

disadvantage; if we do this, how is that going to affect our business community? For instance, if we put in regulations on special events centers, how will that affect Disney and Dodgers Stadium and those kinds of decisions?

The larger question is do we implement as a locality these strategies on a local level, or do we say, "Let's do it on a regional basis?" Do we get more bang out of a regional rule than we do at local rule? That's a good question, too. Then, we talked for a little bit longer, and he said, "Well, how about fair share? What are the fair share questions? How much do we do against some other localities, sub-regional groups". As he's leaving, he says, "Oh, by the way, give me the job impacts. Give me the socioeconomic statistics. I said, "Well, there's a model out there that the AQMD uses and they pump all this information into it, and they supposedly give you information relative to job impacts." As we begin thinking about this, he comes back, and he says, "Oh, there's one last thing. What is this notion of expeditious implementation? Can you help me with that? Oh, by the way, throw in reasonable further progress". We began trying to collect these data, but we essentially could not answer those questions. For a local government official to make some crucial decisions on limited resources — and you know what limited resources are — we couldn't give them basic jurisdictional information to help them make those decisions; those policy decisions. We have talked about policy decisions here. We are talking about what drives it; the data or the policy?

The essential question that was trying to be asked was, what was the biggest bang for my buck? What will give it to me? What they're asking is, what will this measure buy? What are the trade-offs? Who benefits? Who is hurt? Who pays? What they are really seeking is some type of prioritization of alternatives, and that was a difficult, difficult task. One, I'm sorry to say, we couldn't respond to at this particular time.

Secondly, TCM working group is a group of local jurisdictions and private sector folks looking at transportation control measures, trying to make them more compact, simplified. Again, the whole notion of quantification and enforceability, those numbers are not available. You can't pick and choose and simplify if you don't know what results will come from the actions that you take.

Thirdly, we had a recent disturbance in L.A. that focused a lot of attention on urban communities. The question of social equity in transportation has been recently refocused. Are we putting our transportation systems in the communities that benefit most? Those questions have to be addressed, and you should be

addressing them.

I have my wish list. One surrounds the notion of--is it more art than science out there today? I could almost wish we could stop the world and get off for a while and let the science catch up with the art. Let you guys come back with some stunning, brilliant analysis of the competing demands that are out there.

In your data collection, in your data distribution, think of the local official, who makes those crucial decisions.

Bridge the gap between the technician and the local politician. Be concise, readable. Represent real world concerns and economics that are out there, the fragileness of the local economies.

GIS has been discussed here. I'm very fond of that kind of representation of data. I think that would have a great impact on local decision makers. You can see it. You can feel it. You can almost taste it. If it's out there, it's in color, it's on a screen, and you have someone competent who can interpret it for them, it is probably remarkable.

I just want to underscore the idea of cooperation, cooperation, cooperation. This region is over layered with governance, and do they all talk? Yes. Do they talk well? I don't know.

Data have to be reliable. You have to have confidence in it. I cannot overly express the need for confidence in the data that's generated on the local level. Do they look at it and throw it in the wastepaper basket and say, "Oh, it's another MPO survey?"

Lastly, in an earlier discussion, someone said we need a quality of life index. Are our regions relatively better or less well off? Is there a discomfort index that can be developed? I throw that out to you to challenge you.

WORKSHOP REPORTS

Elaine Murakami, Puget Sound Regional Council, and Jack Butler, Florida Department of Transportation

Elaine Murakami

Eighteen people participated in the Workshop Land on Use, Economic Development, and Growth Management. There were two state DOT representatives, 12 from MPOs or COGS, and four others, including the Urban Land Institute and the Growth Management Institute.

The MPOs varied in size from 75,000 population to over three million population, and they also varied in their responsibilities. Some were very active with census activities, and others had less responsibility in that area. About half of the MPOs prepared their own population, employment, and land use forecasts, and the other half used forecasts from other agencies. One agency was required to use the state population forecasts, and

another MPO said that they would never just take the state forecasts, and that their approach was to work directly with the state to come up with mutually agreeable forecast numbers.

The planning horizon for most MPOs was 20 to 30 years. The frequency of the population and employment forecasts range from every two years to once every 10 years, but I would say that most range somewhere between two and four years.

The current practice in terms of population and land use forecasts was that these numbers were prepared first, and then they were fed into the travel demand models. I think we need to be moving toward a more cyclical approach where these two are integrated, but the current practice I could summarize in two ways.

There was a comprehensive plan examination and review with local staff people on the realistic expectations of these comprehensive plans being realized. The first approach was using Delphi-like methods where they would work directly with local staffs and come to some agreement.

The second approach was that regional councils prepared control totals for the area using economic or demographic trends and forecasts. These regional totals were allocated to sub-areas, and those sub-area numbers were reviewed with locals in an iterative process to adjust the figures within those areas.

There was a lot of discussion early on that there wasn't much understanding or knowledge about the interrelationship between land use and transportation.

Al Luedecke made some reference to "field of dreams". He said that sometimes we think about "if you build it, they will come." A Maryland State DOT person said this was sort of the way that people had been speaking about transportation facilities, at least, in their state.

Another theory we have heard related to transportation facilities is opposite of that. If you don't build it, they won't come, but what was actually happening was not only these two options, but these other two options. One of them, if you build it they might not come, was discussed in terms of both highways and rail systems and Texas highways as an example. The other one was if you don't build it, they'll come and the Tysons Corner example was used for this example. From all of what we learned, there wasn't very much knowledge about what these interrelationships were. We have to decide what are we going to do about this lack of knowledge.

The workshop began with a brainstorming session where we thought of many ideas about land use, and growth management, and economic data development. Then we grouped those ideas into more generic,

descriptive categories. We identified the major gaps and the greatest need for improvement. The items that were seen as not as difficult, although there might be a need for ongoing effort, were given a lot lower priority than the higher priority items that we came up with.

The most important item was in the systems analysis area. It was very difficult to prioritize these because they were all very important. We decided that synthesizing data from multiple sources would be a useful way of looking at the data. Not only was this going to be important from the technical aspect, but it was also going to be an important product for informing elected officials and the public. This also came up in the administrative issues part of the discussion.

There were three other items that were almost the same priority level as this one. Those were to revise old and to develop new methods in forecasting, impact analysis, and cost benefit analysis. This will also be related back to the forecasting issue.

We said we needed data to know more about data compatibility and reliability. This was really important when we are trying to build integrated data sets where you might have data from one source like wetlands data and a highway network from another source. You need to know what the accuracy and the reliability of each of those data sets are when you start to compare them against each other.

One of the examples that I brought up from the growth management side was a lot of the wetlands mapping is being compared against parcel databases to determine whether people can build on their specific piece of property. The accuracy issue is very critical in those examples.

Finally, we said that the current GIS in transportation was inadequate and needed further development. This is one area where the federal agencies could take a role in working with the software developers in explaining that there really was a market for these. There are many MPOs and state agencies that could use this project if it could meet our needs a little better. One of the gaps we saw in GIS was this dynamic segmentation problem.

In administration, the biggest problem was that we needed to increase the coordination and cooperation for data access. This crossed all different boundaries. We saw there could be a role for states in helping local governments get access to state data sets outside -- not just DOT, but outside of DOT, also federal agencies, and also to improve the data sharing between the MPOs and local governments.

We set a slightly lower priority for three other items. This was informing elected officials and the public. During the workshop, we talked about education. We talked about educating elected officials and the public,

and I don't think that's what we're trying to do. We're trying to inform them. Part of informing might be that we all, as staff, need to have better communications skills, and we did talk about improving our communication, not only with the elected officials and the public, but also with the people who were asking to provide us data for use in feeding the land use and transportation modeling. This was a problem sometimes when we asked people for data. They didn't understand how that data were going to be used, or what the value was because we didn't communicate enough with them.

We also thought that staff training was very important. We need training in how to increase public participation. We also need training in the areas of technical work in terms of modeling and GIS.

In the forecast, this was sort of a sleeper — not forecasting was the sleeper, but we talked about forecast evaluation. Most MPOs felt that they didn't have the time to sit back and evaluate how well their models predicted 1990 using the 1970 and 1980 information, but this was really something that was very important.

There could be a role for the federal agencies in helping us do this. We recommended taking a sample of certain areas and seeing where different models performed well, forecasted accurately, and those areas that didn't perform well. Then try to assess what went into the models, what were the major gaps, and then see how to revise our methods so that we can improve our forecasting.

The other things that came up were that we would be required or asked to perform multiple forecasts, but there won't be just one forecast. There will be alternative forecasts, i.e., showing different development patterns. This is the current trends forecast, but given growth management requirements, requirements for high residential zoning, higher residential densities, and employment densities by zoning, that this is an alternative forecast using those assumptions.

We also need to adjust our forecast to incorporate these changes, and this is related to the monitoring. It also goes back into the forecast evaluation component.

We also need to recalibrate our base year data. This is going to be a lot of work in the near term because of the availability of 1990 census data.

In terms of surveys, we saw that overall these were very expensive, and that's why they weren't done too frequently. They tended to be irregular.

In terms of what our workshop was tasked with, the biggest gap was in an actual physical inventory of land and this was not something that the MPOs actually wanted to get, but they were largely relying on other agencies like departments of natural resources and forest areas. The different issues of endangered species also came up.

The other topics that the other groups discussed were how travel characteristics and travel behavior were changing over time, and how this related to land. We also discussed facility performance.

Finally, in monitoring, we saw that the biggest gap in this area was in goods movement. We need more employment and other economic indicators. Some agencies have been successful in working with their state files, and other agencies are running into a lot of red tape. Some areas are using private data sources like Dunn & Bradstreet's and other areas are having to go out and do their own employment inventories.

We need some basic information about transportation system usage. There was quite a bit of discussion that the traffic data on the highways had a lot of error, and we question its statistical reliability.

Going back to our initial question, what would the impact be between the land use and transportation and how would this feed into our forecast?

In this area, particularly, people felt they were doing a lot already, and these are the "C" categories where these were ongoing efforts. It wasn't that they weren't needed any more, it was just that there was a good base for those already.

Jack Butler

State departments of transportation have traditionally had almost no direct role in the topic of this session. At most, state DOTs have provided general transportation planning technical support and highway/traffic data. It would also be fair to say that state DOTs are aware of the reactive and proactive economic development effects of transportation improvements, although few states have specific programs for making transportation improvements to create economic opportunities.

This history was well demonstrated by the virtually complete absence of state DOT representatives at the session, which consisted mainly of regional agency (MPO and COG) staff. It was also well demonstrated that the presently limited state DOT role must be greatly expanded if the requirements of ISTEA are to be met.

The expanded state role is primarily one of providing increased leadership for setting data and method standards. There are three basic areas in which state DOTs, working individually or together, must expand their activities:

- Data sharing between state and regional agencies
- *Serve as facilitators for getting information from other state agencies to the MPOs and COGs doing transportation planning.* For example, local agencies need population, employment, and

construction data from which forecasts may be made. These data are usually collected or projected by state Departments of Commerce or Labor.

- *Help affected agencies set data coding and file exchange format standards.* The increasingly large amounts of data required to meet planning quality standards mandate the use of automated data processing methods. However, no standards exist which would allow data from different sources to be readily combined. For example, each county often has its own format for maintaining property records, with the result that regional agencies cannot readily combine information on existing land use from their member counties.
- *Create a statewide forum or mechanism for data sharing between MPOS.* A recently published study showed that acceptable results can be obtained from statewide or even national data defaults for such characteristics as trip generation. It will be cost effective for state and regional agencies to pool their resources so that statewide estimates for appropriate input data can be readily devised; e.g., vehicle occupancy, peak season identification, etc. Each state DOT may want to consider formally recognizing input default values so that the results of all in-state MPOs may be combined in a statewide transportation planning effort.
- **Establishment of methodology standards**
 - *Describe and teach standard surveying methods.* As the ultimate goal is a coordinated state transportation planning effort, the input data upon which the effort is founded must be consistently gathered and reported. A frequently noted need was the establishment of a method for deriving input traffic data, such as how to do seasonal and axle adjustments to base counts. In air quality non-attainment areas, local and regional governments may be called upon to conduct new types of surveys; e.g., travel time studies. The state DOT should set up a program for defining standard methods and teaching these methods to regional and local planning staffs. In some instances, metropolitan areas in the state may be the source of such training.
 - *Establish standard traffic modelling methods.* Just as the input data must be collected or derived on a common basis, so must the use of that data be standardized. Agencies that perform the traffic modelling function may need assistance in increasing the detail of those models, or in improving calibration methods to include travel speeds. The states, MPOS, and FHWA should cooperate on meeting this need.
 - *Create a means to conduct intermodal cost/benefit analyses.* ISTEA requires the state and MPOs to make project selections from a multi-modal mix of alternatives. The states should work with FHWA and FTA to define a standard means for making such selections on a common basis for all modal impacts.
 - *Define and use standard transportation performance measures.* Intermodal planning will also require post-implementation evaluation of improvements. Common and comparable performance measures will allow same-basis evaluation of all types of improvements.
- **Establishing GIS-T standards**

One common item was mentioned in every presentation made during the first day: geographic information systems will be THE tool for combining data from multiple sources and on differing topics into a single presentation. However, there currently is no standard means for representing and storing these data in a GIS. Indeed, there is not even one GIS on the market today that can do the broad range of tasks needed for multimodal transportation planning.

It is the belief of the session attendees that the needed GIS will not be quickly provided by software/hardware vendors through the normally diffuse market for such systems. Accordingly, it is strongly recommended that the MPOs, states, and FHWA quickly work together to define a standard GIS-Transportation specification that can be provided to vendors.