



## Measuring Border Performance: Data Rich but Knowledge Poor?

### Lessons Learned From the 2009 Border Barometer

★ **In Step, In Line, On Time:** ★  
**Regional Strategies for Trade, Security and Mobility  
Challenges at the Canada-US Border**

---

Dr. Kathryn Bryk Friedman  
The NEXTRANS Center  
Purdue University  
West Lafayette, Indiana

November 16, 2009

 **Regional Institute**  
**University at Buffalo** *The State University of New York*

**Introduction.** In recent months, two distinct projects designed to gauge the performance of the Canada-U.S. border have been initiated. The University at Buffalo Regional Institute (UBRI) proposed the development of a "Border Barometer," which is anticipated to be a set of metrics replicable along the breadth of the 49th parallel. UBRI is our partner in a new consortium that performs border-related research—the Northern Border University Research Consortium (NBURC)—and courtesy of a grant from the Canadian government, the NBURC is launching the Border Barometer project.

Additionally, at its July 2008 meeting the Pacific Northwest Economic Region (PNWER) announced the creation of a Border Solutions Coordination Council, which intends to develop a "Border Report Card" specific to the four BC-Washington ports-of-entry that serve the I-5 corridor. Those ports are Peace Arch and Pacific Highway (both in Blaine), Lynden/Aldergrove, and

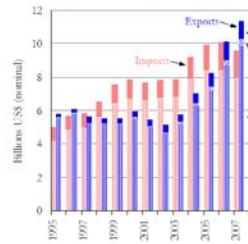
Samas/Huntingto

to as the Cascad  
Our institute  
ways in which  
gauged. This ar  
sible kinds of m  
kinds of data th  
formance at the  
should be meas  
fast come to m  
needed to imp  
such as the exis  
regional initiat

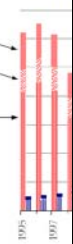
Following are  
coporate into a  
also might be  
makers, includi  
tion of the Bord

**Traffic Load.** A record of the volume and type of traffic passing thro Traffic load is sensitive to continent-wide economic trends, as revealed in Fig stance, a weakening Canadian dollar and a robust North American economy and a surge in imports of Canadian goods, while car traffic declined as BC resi traffic load is also sensitive to other factors. When the Canadian dollar surged through 2007), Canadian visitation remained stagnant, showing a significant up 9/11-related border protocols hampered Canadian visitation. (See Research Note

**Figure 1. Yearly Value of US Imports and Exports through Blaine, Lynden, and Samas**



**Figure 2. Yes through**



February 2009

**BORDER BAROMETER**

A joint project of the University at Buffalo Regional Institute and the Border Policy Research Institute at Western Washington University

**BORDER POLICY** RESEARCH INSTITUTE  
WESTERN WASHINGTON UNIVERSITY

**Regional Institute**  
University at Buffalo  
The State University of New York

The well-being of North America is closely tied to how well the Canada-U.S. border facilitates interaction and ensures security. What happens at the border and how well does it work?

CASCADE  
GATEWAY



BUFFALO-NIAGARA FALLS  
DETROIT-WINDSOR  
CASCADE GATEWAY  
COMPRISED  
**OVER 50%**  
OF CROSS BORDER  
ACTIVITY IN 2007

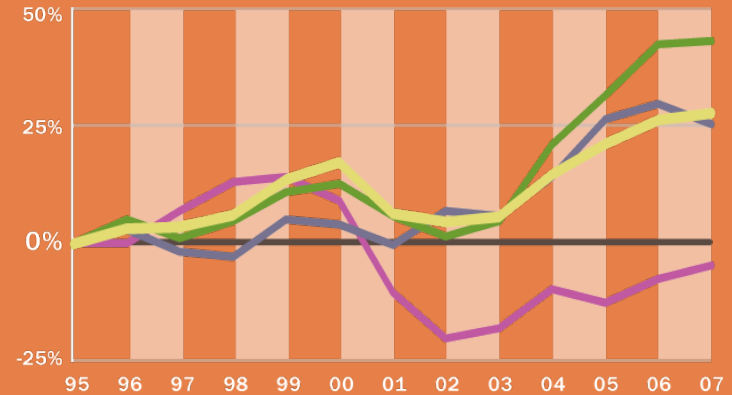
BUFFALO-  
NIAGARA FALLS

DETROIT-  
WINDSOR

# Indicators: Porosity Trade Flows

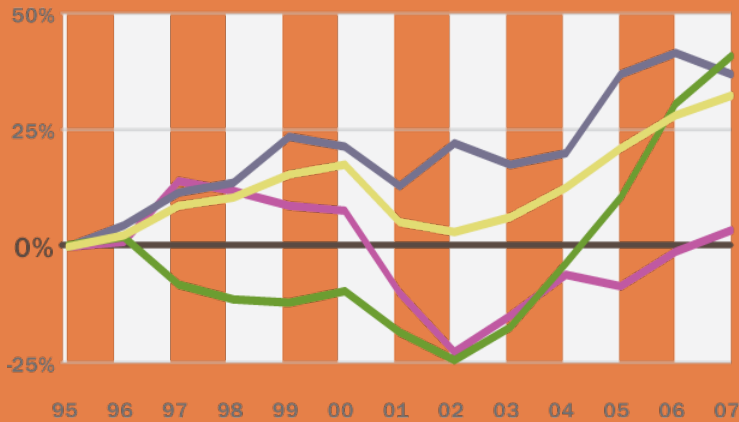
- BUFFALO-NIAGARA FALLS
- DETROIT-WINDSOR
- CASCADE GATEWAY
- U.S. TOTAL

Trade with Canada, % Growth Since 1995

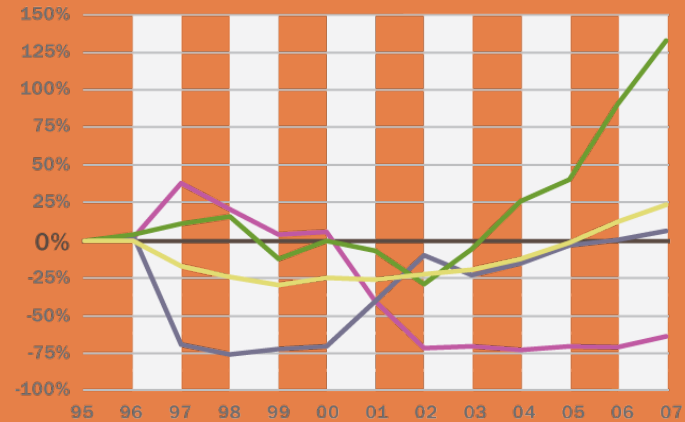


Growth in US Exports, 1995-2007

By Truck



By Rail

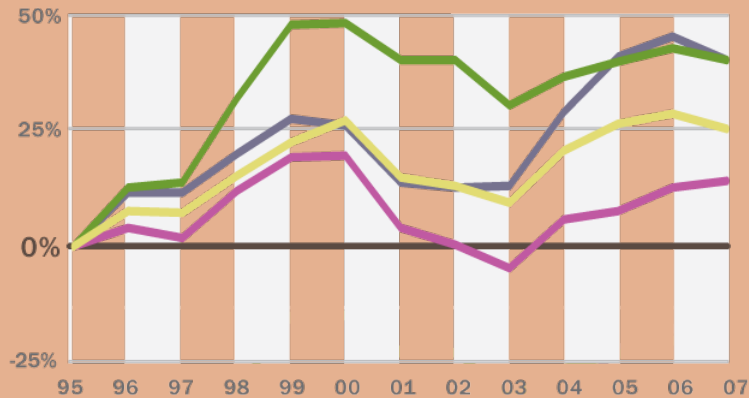


# Porosity: Trade Flows

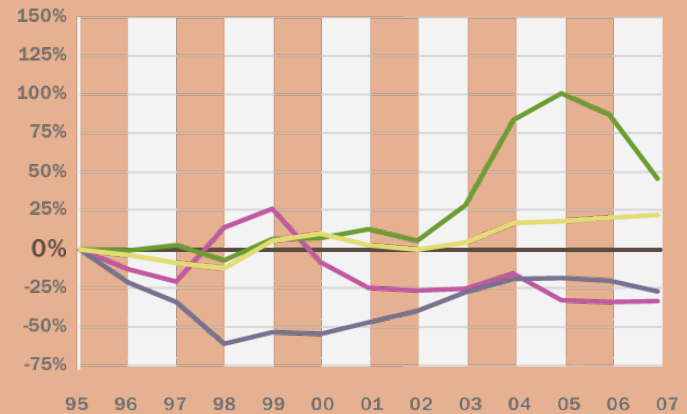
## Growth in US Imports, 1995-2007

- BUFFALO-NIAGARA FALLS
- DETROIT-WINDSOR
- CASCADE GATEWAY
- U.S. TOTAL

### By Truck

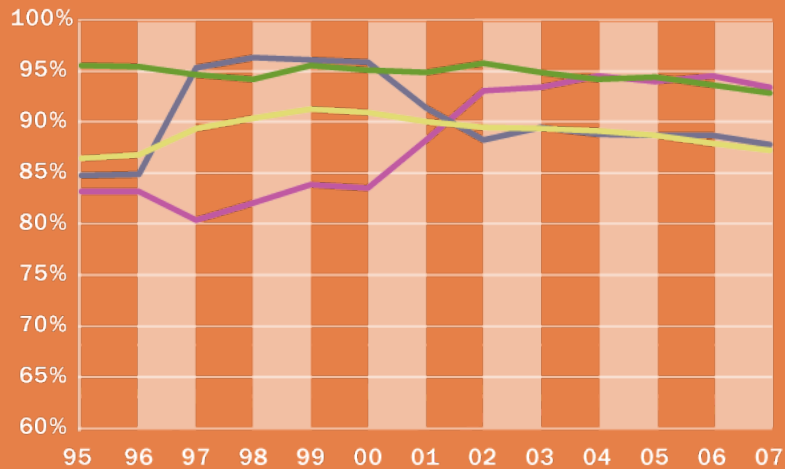


### By Rail

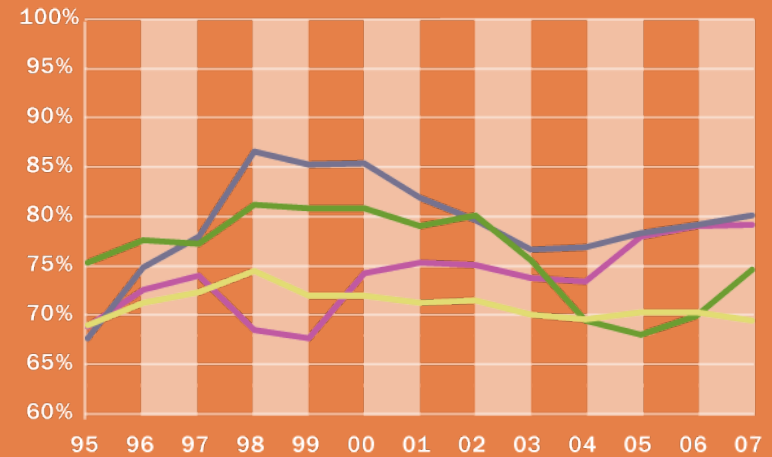


# Porosity: Mode Shares

## Share of Exports Carried by Truck



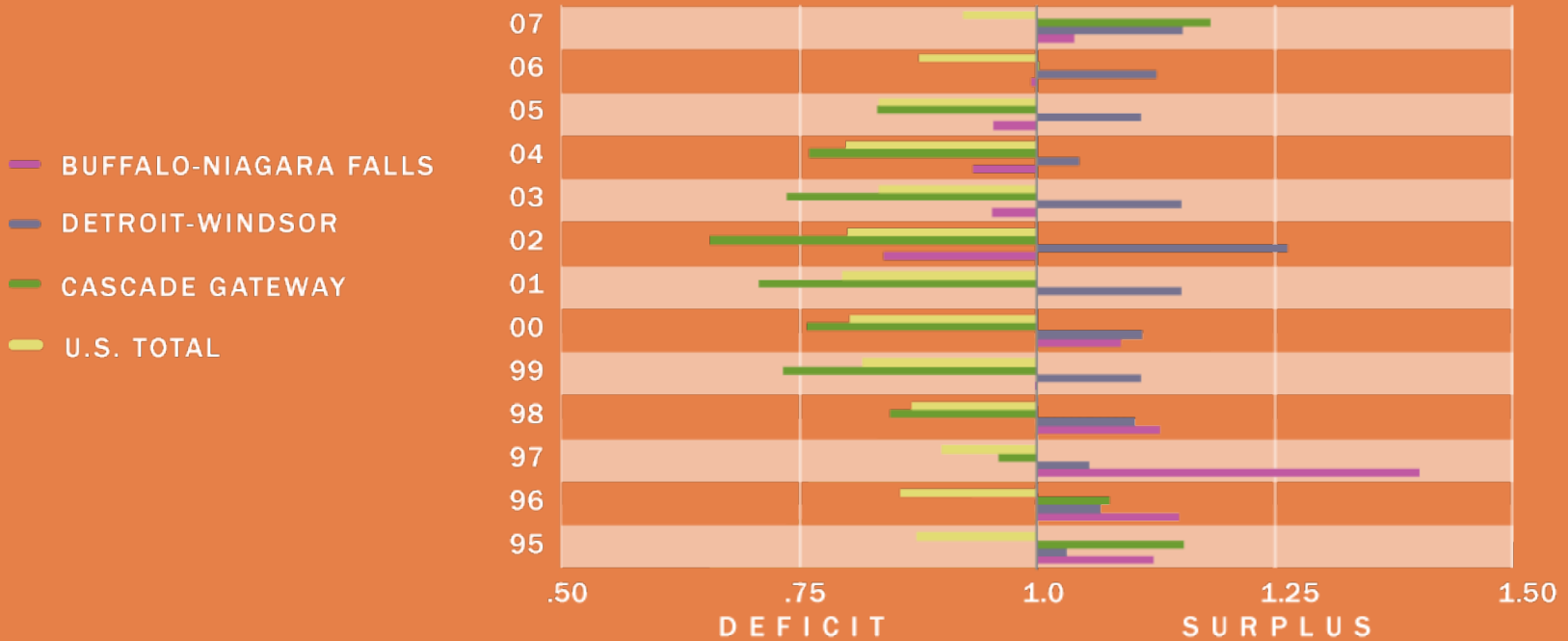
## Share of Imports Carried by Truck



- BUFFALO-NIAGARA FALLS
- DETROIT-WINDSOR
- CASCADE GATEWAY
- U.S. TOTAL

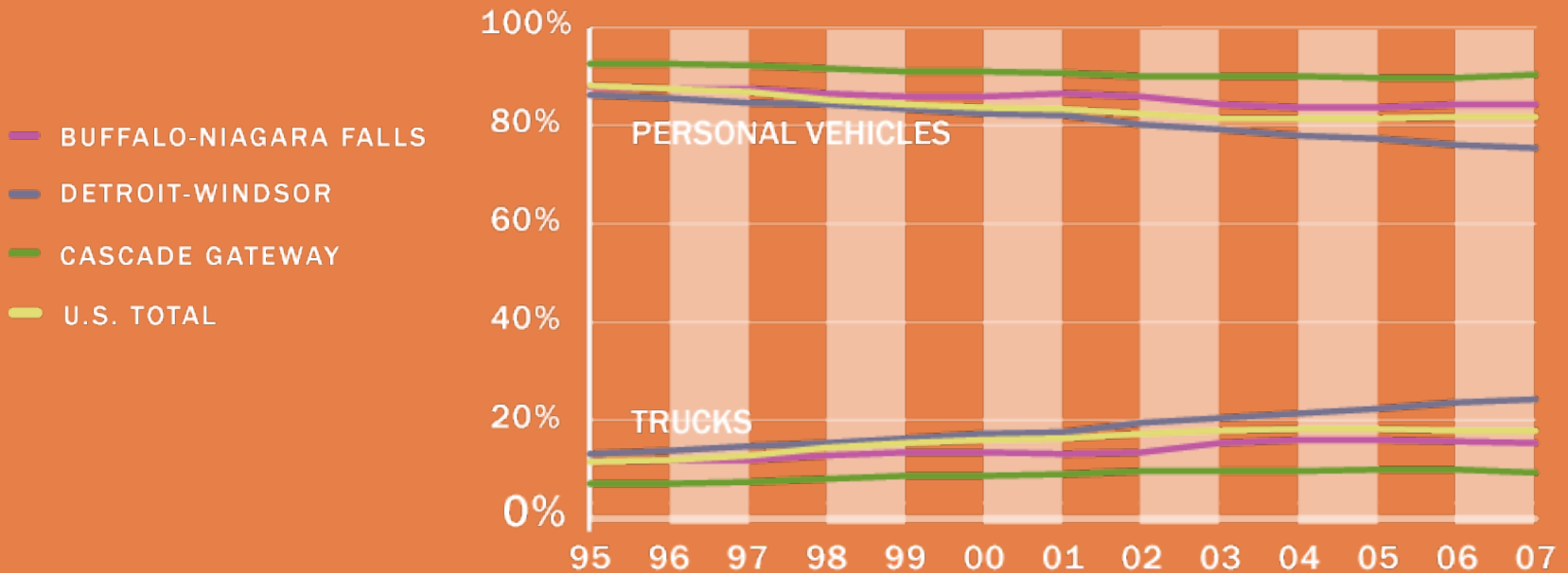
# Porosity: Trade Ratios

## US Export-to-Import Ratios for Trade with Canada, 1995-2007



# Porosity: Vehicle Traffic

## Trucks and Personal Vehicles as a % of Motor Vehicle Crossings, 1995-2007



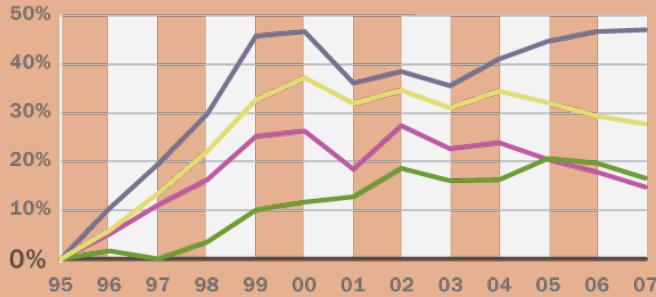


# Porosity: Vehicle Traffic

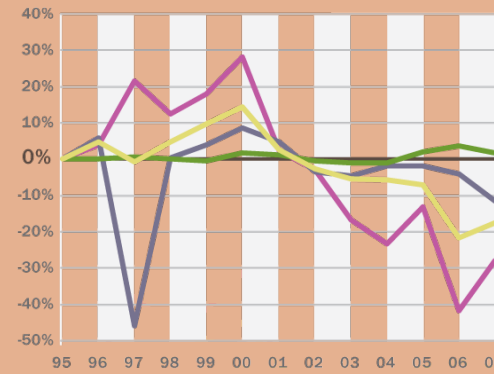
## Traffic Growth, 1995-2007

- BUFFALO-NIAGARA FALLS
- DETROIT-WINDSOR
- CASCADE GATEWAY
- U.S. TOTAL

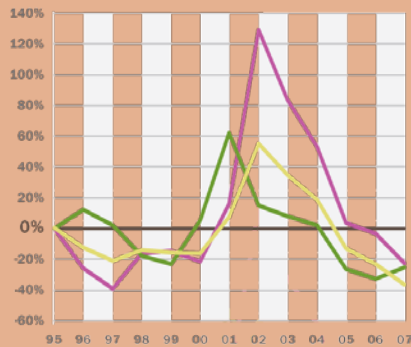
Growth in Truck Traffic



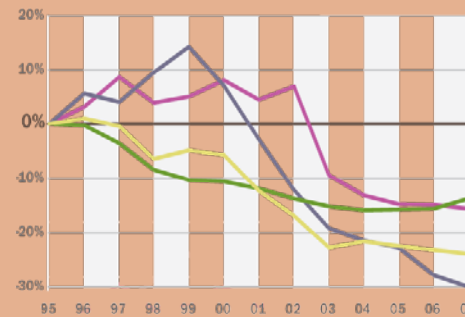
Growth in Bus Traffic



Growth in Pedestrian Traffic



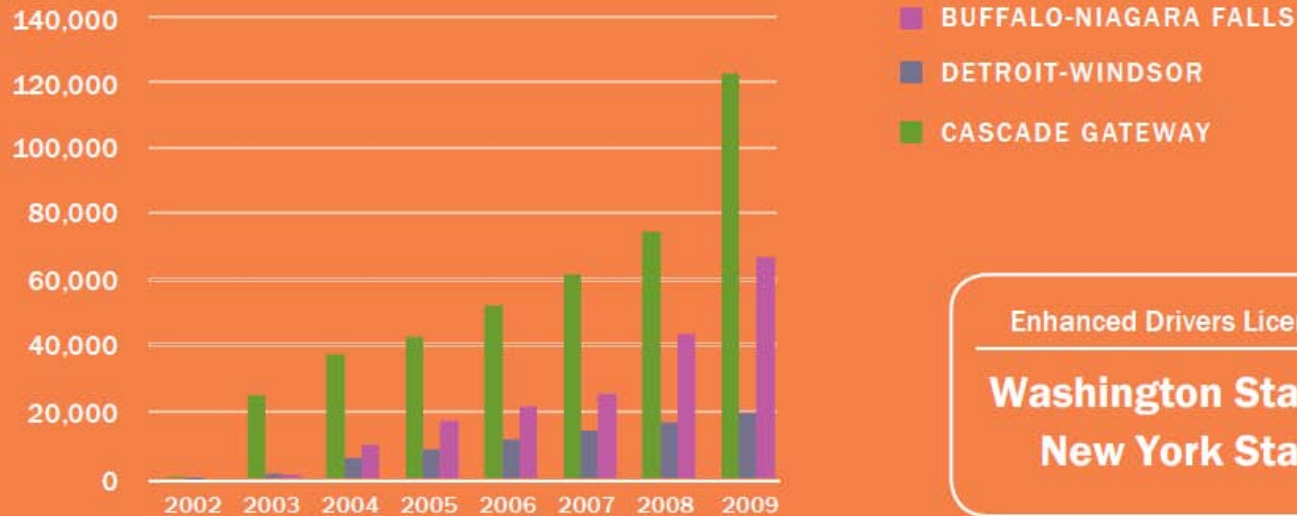
Growth in Personal Vehicle Traffic



# Border Infrastructure: Document Uptake

## DOCUMENT UPTAKE

NEXUS Enrollment, 2002-2009



Enhanced Drivers Licenses Issued

**Washington State: 38,726**

**New York State: 18,277**

# Border Infrastructure: Booths to Traffic Ratio

| = 100,000 Vehicles

U.S. BOUND TRAFFIC 2007

# U.S. BOOTHS  
(as of Nov 2008)

U.S. BOOTHS  
per million vehicles



| Border Crossing                      | U.S. Bound Traffic 2007 | # U.S. Booths (as of Nov 2008) | U.S. Booths per million vehicles |
|--------------------------------------|-------------------------|--------------------------------|----------------------------------|
| <b>Cascade Gateway</b>               |                         |                                |                                  |
| Peace Arch (UNDER CONSTRUCTION)      | 1,677,045               | 4                              | 2.4                              |
| Peace Arch (UNDER NORMAL CONDITIONS) |                         | 10                             | 6.0                              |
| Pacific Hwy                          | 1,086,344               | 6                              | 5.5                              |
| Sumas                                | 634,764                 | 4                              | 6.3                              |
| <b>Detroit-Windsor</b>               |                         |                                |                                  |
| Ambassador Bridge                    | 2,824,810               | 19                             | 6.7                              |
| Detroit-Windsor Tunnel               | 2,366,491               | 8                              | 3.4                              |
| <b>Buffalo-Niagara Falls</b>         |                         |                                |                                  |
| Peace Bridge                         | 2,647,531               | 17                             | 6.4                              |
| Rainbow Bridge                       | 1,702,138               | 18                             | 10.6                             |
| Whirlpool Bridge                     | 144,200                 | 3                              | 20.8                             |
| Lewiston-Queenston Bridge            | 1,465,003               | 7                              | 4.8                              |

# Border Infrastructure: Booths to Traffic Ratio

TRUCKS



# Border Infrastructure: Binational Networks

Organizational Networks

**MULTI-PURPOSE**  
Intergovernmental Initiatives



**SINGLE-PURPOSE**  
Intergovernmental Initiatives



**MULTI-PURPOSE**  
Urban and Civilian Initiatives



**SINGLE-PURPOSE**  
Urban and Civilian Initiatives



|  | Cascade Gateway  | Detroit-Windsor  | Buffalo-Niagara Falls   | Multi-Regional   |
|--|--|--|---|--|
| <b>MULTI-PURPOSE Intergovernmental Initiatives</b>   | Pacific Northwest Economic Region (PNWER)<br>BC-Washington Memorandum of Cooperation   | Ontario-Michigan Declaration of Partnership and MOU on Cooperation   | Ontario-New York Declaration of Partnership and MOU on Cooperation<br>Niagara 10  | Council of State Governments<br>National Conference of State Legislatures<br>Council of Great Lakes Governors<br>Great Lakes Commission                        |
| <b>SINGLE-PURPOSE Intergovernmental Initiatives</b>  | International Mobility and Trade Corridor<br>BC-Washington Transportation Protocol Agreement<br>BC-Washington Action Plan on Border Management | Ontario-Michigan Border Transportation Partnership<br>Ontario-Michigan Letter of Agreement Regarding Events at Nuclear Power Plants<br>Ontario-Michigan MOU on Trade<br>Detroit-Windsor Tunnel Corporation | Buffalo and Fort Erie Public Bridge Authority<br>Niagara Falls Bridge Commission<br>Niagara International Transportation Technology Coalition                                     | International Joint Commission   |
| <b>MULTI-PURPOSE Urban and Civilian Initiatives</b>  | Pacific Corridor Enterprise Council<br>Cascadia Project<br>Center for Canadian-American Studies, Western Washington University                 | Canadian Studies Center, Michigan State  | University at Buffalo's Regional Institute<br>Niagara Regional Observatory  | Great Lakes and St. Lawrence Cities Initiative<br>Northern Border University Research Consortium   |
| <b>SINGLE-PURPOSE Urban and Civilian Initiatives</b> | Border Policy Research Institute, Western Washington University<br>Shared Waters Alliance  | Canada-U.S. Business Association<br>World Trade Center Detroit/Windsor<br>Wayne State/University of Windsor Exchange Agreement<br>Lower Detroit River Conservation Vision                                  | World Trade Center Buffalo Niagara<br>Binational Tourism Alliance<br>Brock University/University at Buffalo Exchange Agreement<br>Canada-U.S. Trade Center, University at Buffalo | Council of Great Lakes Industries<br>Canadian/American Border Trade Alliance<br>Canadian American Business Council<br>Woodrow Wilson Center's Canada Institute |

RELATIVELY STRONG

SIGNIFICANT

RELATIVELY WEAK

Note: Rankings based on relative scope and influence of networks and initiatives across the three examined regions.

# Lessons Learned

**Data Rich but Knowledge Poor?**

**Accessibility**

**Proper Collection and Measurement**

---



## Measuring Border Performance: Data Rich but Knowledge Poor?

### Lessons Learned From the 2009 Border Barometer

★ **In Step, In Line, On Time:** ★  
**Regional Strategies for Trade, Security and Mobility  
Challenges at the Canada-US Border**

---

Dr. Kathryn Bryk Friedman  
The NEXTRANS Center  
Purdue University  
West Lafayette, Indiana

November 16, 2009

 **Regional Institute**  
**University at Buffalo** *The State University of New York*