A Capitol Hill Breakfast Briefing on
The Great Lakes Seaway Navigation System
Economic Impacts, System Investments,
& Maritime Trade Opportunities

Essential to the Region, the Nation, and the World

October 7, 2015
8:30 a.m.
Rayburn House Office Building, B-339
The GL/SLS System

- 160 Million Tons Annually
- 100 Ports
- 8 States
- 2 Provinces
- U.S. Flag Fleet
- Canadian Flag Fleet
- International Cargo
The GL/SLS Is a Key Economic Catalyst to the U.S. and Canadian Economies

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Jobs</td>
<td>226,833 jobs generated by marine cargo activity</td>
</tr>
<tr>
<td></td>
<td>• 92,923 direct jobs</td>
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<tr>
<td></td>
<td>• 66,005 induced jobs</td>
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<tr>
<td></td>
<td>• 67,905 indirect jobs</td>
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<tr>
<td>Revenue</td>
<td>$33.6 billion of direct business revenue</td>
</tr>
<tr>
<td></td>
<td>• Direct revenue from supply of services to cargo and vessels</td>
</tr>
<tr>
<td>Income</td>
<td>$14.1 billion total personal income and local consumption</td>
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<td>• $4.4 billion direct wages and salaries -- $47,000 average salary for direct employees</td>
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<td>• $6.9 billion re-spending/local consumption</td>
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<tr>
<td></td>
<td>• $2.9 billion indirect income</td>
</tr>
<tr>
<td>Taxes</td>
<td>$4.5 billion of federal, state/provincial and local taxes</td>
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<tr>
<td></td>
<td>• $1.5 billion of state/provincial and local tax revenue</td>
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<td>• $3.0 billion of federal tax revenue</td>
</tr>
</tbody>
</table>
Distribution of Direct Jobs by Country

Job Impacts by Country

- Direct
- Induced
- Indirect

Canada
U.S.

0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
100,000
Total Jobs by State and Province

6,271 Jobs
8,777 Jobs
26,819 Jobs
7,177 Jobs
48,332 Jobs
28,081 Jobs
6,271 Jobs
35,013 Jobs
1,967 Jobs
854 Jobs
35,013 Jobs
63,542 Jobs
28,081 Jobs
48,332 Jobs
26,819 Jobs
7,177 Jobs
8,777 Jobs
6,271 Jobs
Direct, Induced and Indirect Jobs Created by U.S. and Canadian Flag Lakers

107,612 Jobs

101,568 Jobs
Nearly 500,000 Additional Jobs with Users Are Related to the Cargo Activity on the GL/SLS

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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</table>
| **477,593 jobs related to the marine cargo activity** | • 393,262 related jobs in the U.S.  
• 84,331 related jobs in Canada                  |
| **$115.5 billion of related business revenue**    | • $83.9 billion related revenue in the U.S.  
• $31.6 billion related revenue in Canada         |
| **$22.7 billion related personal income and local consumption** | • $18.2 billion related wages and salaries  
• $4.5 billion re-spending/local consumption      |
| **$7.0 billion of related federal, state/provincial and local taxes** | • $5.1 billion of related taxes in the U.S.  
• $1.9 billion of related taxes in Canada         |
Since 2009, $6.9 Billion of Public and Private Sector Investment on the GL/SLS

Billions of 2013 $

- Vessel: $4.0
- Ports & Terminals: $1.7
- Waterway Infrastructure: $1.2

Legend:
- Green: Vessel
- Red: Ports & Terminals
- Blue: Waterway Infrastructure
Investment on the GL/SLS is Driven by Private Sector Investment

Billions of 2013 $

- **Private Sector**: $4.6
- **Ports and Terminals**: $2.3
Opportunities

• Focus on near port/on-port industrial development:
  - Bulk and aggregates
  - Steel manufacturing/assembly
  - Leverage industrial development to maximize use of ports
  - Higher value commodities

• Development of clean energy port complex:
  - Wind energy:
    - In-land project development
    - Off-shore production
    - Manufacturing and educational/research complex
  - LNG bunkering:
    - Compliance with ECA
  - Bio fuels – wood chips
Marcellus and Utica Shale Deposits Present Significant Opportunities

Lower 48 states shale plays

Energy Market

• Provide vessel transit for LNG and NGL to serve East Coast as well as export

• Provide fuel for local markets:
  - Trucking
  - Vessel
  - Utilities

• Supply oil fields:
  - Fracking Sand
  - Equipment
Develop Liner Service

• Development of liner services:
  - Cleveland aggressively pursued development of liner service
  - Identification of local markets now using coastal ports:
    - Containers
    - RoRo, Project Cargo
    - Break Bulk
  - Minimize port calls on GL/SLS to maintain schedule integrity
Polar Routing of Energy Projects??
Opportunities

- Enhance federal opportunities to expand regional trade and economic development
  - Maximize U.S. Seaway Corporation (SLSDC) authorities to include bonds, loans and other federal assistance
  - Ensure future national maritime and transportation policies, regulations, and laws incorporate Great Lakes Seaway System maritime commerce options for resiliency
Challenges

• Growth in vessel size
• Limited shipping season
• Maintenance dredging issues:
  - Lack of maintaining St. Marys River at authorized depth costs U.S. Flag maritime industry nearly $20 million/year
• Ice breaking issues:
  - 2015 season ice impacts
  - Loss of 3.2 million tons from January through April 2015 (US Flag)
  - Nearly 2,000 jobs impacted
  - $355.6 million of revenue lost
Challenges

• Limited volume for multiple liner services
• Tolls
• Insurance
• Transload of grain into containers
• Decline in coal use in utilities:
  - Substitute fuels
  - LNG
  - Wind energy
• Enforcement of ECA’s:
  - Low sulphur fuel requirements
  - Scrubbers
  - LNG propulsion
THANK YOU!
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