic and Community Development (OECD) – John Gorlorwulu/Michael Burton

- OR Department of Environmental Quality (ODEQ) - Dave Nordberg/Annette Liebe
- OR Department of Housing and Community Development (OHCD) - Richard Bjelland/David Foster
- OR Department of Land Use and Conservation (DLCD) - Bob Cortright
- OR Department of Transportation (ODOT) - Bill Upton/Jerri Bohard
- OR Governor's Economic Revitalization Team (GERT) - Gabrielle Schiffer
- Metro – Jennifer John/Dick Walker
- Mid-Willamette Valley Council of Governments (MWVCOG) - Mike Jaffe/Richard Schmid
- Lane Council of Governments (LCOG) - Bud Reiff/Tom Schwetz
- Rogue Valley Council of Governments (RVCOG) - Craig Anderson-Matt Hermen/Dan Moore
- Corvallis Area Metropolitan Planning Organization (CAMPO) – Carl Switzer/Ali Bonakdar
- Bend Area Metropolitan Planning Organization (BAMPO) – Tyler Deke
- Southwest Washington Regional Transportation Council (RTC) - Shinwon Kim/Dean Lookingbill
- Port of Portland (POP) – Scott Drumm/Susie Lahsene
- Federal Highway Administration (FHWA) – Satvinder Sandhu/Jon Young
- Portland State University (PSU) – Robert Bertini/James Strathman

Tyler Deke and the Bend Area MPO joined the OMSC in 2005. Satvinder Sandhu and Jon Young replaced Kim Hoovestol and Fred Patron for FHWA. Carl Switzer joined the CAMPO and became the technical member of the OMSC. Matt Hermen replaced Craig Anderson at RVCOG.

## **ORGANIZATION**

The OMSC completes its work through standing and special topic subcommittees and through broad discussions at quarterly meetings of the full committee (see graphic at end of report). The OMSC met four times in 2005 – March 9, June 15, September 21, and December 14.

## **OMSC STANDING COMMITTEE ACCOMPLISHMENTS**

Following are the accomplishments of the three standing subcommittees.

### **Long-range Strategy – Dick Walker/Chair, Richard Bjelland/Vice-chair**

**Purpose:** Responsible for annual work planning, strategic activities and OMSC membership.

### ***Annual Report and Work Planning***

- The OMSC prepared an annual report of 2004 accomplishments to document implementation of the annual work program.
- The draft work program prepared for FY 2005 identified the need to revisit the mission, goals and objectives of the OMSC. Over the years, the focus of the OMSC

has transitioned from research and development to applications and implementation. Although the statewide model is an important part of the Oregon modeling program, data sources and other models are also of importance, including housing, economic, transport and land use. Earlier modeling efforts were to build models. Now that statewide, MPO and local models are being widely used, the emphasis is on use of models and analysis as tools for decision-makers and policy-makers. This transition is a logical progression on a continuum that begins with research and development and moves into using the tools and processes developed for the intended purposes. This loop process feeds back information learned from implementation into model improvements and further development.

### ***Strategic Activities***

- The OMSC members discussed the role of the organization at several meetings and approved a revised mission statement, goals and objectives.
- The OMSC updated its operations procedures, originally adopted in 1998.

### ***Membership***

- Bend Area MPO joined the OMSC in 2005.
- New members received background materials and information.

### **Technical Services - Bill Upton/ODOT**

***Purpose:*** Address technical model development, education, training and quality control.

### ***Model Development and Analysis***

- Metro went through an extensive evaluation process to select VISUM to replace EMME-2 as its transportation software. ODOT purchased VISUM to complement and replace EMME-2.
- ODOT began using the Oregon Small Urban Model (OSUM) and the JEMnR (Joint estimation model in R code) around the state. Corvallis and Bend base models were completed and a Medford model is underway.
- Metroscope is a Metro population-employment application tool that incorporates land values, pricing, and accessibility from the transport model. It brings these elements together to look at population allocations. The current process was not efficient and Metro hired a consultant to help simplify the transport model. The simplified transport model and Metroscope are linked by an interface in R code. The product is open source and available to anyone interested.
- Generation 1 (OR1) of the statewide model was used to develop and evaluate a reference case and alternatives scenarios for the Oregon Transportation Plan (OTP).
- Metro is a project partner with FHWA for TRANSIMS and Portland was selected as a test site because of its size and mix of transportation, and because staff and tools are available to do the work. The TRANSIMS project is funded by FHWA and is pushing the envelope in the way that travel demand modeling is done. Typically, modeling focuses on zone totals but TRANSIMS goes to the individual level. It involves microsimulation on a regional scale. Regular project updates were provided to OMSC members.
- The TLUMIP Peer Panel met to review progress on the program.

### ***Agency/Jurisdiction Coordination***

- Metro, ODOT and the modeling team staff met to discuss the upcoming Metro effort to consider future growth of the Portland Metro region, following Metro 2040. The purpose of the meeting was to inform Metro and ODOT staff of capabilities and look at opportunities to support Metro in its upcoming project.

### ***Research/Data Collection***

- The Port of Portland, in collaboration with Metro and ODOT, initiated a freight data collection project in 2005. POP, RTC, Multnomah County, ODOT and WSDOT collected commodity flow information. Origin-destination data for truck trips was collected through the Oregon State University TRANSNOW grant. The project will continue into 2006.
- Metro and the POP began discussions on updating the airport passenger model. Before the Airport MAX was completed, a stated preference survey was conducted to estimate the probability of a person choosing a mode that did not exist at the time. With MAX operating to the airport today, it is timely to see what data is being collected and available and see how this information is or can be used in modeling.

### ***Outreach and Information***

- ODOT, Metro and consultant staff gave presentations at the Transportation Research Board (TRB) annual meeting in January. Presentations recognized the OMSC and the effectiveness of this group for coordination and collaboration
- The OMSC co-sponsored the 10<sup>th</sup> TRB Planning Applications Conference in Portland in April. Metro and ODOT organized a local steering committee for the conference. There were 335 paid registrations with 36 states and 8 countries represented. A DVD is being prepared to include all presentations, papers, and information from previous conferences.
- The 4th Oregon Modeling Symposium was held in November. The Symposium was sponsored by ODOT, Metro and the OMSC. There were 90 registrations, representing 13 states and 7 countries. Presentations are available at [http://www.oregon.gov/ODOT/TD/TP/Modeling.shtml#4th\\_Oregon\\_Symposium](http://www.oregon.gov/ODOT/TD/TP/Modeling.shtml#4th_Oregon_Symposium). There was discussion that this would be the last Symposium but the strong positive response from attendees will give consideration to continue the bi-annual symposium. Discussion will begin to host the next Symposium through the Transportation Center at Portland State University (PSU).
- The Oregon Modeling Improvement Program (OMIP) brochure was updated to include the new OR MPOs.

### **Applications - Bud Reiff/LCOG, Chair**

***Purpose:*** Address the environment and criteria under which models are applied, i.e., regulatory requirements and general application. Focal point for peer review.

### ***Policy Applications***

LCOG, TPAU and the ODOT Research Unit, under the oversight of this subcommittee, conducted a multi-year Transportation Plan Performance Measures research project. This

research addressed the concern, especially among MPOs, that Transportation System Plans and other state planning documents have broad policy statements but many of those policies do not have adequate measures to evaluate their performance. Six performance measures are identified that can be applied in transportation models, including the JEMnR joint urban model. These fall under the four general categories of: 1) mobility measures which extend the well-known Texas Transportation Institute annual mobility measures into the future planning realm, 2) broader and more meaningful accessibility measures, 3) more effective measures of availability and attractiveness of non-auto modes, and 4) a measure of highway system balance. A copy of the report is available from the ODOT Research Unit at [http://www.oregon.gov/ODOT/TD/TP\\_RES/ReportsbyYear.shtml](http://www.oregon.gov/ODOT/TD/TP_RES/ReportsbyYear.shtml).

### **AD HOC SUBCOMMITTEE ACCOMPLISHMENTS**

Ad Hoc subcommittees are chaired by an OMSC member but usually include broader membership than the OMSC. They are formed to address specific and complex issues, where personnel or expertise beyond the OMSC is desirable. Ad Hoc Subcommittees in 2004 included:

#### **Modeling Program Coordination Subcommittee, Mike Jaffe/MWVCOG, Chair**

The MPC subcommittee coordinates the modeling elements of the ODOT and MPO work programs. The subcommittee provides a forum for MPOs and ODOT to discuss issues of common concern. Activities in 2005 included:

- ODOT and MPOs regularly shared information on modeling projects and issues.
- MPC provided a forum for discussion on how the MPOs can assist ODOT in development of the OTP performance measures and data collection. ODOT OTP staff held two meetings to explore this collaborative opportunity.
- The MPC provided a forum for the MPOs and ODOT to talk about the move to VISUM software. Salem, Metro and ODOT have licenses and other MPOs are interested. The MPC shared current thinking about how the transition to the new software will occur.
- Nick Fortey/FHWA talked about adding safety into the transportation planning process. This topic will be flagged for possible future research projects.
- There was general discussion on the need for a common truck model and making this a future work item for the MPC.
- Consultants for the statewide model presented information on how the Transitional Model is being developed and how local networks fit into the statewide network. How the statewide model and MPO models will work together in the short-term and the long-term and how they can keep pace with each other were discussed.
- MWVCOG, LCOG and Metro prepared a draft discussion paper on the MPO perspective on MPO/statewide model interface issues and opportunities. The paper addresses goals and objectives for using statewide and MPO models and provides a starting point for setting longer-term goals for when to use the MPO or the statewide model or both.

**Continuous Survey for Modeling in Oregon (COSMO) Subcommittee – Bill Upton/ODOT, Dick Walker/Metro, Co-Chairs**

COSMO is the result of the expert panel meetings held two years ago to evaluate use of a longitudinal panel survey. The decision resulting from the expert panel discussion was to develop a continuous cross-sectional survey with a longitudinal panel survey component. COSMO is the acronym selected for this phase of the survey program.

A consultant team was engaged to conduct a pilot survey project in the Portland Metro area. The purpose of the pilot was to explore different techniques for collecting data and to make recommendations for conducting a statewide survey.

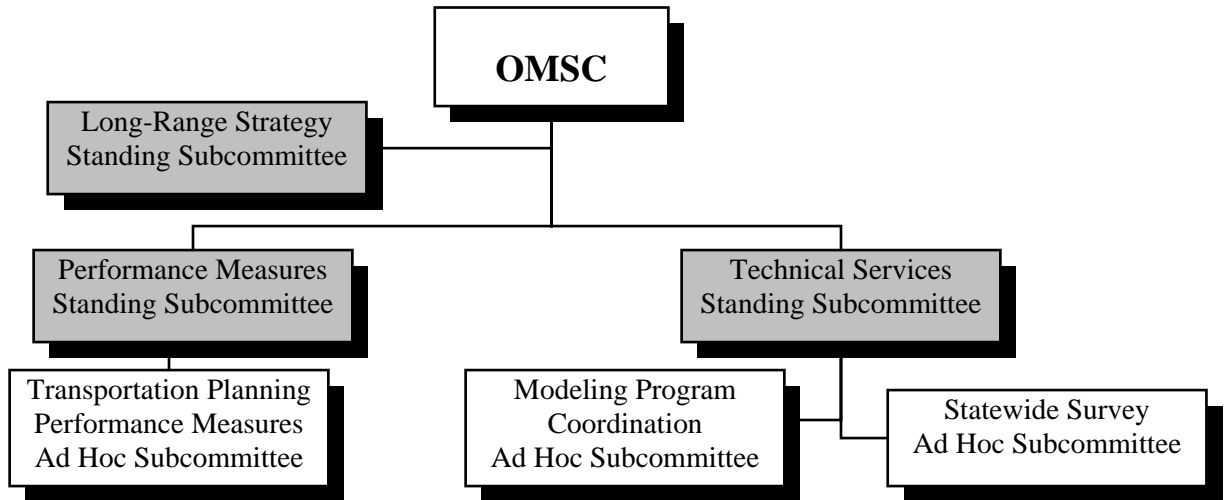
The subcommittee met to review the results of the pilot survey and to begin discussions on a work program, preparation of a Request for Proposals (RFP), and to establish a budget and schedule to conduct a statewide survey. It is intended to issue an RFP and to have the statewide survey underway before the end of 2006. It is expected that the survey will focus on the Portland Metro area and be conducted in phases throughout the remainder of the state.

**Other Activities**

- Regular updates were provided on the Oregon Transportation Plan update project and draft copies of the updated OTP were provided. Information on the OTP is available at <http://www.oregon.gov/ODOT/TD/TP/ortransplanupdate.shtml>.
- Bob Cortright gave a presentation on the update to the Transportation Planning Rule. The revised draft removes the vehicle miles traveled (VMT) requirement and does not require alternative mobility standards. It makes a case for developing performance measures. More information on the TPR update is available on the DLCD website at <http://www.oregon.gov/ODOT/TD/TP/TPR/shtml>.
- Scott Drumm and Brian Kidd/POP gave a presentation on the PDX Terminal Users Survey, on how people move to and from the airport.
- Richard Bjelland gave a presentation on the OHCS Housing and Land Needs Model, a model for determining housing needs and land needed for that housing to support the Oregon Land Use Planning Goal 10 - Housing. Previously, models were used to develop housing needs and these used certain assumptions. This model was developed to allow the user to look at the results based on different assumptions. Information is available for all OR communities and the Housing Needs Model can develop a preliminary housing needs report quickly. The Model uses Excel spreadsheets as templates to input data relevant to a community and for graphs for displaying model results. More information on the Housing Needs Model is available at [http://www.ohcs.oregon.gov/OHCD/PPR\\_HousingNeedsModel.shtml](http://www.ohcs.oregon.gov/OHCD/PPR_HousingNeedsModel.shtml).
- Rob Bertini gave a presentation on the National University Transportation Center (UTC) program and the PSU Center for Transportation Studies. For more information, see <http://www.cts.pdx.edu/partners.html>.
- A Citizens Primer on Oregon's Statewide Transportation Improvement Program (STIP), the funding and scheduling document for major road, highway and transit projects in Oregon, was reviewed with the OMSC. This brochure is a brief overview

of the STIP and how it is developed. It was prepared in English and Spanish. A detailed document is also available at [www.oregon.gov/ODOT/HWY/STIP](http://www.oregon.gov/ODOT/HWY/STIP).

- Metro and MWVCOG gave presentations on the Columbia River Crossing in the Portland/Vancouver area and on the Salem Bridge Crossing projects.



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