



Framing the Discussion of Supply Chain Disruptions



Why Frame the Discussion?

- Learn what worked and didn't work
- Understand how agencies and organizations worked together
- Differentiate between the shorter- and longer-term impacts
 - Short term impacts and recovery affect immediate capital needs and operations
 - Longer term impacts affect outlooks and long term positions



A Disruption Spectrum

**Planned
Disruptions**

**Predictable
Disruptions**

**Rapid
Disruptions**

**Abrupt
Disruptions**



**Columbia River
Closure**

**Winter Weather,
Labor Actions**

**Hurricane
Katrina,
Superstorm
Sandy**

**9/11, Howard
Street Tunnel Fire**



Defining Sandy as a Supply Chain Disruption

Characteristics	Superstorm Sandy
Geographical Scope Affected	<ul style="list-style-type: none">• Extensive – the entire East Coast• At landfall – the New York-New Jersey Region
Freight Facilities Affected	<ul style="list-style-type: none">• All• Ports closed along the East Coast in the storm’s path• Railroads, trucking lines, airports and air cargo, pipelines (power outages, flooding, damage)
Commodities and Shipments Affected	<ul style="list-style-type: none">• Occurred during peak delivery week• Multiple commodities and shipments affected
Recovery Time from Disruption	<ul style="list-style-type: none">• Port of New York-New Jersey closed for nearly a week• Physical repairs to facilities still occurring

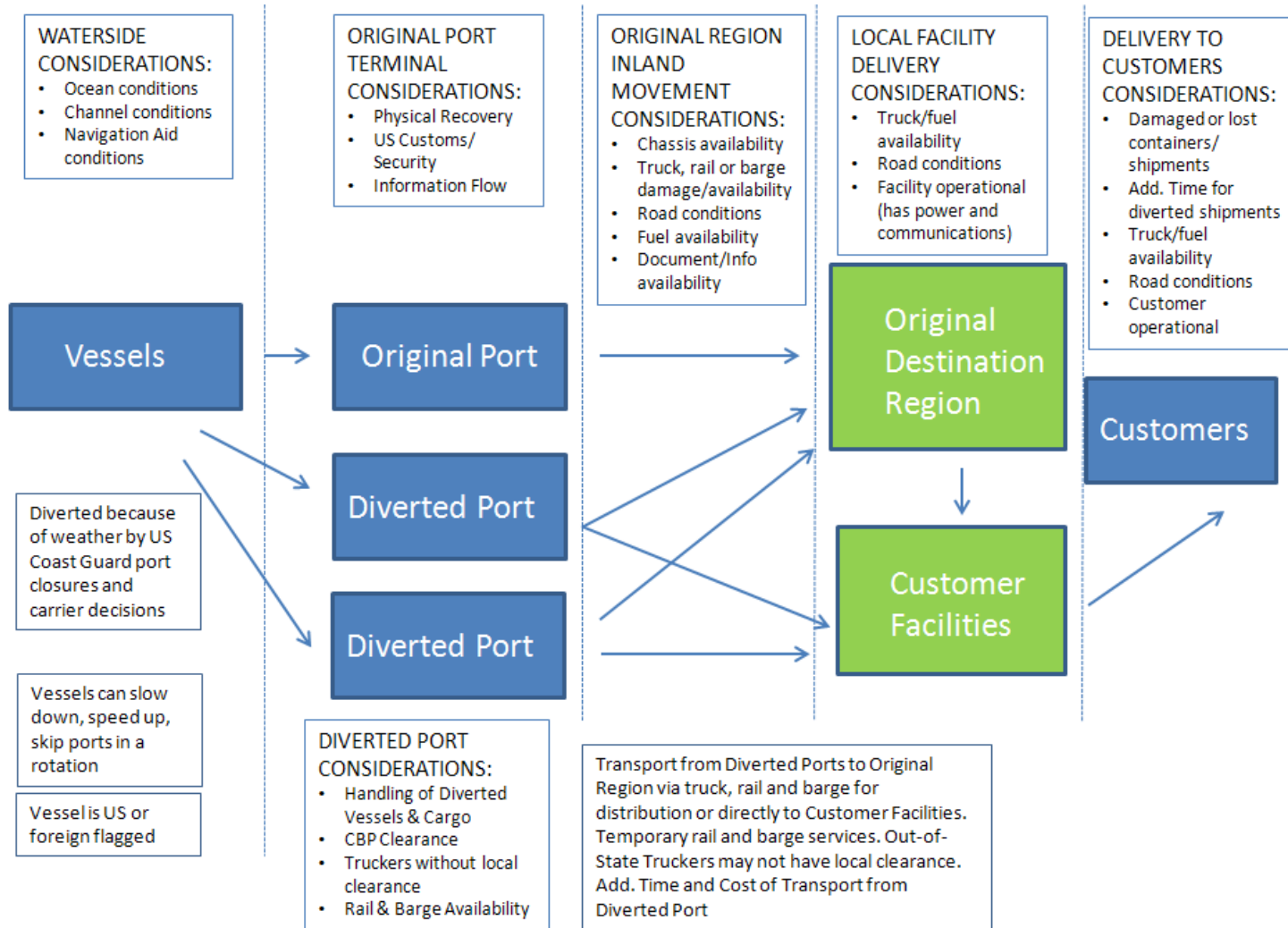
Categories from: Methodologies to Estimate the Economic Impacts of Disruptions to the Goods Movement System, NCHRP 732 (2012)

Three Sets of Activities for Freight Movement

Activities	Definitions and Examples
Physical Flows	<ul style="list-style-type: none">• Any physical activity directly needed for freight movement• Vessels, terminals, railroads, trucks, pipelines, aircraft, warehouses and distribution centers
Communication & Information Flows	<ul style="list-style-type: none">• Any information and transactional exchange needed for freight movement• Bills of lading, financial flows, customer notifications, delivery appointments, warehouse management systems, inter-agency communications, etc.
Regulatory Considerations	<ul style="list-style-type: none">• Any gov't regulations, rules, and agency activities needed for or shaping freight movement• USCG, CBP, truck driver credentials, Jones Act

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Import Container Disruption Topography



Moving into the Discussion

- Learn and improve from every disruption.
- Expect the unexpected.
 - Sandy highlighted power, communications and surge issues.
- Focus on commonsense solutions.
- Having solid relationships is key to recovery.

