

OREGON MODELING STEERING COMMITTEE LONG-RANGE STRATEGY SUBCOMMITTEE 2002 ANNUAL REPORT

This report summarizes the activities and accomplishments completed in 2002 to accomplish the mission of the Oregon Modeling Steering Committee (OMSC).

MISSION STATEMENT

It is the mission of the Oregon Modeling Steering Committee to coordinate the land use and transportation modeling efforts of federal, state, regional and local agencies. It is the further mission to serve as a consensus forum and support group to improve the state-of-the-practice and promote state-of-the-art land use and transportation modeling in the state of Oregon. The Committee cooperates with the Transportation Modeling Users Group. Integration of land use and transportation is a major focus of the Committee.

MEMBERSHIP

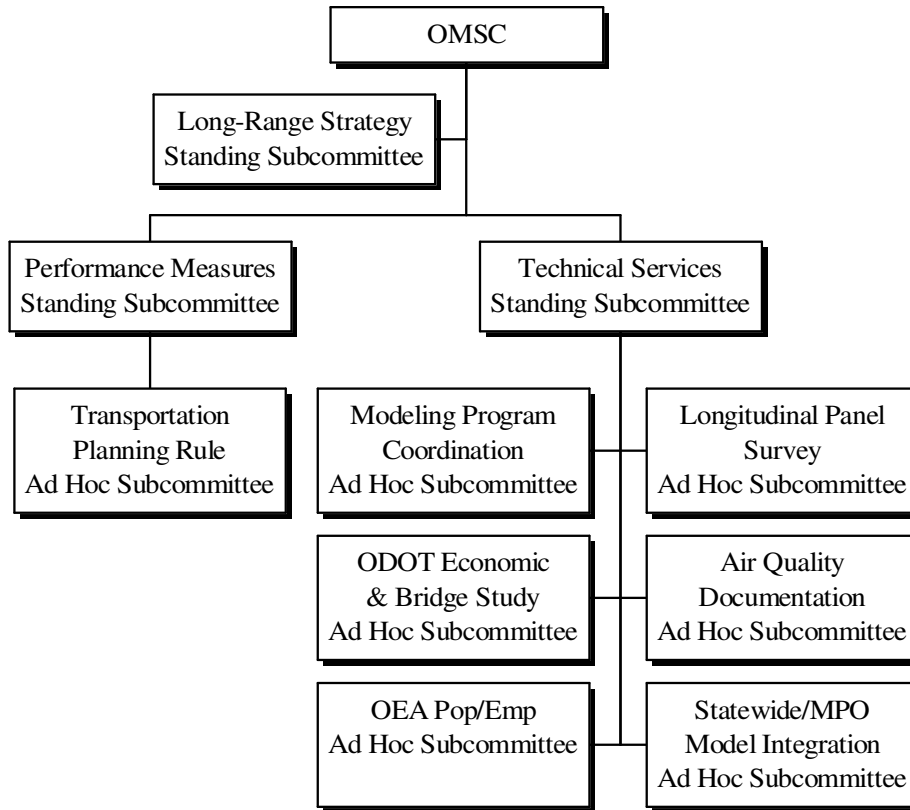
The Oregon Modeling Steering Committee (OMSC) is composed of technical and policy representatives of the following organizations. For 2002, the following representatives participated on the OMSC:

- Federal Highway Administration (FHWA) – Kim Hoovestol/Fred Patron
- Governor's Community Development Office (CDO) - Sam Johnston/Ed Gallagher
- OR Department of Administrative Services-Office of Economic Analysis (OEA) - Dae Baek/Tom Potiowsky
- OR Department of Economic and Community Development (OECDD) – David Kavanaugh/Michael Burton
- OR Department of Environmental Quality (ODEQ) - Dave Nordberg/Annette Liebe
- OR Department of Housing and Community Development (OHCDD) - Richard Bjelland/David Foster
- OR Department of Land Use and Conservation (DLCD) - Bob Cortright/Anna Russo
- OR Department of Transportation (ODOT) - Bill Upton/Jerri Bohard
- Metro - Dick Walker/Keith Lawton
- 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/Dan Moore
- Southwest Washington Regional Transportation Council (RTC) - Shinwon Kim/Dean Lookingbill

As newly designated MPOs, Bend and Corvallis will be invited to join the OMSC in 2003.

ORGANIZATION

The OMSC completes its work through standing and special topic subcommittees and through broad discussions at quarterly meetings of the full committee (see following graphic). The OMSC met four times in 2002 – March 20, June 19, September 18 and December 11.



OMSC STANDING COMMITTEE ACCOMPLISHMENTS

Following are the accomplishments of the three standing committees.

Long-range Strategy – Keith Lawton/Chair, Richard Bjelland/Vice-chair

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

Annual Work Planning

- The OMSC prepared its first annual work program that identified major efforts for the OMSC for FY 2002-2003 and identified special topic subcommittees needed to address specific topics. A copy of the plan is available on the ODOT website at <http://www.odot.state.or.us/tddtpau/modeling.html>

Strategic Activities

- OMSC has been working with Portland State University (PSU) to become an Oregon Transportation Center with recognition and initial funding provided under the federal transportation act TEA-21. OMSC provided a statement to PSU in support of the request for recognition and funding under TEA-21. Proposed elements include:
 - An on-going research and development program to continue model development.
 - A distance-based education program to train Oregon and regional planners and engineers in underlying concepts and practical applications of integrated models.
 - An environment to which Oregon can attract leading researchers and practitioners to work alongside existing staff, augmenting their capabilities and skills as well as providing opportunities for research and development.
 - A laboratory environment in which staff from various agencies bring together data, knowledge, and expertise to evaluate complex issues that transcend agency boundaries, such as growth management, economic competitiveness, sustainability and livability and infrastructure investments priorities.
 - Access to state-of-the-art distributed computing facilities.
- The 4th update of the Strategic Plan for the Oregon Modeling Improvement Program (OMIP) was submitted for OMSC review and comment.

Membership

- Background materials and information was provided to four new members in 2001-02
 - David Kavanaugh/OECDD, Kim Hoovestol/FHWA, Ed Gallagher/CDO and Sam Johnston/CDO.

Technical Services Subcommittee - Bill Upton/ODOT, Dick Walker/Metro, Co-chairs

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

Education and Training

- Mobile 6.2 was used for the National Air Toxins Assessment (NATA) conducted by Metro and DEQ. This assessment gave Metro an in-depth understanding of the new EPA model and will allow Metro to train other MPOs on the differences between Mobile 5 and 6.
- DEQ provided regular updates on the new EPA emissions model Mobile 6.
- Metro gave a presentation to ODOT and the MPOs on the valley external model improvements.
- Regular meetings were held of the Oregon Modeling Users Group.

Technical Documentation

- A draft Air Quality Conformity Modeling Format and Procedures document was prepared under contract with ODOT. There will be revisions to the draft report in 2003 and it can be reviewed at <http://www.odot.state.or.us/tddtpau/modeling.html>.
- A summary report was prepared for the FHWA to document the Oregon Modeling Improvement Program. Copies of this document were provided to the OMSC and are available on the ODOT website.

Model Development and Analysis

- The international Peer Review Panel met on June 13-14 to review the second generation of the statewide model.
- Richard Bjelland provided an overview to the OMSC of the Housing Needs Assessment Model prepared by OHCS. This model was developed at the request of DLCD as a tool for communities to help define urban growth boundaries.
- As part of a USDOT program, the Los Alamos National Laboratory (LANL) is developing a new paradigm known as TRANSIMS (TRANsportation SIMulationS). The LANL approach deals with microsimulations and models traffic as it occurs. Modeling techniques currently available look at relatively small areas. LANL is developing methods to do large simulations. The first demonstration of interim operating capability was in Dallas, Texas. Portland was selected as the second demonstration city because it has a variety of modes but is not too large. Keith Lawton provided regular reports on the status of the project
- Metro and ODOT funded data collection and Metro funded the analysis to develop enhanced delay functions to incorporate intersection delay into models. The project was started in 2001 and was completed in 2002.
- DEQ and Metro conducted a National Air Toxins Assessment (NATA), a risk-based assessment of what is harming people and what should be done about it. Motor vehicles are one of the largest components of air toxin emissions and Metro is predicting what types of toxins are being emitted, where, and at what time of day. This information will be combined with industry pollution to determine aggregate impacts. Criteria pollutants are defined by level of concentration of the pollutant. DEQ will define this information and it will be used to develop air toxin regulations that are consistent with the local area.

Agency/Jurisdiction Coordination

- ODOT and Metro developed an agreement as part of a pilot program to allow sharing of staff more easily, both to address workload issues and to share technical expertise. This program will be evaluated at the end of the 2002-2003 fiscal year.
- ODOT and OEA continue discussions on how the Oregon model can be used for comprehensive planning and to define how local and state agencies can work together to use the statewide model most effectively. OEA has been working on a calibration series to see how well the statewide model matches the 2000 Census data.

Research

- Three research proposals were submitted to ODOT on behalf of the OMSC:
 - Transportation Plan Performance Measures - Bud Reiff – *FUNDED for \$100,000 for two years*
 - Best Practices for Determining Air Quality Conformity - Craig Anderson
 - Investigation and Application of GPS as an Alternative Data Retrieval Method for Longitudinal Household Travel Surveys - Mike Jaffe
- The ODOT research group authorized funds to investigate collecting commodity flow information (GPS, surveys at freight facilities) and to develop pros/cons and cost of different collection options. This was coordinated with the Port of Portland.

- A white paper was prepared by Bud Reiff to evaluate variables that can be incorporated into models to make them more sensitive to the effects of urban design. The key finding of this research is that it takes a huge amount of density increase and connectivity to make a difference in mode choice.

Outreach and Information

- The 3rd Oregon Modeling Symposium was held on July 23-25 in Portland. Attendees represented 14 states and 8 countries.
- ODOT made a presentation on the Oregon modeling program in a Transportation Research Board (TRB) conference on economic development in Portland in 2002.
- Oregon was selected as the site for the TRB Planning Methods Conference in April 2005, to be sponsored by the OMSC.
- Bud Reiff and Brian Gregor participated in a panel entitled *The Land Use-Transportation Connection: The Oregon Experience* at the Oregon Planning Institute conference in October.
- Richard Bjelland provided several updates on the 2000 Census and emerging demographic trends in Oregon and the country.
- Two sessions were held on the Oregon modeling program/TLUMIP at the annual TRB conference in January.
- Keith Lawton participated on a TRANSIMS panel at the annual TRB meeting.

Performance Measures Subcommittee - 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

- Presentations on the OMIP at the Symposium focused on changing how decisions are made, from a linear to an iterative and more comprehensive decision-making process. This discussion will continue as the modeling program transitions from technical development to implementation.
- The Transportation Plan Performance Measures research will be conducted under the oversight of this subcommittee. This research is intended to address the concern, especially among MPOs, that Transportation System Plans and other state planning documents have broad policy statements but no good mechanism for evaluating performance against these policies. Examples include reduction of vehicle miles traveled, safety, economic vitality, and economic justice. This research will develop measures and test them on MPO areas. A Technical Advisory Committee is providing guidance for the research and an expert panel may be convened.

Technical Model Applications

- At the request of the City of Wilsonville, an OMSC subcommittee composed of all MPOs was formed to conduct a peer review of the City model. A memorandum was prepared that outlined technical concerns with the model and provided options to resolve the issues.

AD HOC SUBCOMMITTEE ACCOMPLISHMENTS

For issues that require additional personnel or expertise beyond the OMSC, or to address specific and complex issues, Ad Hoc subcommittees were formed to implement activities of OMSC Standing Subcommittees. Ad Hoc Subcommittees in 2002 included:

Modeling Program Coordination Subcommittee, Dick Walker/Metro, Chair

This subcommittee coordinates the modeling elements of the ODOT and MPO Unified Planning Work Programs. The subcommittee met in early 2002 to review the list of modeling-related projects identified for FY 2002-2003 and to assess progress or changes for identified tasks. The subcommittee generally provides a forum for MPOs to discuss issues of common concern.

Longitudinal Panel Survey - Keith Lawton/Metro, Chair

An expert panel was convened on May 29-31, 2002 to discuss the pros and cons of a longitudinal panel survey. Instead of conducting behavioral surveys every five or so years, the longitudinal survey allows a look at changes in behavior and tracks the same household annually over time. A white paper on survey options was prepared as background for the panel. The subcommittee will make a recommendation to the OMSC in 2003 with possible funding available in FY 2003-2004.

ODOT Economic and Bridge Options Study, Bill Upton/ODOT, Chair.

This subcommittee includes representatives of FHWA, OECD, OHCS, ECONorthwest, ODOT Motor Carrier Division and ODOT modeling/planning/policy staff. Cracks have been found in many Oregon bridges and will require detours or weight restrictions until they are repaired. The ODOT Transportation Planning Analysis Unit (TPAU) used the statewide model to identify impacts on truckers, communities affected by detours and the traveling public and to provide information for the Oregon Transportation Commission and the Legislature to use for setting improvement priorities. The Oregon bridge problem was a significant application of the statewide model and provided a high profile for the application and benefits of the Oregon modeling program. The subcommittee reviewed and advised on assumptions used for modeling the economic and transportation impacts of different bridge improvement investment packages. The subcommittee also reviewed the reasonableness of model results.

Statewide and MPO Model Integration – Bill Upton/ODOT, Chair

Several conversations were held to discuss how the statewide model and local models could be reconciled. This is a major topic of the modeling workshop scheduled for 2003.

Activities for the following Ad Hoc Subcommittees are reported under the Technical Services Standing Subcommittee report:

Air Quality Conformity Procedure & Model Documentation – Bill Upton/ODOT, Chair

Integration of OEA Population/Employment Projections with Statewide Model – Bill Upton/ODOT, Chair