

MTS Recovery – Baseline Essential Elements of Information (EEIs) Guide

EEIs should be established to track and report the status of components of the MTS. Each EEI is comprised of baseline information for the EEI and detailed information for each instance of the EEI. This Guide includes Sample EEI templates to be completed and included in the MTS Recovery Plan prior to a transportation incident. Even though the cause of an incident that has resulted in an impact to the MTS may be: a manmade or natural event; intentional or accidental; affecting physical Elements of the MTS, the effects of the impact on each EEI should be reported in a consistent manner according to this template. An explanation of the templates follows:

1. Definition	
A definition is provided for the EEI within the context of MTS Recovery tracking and reporting.	
2. Status	
EEI status reporting is explained. In most cases, the reporting protocol is “Fully Available, Partially Available, Not Available.” Exceptions are noted in the appropriate EEI templates. Definitions for these terms are included in this section of the template.	
3. Baseline	
This is the data requirement to establish a pre-incident baseline. In most cases, this will be the total number of instances for the EEI (e.g. total number of bridges, bulk liquid facilities, etc.)	
4. Detailed Data	
Requirements for detailed data for each instance of an EEI are included in this section. In addition to data such as names, types, products, etc., one common data requirement for every instance of every EEI is location (in latitude and longitude). The purpose of this requirement is to facilitate geospatial display of data as additional MTS Recovery tools become available.	
5. Data Sources	
Suggestions for typical data sources are included. Sectors are encouraged to identify additional data sources and to add these to the individual EEI templates.	
6. Stakeholders	
The templates include primary stakeholders. Sectors are encouraged to identify additional stakeholders and to add these to individual EEI templates	

EEI CATEGORY: WATERWAYS AND NAVIGATION SYSTEMS:

EEI TYPE: AIDS TO NAVIGATION (ATON)

1. Definition	
For the purpose of this EEI, Aids to Navigation (ATON) refers to Short Range Aids to Navigation: buoys, beacons, lights, lighthouses, ranges, sound signals (horns, bells, gongs, and whistles) and radar-reflecting devices. These assist mariners in safely navigating a waterway by marking navigable channels and hazards.	
2. Status	
Status should be reported as: <u>Fully Available</u> : ATON is watching properly. <u>Partially Available</u> : Temporary corrective action has been taken to ATON. <u>Not Available</u> : ATON is not watching properly.	
When reporting Partially or Not Available, comment in the free form comment block if it is a Cyber incident, the type of event, and the work-around.	
3. Baseline Data	
Total number of ATON in the defined incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> Name/Identifier of each ATON Location (latitude and longitude) Waterway 	
5. Data Sources	
<ul style="list-style-type: none"> Field ATON units via Maritime Agency responsible for Waterways Management Pilots Professional Mariners 	
6. Stakeholders	
<ul style="list-style-type: none"> Pilots Navy Professional Mariners 	<ul style="list-style-type: none"> Waterway Operators Recreational Boat Operators Port Authority

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EEI CATEGORY: WATERWAYS AND NAVIGATION SYSTEMS
EEI TYPE: DEEP DRAFT CHANNELS

1. Definition	
For the purpose of this EEI, Deep Draft Channels refer to navigational channels that have a project depth of greater than 12 feet.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Channel can be navigated as per pre-incident condition. <u>Partially Available</u> : Channel may be navigated with some restrictions (e.g. only inbound or outbound; only a portion of the channel, etc.). <u>Not available</u> : Channel cannot be navigated.	
3. Baseline Data	
Total number of deep draft channels in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name/Identifier of each deep draft channel • Location (latitude and longitude) • Waterway • Is this a Government-Managed Channel? (Channels are those navigation channels that have been authorized by the Government and whose depth is maintained by the an authorized Agency) • Channel Depth • Average daily vessel arrivals (Spring, Summer, Fall, and Winter; cite source of information) <ul style="list-style-type: none"> ■ Include commodities carried by the vessels 	
5. Data Sources	
<ul style="list-style-type: none"> • Responsible Agency – channel depths • Vessel Pilots, Masters, Agents • Local Ports • Navigation Charts 	
6. Stakeholders	
<ul style="list-style-type: none"> • Pilots • Navy 	<ul style="list-style-type: none"> • Customs • Port Authorities

EEI CATEGORY: WATERWAYS AND NAVIGATION SYSTEMS
EEI TYPE: NON-DEEP DRAFT CHANNELS

1. Definition	
For the purpose of this EEI, For the purpose of this EEI, Non-Deep Draft Channels refer to navigational channels that have a project depth of 12 feet or less.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Channel can be navigated as per pre-incident condition. <u>Partially Available</u> : Channel may be navigated with some restrictions (e.g. only inbound or outbound; only a portion of the channel, etc.). <u>Not available</u> : Channel cannot be navigated.	
3. Baseline Data	
Total number of federal channels in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name of each channel • Location (latitude and longitude) (Cite location of the beginning of channel i.e. #1 entrance buoy) • Waterway • Is this a Government-Managed Channel? (Channels are those navigation channels that have been authorized by the Government and whose depth is maintained by the an authorized Agency) • Channel Depth 	
5. Data Sources	
<ul style="list-style-type: none"> • Responsible Agency – channel depths • Navy or Responsible Agency that conducts channel survey operations to ensure no hazards to navigation lie in channel or waterways. • Pilots and Other Waterway Operators • Navigation Charts 	
6. Stakeholders	
<ul style="list-style-type: none"> • Port Authorities • Waterway Operators 	<ul style="list-style-type: none"> • Pilots Associations • Commercial Fishermen • Recreational Boaters

**EEI CATEGORY: PORT AREA – MTS ESSENTIAL
INFRASTRUCTURE:**

EEI TYPE: BRIDGES

1. Definition	
For the purpose of this EEI, Bridges refer to bridges over navigable waterways. These include both rail and highway bridges.	
2. Status	
<p>Status should be reported as:</p> <p><u>Fully Available</u>: Bridge is operating at pre-incident capability.</p> <p><u>Partially Available</u>: Bridge may be operated with some restrictions or limitations; or bridge damage restricts, but does not prevent, vessel navigation; or bridge may be locked in the open position, thereby allowing vessel navigation under the bridge.</p> <p><u>Not available</u>: Bridge is not operational or is damaged such that vessels cannot transit under the bridge.</p>	
3. Baseline Data	
Number of total bridges in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name of each bridge • Location (Latitude and Longitude) (Mid-point of span)_ • Type of bridge (e.g. highway draw bridge, railroad bridge) • Waterway affected • Vessel traffic in the queue 	
5. Data Sources	
<ul style="list-style-type: none"> • Local Transportation Departments/Vessel Traffic Centers • Railroad Companies • Waterway Users • Maritime Agency 	
6. Stakeholders	
<ul style="list-style-type: none"> • City and Local Ports • Local Port Authorities • Local Port Associations • Local River Maritime Association • Waterway Operators 	<ul style="list-style-type: none"> • Pilots • Towing Companies • Transportation Agency • Railroad Administration • Local Bridge Owners • Railroad Companies

EEI CATEGORY: PORT AREA – MTS ESSENTIAL INFRASTRUCTURE:
EEI TYPE: BULK LIQUID FACILITIES

1. Definition	
For the purpose of this EEI, Bulk Liquid Facilities are waterfront facilities that handle bulk liquid cargoes (petroleum and hazardous materials).	
2. Status	
Status should be reported as: <u>Fully Available</u> : Bulk liquid facility is operating at pre-incident capability. <u>Partially Available</u> : Bulk liquid facility is operating at reduced capability. <u>Not available</u> : Bulk liquid facility has no capability to conduct transfer operations due to damage to the facility or piers/wharves or due to obstructions preventing vessels from mooring at the facility.	
3. Baseline Data	
Number of bulk liquid facilities in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name of each bulk liquid facility • Location (Latitude and Longitude) • Waterway • Primary Products received from vessels (no more than 3) • Primary Products transferred to vessels (no more than 3) • Importance, criticality, or uniqueness of cargo • Average daily receiving transfer amount • Average daily outbound transfer amount • Average number of daily vessel arrivals 	
5. Data Sources	
<ul style="list-style-type: none"> • Agency records on regulated facilities • Port Authorities • National Highway Traffic Safety Administration • Energy Agency • Oil Pipeline Agency 	
6. Stakeholders	
<ul style="list-style-type: none"> • Port Authorities • Local Towing organizations • Transportation Agency <ul style="list-style-type: none"> ○ Highway Association ○ Motor Carrier Safety Association ○ Maritime Administration 	<ul style="list-style-type: none"> • Security Agency • Pilots • Waterfront facilities (Bulk Liquid, Refineries, etc.) • Railroads • Trucking and highway transportation

EEI CATEGORY: PORT AREA – MTS ESSENTIAL INFRASTRUCTURE:
EEI TYPE: CONTAINER CARGO FACILITIES

1. Definition	
For the purpose of this EEI, Container Cargo Facilities are waterfront facilities that load and/or unload cargo containers from/to vessels. These facilities may also handle non-containerized cargo, but will be classified as Container Cargo Facilities.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Container cargo facility is operating at pre-incident capability. <u>Partially Available</u> : Container cargo facility is operating at reduced capability. <u>Not available</u> : Container cargo facility has no capability to conduct loading/unloading operations due to damage to the facility or piers/wharves or due to obstructions preventing vessels from mooring at the facility.	
3. Baseline Data	
Number of container cargo facilities in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name of each container cargo facility • Location (Latitude and Longitude) • Waterway • Average daily number of twenty-foot equivalents (TEUs) off-loaded from vessels • Average daily number of TEUs loaded onto vessels • Importance, criticality, or uniqueness of cargo • Average number of daily vessel arrivals 	
5. Data Sources	
<ul style="list-style-type: none"> • Agency records on regulated facilities • Port Authorities • National Highway Traffic Safety Administration 	
6. Stakeholders	
<ul style="list-style-type: none"> • Local Port Authorities • Shipping lines • Trucking and highway transportation companies • Transportation Agency <ul style="list-style-type: none"> ○ Highway Association ○ Motor Carrier Safety Association ○ Maritime Administration 	<ul style="list-style-type: none"> • Security Agency • Pilots • Waterfront facilities (Containerized cargo facilities, Warehouses, etc.) • Railroads • Agriculture Community • Port/dock workers

**E EI CATEGORY: PORT AREA – MTS ESSENTIAL INFRASTRUCTURE:
 EEI TYPE: NON-CONTAINERIZED CARGO FACILITIES**

1. Definition	
For the purpose of this EEI, Non-containerized Cargo Facilities are waterfront facilities that load/unload solid bulk or break-bulk cargo to/from vessels, but which do not handle containerized cargo, or bulk liquid cargo.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Non-container cargo facility is operating at pre-incident capability. <u>Partially Available</u> : Non-container cargo facility is operating at reduced capability. <u>Not available</u> : Non-container cargo facility has no capability to conduct loading/unloading operations due to damage to the facility or piers/wharves or due to obstructions preventing vessels from mooring at the facility.	
3. Baseline Data	
Number of total non-containerized cargo facilities in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Location (Latitude and Longitude) • Waterway • Typical cargoes off-loaded from vessels • Typical cargoes loaded onto vessels • Importance, criticality, or uniqueness of cargo • Average daily tonnage of cargo off-loaded from vessels • Average daily tonnage of cargo loaded onto vessels • Average number of daily vessel arrivals 	
5. Data Source	
<ul style="list-style-type: none"> • Agency records on regulated facilities • Port Authorities • National Highway Traffic Safety Administration 	
6. Stakeholders	
<ul style="list-style-type: none"> • Security Agency • Transportation Agency <ul style="list-style-type: none"> ○ Highway Association ○ Motor Carrier Safety Association ○ Maritime Administration 	<ul style="list-style-type: none"> • Trucking and highway transportation companies • Pilots • Waterfront facilities (General Cargo, Warehouses, etc.) • Railroads • Towing organizations

EEI CATEGORY: PORT AREA – MTS ESSENTIAL INFRASTRUCTURE:
EEI TYPE: HIGH CAPACITY PASSENGER VESSEL AND FERRY TERMINALS

1. Definition	
For the purpose of this EEI, High Capacity Passenger Vessel and Ferry Terminals are waterfront facilities that embark and disembark passengers from and to high capacity passenger vessels (cruise ships) and ferries carrying 500 or more passengers.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Passenger or Ferry Terminal is operating at pre-incident capability. <u>Partially Available</u> : Passenger or Ferry Terminal is operating at reduced capability. <u>Not available</u> : Passenger or Ferry Terminal has no capability to embark or disembark passengers.	
3. Baseline Data	
Number of high capacity passenger vessel and ferry terminals in the incident area listed individually.	
4. Detailed Data	
<ul style="list-style-type: none"> • Name of each terminal • Location (latitude and longitude) • Waterway • Type (cruise ship terminal, ferry terminal) • Number of cruise ships docked on a typical day • Number of ferry arrivals/departures on a typical day • Number of ferry passengers per week (Spring, Summer, Fall, Winter) 	
5. Data Source	
<ul style="list-style-type: none"> • Port Authorities • Cruise Lines • Terminal Operators 	
6. Stakeholders	
<ul style="list-style-type: none"> • Cruise Lines • Port Authority • Office of Tourism • Local Chamber of Commerce 	<ul style="list-style-type: none"> • Customs • Ferry passengers • HCPV passengers

EEI TYPE: COMMERCIAL FISHING VESSELS

1. Definition	
For the purpose of this EEI, Commercial Fishing Vessels are vessels that engage in commercial fishing. Recreational boats and charter fishing boats are not included in this EEI.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Commercial Fishing Vessels are operating at pre-incident capability. <u>Partially Available</u> : Commercial Fishing Vessels are operating at reduced capability. <u>Not available</u> : Commercial Fishing Vessels cannot operate.	
3. Baseline Data	
Pre-incident average number of commercial fishing vessels in the incident area.	
4. Detailed Data	
None	
5. Data Sources	
<ul style="list-style-type: none"> • Agency Responsible for Commercial Fishing Vessels • Local Fishery Management Councils 	
6. Stakeholders	
<ul style="list-style-type: none"> • Public • Fish / Ice houses 	<ul style="list-style-type: none"> • Owner/Operators • Commercial Fishing Vessel Associations

EEI TYPE: HIGH CAPACITY PASSENGER VESSELS AND FERRIES

1. Definition	
For the purpose of this EEI, High Capacity Passenger Vessels and Ferries are those vessels certified to carry passengers carrying 500 or more passengers.	
2. Status	
Status should be reported as: <u>Fully Available</u> : High Capacity Passenger Vessels and Ferries are operating at pre-incident capability. <u>Partially Available</u> : High Capacity Passenger Vessels and Ferries are operating at reduced capability. <u>Not available</u> : High Capacity Passenger Vessels and Ferries cannot operate.	
3. Baseline	
Pre-incident average number of passenger and ferry vessels in the incident area.	
4. Detailed Data	
<ul style="list-style-type: none"> • Typical cruise ship route/operating area (e.g. Port Canaveral to Eastern Caribbean) • Ferry route (starting/ending point) 	
5. Data Source	
<ul style="list-style-type: none"> • Port Authorities • Cruise Lines 	
6. Stakeholders	
<ul style="list-style-type: none"> • Cruise Lines • Port Authority • Office of Tourism 	<ul style="list-style-type: none"> • Customs • Local Chamber of Commerce

EEI TYPE: SMALL PASSENGER VESSELS

1. Definition	
For the purpose of this EEI, Small Passenger Vessels are those vessels certified to carry passengers. These include tour boats, harbor cruise vessels, sightseeing vessels, and charter fishing vessels, among others.	
2. Status	
Status should be reported as: <u>Fully Available</u> : Small Passenger Vessels are operating at pre-incident capability. <u>Partially Available</u> : Small Passenger Vessels are operating at reduced capability. <u>Not available</u> : Small Passenger Vessels cannot operate.	
3. Baseline Data	
Pre-incident average number of small passenger vessels in the incident area.	
4. Detailed Data	
None	
5. Data Source	
<ul style="list-style-type: none"> • Passenger Vessel Association • Industry • Maritime Agency 	
6. Stakeholders	
<ul style="list-style-type: none"> • Port Authorities • Local government 	<ul style="list-style-type: none"> • Small passenger vessel operators • Local Chambers of Commerce

MTS Recovery Reports

Sectors/applicable MSU's are responsible for producing MTS Executive Summary reports that will ensure an appropriate level of information is passed through the chain of command. Use of CART will enable an Executive Summary to be generated automatically and will satisfy the MTS sections of the standard SITREP reporting requirement. Since Cyber Systems EEIs do not reside in CART, disruptions to Cyber Systems must be reported separately via SITREP. However, disruptions to all other MTS EEIs that do reside in CART, when disrupted by a cyber event, should be reported through CART. If unable to use CART, MTS Recovery Reports must be included in the SITREP. The type and frequency of reports required during a response to any incident involving MTS recovery is as follows:

MTS Executive Summary - This is a narrative report that describes the incident, affected area, MTS status, and MTS recovery actions. CART will automatically generate the Executive Summary on demand. The Executive Summary should be the primary mechanism for providing MTS recovery information. The free form sections of CART should be updated as significant changes occur in status, concerns or planned actions. At a minimum, these sections should be reviewed and updated daily, to coincide with the SITREP reporting cycle. Attachment (A) to this enclosure is the template from CART that may be used as a guide for completing the free form sections of CART that will feed the Executive Summary. Attachment (B) to this enclosure is a sample Executive Summary.

Situation Report (SITREP) - The IC/UC is responsible for submitting daily SITREPs. The SITREP should reference the attached MTS Executive Summary in the applicable sections of the SITREP, in lieu of providing the detailed MTS recovery information. The MTS Executive Summary should be submitted as an attachment to the SITREP. If unable to generate an Executive Summary, the SITREP should include as a minimum:

- Recovery Actions by the IC/UC
- Summary description of the impact of the incident on the MTS
- Summary of condition and impact to each of the EEIs appropriate for the incident (i.e. bridges, bulk liquid facilities, etc.). These summary statements shall refer to the baseline for each EEI (e.g. "There are 20 bridges over navigable waterways in the affected area. Of these, 10 have been damaged. Of the 10 affected bridges, two have been repaired and are operating at pre-incident capacity and four are operating at reduced capacity. There are four bridges in the affected area that have been damaged or are inoperable to the point where no vessel traffic can pass through the waterways under these bridges.")
- Vessels in the queue: Include a statement describing how many vessels are in the queue as a result of damage to infrastructure such as locks or due to navigation obstructions or waterways management actions.
- Future plans to facilitate MTS recovery and resumption of commerce.

Executive Summary Template
(Name of Incident, Location) Executive Summary # (1, 2, etc.)

Incident Name:

Location:

Incident Summary:

(Brief description of the date, time, location, and circumstances of the incident. Circumstances should include the initiator of the incident. If a cyber disruption event, the Executive Summary should include what cyber elements are disrupted: Telephone, Radio, Internet, Private Network, Satellite, communications, SCADA, other automated systems)

Port/Incident Area Summary:

(Brief description of the port or the incident area. This should include a description of the major waterways and identification of typical types of cargo, marine transportation, and major facilities.)

MTS Impact:

(Summary of overall effect of the incident to the MTS in the incident area.)

MTS Recovery Actions:

(Description of actions being taken to address MTS Recovery.) Examples include:

- Establishment of the MTSRU, including any special representation by other agencies or industry
- Assistance by the MTSRAT
- Damage surveys being conducted
- Stakeholders meeting being conducted
- Goals, objectives, or priorities established by the IC/UC

Vessels in Queue:

(Describe how many vessels are in the queue as a result of damage to infrastructure such as locks, or due to navigation obstructions or waterways management actions and the actions taken to manage the queue (i.e. standing up a Queue Management Team, Port Coordination Team, use of PIPO or other software, etc..)

Cyber Mitigation Actions: * (not in cart)

(Describe any actions taken to mitigate the impact of the cyber disruptions whether by any party (owner/operator, industry consortium, service provider, federal/state/local agency or the Captain of the Port (COTP))

EEI Summary:

(Provide a summary for each EEI indicating the baseline, and number fully, partially, and not available. For vessel salvage and oil and hazardous materials incidents, indicate the number of cases opened, investigated, and closed. For Offshore Production, indicate the pre-incident average and current liquid hydrocarbon production (bbl/day) and pre-incident average and current natural gas production (mcf/day).

EEI	Base	FA	PA	NA	Comment
Waterways and Navigation Systems					
Aids to Navigation					
Deep Draft Channel					
Non-Deep Draft Chan.					
Locks					
		Open	Invest	Closed	
Vessel Salvage/Wrecks					
Oil Pollution Incidents					
HAZMAT Incidents					
Port Area – MTS Essential Infrastructure					
Bridges					
Bulk Liquid Facilities					
Container Facilities					
Non-container Facilities					
Shipyards					
Pass/Ferry Terminals					
Port Area - Vessels					
Commercial Fishing					
Passenger and Ferries					
Small Passenger					
Gaming					
Barges					
Offshore Energy					
Offshore Platforms					
Offshore Production (liquid hydrocarbons)	Pre-incident bbl/day	Current bbl/day			
Offshore Production (natural gas)	Pre-incident mcf/day	Current mcf/day			
Offshore Renewable Energy Installations					
Monitoring Systems					
Monitoring Systems					

Base = Baseline (pre-incident number)

FA = Fully Available

PA = Partially Available

NA= Not Available

Comments:

Use the comment column in the EEI Summary to provide specific information about the EEI category or component. Such information might address restoration or recovery challenges or might provide additional detail about recovery plans, such as when a facility might return to fully available, if a facility has the resources necessary to return to fully available, or if the facility requires government assistance to return to service. If a cyber incident, the comment should include what cyber system is affected.

EEI Trends:

If CART is functioning, include a trend diagram for each of the EEI categories as follows:

- **Waterways and Navigation Systems**
Depict over time the percentage of aids to navigation, deep draft channels, federal channels, and locks that are fully available. Also in this diagram or in a separate trend diagram, depict over time the percentage of salvage, oil spill, and hazardous materials cases opened during the incident that are closed.
- **Port Area – MTS Essential Infrastructure**
Depict over time the percentage of bridges, bulk liquid facilities, containerized cargo facilities, non-containerized cargo facilities, shipyards, and high capacity passenger vessel/ferry terminals that are fully available.
- **Port Area – Vessels**
Depict over time the percentage of commercial fishing, high capacity passenger/ferry, small passenger, and gaming vessels and barges that are fully available.
- **Offshore Energy**
Depict over time the percentage of offshore platforms that are fully available. Also depict over time the current cumulative liquid hydrocarbon and natural gas production as a percentage of pre-incident average cumulative liquid hydrocarbons and natural gas production.
- **Monitoring Systems**
Depict over time the percentage of fully available monitoring systems.

EEI Details:

(List each instance of an EEI (each bridge, each bulk liquid facility, etc.) affected by the incident by name and include a brief description of the condition, and comment on the system affected if a cyber event.)

Future Plans:

(Describe future plans regarding MTS Recovery. This section should include actions planned to clear waterways, mitigate environmental incidents, restore commerce, etc. as well as internal actions being taken such as convening MTS stakeholder groups or incorporating other agency resources.)

MTS Executive Summary Example

New Madrid Earthquake, Memphis, TN Executive Summary # 2

Incident Name: New Madrid Earthquake

Location: Memphis, TN

Incident Summary:

On 191400Z JUN 07, an earthquake with a magnitude of 7.7 occurred on the southwest section of the New Madrid zone. Duration of the earthquake was 34 seconds and caused significant damage to the Mississippi River Valley and the Sector Lower Mississippi River area of responsibility.

Port/Incident Area Summary:

In 2004, the Mississippi River handled 793.2 million tons of cargo. 31.7% of all waterborne commerce in the United States traveled on the Mississippi River. The International Port of Memphis received shipments of 17.5 million tons or 2.2% of the total moved on the Mississippi River. Of that total, the top five commodities moved were Petroleum at 32%, Crude Materials at 22%, Food and Farm Products at 21%, coal at 13% and Manufactured Goods at 8%. The top three food and farm products were Wheat, Corn and Rice.

The International Port of Memphis has 6 grain elevators which have 2,238 feet of berthing space, supplemented by 50 concrete silos and 25 steel tanks with storage capacity of over 12.3 million bushels. In the International Port of Memphis, Liquid bulk commodities are handled by 18 facilities that have 6,313 feet of berthing space and approximately 130 storage tanks with a total capacity of 88,956,750 gallons.

In addition, the International Port of Memphis is home to the Valero petroleum refinery, the only refinery in the State of Tennessee. The refinery has a direct pipeline that carries jet fuel from the refinery located at the port to the Memphis International Airport.

In the International Port of Memphis, dry bulk commodities are handled by 8 facilities with 4,404 feet of berthing space and storage capacity of approximately 581,000 tons. The port is also home to the United States Army, Corps of Engineers Ensley engineering yard. The yard is part of the Memphis district that covers 355 miles of the Mississippi, Arkansas and other waterways spanning over 25,000 square miles. The Ensley yard covers 157 acres and provides repair shops, warehousing, and administrative offices which support the fleet of over 33 vessels on a mile+ long string out in the slack water harbor.

The average annual total economic impact of the International Port of Memphis in Memphis and the region is approximately 5.5 billion dollars (15 million dollars per day). The companies in the port pay approximately 17.6 million a year in business and real estate taxes and 8.2 million in retail sales taxes.

MTS Impact:

Significant damage to bridges and other MTS essential infrastructure throughout the Port of Memphis. MTSRU still receiving marine industry reports and assessing damage and impact. Many bulk liquid facilities are operating at reduced capacity. 35 towing vessels are awaiting transit through impacted area.

MTS Recovery Actions:

A MTSRU is established and tasked with tracking and reporting the status of the MTS. The MTSRU is also charged with understanding critical recovery pathways, recommending courses of action, and providing all MTS stakeholders with an avenue of input to the response organization. Essential Elements of Information (EEIs) are being tracked to provide executive level indicators of recovery progress and the overall health of the MTS.

The MTSRU developed and distributed a standard questionnaire to determine impacts to facilities within the Sector LMR area of responsibility. The survey included current production status, operations sustainability, vessel arrival/departure projections, vessel priorities, and daily/cumulative economic impacts.

Vessels in Queue:

There are presently 35 tugs (28 up-bound, 7 down-bound) awaiting transit through the impacted area. The MTSRU is working with the Inland River Vessel Movement Center and local companies to determine the number of associated barges in the queue, commodity types and quantities and tug destinations.

Waterways Management Actions:

A safety zone has been established from river mile 661 to river mile 869 restricting all navigation on the Mississippi River.

EEI Summary

EEI	Base	FA	PA	NA	Comment
Waterways and Navigation Systems					
Aids to Navigation	110	80	20	10	
Deep Draft Channel	4		2	2	
Non-Deep Draft Chan	1		1		
Locks	12	4	5	3	
		Open	Invest	Closed	
Vessel Salvage/Wrecks		10	8	5	
Oil Pollution Incidents		10	5	4	
HAZMAT Incidents		5	3	1	
Port Area – MTS Essential Infrastructure					
Bridges	11	6	11		
Bulk Liquid Facilities	18	13	16	2	
Container Facilities	12	9	12		
Non-container Facilities	8	5	8		
Shipyards	-				
Pass/Ferry Terminals	-				
Port Area - Vessels					
Commercial Fishing	-				
Passenger and Ferries	-				
Small Passenger	12	12			
Gaming	-				
Barges	100	50	25	25	
Offshore Energy					
Offshore Platforms	-				
Offshore Production (liquid hydrocarbons)	Pre-incident bbl/day		Current bbl/day		
	-		-		
Offshore Production (natural gas)	Pre-incident mcf/day		Current mcf/day		
	-		-		
Offshore Renewable Energy Installatoin					
Monitoring Systems					
Monitoring Systems	-				

Base = Baseline (pre-incident number)

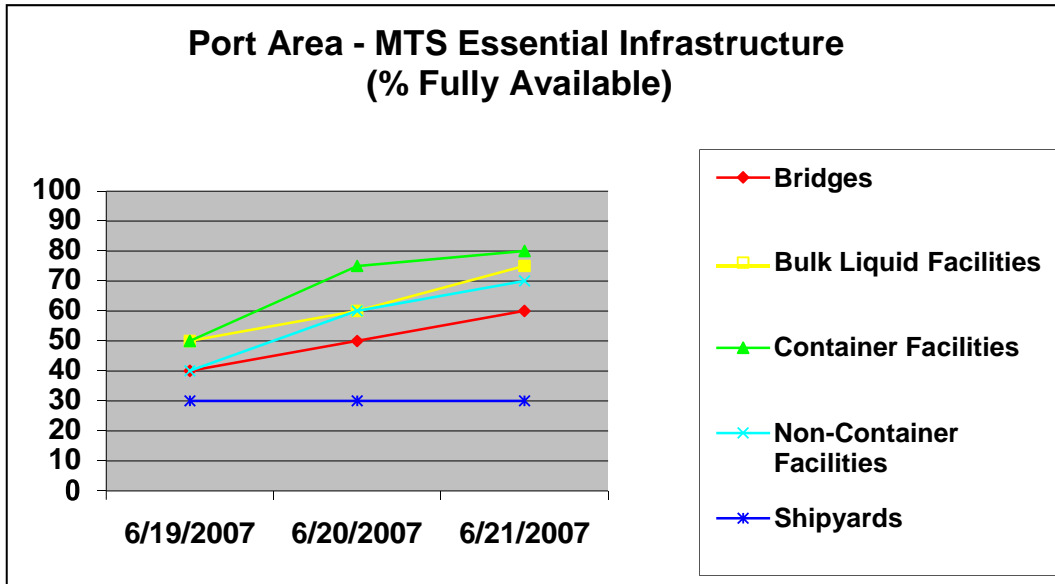
FA = Fully Available

PA = Partially Available

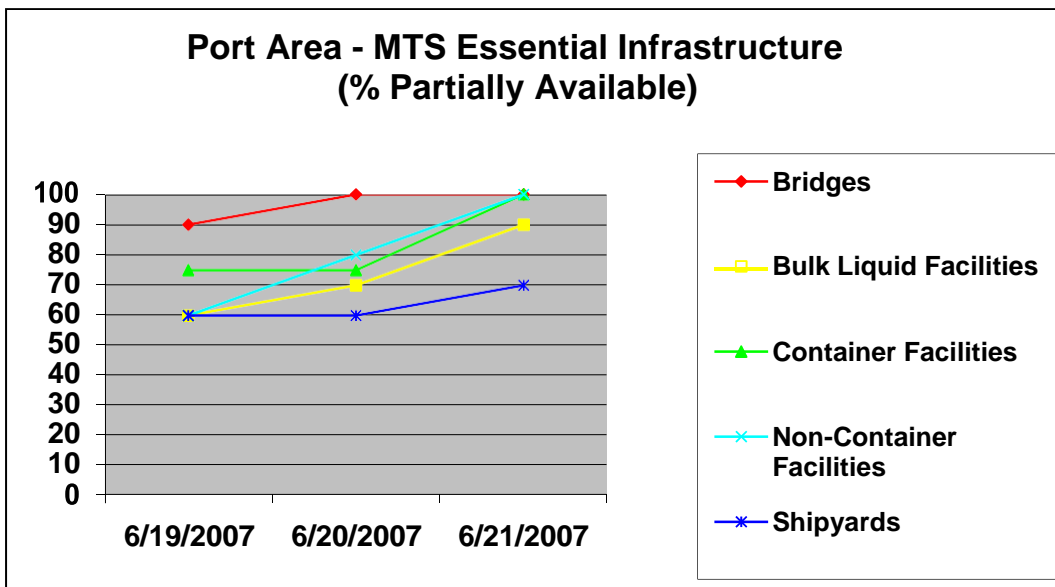
NA= Not Available

EEI Trends:

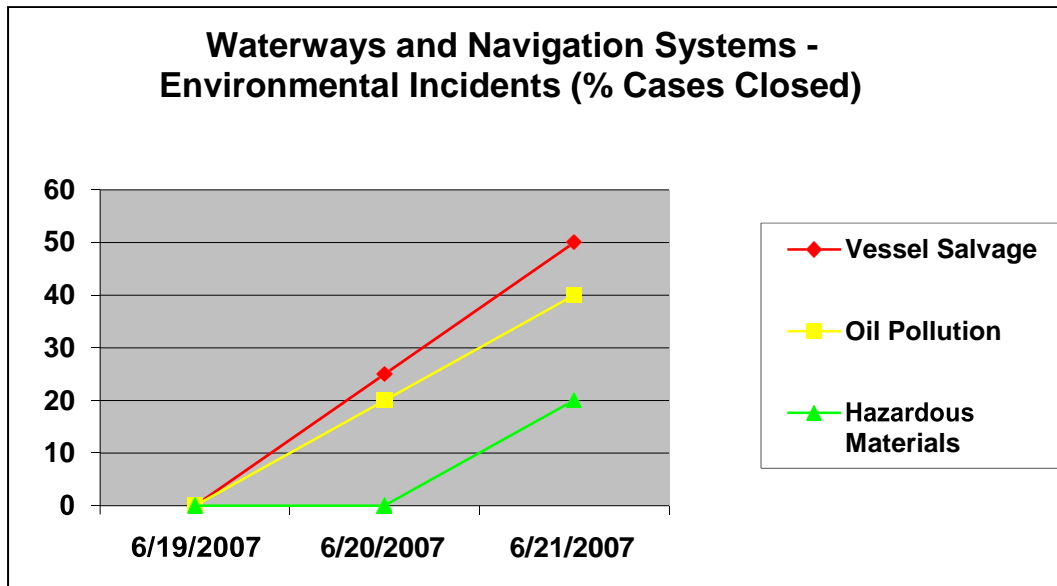
Below is an example of an EEI Trend line showing the percentage of Port Area MTS Essential Infrastructure that is Fully Available at the time of this report.



Below is an example of an EEI Trend line showing the percentage of Port Area MTS Essential Infrastructure that is Partially Available at the time of this report.



Below is an example of an EEI Trend line showing the percentage of Environmental Incident cases closed at the time of this report.



EEI Details:

Bridges: A number of the major bridges within the Sector LMR AOR were significantly impacted:

Memphis/Arkansas Bridge (I-55):	Collapsed
I-20 Bridge:	Undamaged
Vicksburg Bridge:	Undamaged
Natchez/Vidalia Bridge:	Undamaged
Helena Bridge (US 49):	Approaches Collapsed
New Greenville Bridge:	Undamaged
Greenville Bridge (US 82):	Undamaged
Frisco Railroad Bridge:	Collapsed
Harahan Railroad Bridge:	Collapsed
Mississippi River I-40 Bridge:	Approaches Collapsed
Caruthersville Bridge (I-155)	Approaches Collapsed

Bulk Liquid Facilities:

(1) LUCY WOODSTOCK MARINE TERMINAL: Pre-incident production capacity was 100%. Post incident production is 0%. Shutdown has effect throughout Dupont and Lucite facilities throughout nation (7 facilities total).

(2) VALERO MALLEROY: Pre-incident output 100%. Post incident impact 100%. If Barge Judith Ellen is delayed beyond Friday, the terminal will have to start reducing production.

(3) VALERO RIVERSIDE: Pre incident production 100%. Post incident production 0%.

Unable to supply diesel and gasoline to region. This is a distributor that services the riverside area.

Future Plans:

The MTSRU is developing a Restoration Plan for navigation on the Lower Mississippi River including an aerial overflight to identify missing aids to navigation, hydrographic surveys from river mile 661-734 and McKellar Lake, and a National Weather Service forecast and assessment of river stages. Following actions planned for 12 July:

- Execute waterway assessments
- Conduct salvage operations
- Reopen waterway to permit transit of tugs with barges 2 wide
- Identify highest priority vessels for transit once waterway reopened