



Strategic Freight Transportation Analysis

UBC / WSU

Joint Mini-Conference

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Research Projects

Current and/or Ongoing Projects

- **Strategic Freight Transportation Analysis (SFTA)**
 - Six Year, Comprehensive, Research / Implementation Study
- **Oregon Department of Transportation**
 - Urban Freight Data Collection Study
- **Idaho Transportation Department**
 - Truck Registration and Weight Distance Tax Analysis
- **Washington State Department of Transportation**
 - Inter-Modal Port Facilities Project



Recently Completed Projects

- ✓ Port of Moses Lake
- ✓ Port of Whitman County
- ✓ Washington Fruit Express

What is SFTA?

SFTA is a six year, comprehensive research and implementation analysis that will provide information (data and direction) for local, state and national investments and decisions designed to achieve the goal of seamless transportation.

“SFTA’s desired outcome is improved freight mobility for economic vitality”

To achieve this, the SFTA research and implementation project, with its collaborative partnerships and integrated dynamic freight data warehouse will aid in strategic infrastructure investment choices, including transportation support for economic development, responding to freight congestion and chokepoint locations, and other emergent issues.

SFTA's Origin?

Eastern Washington Intermodal Transportation Study (EWITS)

- A six year study (1992-1998) that was funded jointly by the Federal government and the Washington State DOT as part of ISTEA.
- First statewide Origin-Destination Freight Truck Survey, 27 locations, collected over 28,000 questionnaires regarding specific freight movement attributes.
- Generated 39 analytical reports and working papers, over 40 presentations and invited talks and directly contributed to several infrastructure improvements and analyses, including:
 - Utilized for the Puget Sound Regional Council travel demand modeling for the MPO.
 - US 395 North Safety Improvement Project, Deer Park to Kettle Falls. Project has been completed.
 - North-South Corridor Justification - travel savings, freight value, truck percentages. North-South Corridor is now under construction.

SFTA's Steering Committee

Jerry Lenzi Chair, SFTA Steering Committee Regional Administrator, Washington State Department of Transportation			
Deborah Stephens Senior Policy Advisor, Washington State Office of Trade & Economic Development	Barbara Ivanov Director, Freight Policy & Strategy Washington State Dept. of Transportation	Karen Schmidt Executive Director Freight Mobility Strategic Investment Board	Andrew Johnsen Executive Policy Advisor Governor's Executive Policy Office
Jay Weber Executive Director County Road Administration Board	Scott Merriman Policy Director, Washington State Association of Counties	Jackie White Transportation Coordinator Association of Washington Cities	Patrick Jones Executive Director, Washington Ports Association

SFTA's Advisory Committee

SFTA's Advisory Committee currently includes over 75 transportation stakeholders representing a statewide, multi-modal spectrum from private industry, and local, city and state government. Below is a small example of these individuals.

<p style="text-align: center;">Peter D. Beaulieu Principal Planner, Puget Sound Regional Council</p>	<p style="text-align: center;">Steve Frasher President, Tidewater Barge Lines</p>	<p style="text-align: center;">Mary Beth Clark Program Manager, Colville Tribes Planning Department</p>	<p style="text-align: center;">Jim Miller Executive Director, Whatcom Council of Governments and IMTC</p>
<p style="text-align: center;">Glenn Miles Transportation Manager, Spokane Regional Transportation Council</p>	<p style="text-align: center;">Larry Pursley Exec. Vice President, Washington Trucking Association</p>	<p style="text-align: center;">Brad Smith General Manager, PCC Railroad</p>	<p style="text-align: center;">Glen Squires Senior Analyst Washington Wheat Commission</p>

SFTA Work Tasks

- I. **Statewide Freight Origin-Destination Study**
 - 2002 Data Collected over Four Seasons
 - Allows comparisons between 1993 and 2002
 - Cooperation of WSP, U.S. and Canadian Customs, Service Clubs, etc.
 - Results will be posted on the website (www.sfta.wsu.edu)

- II. **Strategic Resource Road Network:**
 - Identification of the critical road network by layering the transportation infrastructure characteristics and mobility needs of the following:
 - Grain Freight Flows
 - Fruit and Vegetable Movements
 - Mining Access Routes
 - Grape and Wine Transportation
 - Forest Products Movements

SFTA Work Tasks

(continued)

- III. Short Line Railroad Issues and Analysis**
 - Methods of Estimating Impacts from Abandonment Including Environmental Related Pavement Deterioration
 - Abandonment Impacts on Shippers
 - Short Line Abandonment and Transportation Competition
- IV. Adaptive Research Management**
 - Development of Methodology for Identifying Freight Chokepoints
 - Ability to Address Emergent Issues Identified by Steering Committee

For a full description of SFTA Deliverables and Reports:

<http://www.sfta.wsu.edu/>

Data Request and Inquiries

Examples

- | Agency | Purpose |
|---|--|
| 1. U.S. DOT | • Used in "The West Coast Corridor System" Phase I report, funded as part of the Borders and Corridors budget of USDOT. The analysis and data were used to confirm and in some cases to establish levels of freight activity within the corridor system. |
| 2. Benton-Franklin Council of Governments | • Requested for use in RTPO's and MPO's planning. |
| 3. Washington Wheat Commission | • Utilized to evaluate industry changes and transportation shifts over the last 10 years. |
| 4. Transportation Ministry, Seoul, Korea | • Methodological information was requested to help in the development of freight collection techniques for Seoul, Korea. |
| 5. Oregon Department of Transportation | • SFTA methodology incorporated into the development of an urban and metropolitan freight data collection technique. |
| 6. City of Reardan, Washington | • Utilized to compare and contrast changes in freight flows, by vehicle type and commodity, between 1994 and 2002. |

Data Request and Inquiries

Examples

Agency	Purpose
7. Freight Strategy and Planning: WSDOT	<ul style="list-style-type: none">• Provide data for use in reports, presentations and freight policy plans.• Address private citizen concerns regarding freight traffic and safety issues.
8. Planning and Data Offices: WSDOT	<ul style="list-style-type: none">• WSDOT Planning and Data offices are developing a planning data depository where multiple types of data will be stored.
9. Cambridge Systematics	<ul style="list-style-type: none">• Development of survey design and sample frame for Port of Portland for freight data collection.
10. WSDOT / WSP	<ul style="list-style-type: none">• The data are being utilized to develop and design a process for locating future weigh-stations and weigh-in-motion locations based upon freight vehicle frequencies, truck type, commodity, etc.
11. Puget Sound Regional Council	<ul style="list-style-type: none">• Utilized to validate truck travel demand models used by the MPO.
12. City of Lind, Washington	<ul style="list-style-type: none">• Used by consultants hired by the City of Lind, WA to profile changing freight truck travel through town.
13. Texas Transportation Institute	<ul style="list-style-type: none">• Used in designing statewide origin and destination freight study for Texas.

One Specific Research Project

“An Analytical Model Supporting Inter-Modal Port Facilities”

- Funding Agency: Washington State Department of Transportation
- Amount: \$112,000
- Timeline: One Year

Inter-Modal Port Facilities Project

➤ **Background**

- Tremendous Growth in Ocean Port Traffic, Especially Containers
 - Seattle, Tacoma, Portland
- Combined with Urban Growth
- Ocean Ports Have Limited Facilities Expansion Opportunities
- State and Region Facing a host of Transportation Problems / Issues
 - Major Traffic Congestion in Urban Areas
 - Port Capacity Limitations for Inbound and Outbound Shipments
 - Safety Concerns for Freight and Passenger Traffic



Inter-Modal Port Facilities Project

➤ **Growing Interest in Development of Inland Inter-Modal Port Facility**

- Improve Freight Transportation Efficiency
- Reduce Freight Related Congestion in Urban Areas
- Improve Economic Vitality
- Improve Safety and Reduce Frequency of Freight Related Accidents



Inter-Modal Port Facilities Project

➤ **Multitude of Port Districts Become Interested**

- ✓ Quincy, Moses Lake, Yakima, Wenatchee
- How to identify those characteristics that contribute to the operational success of these types of inter-modal facilities
- Provide state government with means of ranking different locations or at least identifying minimum set of location related attributes and characteristics before candidate site is considered



Inter-Modal Port Facilities Project

➤ **First....**

- Development of Location Attribute Check-List

➤ **Then.....**

- Develop Empirical Model
- Estimate the Spatial Demand for Inter-Modal Freight Services



Possible Dependent and Independent Variables

Dependent

- Inbound / Outbound Shipments / Time Period



Independent

- Location Attributes
 - Distance to/from supply /demand markets
 - Availability and access to competitive/complementary modes (truck, rail, barge, air, pipeline)
- Facility / Service Attributes
 - Ownership Type: Private vs. Public
 - Capacity / Facility Size
 - Shipment size
 - Storage / Warehousing Availability
 - Commodity Mix and Value
 - Technology (Degree of Automation)
 - Materials Handling
 - Inventory Control
 - Order Processing
- Efficiency / Price Attributes
 - \$ Rate / Fee

Next Steps.....

- Literature review
 - Identification of Model / Functional Specification
- Identify Needed / Available Data
- Develop potential list of Inter-Modal Facility/Operations to Survey / Interview
 - State / Federal Govt. Sources, Intermodal / Terminal Associations, etc.
- Collect and Compile Information
- Estimate Model / Analyze Results
- Write Final Report / Publish Articles

Questions / Comments

