

FY 2009 RESEARCH PROBLEM STATEMENT

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TITLE

Oregon Freight Data Archive: A Tool for Planning, Operations and Research

PROBLEM (Description of need)

Increasing freight volumes are adding pressure to the Oregon transportation system. Monitoring the performance of the transportation system and freight movements is essential to guarantee the economic development of the region, the efficient allocation of resources, and the quality of life of all Oregonians. Freight data is expensive to collect and maintain. Confidentiality issues, the size of the datasets, and the complexity of freight movements are barriers that preclude the easy access and analysis of freight data. Data accessibility and integration is essential to ensure successful freight planning and consistency across regional partner agencies and planning organizations. The main objectives of this project are: a) to maintain a long-term freight database that would be available for Oregon Universities, state transportation agencies, regional planning agencies, and economic development organizations, b) to integrate freight data into the existing and successfully operating PORTAL system, and c) to monitor freight performance measures. The data will be stored on a designated server space at Portland State University and integrated into the PORTAL system which will streamline data accessibility and consistency.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

The objective of this project is to build upon past and ongoing research efforts to collect freight data, place it into a scalable and accessible data archive structure, and develop tools for freight performance measurement. The objective will be met by carefully reviewing the literature, conducting a regional and statewide freight data inventory, expanding an existing archived data user service to include regional and statewide freight data, developing unique and comprehensive data sampling strategies, working with regional and statewide transportation agency partners to clearly define their freight data needs, and developing online performance measurement tools using freight data in order to capture the state of the freight transportation system. The project will leverage existing resources already invested in collecting freight data and establishing the PORTAL data archive.

BENEFITS

With limited investment, taking advantage of past investments in surveillance, freight data collection, and the creation of an archived data user service, a greater connection between freight planning entities and actual data can be achieved. Establishing the volumes and type of trucks on the highway network with temporal and spatial dimensions will help planners understand through-trip and local trip truck trends. In addition, the continuous nature of the data could allow for validation of simulation models and other truck models currently being applied in the Portland metro area and in the state of Oregon.

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