Freight Transportation & the Panama Canal

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What Questions Should be Asked about the Canal...

- Is it needed?

- Does it fundamentally change North American flows?

- Can (will) I get a piece of the pie?
History of Panama Canal Expansion

- **1914** - Opened
- **1930’s** - First consideration for expanding third locks considered
- **1977** - Signing of the Panama Canal Treaty (Torrijos-Carter Treaty)
- **1999** - All canal properties transferred to the Republic of Panama.
- **2006** - Panamanian Voters approved Referendum authorizing expansion of Canal
- **2014** - Target Date for 3rd Locks
Why Expand the Canal?

- Enjoyed strong growth before “great recession”
- Critical, but obsolete, bottleneck
- West coast uncertainties
- Vessel economics
Comparison between Panamax and Post-Panamax Container Vessels

- **Length of Post-Panamax Vessel**: 366m
- **Draft**: 15m
- **Beam**: 49m
- **Panamax Vessel**: 294m
- **Draft**: 12m
- **Beam**: 32m
- **Length of Post-Panamax Vessel**: 366m
- **Beam**: 49m
- **Panamax Vessel**: 294m
- **Beam**: 32m

<table>
<thead>
<tr>
<th></th>
<th>Panamax</th>
<th>Post-Panamax</th>
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<tbody>
<tr>
<td><strong>Capacity</strong></td>
<td></td>
<td></td>
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<tr>
<td>Containers (TEUs)</td>
<td>4,500</td>
<td>12,000</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
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<tr>
<td>Beam</td>
<td>32m (106')</td>
<td>49m (160')</td>
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<tr>
<td>Length</td>
<td>294m (965')</td>
<td>366m (1,200')</td>
</tr>
<tr>
<td>Draft</td>
<td>12m (39.5')</td>
<td>15m (50')</td>
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Components of Third Set of Locks Project

1. Deepening and widening of the Atlantic entrance channel
2. New approach channel for the Atlantic Post-Panamax locks
3. Atlantic Post-Panamax locks with 3 water saving basins per lock chamber
4. Raise the maximum Gatun lake operating water level
5. Widening and deepening of the navigational channel of the Gatun lake and the Culebra Cut
6. New approach channel for the Pacific Post-Panamax locks
7. Pacific Post-Panamax locks with 3 water saving basins per lock chamber
8. Deepening and widening of the Pacific entrance channel
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"[The shipping industry] now carries more than 90% of the world's trade by volume, and has tripled its tonnage since 1970."


NOTE: The data in this figure include only loaded containers in U.S. international maritime activity and cover U.S. imports, exports, and transshipments. Therefore, the trade levels will be greater than those reported from U.S. international trade statistics, which exclude transshipments. The data also exclude military shipments.

The Canal “Question” Today

The Known

• The Canal is expanding
• Trade already shifted from West Coast
• Total Trade will recover in next few years
• Inbound logistics driving system

The Unknown

• Will S. Cal ports push trade away?
• Will Eastern U.S. ports receive dredging?
• How much more cargo is divertible?
• How (when) will vessels be deployed?
• Balance between Canal tolls and Railroad costs?
• External Shocks?
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Exports as Share of Kentucky GDP, 1997-2008

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce & WISERTrade State Exports
Kentucky Shipments by Origin, Trade by Mode, By Value 2000-2010
Kentucky Shipments of Origin, top Destinations 2010
(Vessel Shipments- $5.2 Billion)

- Japan (11%)
- Germany (10%)
- China (9%)
- Korea, Republic Of (7%)
- Belgium (5%)
- Brazil (5%)
- United Kingdom (5%)
- Australia (4%)
- Malaysia (4%)
- Netherlands (3%)
- Other (37%)
Connecting Regional Export Markets to Panama Canal

- Intermodal Terminals
- Container Interoperability
- Who is the Champion?
- Who bears the cost?
- Can you develop densities?
AASHTO - Transportation Invests In Our Future
Freight Access and Mobility Represent Transformative Opportunities
Thank you

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