

# Statewide Transportation Planning and Coordination of the 1980 Urban Transportation Planning Package

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Census Bureau data products have long played a vital role in transportation planning. They are of particular importance to states like Florida that have a rapidly expanding population base, which places ever-increasing demands on all levels of the transportation system. The Florida Department of Transportation (FDOT), because it serves as the primary resource for transportation-related data services to state, regional, and local agencies, has taken a leading role in the acquisition, processing, and distribution of transportation-related Census Bureau data products in the state of Florida. That role and the role of other selected transportation agencies throughout the country in the use of 1980 census products will be discussed.

## FDOT ROLE

In 1980, following a study of data requirements for urban transportation planning modeling and evaluation, FDOT determined that its urban travel-demand models in the state's 15 urbanized areas should be standardized and input data requirements should be simplified. Cross classification rather than regression equations was selected as the model structure for trip generation. In addition, FDOT decided to make extensive use of 1980 census products in the formulation of base-year data and model calibration activities. With support of local metropolitan planning organizations (MPOs), FDOT initiated an acquisition program for the purchase of Census Bureau Summary Tape Files and the Urban Transportation Planning Package (UTPP).

In November 1981, as part of the budget cycle, MPOs were provided with an estimate of 1981-1982 planning funding allocations that might be expected for Florida. With the subsequent passage of the Surface Transportation Assistance Act of 1982, however, the total allocation of planning funds to Florida amounted to approximately \$100,000 more than the budget estimate. In a proposal to the MPOs, FDOT suggested that it be granted the authority to use the additional planning funding allocation to purchase the Census Bureau UTPP for all MPOs in the state, with FDOT providing the required 20 percent matching funds. On receipt of formal resolutions from each MPO to that effect, FHWA approved the proposal and FDOT programmed the necessary matching funds in its budget and executed a contract with the Census Bureau for purchase. The total contract price of Florida's UTPP was \$118,000.

In addition to administrative and funding support mentioned above, FDOT provides the necessary funding for the purchase of Census Bureau Summary Tape Files as well as providing data processing services to the local MPOs. In the case of the UTPP, local MPO staffs provided the Census Bureau with an annotated listing of all census metropolitan geography by internal and external traffic analysis zones (TAZs) and FDOT provided the necessary data processing services. The final work product delivered to each MPO consisted of both a microfiche file

and a hard copy of the UTPP covering their Standard Metropolitan Statistical Area. In instances where the local MPO had the appropriate data processing facilities, a tape copy of the UTPP was also provided.

To date, FDOT has used the Census Bureau data products to generate trip tables, list external trips, describe residential and workplace population, and study carpooling. Although experience with the UTPP has not been without problems (such as factoring for other-than-work trips), FDOT has been pleased with the results.

#### SURVEY OF STATE TRANSPORTATION AGENCY ROLES

To provide some additional insight into the use of Census Bureau materials, FDOT contacted 26 geographically dispersed state and regional transportation agencies regarding their purchase or use of Census Bureau data products. Time and budget constraints precluded the inclusion of all states; however, the number of inquiries was sufficient to show a substantial variation in prevailing attitudes toward Census Bureau products and the UTPP in particular. For example, nine states purchased complete UTPP tabulations for each of their urbanized areas; two others, Louisiana and Wisconsin, developed purchase programs oriented toward the smaller areas in their states and left purchase as an option for the larger urbanized areas (see Table 1).

The interviews also indicated a variety of philosophies on the working relationships between state agencies and MPOs, which influenced the opinions presented on census data products. In some states, such as Florida, the department of transportation (DOT) has a close working relationship with the MPOs. Because FDOT not only serves as a primary data resource but also provides the majority of MPO data processing services and modeling support, it makes extensive use of census products. At the other extreme are states in which the MPO has the primary responsibility for data analysis and the development of data resources and the DOT has only a limited input. State DOT interest in Census Bureau data products, and the UTPP in particular, may be directly related to the working relationships established between the DOT and MPOs.

The interviews also indicated a general level of satisfaction with Census Bureau products and an equal level of dissatisfaction with delays in product delivery. The most common problems seem to have been associated with rapid urban growth. One problem commonly noted was the time lapse between the address reference file (GBF/DIME file) and the delivery of the UTPP. In Florida, considerable effort was expended in coding external zones because of development and annexations within the urban areas.

Acquisition of census data products varied from state to state. Some, like Florida, purchased Summary Tape Files from the Census Bureau, and others took advantage of the State Data Center program. With the UTPP, however, there was substantial agreement on funding sources. In most instances planning funding was used, usually amounting to 80 percent of the purchase price; the balance was provided by the state. The survey indicated only minor use of UMTA and Highway Planning and Research (HPR) funding.

Six states that did not purchase the UTPP were also interviewed and were asked to describe the basis for that decision. The results were as follows:

1. North Carolina: A state-conducted survey was used to provide information needed to develop trip-generation data. These data were available with less time lag for distribution and at relatively less expense than the UTPP and were specifically tailored to meet the state's needs.
2. California: Regions were not initially interested in sharing costs with the state. Later, the regions purchased UTPP independently.

**TABLE 1. State Transportation Agency Users of Census Bureau Data Products**

State Agency	Urban Transportation Planning Package <sup>a</sup>			Summary Tape Files	
	Urbanized Area Coverage	Approximate Cost (\$)	Funding Distribution (%)	Purchased	Data Processed by
Connecticut DOT	All	N/A	Planning, 85; state, 15	No	State <sup>b</sup>
Florida DOT	All	118,000	Planning, 80; state, 20	Yes	State
Louisiana DOT	Some <sup>c</sup>	10,000	HPR	Yes	State
Massachusetts Department of Public Works	Some <sup>d</sup>	N/A	HPR	No	—
Michigan DOT	All	N/A	Planning, 40; UMTA, 40; state, 20	No	—
New Hampshire DOT	All	100,000	Planning and HPR	No	—
New Jersey DOT	All	100,000	HPR, 85; state, 15	No	—
North Dakota State Highway Department	All	N/A	Planning, 85; state, 15	No	—
Rhode Island Department of Administration	All	N/A	Planning, 80; state, 20	(Depository)	State data center
Virginia DOT	Some <sup>e</sup>	N/A	Planning, 50; HPR, 50	Yes	State
Wisconsin DOT	Some	12,500	Planning, 80; state, 20	Yes	State

Note: Data are from telephone interviews conducted by the Bureau of Policy Planning, Division of Planning and Programming, FDOT, Nov. 1984. N/A = not available, HPR = Highway Planning and Research.

<sup>a</sup>Data processed by states.

<sup>b</sup>Tapes acquired from State Data Center.

<sup>c</sup>For all urbanized areas except the three largest SMAs.

<sup>d</sup>Census Bureau provided a town-to-town trip table for state, excluding Boston SMA.

<sup>e</sup>For all urbanized areas except the Washington/Maryland/Virginia SMA.

3. Colorado: The state DOT required each MPO to generate its own data for planning needs.

4. Pennsylvania: Project-specific data were obtained from local planning commissions. There was little systems planning, which might utilize UTPP data.

5. New Mexico: UTPP data were not needed. The current priority for state transportation planning was the development of a highway needs package.

In most instances, the urbanized areas within each state identify their own data needs and resources. One state commented that it was unable to generate any MPO enthusiasm for undertaking a shared purchase initially, although the MPOs eventually purchased the UTPP independently. It was also noted that nonpurchasing states made little use of other Census Bureau products, preferring to use alternative data sources.

#### SUBSTATE AGENCY ROLES

In addition to state agencies, selected regional purchasers of the UTPP were also interviewed. This group consisted of councils of government (COGs), coordinating councils, or regional planning agencies (see Table 2), in most instances from states that did not purchase the UTPP. In general, most were satisfied with their purchase, using their packages heavily for data base updates, local and regional system studies, and corridor studies.

#### APPLICATIONS

Applications of the Census Bureau products are as varied as the needs and problems facing the transportation planning community. In general, however, model calibration, land use and corridor planning, mass transit and special generator studies proved to be the most common. The following is a list of the applications cited by the agencies contacted during the survey:

- Transportation modeling
- Model calibration
- Mass transit studies
- Regional planning
- Location studies
- Population projections
- Trip generation
- Corridor planning
- Carpooling studies
- Subregion area planning
- Data base development
- Land use studies

FDOT is making extensive use of census products in development of the Florida Transportation Plan. Data from the 1980 census were used to compute population density and determine persons per household. Those data coupled with data from the 1977 Nationwide Personal Transportation Study were used in the development of a trip-density distribution table. These data will be part of an analysis of market potential for alternative future transportation modes.

Each user of census materials was also asked to comment on applications of data products utilizing microcomputers, specifically the downloading of census data to microcomputer diskettes (see Table 3). Nine agencies responded that downloading of some census products (Summary Tape Files) had been completed or was in the planning stages, and four indicated that downloading was under active consideration. Most, however, expressed an interest in future census products in microcomputer format.

**TABLE 2 Substate Area Agency Users of Census Bureau Data Products**

Agency	Urban Transportation Planning Package				Summary Tape Files	
	Purchased by	Approximate Cost (\$)	Type of Funds	Data Processed by	Purchased by	Data Processed by
Council of Fresno County Governments (Calif.)	Agency	5,000-6,000	N/A	Consultant	County	County
Denver COG (Colo.)	Agency	20,000	UMTA	Agency	Agency	Agency
Washington, D.C., COG	Agency	N/A	Planning	Agency	Agency	Agency
Central Massachusetts RPC	State	N/A	N/A	State	N/A	N/A
Strafford RPC (N.H.)	Agency	2,500	Planning	Agency	(Depository)	Agency
Middle Rio Grande COG (N. Mex.)	Agency	N/A	N/A	Agency	Agency	Agency
N.E. Ohio Coordinating Agency	Agency	N/A	Planning	Agency	Agency	Agency
Mid-Willamette Valley COG (Oreg.)	Agency	3,500	Planning	State (by request)	(Depository)	State
Puget Sound COG (Wash.)	Agency	N/A	Planning	Agency	Agency	Agency

Note: Data are from telephone interviews conducted by the Bureau of Policy Planning, Division of Planning and Programming, FDOT, Nov. 1984, N/A = not available; RPC = regional planning council.

**TABLE 3 Specific Data Processing Tasks for Urban Transportation Planning Package**

Agency	Tract or Block to TAZ Equivalency Data Processed by User Agency	Downloading to Microcomputer Diskettes		
		Complete or Planned	Under Consideration	Not Planned
Connecticut DOT	X	--	--	X
Florida DOT	X	--	X	--
Louisiana DOT	X	--	--	X
Massachusetts DPW	X	X	--	--
Michigan DOT	X	--	--	X
New Hampshire DOT	X	X	--	--
New Jersey DOT <sup>a</sup>	--	X	--	--
N. Dakota Highway Department	X	X	--	--
Rhode Island DOA	X	--	--	X
Virginia DOT	X	--	--	X
Wisconsin DOT (with MPO assistance)	X	--	X	--
Council of Fresno County Governments <sup>b</sup>	--	--	X	--
Denver COG	X	X	--	--
Washington, D.C., COG <sup>c</sup>	--	X	--	--
Central Massachusetts RPC	X	X	--	--
Strafford RPC	X	X	--	--
Middle Rio Grande COG	X	--	X	--
N.E. Ohio Coordinating Agency	X	--	--	X
Mid-Willamette Valley COG	X	--	X	X
Puget Sound COG	X	X	--	--

Note: Data are from telephone interviews conducted by the Bureau of Policy Planning, Division of Planning and Programming, FDOT, Nov. 1984.

<sup>a</sup>Tract or block to TAZ equivalency data not processed by user.

<sup>b</sup>Preexisting equivalency data.

<sup>c</sup>Local jurisdictions processed equivalency data.