

**OREGON MODELING STEERING COMMITTEE**  
**ODOT Human Resource Center, 2775 19th Street SE, Salem, OR**  
**Wednesday, April 16, 2008**  
**1:00 p.m.-4:00 p.m.**

**MINUTES**

**ATTENDANCE**

**Members**

Dave Nordberg, Vice-chair	OR Department of Environmental Quality
Brian Dunn	OR Department of Transportation
Bill Holstrum	OR Department of Land Conservation & Dev
Satvinder Sandhu	Federal Highway Administration
Shinwon Kim	Regional Transportation Council
Dick Walker	Portland Metro
Bud Reiff	Lane Council of Governments
Susan Payne	Lane Council of Governments
Ray Jackson	Mid-Willamette Valley Council of Governments
Matt Hermen	Rogue Valley Council of Governments
Tyler Deke	Bend Area Council of Governments
John Gliebe	Oregon Transportation Research and Education Consortium/Portland State University

**Others**

Sonny Condor	Portland Metro
Aaron Breakstone	Portland Metro
Brian Gregor	OR Department of Transportation
Marianne Fitzgerald	OR Department of Environmental Quality
Michal Wert	MW Consulting

**INTRODUCTIONS** – Self-introductions.

**FY 2007-08 OMSC ANNUAL REPORT**

Michal reviewed the highlights of the OMSC activities for FY 2007-2008. A copy of the annual report is available at <http://www.oregon.gov/ODOT/TD/TPAU/OMSC.shtml>.

**FY 2008-09 OMSC WORK PROGRAM**

Michal stated that the OMSC work program was reformatted to cover the fiscal year instead of a calendar year to be more useful for work planning for OMSC members. It includes a few specific items of focus as well as purpose and responsibilities to provide guidance for the OMSC and its subcommittees. The work program was recommended to

the full OMSC by the Long-Range Strategy Subcommittee. A copy of the work program is available at <http://www.oregon.gov/ODOT/TD/TPAU/OMSC.shtml>.

## **SUBCOMMITTEE REPORTS**

### **Long-Range Strategy Subcommittee**

Michal stated that the Subcommittee met to review the April 16 agenda. Most of the items discussed are covered under other topics. There was considerable discussion on greenhouse gas (GHG) issues and it is expected that this will be a focus of the OMSC over the next year.

### **Professional Development Subcommittee – Ray Jackson, Chair**

Ray stated that about 20 people attended the March meeting of the OR Modeling Users Group (OMUG). The OMUG is drawing a good mix of public and private modelers from around the state. Three major discussion topics at the meeting included:

- Reevaluating JEM-c-R code and utilities (Alex Bettinardi/ODOT)
- LUSDR model in the Rogue Valley MPO area (Brian Gregor/ODOT)
- Dynamic tour based model for Portland Metro – (John Gliebe/PSU).

Presentations and previous meeting information is available on the ODOT website at <http://www.oregon.gov/ODOT/TD/TPAU/OMUG.shtml>. A topic of interest is training on the new EPA air quality modeling system **MO**tor **V**ehicle **E**mission **S**imulator (MOVES). The MOVES program is available for downloading and there will be a training program by EPA at its June 2 conference in Portland. After the draft release of MOVES in September, OMUG may try to schedule a one-day training event.

Dave suggested that Jeff Houk/FHWA be contacted for MOVES training. FHWA has done more training in emissions factors models than EPA and Jeff is a good presenter. There may be two levels of training – a higher level overview of MOVES and how it works, and a more detailed training session on how to use it. Different level people in each agency will need different training.

The OMUG meeting scheduled for June was cancelled because of the number of conferences occurring in Portland. The next meeting will be held September 11.

### **Applications Subcommittee – Bud Reiff, Chair**

Bud handed out a list of research projects of interest to the OMSC. A copy is attached to these minutes. The handout is a first cut of current model-related research in OR and information was taken from websites of OTREC and the ODOT Research Unit. Many of these projects are coordinated between OTREC and ODOT Research and several are joint projects. This list will be maintained by the Application Subcommittee and regularly updated.

OTREC received 50 proposals for 2008-09 and they will be reviewed in the next few weeks. The ODOT Research Unit is evaluating Stage II of several projects. Metro Council is considering expanding the work of Jennifer Dill on encouraging bicycle use.

The Spokane WA MPO is trying to organize a course on dynamic traffic assignment models in August. They are soliciting interest from other MPOs to participate and reduce costs. Bud will monitor this opportunity and share information as it becomes available.

### **Modeling Program Coordination (MPC) – Dick Walker, Chair**

Dick stated that the MPC meets the morning before the OMSC. The morning discussion focused on greenhouse gas (GHG) issues from a technical perspective and started dialog on defining the issues and the analysis tools that are available to address these issues. An important question is the role of the OMSC in the GHG discussion.

The issue of GHG is getting a lot of attention in OR and the Governor has directed several committees to define actions to reduce GHG. There are two major components:

- Inventory – What are the sources that contribute to GHG emissions? What is the most efficient way to do an inventory?
- Reporting - Who reports and what is reported?

There are many things that can influence GHG, including size and profile of fleets, fuel type and efficiency, and land use allocation. It is important to inventory the current situation but forecasting will be more difficult. What type of returns on investment can be achieved from regulations and other policy activities?

GHG emissions measurement and analysis offers a challenge to OR models. The relationship of people and stimuli is not clear. For example, the reaction of travelers to the increasing price of gas may initially be to increase transit use or reduce trips. Some people do not have options and will change spending habits to accommodate travel, transferring discretionary income from other uses to pay for transportation. Some people are not reducing travel but are purchasing new vehicles that are more efficient. Households with several cars may not reduce driving but instead focus on the more efficient vehicle. All these issues and their economic effects make modeling a challenge. Modeling tools are good for measuring tendencies, alternatives and how they compare, and relative impacts of different policies. Caution was advised for requests to measure absolutes.

An important question is the role of OMSC in the GHG discussion. How does the OMSC bridge the gap between policy and modelers? OMSC is a good collaboration forum and can serve as conduit for the flow of information. It can help policy makers understand the influence of a variety of factors and consider trade-offs. There is also a need to dispel misinformation – VMT does not equal GHG does not equal energy use.

There has been a lot of work done on GHG. One thought is to designate a person or a group of people to serve as a clearinghouse for GHG. OTREC is one possibility. MPO and ODOT staff is very busy and it would be a burden to get heavily engaged in GHG without reassigning existing work. If done through an OTREC process, a person with good research credentials, who knows what is being done nationally and understands the OR modeling and analysis program, could be very effective. Depending on what type of

technical support is required and how it is done, the question of how this work will be funded must be addressed.

Another consideration is that results of the models could lead to specific regulation. Typically models are used for comparative analyses but they are being looked at for direct regulation and this needs to be discussed.

Metro staff is working through an early version of MOVES and they shared the general architecture of MOVES with the MPC. Metro's work program includes learning and applying MOVES for different policy questions, such as what can be done with urban form to reduce GHG. Some policy issues will be easier to test than others, i.e., fuel efficiency changes vs. land use allocation and urban form. Brian Dunn noted that Metro will not be setting policy through their efforts but will be testing different policies. There are several committees working on GHG and the OMSC needs to clarify what OR analysis tools are and what they can and cannot do.

Tyler noted that a DEQ committee on transportation will begin working this summer to address GHG. They have agreed to have an MPO member participate and he suggested that OMSC should also be at the table.

Dave noted that DEQ has done emissions inventories for many years and has an established base line. Current rule-making addresses industrial source (factories, smoke stacks, etc.) emissions reporting and will build an inventory. Inventorying transportation issues will be more difficult. Fuel data may be a good source for GHG but future projections is more difficult. The Climate Registry (<http://www.theclimateregistry.org>) is a nonprofit organization that is looking to establish a national protocol for inventorying GHG emissions.

Susan noted that the Climate Registry is establishing protocol on how to submit information and where measurements are made but it does not define how to develop the numbers that are included in the data base. If VMT is provided, there is not a protocol on how to estimate VMT. Eugene worked with the International Council of Local Environmental Initiatives (ICLEI - <http://www.iclei.org/index>) and used VMT to provide an order-of-magnitude indication of what the transportation sector is doing. It is important to know what is measured to define VMT and to clarify that VMT is an estimated value.

Bill stated that DLCD is advocating compact and bikeable communities to help address GHG by allowing less reliance on the auto. The OR Department of Energy (ODOE) gave a presentation on peak oil, which also ties in with climate change. The issue is not a shortage of oil but the difficulty and expense of extracting less readily available resources.

Michal noted that modelers were asked challenging questions ten years ago about land use-transport connections and rose to the challenge with a variety of sophisticated land

use-transport-economic models. It is good to ask these difficult questions to challenge modelers and it is a good role for modelers to help define and frame the questions.

Bud stated that a role for OTREC may be as a location for researchers who are interested in GHG and who can articulate to policy-makers and the public what technical tools and opportunities are available to better understand the issue. It is important for the OMSC to take a lead role in this discussion. When the TPR was adopted, it was difficult to model the required information. However, if DLCD had been provided with early feedback on what the required VMT reduction translated to in policy terms, a more effective measure may have developed.

John stated that he prepared a proposal to develop a GHG emissions calculation tool at the request of the ODOT Director's office. A literature review was conducted and there are several models available that calculate emissions in different ways. The problem statement was not put forward, but in the process of preparing it, OTREC compiled a lot of information. John talked with colleagues who specialize in energy modeling, spatial and environmental modeling and talked about whether to include construction and maintenance activities in the calculations. No models do emissions modeling of transit or power-electric. They started thinking about life cycles and production processes and how they fit into modeling efforts. It is very complicated. There will be a role for the OMSC to play but it needs to be done as a concerted effort with others outside the transportation community. They can provide valuable lessons and there needs to be a sharing of resources and ideas. OMSC cannot do everything itself and its role needs to be clearly defined. A researcher at Princeton argues that the desired GHG emission levels will not be achieved with one or two policies but that there will be lots of policies required to fully address the problem. An organization like OTREC could be an information clearinghouse and it should be multi-disciplinary and should involve all the universities.

Dick suggested that the OMSC needs to be closer to the conversation to understand the issues, what will be asked of the modeling community and how to formulate responses to the anticipated questions.

## **PROGRAM UPDATES**

### **OR Household Activity Survey (OHAS)**

Dick stated that a statewide household survey is being conducted to update information from the 1994-95 survey. The OMSC OHAS Ad Hoc Subcommittee met with the consultant to develop core survey questions for a pilot that will be conducted this summer. When the pilot survey is completed, it will be evaluated and modified as necessary. The plan is to conduct the first survey in ODOT Region 2 this fall, in Salem and Eugene-Springfield in 2009, the Portland area in fall 2010, and RVCOG in 2011. Other areas of the state will fit into this schedule. For the Portland area, the funding partners are Metro, ODOT Region 1 and Tri-Met. RTC will be responsible for a survey for Clark County.

Satvinder suggested that the OHAS project include elements that will support GHG emission analysis.

## **2008 CONFERENCES**

### **June 2-5 – 17<sup>th</sup> International Emissions Inventory Conference, Portland**

Dave stated that MOVES training will be conducted during the EPA conference in Portland on June 2. Class is full with a waiting list. Registration and program information is available at <http://www.epa.gov/ttn/chief/conference/ei17/index.html>

Dave asked Jeff Houk/FHWA if he will talk with those interested about MOVES while he is here for the conference. He will reserve a room at Metro and notify those who may want to meet with Jeff. Susan stated that Jeff has a good presentation on *Energy and Greenhouse Gas Analysis at the Planning Level*. She will send a copy of this presentation to Michal to forward to OMSC members.

### **June 19-20, 5th OR Symposium on Integrated Land Use-Transport Models, Portland**

John stated that Day 1 of the symposium will address GHG-related issues. The keynote speaker is Angus Duncan, Chair of the OR Global Warming Commission. An update on OR models will also be presented, including the Statewide Integrated Model (SWIM) and the Land use Scenario Developer model (LUSDR). Day 2 will focus on regional economic models. Registration and program information is available at <http://www.tlumip.org/>

### **June 22-24, TRB Innovations in Transportation Modeling (ITM), Portland**

John stated that the TRB conference will include tracks focusing on activity-based models, linking demand and dynamic network models, communicating forecasts, policy and pricing analyses, and freight modeling. Registration and program information is available at <http://www.trb-forecasting.org/innovationsConference2008.html>

### **September 17-19, Transport Planning for Small to Medium Cities, Portland**

Bud stated that the OR contact for this conference is Tom Schwetz. This national conference will provide practical information for transportation professionals in small (under 50,000) and medium sized (50,000 to 250,000) communities and will include several sessions on modeling. Registration and program information is available at <http://www.trbtoolsofthetrade.org/conference.html>

## **CLIMATE CHANGE/GREENHOUSE GAS EMISSIONS ISSUES**

Marianne Fitzgerald, DEQ Air Quality Division gave an overview of Oregon's actions to address GHG emissions from transportation.

- OR Department of Energy (ODOE) has had the lead on climate change for the past several years and its website has good information on global warming. The OR

Climate Change Portal includes a listserv and links to several resources (<http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>).

- House Bill 3543 includes a number of actions to reduce global warming emissions, including establishing a Global Warming Commission. The Commission recently established a committee on transport and land use which will meet for the first on April 24. Damon Fordham/ODOT is primary staff support for the group. It is intended that the work of the Commission will lead to legislation in 2009.
- ODOT's efforts on climate change focuses on sustainability. More information is available at <http://www.oregon.gov/ODOT/SUS/index.htm>.
- ODEQ is responsible for two initiatives on climate change: adopt low emission vehicle rules to reduce GHG gas emissions from motor vehicles sold in OR, and adopt a GHG mandatory reporting rule. The reporting rules will not reduce GHG emissions, but they will provide data to gain a better understanding of the sources of GHG emissions and to track progress toward meeting GHG emission reduction goals. Public hearings on reporting rules for stationary sources are being scheduled around the state (<http://www.deq.state.or.us/aq/climate/index.htm>).
- The Greenhouse Gas Reporting Advisory Committee met last fall. It found that transportation is a large source of GHG emissions and it must be part of the solution. It also recognized the difficulties in getting information from mobile sources and the complexities of implementing mandatory reporting. It recommended a mobile source reporting task force be established to make recommendations regarding reporting rules for fleets and other mobile emissions sources, including an emissions threshold, and to make recommendations to the Legislature as needed. DEQ plans to hold a committee meeting this fall and to coordinate with the Global Warming Commission.
- DLCD's effort on climate change is its review of the OR land use program – The Big Look (<http://www.oregonbiglook.org>).

At a regional level, a key effort is the Western Climate Initiative (WCI), a collaboration of seven states and two provinces. Initial draft design recommendations will set a cap-and-trade program and the Governor will present this program to the 2009 Legislature. A big issue is the point of regulation for transportation. The easiest way to regulate is to focus on cleaner fuels (distributors), cleaner cars, and reduce VMT. It is much harder to regulate behavior change. WA State recently passed legislation to adopt broad statewide goals to reduce annual per capita VMT by 2050. WA is the only member of the WCI that adopted VMT reduction goals. CA and British Columbia have low carbon fuel standards. OR deals with landfills and wastewater treatment plants.

In a speech last week, the Governor identified climate change and transportation as the major issues for OR for the 21<sup>st</sup> century. He expressed an interest in congestion pricing to achieve transportation goals and is looking at transportation through a climate change lens. He will not seek a constitutional amendment to allow state gas tax to be used for other than highway purposes, such as alternative transportation. He is interested in other financing mechanisms beyond the gas tax to pay for transportation needs. There are critical infrastructure needs in urban areas, such as completing sidewalk networks to access bus stops and other transportation, in addition to highways needs. There are

many visions and ideas but it is up to the technical staff to figure out how to meet the goals.

Brian Gregor gave a presentation on what ODOT is doing to analyze GHG and its basic components. This is a much bigger issue than modelers normally consider. There are six elements/factors that affect GHG: land use (affects transportation and has its own emissions), travel choices (travel demand modeling), fuels (what is being used), vehicles (technology, fleets, type), transportation infrastructure, and the economy.

- Land use – the 4Ds that affect transportation are density, diversity, design, and destinations. Land uses in models are density and destinations. Does more need to be done to better capture the effect of land use on travel?
- Travel choices – elements include how many trips, how they are organized, distance traveled, and mode used. Tour-based activity modeling will better reflect how people behave and how they respond to different policies. A research proposal was submitted to develop an on-line activity planner to help people plan out their trips more efficiently.
- Fuels – this includes life cycle carbon content. Looking at the entire production of fuel that is consumed includes not just the carbon in the fuel but also the carbon used to create the fuel. Biofuels may be more carbon neutral because of sequestering carbon to produce the fuel. CA is producing targets to reduce carbon content to reduce life cycle. If fuel production lowers carbon, it reduces fuel carbon impact.
- Vehicles – major elements include fuel efficiency, alternative fuel vehicles, ownership, and maintenance. Auto ownership addresses vehicle models but it may be necessary to address how people manage fleets – keep trucks but only use them to haul heavy cargo and drive smaller cars for day-to-day activities.
- Transport infrastructure – includes efficiency of utilization and traffic flow efficiency. If a bus operates with less than a full passenger load, there is more carbon per person per mile than if the bus is full. For traffic flow efficiency, microsimulation can identify bottlenecks and other areas with start/stop that produce more CO<sub>2</sub>.
- Economy – this is an important element. What and how much is produced, what and how much is consumed? Bottled water is a good example – tap water consumption, which has negligible GHG to produce, has gone down. It is being replaced by bottled water which requires producing bottles and trucking a heavy commodity.

Looking at the past 30 years, there is a close relationship between income and VMT. There has been an increase in the amount of households working and a decrease in household time. This has resulted in an increase in commuting, vehicle ownership, and trip chaining, and a decrease in ride share and public transit. It is difficult to do trip chaining using public transit or sharing rides. With reduced household time, there is an increase in consumption – people buy more because they are not at home to make it. This leads to the flow shown on the graphic at the end of these minutes.

Economic modeling needs to be to tie GHG to the economy. Carbon might be able to be treated as a commodity in the SWIM. At the state level, it is important to think about how to tie the model of the economy with GHG. OR cannot meet its GHG reduction

goals simply with more efficient cars and land use systems. The structure of the economy must be changed.

The CA Transportation Commission (CTC) undertook a review of its Regional Transportation Planning Guidelines to incorporate climate change emission reduction measures. It was charged with using models that accurately measure the benefits of land use strategies aimed at reducing vehicle trips. A copy of the letter to the Senate from the CTC discussing this review is posted with the OMSC minutes at <http://www.oregon.gov/ODOT/TD/TPAU/OMSC.shtml>. The CTC addressed different urban levels and modeling and discussed many of the things that OR is trying to do.

Marianne stated that Metro has two projects that are addressing GHG and analysis is done using different models and methodologies. There were many public comments on the Regional Transportation Plan (RTP) about addressing GHG and it is discussed in the RTP. The Columbia River Crossing project used fuel use to estimate GHG instead of a transportation model that uses VMT for GHG. It is important to define what models are most appropriate for this purpose and to define how to complement MOVES. Estimates based on fuel tax do not get at the carbon content of the fuel. Unless there is a county or local gas tax, there is no local information.

Brian Gregor noted that the bulk of GHG emissions are fairly closely related to fuel consumption. There is reasonable data for the state and for some communities. At the community level, however, fuel consumption cannot be used because it is not always bought locally and travel data must be used instead. The state GHG inventory tool does not use MOBILE6. Comparing the two approaches, the results are close but are not the same.

Models are used to compare and not to define a specific number. Environmental groups are suggesting that models be used as regulatory tools to assess whether a number is achieved. This is being done for transit, where the Federal Transit Administration (FTA) uses model outputs to evaluate projects. FTA dictates what the model needs to be and how it is structured, which limits innovations in modeling. If current models are used to generate a target number for GHG, this could limit needed innovation.

A problem with defining a number is that, as models are improved, the numbers will change. Differences are due to a different model. The issue becomes 'why is the model number changing'. If models are used to do a relative evaluation of policies, they will likely be consistent. This is analogous to a conformity budget. For mobile sources, the model is run and results are provided to DEQ to define an air quality budget. Noise is introduced when new model runs are compared with old budgets as a result of changes with the modeling tool - districts change in size, computer processing speeds allow runs to be done with more acuity and smaller zones, the smaller the zones the more that can be assigned to smaller areas.

Models can inform on things like which of several alternatives gets us closer to where the goals or targets. If there are not other compelling reasons not to select that alternative,

then that is the one to select. That is different than not choosing an alternative based on a specific level of GHG. Every trip is independent but each is really a tour. Tour-based activity models will show differences because these models are more sensitive to the effects of policies. It was noted that what models can and cannot do and general ranges of confidence should be clearly communicated to policy makers. For example, Metro does not estimate GHG in the model, it is done with post processing. This is an important caveat that should be made clear to policy makers.

Dick stated that Metro is doing a study called The Greatest Places. The notion is to try to optimize the combination of urban form and transportation infrastructure to get closest to defined criteria or measures. GHG is one of many measures. It will start with eight scenarios. Four will be done using Metroscope to look at variations in urban form (urban growth boundaries, variations in urban centers, etc.). The other four will look at the infrastructure side, including heavy investments in individual transportation options, such as transit, roadway, transportation demand management/intelligent transportation systems, etc. The intent is to get a broad sense of the changes that result from each of these scenarios and to develop an optimized hybrid that uses scarce dollars most efficiently.

Dave noted that policy decisions will be made using 'imperfect' models and that modelers need to provide the best tools they can. CA is the model for DEQ's efforts and DEQ is looking at a list of discrete actions that can be done quickly and easily to recommend to the 2009 Legislature. Metro and LCOG are looking at what can be done at the MPO level to reduce GHG. It was noted that MPOs are limited because, except for Metro, they have no land use authority. An MPO is not a government and relies on partners (cities and counties) to follow through with policies that a joint policy board may develop. There is often tension at the policy board level and if there is not consensus, the MPO can do nothing. City and County governments have the regulatory authority.

Dick stated that Measure 37 opened the potential for development of farmlands. There was a proposal that a bank be established through a third party to purchase property eligible for re/development under Measure 37 with the goal of minimizing the impact of development in farm areas. The bank could sell GHG credits to developers wishing to develop more densely in regional centers and areas that encourage non-auto travel. This could accomplish a variety of goals. This would be similar to a carbon tax to encourage people to develop in selected locations, or as a transfer of development rights. With the passage of Measure 49 that reduces this development potential in farm areas, there is less incentive for this idea. It was noted that the CA Attorney General successfully sued developers for not including GHG in their comprehensive development plans.

Brian Gregor noted that the more that development approvals are based on traffic impacts, the more potential there is for a legal challenge to the models. If GHG is estimated using models, and development is approved or not based on GHG, and most of the GHG comes from transportation, there will be increased scrutiny of models. It is one thing to use a model to compare alternatives to develop a regional transportation plan. It is another issue when models are used under the TPR to approve permits. Also, it is one

thing to estimate GHG over the next few years. Trying to estimate GHG 30 years from now is difficult because of the many unknowns. It will be a challenge to provide information on reducing GHG by a given amount by a given year.

Marianne urged the modeling community to consider the 2009 Legislature. It is expected that there will be transport and climate change packages which will address cleaner fuels, cleaner cars, and less VMT.

### **OTHER ISSUES/AGENDA TOPICS**

Topics of interest for future OMSC meetings:

- John Kaufman, ODOE to discuss peak oil issues.
- Metro's project The Greatest Place. Results will not be available for some time but a presentation on the concept and work program would be useful.

### **NEXT MEETING/AGENDA**

The next quarterly OMSC meeting will be on Wednesday, July 16, 2008, from 1:00-4:00 p.m. in Salem. Agenda items include:

- Subcommittee Reports
  - Applications - Reiff
  - Modeling Program Coordination – Walker
  - Professional Development - Jackson
- Program Updates
  - Oregon Household Activity Survey – Upton
  - Statewide Integrated Model – Upton
- Summary of June conferences
- Presentation on peak oil or The Greatest Place

The meeting adjourned at 4:00 p.m.

### **MEETING REFERENCES**

The following links are for topics discussed at the OMSC meeting:

- The OMSC FY2007-08 Annual Report and FY2008-09 Work Program are posted at <http://www.oregon.gov/ODOT/TD/TPAU/OMSC.shtml>.
- Presentations and meeting information for the OR Modeling Users Group are at <http://www.oregon.gov/ODOT/TD/TPAU/OMUG.shtml>
- Program and registration for the June 2-5, 17<sup>th</sup> International Emissions Inventory Conference and MOVES training, Portland, OR - <http://www.epa.gov/ttn/chief/conference/ei17/index.html>
- Program and registration for the June 19-20, 5<sup>th</sup> Oregon Symposium on Integrated Land Use-Transport Models, Portland, OR on June 19-20, 2008 - <http://www.tlumip.org/>

- Program and registration for the June 22-24, TRB Innovations in Transportation Modeling Conference, Portland, OR - <http://www.trb-forecasting.org/innovationsConference2008.html>
- Program and registration for the September 17-19, Transport Planning for Small to Medium Cities Conference, Portland, OR - <http://www.trbtoolsofthetrade.org/conference.html>
- Greenhouse gas links:
  - The Climate Registry - <http://www.theclimateregistry.org>
  - International Council of Local Environmental Initiatives (ICLEI) - <http://www.iclei.org/index>
  - The OR Climate change Portal - <http://www.oregon.gov/ENERGY/GBLWRM/Portal.shtml>
  - ODOT sustainability program - <http://www.oregon.gov/ODOT/SUS/index.htm>.
  - ODEQ GHG draft reporting rules - <http://www.deq.state.or.us/aq/climate/index.htm>
  - DLCD The Big Look - <http://www.oregonbiglook.org>
  - CA Transportation Commission review of its Regional transportation Planning Guidelines - <http://www.oregon.gov/ODOT/TD/TPAU/OMSC.shtml>

**OREGON MODELING STEERING COMMITTEE  
APPLICATIONS SUBCOMMITTEE  
Current Model-Related Research in Oregon**

**OTREC Year 2 - Projects 2007-2008**

These projects are directly relevant to LU / Transport modeling:

- 08-130 Value of Reliability; PIs: Bertini, Levinson
- 08-137 Dynamic Activity-Based Travel Forecasting System; PI: Gliebe
- 08-173 Options for Integrating Urban Land Use and Travel Demand Models; PI: Gliebe
- 07-33: Understanding and Measuring Bicycling Behavior: A Focus on Travel Time and Route Choice; PI: Jennifer Dill (Follow-up funding for 07-08?)

These projects are not directly relevant, but may produce information that improves understanding of modeled behaviors and networks, or provides insights for model applications:

- 08-81 Socio-economic Effect of Vehicle Mileage Fees, Phase 2; PIs: McMullen, Zhang
- 08-108 Empirical Observation of the Impact of Traffic Oscillations of Freeway Safety; PIs: Monsere, Ahn
- 08-115 Application of WIM Data for Improved Modeling, Design and Rating; PIs: Monsere, Higgins, Nichols
- 08-116 Road User Fee; PI: Rufolo
- 08-131 Oregon Freight Data Mart; PIs: Figliozzi, Bertini
- 08-133 Freight Distribution Problems in Congested Urban Areas: Fast and Effective Solution Procedures to Time-Dependent Vehicle Routing Problems; PI: Figliozzi
- 08-134 Practical Approximations to Quantify the Impact of Time Windows and Delivery Sizes on Freight VMT in Urban Areas; PI: Figliozzi
- 08-145 Assessment and Refinement of Real-Time Travel Time Algorithms for Use in Practice, Phase 2; PIs: Tufte, Ahn
- 08-152 Overlooked Density: Re-thinking Transportation Options in Suburbia; PI: Larco
- 08-163 No More Freeways: Urban Land Use-Transportation Dynamics without Freeway Capacity Expansion; PI: Zhang
- 08-184 Healthy Communities, the Transportation-Land Use Connection and Children's Travel; PIs: Yang, Schlossberg
- 08-190 Using Archived ITS Data to Measure the Operational Benefits of a System-wide Adaptive Ramp Metering System; PIs: Bertini, Zhang (with ODOT)
- 08-195 Freight Performance Measures: Approach Analysis; PIs: Zhang, Monsere (with ODOT)

### **OTREC Projects 2008-2009**

OTREC has received 50 proposals for the 2008-2009 funding year. The proposals are currently undergoing peer review, and are not yet posted on the web site.

### **ODOT RESEARCH UNIT**

Some of the projects above are co-funded by the ODOT research unit. In addition, the following is an ODOT research Stage 2 proposal being considered for funding in FY09, and directly relevant to LU / Transport modeling:

- PEA-09-07 Feasibility of a Web-Based Household Activity Planner to Reduce Travel and Improve Transportation Service PIs: Gregor, Zhang

### **OTHER**

The Metro Council is reportedly interested in funding follow-up analysis of data from OTREC project 07-33, Understanding and Measuring Bicycling Behavior: A Focus on Travel Time and Route Choice. This analysis, by Portland Metro in cooperation with LCOG, would focus on variables that are relevant to bicycle mode and route choices, and seek to improve how bicycles are modeled.

*LCOG: H:\Templates\WordXP\Normal.dot  
Last Saved: Thursday, May 01, 2008*

Attachment 2  
Graphic from Brian Gregor, ODOT, presentation on GHG

