



ANNEX: Maritime Sub-Sector Pandemic Influenza Planning Guidelines

Purpose: This Sector-specific guideline is an annex to the *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources* and intends to assist the Maritime Sub-Sector of the Transportation Sector, and the public and private sector businesses within the Sector, plan for pandemic influenza. Organizations that fail to prepare for such a prolonged catastrophic event may find themselves without the staff, equipment, or supplies necessary to continue providing essential transportation services for their customers and the nation. For a copy of the complete guide, please see www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf.

How to Use Guidelines: The guideline serves as a non-prescriptive reference for owner-operators and a practical tool that business planners can use to augment and tailor their existing emergency response plans given the unique challenges an influenza pandemic presents. **It is important to integrate your pandemic influenza plan with your existing business continuity and emergency response plans and/or the CI/KR Pandemic Influenza Guide's comprehensive framework for pandemic influenza catastrophic planning.** This annex addresses the unique challenges the Maritime Sub-Sector may face during a pandemic influenza outbreak, as well as the seven major areas of vulnerability the Sub-sector should fully assess in planning for pandemic influenza. While not necessarily applicable to all types and sizes of businesses or entities in a given sector, each relevant *Action*, *Supporting Action*, and *Question* in this Guideline can be integrated and managed as a separate checklist item during the planning process.

- **Actions:** These are primary checklist items with numerous related supporting actions and questions to consider.
- **Supporting Actions:** Expanding on the overarching action, these supporting actions offer specific suggestions for further study.
- **Questions to Consider:** These questions are Sector-specific and designed to focus on the main and supporting actions. The questions are neither comprehensive nor prescriptive; they are designed simply to represent a starting point to stimulate thinking about further actions and options.

Planning Assumptions: Influenza pandemics are unpredictable events; it is impossible to forecast their characteristics or severity accurately. The Centers for Disease Control and Prevention (CDC) define a severe pandemic influenza as a Category 4 or 5 with case fatality ratio of 1 percent or higher. Given today's highly mobile population, if a severe pandemic influenza emerges, outbreaks may occur nearly simultaneously across the country making reallocation of resources more difficult than in other emergencies. Therefore, each sector must rely primarily on its own internal resources and workers, for protection and response. While a pandemic flu will likely affect a given community for up to 12 weeks, nationally a wave may linger even longer, and multiple waves may result further complicating recovery and preparedness for each subsequent wave. Thus, even though a community outbreak may have subsided, businesses in those communities that depend on a national supply chain may find themselves without the necessary materials, supplies, and workforce because other communities across the country may still be affected by an outbreak. The guidance, which is based on disease impact assumptions (pandemicflu.gov/plan/pandplan.html) from the Centers for Disease Control and Prevention (CDC), includes the following:

- *Susceptibility to the pandemic influenza virus will be universal.*
- *Once sustained person-to-person transmission begins, the disease will spread rapidly around the globe.*
- *The clinical disease attack rate will likely be 30 percent or higher in the overall population during the pandemic influenza.*
- *Rates of absenteeism will depend on the severity of the influenza pandemic. In a severe influenza pandemic, absenteeism attributable to illness, the need to care for ill family members and fear of infection may range from 20 to 40 percent.*
- *Epidemics will last 8-12 weeks in affected communities.*
- *Multiple waves (periods where community outbreaks strike across the country) will likely occur with each lasting 2-3 months.*

For detailed information on the complete set of planning assumptions and the influenza pandemic context, see Section 3 of the *CI/KR Pandemic Influenza Guide* and the other Federal guidance at www.pandemicflu.gov.

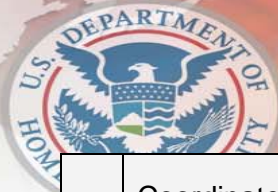


ESSENTIAL SERVICES, FUNCTIONS, AND PROCESSES

The Maritime sub-sector serves the nation by moving critical goods and people across the world’s oceans and along coastal and inland waterways. Waterborne cargo contributes about 7.5 percent to the U.S. gross domestic product. America's dependence on the seas, inland waterways, the outer continental shelf, and its ports has been integral to the nation’s economic health and survival. Given the importance of maritime trade to the U.S. economy and our national defense, disruptions to it can have immediate and significant economic, social and national defense impacts. Specific maritime functions and processes for consideration include: *receiving, holding, securing and managing passengers and goods on vessels and in ports; tugboat, towboat, bunkering, lightering and fleeting operations; intermodal cargo transfer; operating and maintaining critical equipment; providing customer service support; pilot, fire fighting and hazmat services; port and vessel security operations; ensuring port and afloat emergency response capabilities; overseeing control and emergency operations center functions; coordinating scheduling and dispatch; collecting revenue; business and HR support operations; information management and IT support; and ensuring passenger, worker, and operational safety.*

ACTION Identify and assess all essential services and supporting functions and processes.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>As appropriate, in collaboration with government officials, consider affects on maritime operations from potential national/regional priorities during an influenza pandemic for the transportation of essential goods and people.</p> <p>Forecast and assess potential changes in normal demand for services and impacts on operations/revenue.</p> <p>Prioritize the organization’s essential services and functions given their value to customers and the nation.</p> <p>Sustain those essential supporting functions and processes required to maintain essential services and operations.</p> <p>Identify potential “non-essential” services, functions, and processes that may be suspended or adapted to other more essential purposes.</p> <p>Communicate with critical customers, suppliers, other stakeholders and local emergency response officials on jointly planning and preparing for an influenza pandemic.</p>	<ul style="list-style-type: none"> While each maritime vessel company (passenger, cargo and support), the Department of Defense (DoD) maritime and port operates independently, each is fundamentally interdependent on the other and thus their actions will have impacts on each other. How may these interdependent and dependent impacts affect the provision of essential services? For example, maritime vessel operators are able to transfer resources between ports to support a shift in passenger or cargo demand. How might these changes affect those ports with less demand, and their supporting local communities? And, what about DoD facilities that may not be able to transfer resources because of the type of cargo handled? Are these shifts predictable and response actions for all parties something that can and should be planned for and coordinated in advance? What changes in passenger customer demand will a severe pandemic flu generate? How would they affect maritime operations? For example, direct disease impacts, personal fear and public health containment strategies may significantly lower demand for passenger cruise ships and day-excursion vessels. If this maritime segment is significantly impacted, what are the likely cascading effects on ports and support operations? What potential changes may be anticipated for maritime cargo shipping businesses and the ports supporting these cargo operations? For example, what impact will be felt if “non-essential” but high demand, maritime cargo businesses like automobile or clothing manufacturers reduce operations or close temporarily? If overall demand for certain “non-essential” consumer goods drops it may impact liner shipping efficiency and potentially increase the basic cost of shipping the remaining more essential goods. Who will pay for these temporary increases due to extraordinary circumstances (e.g., maritime businesses, consumers or government)? How are operations different between ports based on their types (specialty vs. general, and passenger vs. cargo) and locations (ocean vs. inland waterway), and in the pandemic influenza risks for worker types and family support? What are the differences in pandemic influenza risks for ocean-going ship operations with extended periods at sea versus coastal and inland waterway ships (e.g., for potential cargo contamination, and for the health of the ship’s crew and for crew family member support)?



<input type="checkbox"/> <input type="checkbox"/>	<p>Coordinate with supporting organizations (e.g. insurance carriers, lending institutions, and government officials) to plan for ways to continue essential business operations and support workers if revenue flows are substantially impacted.</p> <p>Given the potentially long lead time required to change the types of cargo that are already in the maritime “pipeline” at the start of an influenza pandemic (e.g., 4-6 weeks of material from international producer to end-user), consider ways to develop greater flexibility in modifying processes and/or ensuring sufficient advance planning and warning to more rapidly adapt services.</p>	<ul style="list-style-type: none"> • How might disease and containment strategies impact the international workforce, raw material producers, manufacturers and shippers affect domestic as well as international maritime operations? For example, if the workers are not available to produce and manufacture, the intermodal transportation system is degraded, or travel restrictions are imposed at borders, will the goods/products be available at the port to transport? • How might maritime organizations creatively adapt their typical maritime services to better support the community or nation? For example, can cruise ships be used as temporary medical isolation and treatment centers? • Might typical maritime cargo vessel routes/port calls be modified based on changing demand (e.g., as the influenza pandemic unfolds potentially reducing low-demand maritime cargo routes and increasing service to fewer port calls for consolidated cargo operations)? How quickly can these changes take place? • How will pandemic influenza affect specialty maritime operations (e.g., fire fighting, pilots, and offshore oilrig support)? How will priority delivery for essential items (i.e., fuel, repair parts) be maintained for these specialty carriers? What is the impact to unique DoD port and vessel operations? • How reliant on or vulnerable are maritime operations to information management and IT support at regional/national consolidated centers (e.g., producing “stability plans” and “discharge plans”) or by outside contractors?
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ESSENTIAL ASSETS AND EQUIPMENT

Unlike other disasters, a pandemic flu will not physically damage assets and infrastructure. However, contingency planners should assess the impact absenteeism might have on essential equipment operations and the supply chain. High absentee rates will make it difficult to sustain maintenance, repair, and emergency response capabilities (dockside and afloat). A worker shortage may delay port and shipboard maintenance and repair of assets and equipment and could limit the availability of replacement parts and supplies. Essential assets and equipment include: *ships (deep-sea merchant ships, tugboats, towboats, ferries, dredges, excursion vessels, and other waterborne craft operating on the oceans, outer continental shelf, the Great Lakes, rivers, canals, and other waterways, as well as in harbors); mobile offshore drilling units (MODU); port intermodal material and transfer cranes and other equipment; hazmat, fire and life safety equipment; port fuel bunkering, lightering and hospitality operations; passenger and cargo customer ticketing and electronic interface; telecommunications for dispatch, movement monitoring and safety; and internet access and computer equipment.*

ACTION **Review all equipment critical to support each essential function.**

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/>	<p>Identify assets and equipment that must be operated continuously and/or at key periods to sustain essential functions and processes.</p> <p>Identify and prioritize safety and security requirements for maintaining essential equipment and assets.</p>	<ul style="list-style-type: none"> • How will a change in demand levels affect the need for ships and equipment (e.g., primary and supporting)? For example, fewer ships may be needed if passenger or non-essential cargo demand reduces temporarily, and fewer port longshoremen and fire and rescue craft may be needed if fewer ships are being operated? • Can typical processes be modified temporarily to sustain essential assets and equipment? For example, could maritime vessels and support equipment be used in a more efficient and less demanding manner to try and reduce maintenance and repair requirements; such as rotating ships in and out of essential cargo service to limit engine hours?



<input type="checkbox"/> <input type="checkbox"/>	<p>Review all primary and supporting assets and equipment to uncover potential single-point failures and possible cascading consequences.</p> <p>Consider how each action relates to those developed to address other emergencies in existing Maritime business contingency plans, and in the Transportation Sector-Specific Plan to the National Infrastructure Protection Plan (NIPP). See: www.dhs.gov/xlibrary/assets/Transportation Base Plan 5 21 07.pdf.</p>	<ul style="list-style-type: none"> • Can non-essential facilities be closed to consolidate operations and supplies? For example, could fewer Jones Act fleet ship maintenance sites be operated and still adequately support all operational U.S. vessels? • What are the recurring maintenance and repair requirements for the critical facilities used to house port equipment, passengers, cargo and workers? Do they demand a continuous level of operations, maintenance and repair? What backup options exist in case of facility environmental equipment breakdowns during times of extreme weather? • Has a full assessment been conducted for all port and ship systems to identify potential single-point failures based on the pandemic influenza planning assumptions? • When assessing potential single-point failures, what are all the possible primary and supporting asset/equipment challenges (e.g., specialty captain/pilot and marine maintenance technician availability; adequate fuel availability and stockpile security; emergency ship and port repair; non-standard replacement and repair part accessibility; port backup electrical generators, security and safety equipment availability; Internet and telecommunications scheduling and control resilience)? • Have all contractor managed primary and supporting maritime systems been assessed and coordinated with contractors, sub-contractors and other key stakeholders to identify potential single-point failures in their support networks (e.g., assessments with contractors and sub-contractors operating essential intermodal cargo transfer sites, operational support equipment, and refueling vessels and crews)? • Have standard operating and emergency procedures been developed for all essential processes and equipment? If so, have they been distributed broadly to port and ship managers/captains and staff/crew, and to contractors?
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ACTION Prepare to sustain essential equipment for a wave lasting up to 12 weeks.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Prioritize the options available to address demands on essential resources.</p> <p>Plan to rely on in-house or available local maintenance and repair/replacement support for up to 12 weeks during a pandemic influenza wave.</p> <p>Assess recurring and preventative maintenance requirements.</p> <p>Assess implications if essential assets fail early on during the pandemic influenza outbreak.</p>	<ul style="list-style-type: none"> • Is there excess operational capacity available in the organization’s essential assets to sustain functions and reduce demand on equipment and workers? For example, are there typically more qualified captains/mates than operational ships, or is there a shortage of qualified and experienced crewmembers? • Are there other similar type vessels that may become available due to decreased demand in their normal operations that can be pressed into service for essential operations? • Without sufficient replacement parts on-site or locally, could a mutual aid pact be formed to sustain operations? For example, could smaller ports collaborate to share a maintenance site with adequate repair equipment and key workers? • What is the frequency for routine maintenance on essential primary/secondary port and ship assets and equipment? How critical is it to perform on this schedule? How easily can scheduled maintenance be deferred or accelerated on short notice? • What are the special demands for essential equipment, such as port and ship infrastructure components that must be frequently inspected and maintained, to include engines, electronics, communications, and safety equipment?



<input type="checkbox"/> Consider establishing a pandemic influenza mutual aid program among similar small/medium and large businesses to assist each other with sustaining essential assets.	<ul style="list-style-type: none"> Are there updated emergency operating plans for all assets/equipment to address pandemic influenza conditions? For example, can social distancing strategies, disciplined personal hygiene, personal protective equipment, and equipment decontamination be effectively and efficiently incorporated in all types of essential maritime operations?
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ESSENTIAL RAW MATERIALS AND SUPPLIES

A severe influenza pandemic may disrupt access to suppliers and manufacturers of essential materials nationwide for up to 12 weeks during a single wave with multiple waves potentially occurring over 12-18 months to compound the impacts, much longer than with other disasters. The negative effects on individuals, businesses, and the nation from the virus directly, and disease mitigation strategies indirectly, may affect the production and delivery of all types of materials and supplies. Maritime businesses should, where possible, investigate and assess their supply chain networks from their in-house storage capacity through all 1st, 2nd, and beyond distributor levels. Given the significant reliance on “just-in-time” delivery and other potential impacts that could temporarily shut down the port and ship supply chain, the business may want to consider stockpiling essential items such as fuel, lubricants, filters, electronics as well as worker protection and environmental cleaning material (e.g., masks, gloves, hand sanitizer and surface disinfectants).

ACTION Identify materials and supplies to sustain essential functions and equipment for up to 12 weeks.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Identify critical material and supplies (e.g., fuel, lubricants, refrigerants, filters, repair parts) necessary to maintain essential assets and equipment.	<ul style="list-style-type: none"> What quantities of which supplies (e.g., gallons of gasoline/diesel/biodiesel/ethanol, quarts of lubricants) are required to sustain essential operations for up to 12 weeks?
<input type="checkbox"/>	Prioritize essential material and supplies necessary to operate equipment and sustain essential functions.	<ul style="list-style-type: none"> How many days’ supply of essential fuels and supplies (e.g., ships, land vehicles, cranes, and other equipment) are stocked at ports and on ships? How will the necessary difference between what is stocked and what is required be obtained during an influenza pandemic to support both portside operations and vessels afloat?
<input type="checkbox"/>	Identify options to help reduce demand for essential supplies and materials.	<ul style="list-style-type: none"> What available supplies might be substituted as backups temporarily for preferred essential ones (e.g., other appropriate types of dyed or synthetic fuels and lubricants)?
<input type="checkbox"/>	Assess all internal and external supply-chain support operations and contracts.	<ul style="list-style-type: none"> Are there operations and maintenance processes that could be modified to reduce demand to stock supplies? For example, could the period between lubricant and filter replacement be extended?
<input type="checkbox"/>	Explore options that might reduce the need to stockpile high-cost supplies or hazardous materials on-site or onboard.	<ul style="list-style-type: none"> Are there new or additional procedures necessary to ensure passenger and worker areas are cleaned and disinfected during and between passenger trips and cargo changes? And, does the business have sufficient and appropriate cleaning solutions to disinfect the vessel’s passenger and crew living/work areas between shifts in accordance with OSHA www.osha.gov/Publications/influenza_pandemic.html, NIOSH www.cdc.gov/niosh/ and EPA www.epa.gov/pesticides/factsheets/avian.htm guidance?
<input type="checkbox"/>	Assess costs to procure, stock, and/or ensure delivery of essential materials.	<ul style="list-style-type: none"> What must be stockpiled and what can the organization afford to stockpile? How will these additional extraordinary costs be covered (e.g., retained earnings, special disaster fund, and/or government support)?



ACTION

Determine the most effective ways to ensure an adequate supply of essential materials.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	<p>Identify physical/safety limitations in stocking sufficient essential supplies/materials locally at ports and onboard ships.</p>	<ul style="list-style-type: none"> • Can stockpiled essential materials and supplies be safely, legally, and practically stored at ports or other locations? • Is there adequate and useful space on-site, such as port maintenance and support areas, to expand storage of fuels and supplies temporarily?
<input type="checkbox"/>	<p>Identify a formal chain of command to ensure someone is available to authorize major emergency procurements.</p>	<ul style="list-style-type: none"> • Are open warehouses or storage containers available locally on short notice to serve as temporary storage sites for materials requiring environmental control or security? • Are there realistic options for obtaining these essential materials/supplies elsewhere during an influenza pandemic (e.g., Fed/State/local government stockpile, mutual assistance business stockpile, or excess capacity in large or “non-essential” businesses)?
<input type="checkbox"/>	<p>Identify additional security needs for expanded and newly created high-value or at-risk material stockpiles.</p>	<ul style="list-style-type: none"> • How might small/medium-sized maritime organizations collaborate to reduce their risk and vulnerability for obtaining essential supplies and materials?
<input type="checkbox"/>	<p>Identify potential risk through 1st/2nd/3rd-order vulnerabilities or unintended effects to supply chain (i.e., who supplies the suppliers?).</p>	<ul style="list-style-type: none"> • Are essential workers authorized to expedite critical purchases of supplies and materials (e.g. via credit card or purchase order) when the supervisors may not be available to approve or make purchases? • To improve availability options, are there pre-established contracts with multiple vendors and contractors of essential supplies and services? Who do the vendors/contractors rely on for their supply and transport services; are they different or the same providers? • What happens if the supply chain cannot provide critical materials or supplies? How quickly would that affect the business’ ability to provide essential services? How will workers, customers, vendors/contractors, and government emergency response officials be notified of potential impacts?
<input type="checkbox"/>	<p>Coordinate with all supply-chain vendors and normal support sites.</p>	<ul style="list-style-type: none"> • Have planning and preparedness actions been integrated with local/regional suppliers to promote interface resilience and priority support for the port’s and ship company’s essential requirements (e.g., repair sites, and vehicle fuel and vessel bunkering stations)? • Are there vulnerabilities in support for the business’ primary suppliers and supply sites? For example, is there a priority for fuel distributors to re-supply specific local fueling stations other than those on which the port or maritime support operations rely? • How can incentives be provided for essential suppliers and support contractors to become better prepared? For example, should the business collaborate on planning and integrate preparedness training with vendors/contractors, and can it stipulate a level of supplier pandemic influenza preparedness and certification in all supply contracts?



ESSENTIAL WORKERS

During an influenza pandemic, workforce absenteeism may range from 25 to 40 percent. Complicating matters, the disease will strike randomly among employees from the boardroom to the mailroom. Implementing disciplined workplace personal hygiene and appropriate social distancing strategies may reduce absentee rates for illness and other related reasons. Organizations may also consider stockpiling certain medical (e.g., antiviral medications, see www.pandemicflu.gov/vaccine/medantivirals.html) and non-medical countermeasures (e.g., hand disinfectants, gloves, and masks). A list of essential workers may include: *captains, masters; deck officers, mates; pilots; ship engineers; marine oilers and qualified members of the engine department (QMED); tankerman; lockmasters; deck hands and sailors; information management and IT technicians; passenger hotel, traveler and administrative support personnel; port operators; public and occupational health staff; container and specialty crane operators; longshoremen; ground transport and intermodal equipment operators; security and safety personnel; critical business support staff; line supervisors and executive management.*

ACTION Identify the types and numbers of workers critical to sustain essential functions.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Identify essential workers based on the position/skills necessary to sustain essential functions and equipment.	<ul style="list-style-type: none"> • Have the worker categories and specific workers who are essential to operate and maintain the essential functions and equipment that sustain the most essential services been formally identified and communicated to the workers and appropriate unions and other worker organizations? • What are the potential impacts on essential functions based on the differences between workers being employees of a maritime vessel company, DoD or port and those hired under other circumstances such as from union labor pools for specific vessel deployments, short-term dockside support or other purposes? • Are there constraints in employing union and non-union workers or for specific local worker contracts that should be negotiated in advance of an influenza pandemic (e.g., can skilled mates serve as captains temporarily, or can non-union crane operators fill in for union operators out ill)? • What different issues does the organization face with full-time versus part-time or seasonal workers, and how are these addressed in planning and preparedness efforts? • What different challenges are there between worker types and family settings for those employed at ports, ocean going vessels and inland waterway ship operations and how are these addressed in planning and preparedness efforts? • What are the potential impacts of changes in demand and adjustments in scalable operations on essential worker requirements and numbers? For example, as demand drops for a particular type of maritime operation can those workers be shifted rapidly to support operations that are more essential? • Have worker types, which are not typically considered “essential,” but may become so in an influenza pandemic, been assessed and incorporated in plans, such as port and vessel cleaning crews? • Are there differences in the workforce by age and/or family status? For example, a predominantly younger workforce with employees having more school age children will likely be affected more profoundly by school closures and self-quarantine.
<input type="checkbox"/>	Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, and staff medical personnel during an influenza pandemic.	
<input type="checkbox"/>	Assess impacts from short-term and extended absences by essential workers.	
<input type="checkbox"/>	Assess requirements given differences in operational demands for essential workers (e.g., sea vs. river vessel crews vs. port dispatchers).	
<input type="checkbox"/>	Assess the options to obtain contractor backup support on essential operations and determine how quickly that can be started.	



		<ul style="list-style-type: none"> • For ship crews on extended work/leave rotations that maintain families/homes distant from ports (domestically and internationally), how will they be prioritized and managed for transport to ship embarkation sites? Will this affect the numbers of workers that could be readily available during a long duration influenza pandemic? • Do contract employees provide essential onsite or offsite services for vessels, electronics, business functions and passenger support operations (e.g., workplace and vessel cleaning, equipment repair, information management and telecommunications, critical business administrative operations, computer and internet access support)? • What are the different workforce challenges potentially resulting from onsite vs. offsite and full-time vs. part-time contractors and vendors performing critical functions for ports and ship companies? • What essential operations normally accomplished in-house might need to be maintained temporarily through external contract support (e.g., passenger waiting and port storage physical security)?
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ACTION Identify policies and procedures to ensure a safe workplace.

	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
✓		
<input type="checkbox"/>	Emphasize worker/workplace disease control/protection. See: www.pandemicflu.gov/plan/workplaceplanning/index.html .	<ul style="list-style-type: none"> • What will requirements for maintaining social distancing, equipment decontamination and worker personal protection and barriers have on normal and emergency operations and services for all maritime services? • Should port and ship (crew, passenger and cargo areas) cleaning procedures be modified and enhanced (www.osha.gov/Publications/influenza_pandemic.html)? • How will the costs be funded for stocking worker protection items such as masks and additional cleaning materials, and possibly, with appropriate medical oversight and support, antiviral medications? • If anticipated for use, have worker preparedness tasks for mask and respirator training and fit testing been reviewed based on manufacturer and OSHA requirements (www.osha.gov/Publications/influenza_pandemic.html) and incorporated into the plans? • What impacts will disease protection options such as PPE use have on worker productivity? For example, what are the impacts when performing heavy physical labor such as cargo handling if workers are required to wear PPE? • Have the appropriate port and ship workers been trained to provide basic medical assessment and care should you need to implement health screening and support emergency response for passengers and crew? • Has closing or restricting use of non-critical port and ship common areas, such as break and lunchrooms been considered? How could the organization ensure that workers do not commingle during typical operations and shift changes? • Can essential workers be effectively separated from other business personnel (e.g., transportation workers at intermodal sites), passengers and other customers by physical distancing and/or constructing appropriate temporary barriers during operations?
<input type="checkbox"/>	Determine the types of Personal Protective Equipment (PPE) that may be best for various worker types and worksites. For information on suggested PPE use, see: www.osha.gov/Publications/influenza_pandemic.html .	
<input type="checkbox"/>	Consider implementing a process to screen employees and visitors for influenza symptoms at the entrances to critical facilities.	
<input type="checkbox"/>	Identify which organization (e.g., port, ship, and/or government) will be responsible for officially declaring a port or ship contaminated.	
<input type="checkbox"/>	Identify and address how policies and procedures can be made sufficiently flexible based on the evolving nature of pandemic influenza and its specific impacts by location.	



<input type="checkbox"/>	<p>Identify and enhance risk communications and incident communication protocols for the airport, airline, government, local communities and the public.</p>	<ul style="list-style-type: none"> • Have locations and trained staff to screen workers before they begin their shift been considered? Are there “self declaration” forms and processes for workers to assess their and their family’s health? • Has stockpiling emergency supplies such as food and water been considered for workers who may be retained at the worksite for extended shifts/periods (e.g., port and ship company control and/or emergency operations centers)? • Have specific policies been established and workers provided appropriate equipment and training on identifying and safely managing potentially ill individuals for those workers who will likely come in direct contact with passengers and the public? • If a ship or port becomes contaminated, who makes the official determination and public announcement that it has been cleaned sufficiently to resume operations—the ship captain/company, the port, and/or the federal/state/local government and public health officials --and who then assumes liability for the decisions? • Has the port and maritime vessel business developed effective and efficient communications protocols and systems (e.g., Internet, intranet, telecommunications, news media, other government and private sector alert networks) to rapidly reach all workers and stakeholders while reducing confusion and increasing awareness and responsiveness?
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ACTION Identify policies and procedures to protect and sustain workers during an influenza pandemic.		
<input checked="" type="checkbox"/>	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Reduce demands on essential workers.</p> <p>Temporarily augment essential worker ranks.</p> <p>Coordinate with officials on using non-licensed or certified workers during a pandemic flu.</p> <p>Consider, where practical, plans to have an increased number of appropriate employees work from a safer off-site location (i.e., home or designated locations).</p> <p>Develop protocols (i.e., seek medical attention, stay away from work, notify supervisor) for employees to follow if they contract virus, show symptoms, or have ill family members.</p> <p>Develop focused protection protocols for workers who cannot maintain adequate social distancing from other workers, passengers, visitors and others in ports and on ships.</p>	<ul style="list-style-type: none"> • Are there practical, temporary options (e.g., extending shift hours, adding focused overtime, reducing port operations, and using other non-essential workers both as essential replacements and to augment essential workers by performing their non-essential tasks) that can be exploited to increase worker availability? • In the event of an emergency, have less essential workers (e.g., back-office workers) been cross-trained to perform essential jobs (e.g., safety inspections, security, and dispatch)? • Where practical have essential workers been cross-trained on other key technical functions such as having deck officers cross-trained for different ship types, and additional captains trained and licensed on critical inland waterway routes? • Has re-certifying and employing skilled supervisors to operate essential equipment, and other options to augment essential workers such as employing retired port crane operators, pilots and ship crews, supervisors and skilled trainees been considered? • Should non-essential port, support and vessel company staff be sent home to reduce possible disease transmission at the workplace? • Can off-site work options be reasonably employed for certain portions of the staff (e.g., payroll, bookkeeping)? • For essential safety inspectors and security workers, are there ways to automate or electronically augment more of their essential functions to assist in reducing essential workforce demands?



<input type="checkbox"/>	<p>Coordinate with government officials on the priority release and process for administering medical countermeasures to identified essential workers.</p>	<ul style="list-style-type: none"> • Has the organization considered the possibility of employing more extreme measures, such as sequestering essential workers, with appropriate social distancing and other safeguards in place, onsite for the duration of an influenza pandemic wave (e.g., emergency operations, and safety and port control centers)? • How will the organization ensure its IT and telecommunications systems are open for access from remote sites and that the community’s and employee’s Internet and telecommunications infrastructure can support any increases in employees working offsite? • Do pandemic influenza plans include processes to actively monitor and support potentially and confirmed ill workers and their families at and away from the worksite? Have these processes been coordinated with all stakeholders? • How will vessels on extended deployment manage impacts on essential worker productivity and morale with increased risk and possible illness or death for worker families on shore?
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ACTION Identify Human Resource (HR) and protective actions to sustain essential workforce.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Assess standard Maritime business HR policies and procedures.</p> <p>Develop additional HR policies specific to pandemic influenza response.</p> <p>Identify likely legal considerations that may arise from these new HR actions.</p> <p>Identify and address other possible pandemic-related worker issues, such as potential activation for essential workers who are members of the National Guard or Reserve.</p> <p>Develop plans and procedures that provide support and assistance to workers’ families.</p> <p>Provide regular communication to all workers and stakeholders on the latest HR pandemic influenza recommendations to better prepare them and to reduce uncertainty.</p>	<ul style="list-style-type: none"> • Have existing policies been adapted and/or new sick leave policies been developed to support ill workers and well workers with ill family members, and to facilitate such as voluntary family support networks (www.pandemicflu.gov/plan/community/commitigation.html)? • Given the diverse employment practices in the maritime industry, have policies and support options been developed to address essential workers who are both full-time port/ship employees and those who are also essential but hired under limited duration or part-time contracts from union halls and other labor pools? • Has the organization collaborated with all worker unions and other worker labor groups about developing and implementing temporary policies? • Has the organization collaborated with the worker unions and related groups who provide direct essential worker support for sick leave and medical and death benefits on how those actions will be implemented to support such as liberal sick leave for suspected illness? • Has adding provisions in the relevant union/labor contracts been considered to address actions taken if a pandemic influenza is officially proclaimed? For example, it may necessitate the temporary suspension of certain collective bargaining agreement provisions? • Has the potential risk and have the planning and preparedness actions for potential HR policy changes and the chosen HR response methods (i.e., crisis hotline, telephone tree, and/or internet/intranet postings) been communicated with workers and their families and other stakeholders? • Have the actions to help reduce potential abuse of special leave policies been identified? • Have the legal and business effects from employing emergency HR policies (e.g., costs associated with leave policies, essential vs. non-essential worker status) been identified? • Have appropriate portions of those relevant Federal/State/local HR-type laws and regulations (e.g., Federal Medical Leave Act, www.dol.gov/esa/whd/fmla) governing extended emergency medical leave been assessed and integrated in pandemic influenza plans?



ESSENTIAL INTERDEPENDENCIES

When pandemic influenza strikes, it will affect all sectors of society. Successful preparedness and response will require a coordinated nation-wide response, including Federal, State, and local governments and most importantly the private sector. To enable a swift pandemic influenza response and recovery, the Maritime Sub-Sector must identify and be able to sustain the essential interdependencies it supports and relies upon within and across sectors. Interdependencies requiring advanced coordination include support from: *municipal utilities, businesses, government health, safety and emergency response agencies, as well as essential goods and services from others such as fuel, electricity, healthcare, telecommunications, and physical security.*

ACTION Identify the interdependent relationships and take actions to sustain this essential support.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Assess internal sector and external cross-sector essential service support requirements.	<ul style="list-style-type: none"> • Within the Transportation Sector and for other CI/KR Sectors (e.g., Communications, Emergency Services, and Water) which entities does the organization depend on most to sustain its essential operations, and vice versa? • What has been done to coordinate with and enhance priority for support from those entities on which the port or maritime vessel depends inside and outside of the sector? For example, ensuring priority for municipal potable water and wastewater support as well as priority supply for electrical and telecommunications? • What critical customers (e.g., oil, coal, chemicals, perishable food) depend most on specific maritime operations? What should/could be done to prioritize maritime support for them? • What supply chain or intermodal logistics operations are most affected that in turn may impact maritime operations? For example, even if maritime operators are able to move cargo, if the intermodal transfer or transportation capability from/to the port or at the end-user/receiver is disrupted cargo may be left holding on ships or docks. • Can the risk and reliance on municipal and cross-sector support be reduced through targeted preparedness activities? For example can similar maritime and non-maritime entities collaborate to establish a mutual support pact for basic infrastructure equipment, supplies and workers (e.g., fire fighting, backup power generation, physical security, plumbing and electrical workers, HVAC repair parts, and earth moving equipment)? • Does the maritime port or primary or supporting vessel company participate in State, Tribal, regional and local community pandemic influenza planning and preparedness activities? • Are the maritime pandemic influenza plans shared and integrated with other key sector and cross-sector business continuity plans? • How is coordination between the various Emergency Operations Centers at ports, with ship companies, and with Federal, State and local governments being accomplished to ensure appropriate collaboration on processes and actions, and on shared needs identification? • Does the maritime port or primary or supporting vessel company participate with other stakeholders in public and private pandemic influenza planning and response training exercises and preparedness forums?
<input type="checkbox"/>	Assess other external interdependent essential service support requirements (e.g., municipal infrastructure support).	
<input type="checkbox"/>	Assess the capability of the sub-sector's associations and government alert networks, as well as other informal mutual aid and assistance networks to aid in reducing vulnerabilities.	
<input type="checkbox"/>	Collaborate with public/private partners, such as State/local health authorities and first responders, who support and rely on the business.	
<input type="checkbox"/>	Consider developing joint operational plans with service providers, suppliers, customers and other stakeholders.	



REGULATORY ISSUES

In response to pandemic influenza, the government may provide direct support in the form of vaccines, antiviral medications, and personal protection supplies for essential workers; priority and clearances for an organization’s supply deliveries; on-site public safety and physical security augmentation. Indirect support may come from governmental relief and waivers from sector-specific regulatory requirements. It is important to understand clearly that public and private sector businesses should not rely on possible regulatory relief and/or waivers in their pandemic influenza planning. Early discussions however with regulatory officials can identify issues that may be appropriate to address before and during an influenza pandemic.

ACTION Identify Federal, State, and local regulatory requirements that may affect business operations.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Collaborate with government officials to determine potential priorities for defining essential goods/products and passengers.	<ul style="list-style-type: none"> • Are there direct/indirect impacts on business operations that should be addressed, such as: <ul style="list-style-type: none"> ○ enacting temporary safety policies (e.g., authorities for maritime police/security/crews to manage potentially ill passengers and workers; government mandated social distancing procedures for maritime passenger operations)? ○ enhancing enforcement of existing regulations (e.g., Jones Act vessels afforded priority for maintaining service to Alaska, Hawaii, and the U.S. Caribbean ports; maritime “Declaration of Health” certification; and fuel price gouging)? ○ authorizing temporary waivers to sustain essential operations (e.g., targeted Jones Act waivers; extended hours of service for licensed mariners; requirements for worker TWIC cards; adjusting routine safety inspection schedules; pre-employment drug testing; non-U.S. flagged vessel requirements for a pilot in U.S. waters)? ○ determining relative priority of military and civilian DoD vessels to commercial vessels? • What are the potential impacts resulting from government response actions and cross-jurisdictional differences in response (e.g., possible quarantine of specific communities; widespread or localized travel restrictions)? • Has communication and collaboration occurred with officials on how government actions and regulatory enforcement may change as the virus moves through a community or region (e.g., passenger and cargo screening and travel restrictions more vigorously applied at the start of a pandemic flu) and as the levels of acceptable risk change for port and vessel operations? • Are there potential temporary workforce regulatory challenges specific to pandemic flu that should be considered? For example, can qualified crew promotions be expedited for other than maritime academy graduates, crew members authorized to operate on recently expired maritime credentials and other certifications if credentialing offices are closed or backlogged; specific licensure and certification regulations waived to perform essential jobs temporarily? • What issues may arise from temporarily modifying safety/licensing procedures that the organization must plan to offset (e.g., insurance carrier restrictions, and greater monitoring of workers who may be allowed to exceed hours of service)? • In a crisis, will the Fed/State recognize another Nation’s/State’s certification (e.g., to allow qualified workers to cross national/state lines and assist)? • How will international and domestic ship and port operators legally (e.g., anti-trust laws) work together and with government to collaborate in advance of a pandemic on the types of plans to ensure priority movement of essential goods/products and passengers during a pandemic?
<input type="checkbox"/>	Identify regulations that, if temporarily modified, would reduce impacts on essential functions, resources, and workers.	
<input type="checkbox"/>	Identify direct and indirect government support options that may be necessary to ensure sustaining the organization or sector.	
<input type="checkbox"/>	Coordinate possible direct and indirect support and specific regulatory constraints and relief options in advance with the appropriate Federal/State/local government officials.	
<input type="checkbox"/>	Identify impacts that may result from changes in government actions as the pandemic influenza’s affects on specific communities evolves.	
<input type="checkbox"/>	Communicate potential relief actions and clarify “who is in charge” for each action in advance to all stakeholders, such as workers, unions, supporting businesses, insurance carriers and customers.	

IMPACTS FROM COMMUNITY DISEASE MITIGATION STRATEGIES

To reduce health impacts from an influenza pandemic, Federal, State, local, and tribal government authorities, as well as private entities, may choose to implement strategies, including: voluntary isolation, voluntary family home quarantine, extended student dismissals, and social distancing of adults in the community and workplace. The public health and social distancing strategies may ultimately contain the disease and reduce the risk of infection and death, but they will also have significant consequences for businesses and organizations in all sectors. For more information on these potential community mitigation strategies, please see CDC's *Community Mitigation Strategies* at www.pandemicflu.gov/plan/community/commitigation.html and in Section 3 of the *CI/KR Pandemic Guide* available at www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf.

ACTION Identify effects from mitigation strategies; take actions to reduce negative impacts.		
✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Calculate effects of CDC's Community Disease Mitigation Strategies (www.pandemicflu.gov/plan/community/commitigation.html) on the organization, workers, and community.	<ul style="list-style-type: none"> • What impacts will the mitigation strategies have on worker absentee rates? For example, how will it affect workers and their families if students are dismissed and daycare facilities closed for weeks at a time?
<input type="checkbox"/>	Determine the strategies that your State/community may/can employ.	<ul style="list-style-type: none"> • What are the direct and indirect costs associated with expanding sick leave policies to support mitigation strategies like home self-isolation and voluntary family quarantine?
<input type="checkbox"/>	Discuss the potential impacts from strategies with the organization's workers.	<ul style="list-style-type: none"> • If there is not adequate sick leave or other compensation options available, what are the near- and long-term impacts on the workforce and the organization if workers are absent for prolonged periods?
<input type="checkbox"/>	Familiarize yourself with your community's influenza pandemic planning trigger points and the CDC's Pandemic Severity Index to determine the timing and use of mitigation interventions. For more information, see: www.pandemicflu.gov/plan/community/commitigation.html#IV	<ul style="list-style-type: none"> • What workplace enhanced social distancing, personal hygiene and environmental cleaning measures can and should be implemented (e.g., work-at-home options, split working/meal shifts, reduced non-essential travel, and physical separation throughout the passenger handling areas and other worksites)? • Has the business met with local government and emergency response officials on timing of their measures, alerts, and implementation and on response triggers? • What additional potential demand changes for the organization could occur when these strategies are implemented? • Do the maritime pandemic influenza plans integrate practical support options for worker families in order to directly and indirectly aid in decreasing worker absentee rates?

For additional information, including a PDF copy of the complete *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources*, visit www.pandemicflu.gov or email your questions to dhspandemic@dhs.gov.