Government of Saint Lucia

National Influenza Plan
Volume 8: Essential Services: Pandemic Influenza Planning Guidelines for the Transportation Sector

Document of the Saint Lucia National Emergency Management Plan

Developed by the NEMO Secretariat and the Transport Committee based on USA Department of Transport - DRAFT – Last Updated: 24th March 2008
http://www.dot.gov/pandemicflu/aviation.pdf

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Cap Pt.
Pigeon I.
Rodney Bay
Gros Islet
CASTRIES
Grande Cul de Sac Bay
Babonneau
Anse la Raye
Roseau
La Caye
Canaries
Dennery
Mt. Gimie
Praslin
Soufrière
Micoud
Canelles
Desruisseaux
St. Lucia I.
Choiseul
Laborie
Hewanorra Int'l. Airport
Vieux Fort
Maria Is

Preamble

NATIONAL INFLUENZA PLAN

The National Influenza Plan is a collection of Documents as listed below.

The procedures are supported by the Saint Lucia National Emergency Management Plans, Policies, Legislation and Standard Operating Procedures.

Volume

1. Concept of Operations
2. Strategic Plan
3. Communications Strategy
4. Ministry of Health Plan
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6. Ministry of Education Plan
7. Law Enforcement, Public Safety, and Security
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Purpose

This Sector-specific guideline is a stand-alone document but forms part of the Saint Lucia National Pandemic Plan and intends to assist the Sub-Sectors of Transportation, 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.

How to Use the 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.** The sections addresses the unique challenges the various aspects of the Transport Sector may face during a pandemic influenza outbreak, as well the seven major areas of vulnerability the 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. 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 from the World Health Organisation, 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.*

Definitions

Seasonal Influenza

Seasonal influenza or "the flu" is a respiratory illness that is spread from human to human. It tends to occurs with the start of the school year.

Pandemic Influenza

Pandemic influenza results in a global outbreak of the flu that can occur at any time of the year. Scientists do not know when the next pandemic may occur.

Pandemic Phases

[Modeled upon: www.cdc.gov/flu/pandemic/phases]

- In **Phase 2** an animal influenza virus circulating among domesticated or wild animals is known to have caused infection in humans, and is therefore considered a potential threat.

- In **Phase 3** an animal or human-animal influenza re-assortment virus has caused sporadic cases or small clusters of disease in people but not resulted in human to human transmission sufficient to sustain community level outbreaks.

- **Phase 4** is characterised by verified human to human transmission of an animal or human-animal influenza re-assortment virus able to cause "community level outbreaks". The ability to cause sustained disease outbreaks in a community is a significant upward shift in the risk of a pandemic.

- **Phase 5** is characterised by human to human spread of the virus into a least two countries in one WHO region.

- **Phase 6**, the pandemic phase, is characterised by community level outbreaks in at least one other country in another WHO region. Designation of this phase indicates that a global pandemic is underway.

Ground Transport Sub-Sector Pandemic Influenza Planning Guidelines

Highway and Motor Carrier Sub-Sector Pandemic Influenza Planning Guidelines

MODELED UPON: USA Department of Transport
http://www.dot.gov/pandemicflu/masstransit.pdf

ESSENTIAL SERVICES, FUNCTIONS, AND PROCESSES	
Whether transporting passengers by bus, or taxi; shipping goods and services by commercial trucks around town or across the country; maintaining the nation's highway infrastructure (i.e., highways bridges, tunnels and operations centers); working in a transportation-related job; or shipping or receiving transported goods, the Sub-Sector's impact on the nation's economy and social stability is significant. Any disruption to these key highway transportation services and infrastructure may cause significant local, national and even regional challenges potentially putting the delivery of critical food, fuel, and medical supplies, as well as emergency response equipment, supplies, and personnel at risk. Proactive planning with emergency management and safety officials and community leaders will facilitate the successful integration of essential highway and motor carrier business operations into community emergency response planning. Primarily a service sector, this sub-sector's chief function is assuring the movement of people and others' goods/products. Other essential functions and processes include: *customer service and support; intermodal transfer operations; scheduling and dispatch; transport and delivery; HAZMAT and specialty transport; business and HR support operations; critical equipment (mobile and fixed) and highway infrastructure maintenance and operations; and passenger, worker and operational safety.*	
ACTION: Identify and assess all of your system's essential services, functions, and processes.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Maintain all essential services, functions, and processes required to sustain essential business operations. 2. Prioritize critical customers *given their value to sustaining* the business and the community. 3. Prioritize business services and functions based on their value to essential customers and the community. 4. Identify potential "non-essential" services, functions, and processes you can suspend or adapt to other more essential uses.	1. What are the influenza pandemic implications on volume, supply, and demand for your most critical customers, and what would the impacts be on your business operations (e.g., effects on charter bus services for school trips, and delivery of food/supplies to resorts)? 2. How likely are your customers (e.g., suppliers, brokers, and shippers) and their manufacturer customers able to operate during an influenza pandemic (e.g., at what point will a distributor, reliant on

	international production plants, cease operations)? 3. How might your business' typical services be adapted creatively during an influenza pandemic to other more essential purposes for the community or country (e.g., charter buses as environmentally controlled medical supply freight transporters, taxis augmenting traditional public bus routes to reduce public contact among passengers)? 4. Have you communicated with your critical customers and your community emergency response officials the need to jointly plan and prepare for an influenza pandemic?

ESSENTIAL ASSETS AND EQUIPMENT	
Unlike other disasters, an influenza pandemic will not physically damage transportation assets and infrastructure. However, highway and motor carrier planners need to assess the impact absenteeism may have on equipment positioning, reduced operations for regular vehicle maintenance and repair sites (e.g., truck stops, repair shops, and towing firms), and delayed in-house maintenance on essential assets and equipment. For operational maintenance sites, an influenza pandemic's impact on "just-in-time" supply chain could have significant implications for the availability of adequate repair parts and supplies. Essential assets include: *trucks; buses; warehouse movement and storage equipment; intermodal material and transfer cranes; customer tracking and electronic interface; and Internet and telecommunications services for dispatch, inventory management and control.*	
ACTION: Review all equipment critical to support each essential function.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify primary and supporting assets and equipment that must operate continuously and/or at key periods to sustain essential functions and processes. 2. Plan to rely on in-house or available local maintenance and repair/replacement support for up to 12 weeks during an influenza pandemic wave. 3. Review the business' primary and supporting assets to identify potential single-point failures and possible cascading consequences. 4. Consider how each action relates to those developed to address other emergencies in existing business contingency plans, and in	1. Can you modify your typical processes temporarily to sustain essential assets and equipment (e.g., employing drivers and vehicles in a more efficient manner or sharing ground support equipment with less essential local businesses)? 2. What other challenges or opportunities will affect your operations, and assets and equipment (e.g., will drivers who are absent permit other drivers to use their vehicles as temporary replacements for non-working vehicles)? 3. How will changes in demand (e.g., potential for decreased demand from ice cream distributors for refrigerated capacity

the National Influenza Pandemic Preparedness Plan (NIPPP).	and increased demand for mortuary support) affect essential equipment demand and operations? 4. When assessing potential single-point failures, have you considered all possible primary and supporting asset/equipment challenges (e.g., driver availability and licensure; maintenance technician certification; fueling availability; repair center operations; bridge and roadway maintenance; replacement and repair part accessibility; Internet and telecommunications scheduling and control; and dispatch resilience)? 5. Have you developed standard operating and emergency procedures for your essential processes and equipment, and, have you distributed them broadly to managers and staff? 6. Do your contingency plans specifically address the potential disruption of critical fueling and maintenance and repair sites in the city and on the highway, and the potential for a shortage of fuel, repair parts and supplies at those sites still operating?
ACTION: Prepare to sustain essential equipment for a wave lasting up to 12 weeks.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Prioritize the options available to you to support demands on your resources. 2. Assess recurring and preventative maintenance requirements. 3. Assess implications if your essential assets fail early on during the pandemic outbreak. 4. Consider establishing an influenza pandemic mutual aid program among similar small/medium and even large businesses to assist each other with sustaining essential assets.	1. Is excess operational capacity available in your business' essential assets to sustain functions and reduce demands on equipment and workers (e.g., typically more qualified drivers available than operational trucks/buses, or more vehicles available than drivers)? 2. If you do not have sufficient replacements parts available on-site or locally, could you develop a mutual aid pact (e.g., collaborate among small businesses to support a local shared maintenance site with adequate stocks of repair parts and backup key personnel)? 3. What is the frequency for all routinely scheduled maintenance on essential primary and secondary assets and equipment, and the criticality of performing

	on this schedule? And, can you easily defer or accelerate scheduled maintenance on short notice? 4. Do you have updated emergency operating plans for these assets to effectively address pandemic conditions (e.g., incorporated social distancing strategies, disciplined personal hygiene, possible use of personal protective equipment, and equipment decontamination)?

ESSENTIAL RAW MATERIALS AND SUPPLIES	
A severe pandemic may disrupt access to your and your supplier's essential materials and supplies for up to 12 weeks. The negative effects on individuals, businesses, and the nation from the illness directly, and disease mitigation strategies indirectly, may affect the production and delivery of all types of materials and supplies for a much longer than other disasters. Highway and motor carrier businesses should, where possible, fully explore and assess their supply chain networks from their in-house storage capacity through all 1st, 2nd, and beyond distributor levels to the source of the materials. Given a reliance on "just-in-time" delivery and the potential impacts that could shut down your supply chain, you may want to consider stockpiling items such as lubricants, filters, belts, tires, batteries, and key parts, as well as worker protection and cleaning material (e.g., masks, gloves, hand sanitizer).	
ACTION: Identify materials and supplies to sustain essential functions and equipment for up to 12 weeks.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify critical material and supplies (e.g., fuel, lubricants, refrigerants, filters, repair parts,) necessary to maintain essential transportation assets and equipment. 2. Prioritize essential material and supplies necessary to operate equipment and sustain essential functions. 3. Identify options to reduce demand for essential supplies and materials. 4. Assess all internal and external supply-chain support operations and contracts. 5. Explore options that might reduce the need to stockpile high-cost supplies or hazardous materials on-site at each business. 6. Assess costs to procure, stock, and/or ensure delivery of essential materials.	1. How much of which materials/supplies (e.g., gallons of diesel, quarts of lubricants) are required to sustain the most essential operations for up to 12 weeks? 2. How many days supply do you stock onsite for essential fuels and supplies, and how will you obtain the difference in a pandemic influenza emergency both locally and on the road? 3. Are there realistic options for obtaining these essential materials/supplies elsewhere during an influenza pandemic (e.g., government stockpile, mutual assistance business stockpile, or excess capacity in large or non-essential businesses)? 4. What available supplies might you substitute as backups temporarily for preferred essential ones (e.g., a dyed diesel fuel, biodiesel, synthetic fuels and

	lubricants)? 5. Are there operations and maintenance/repair processes (e.g., extend period between lubricant replacement) you could modify to reduce demand on stocking supplies? 6. How might small/medium-sized businesses collaborate to reduce their risk and vulnerability for essential supplies and materials (e.g., a local or regional stockpile for high value, low turnover critical repair parts and hazardous materials)? 7. Are there specialty support operations and supply requirements for transportation cargos and/or handling situations (e.g., tank wash locations and cleaning supplies for bulk hazardous materials)? 8. Are there new or additional procedures and supplies necessary to ensure vehicles (trucks, taxis and buses) and appropriate cargos are cleaned and adequately disinfected between trips/shifts and load changes (e.g., sufficient and appropriate cleaning solutions available to disinfect the interior of buses between shifts or as often as deemed necessary)? 9. What can you afford to stockpile and what must you stockpile, and how do you fund these extraordinary costs (e.g., retained earnings, special disaster fund, government support)?
ACTION: Determine the most effective ways to ensure an adequate supply of essential materials.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify physical or safety limitations in stocking sufficient essential supplies and materials locally. 2. Identify a formal chain of command to ensure someone is available to authorize major emergency procurements. 3. Identify additional security needs for expanded and newly created high-value or at-risk material stockpiles. 4. Identify potential risk through1st/2nd/3rd-order vulnerabilities or unintended effects	1. Is there adequate space on-site to expand storage of fuels and supplies temporarily? 2. Are open warehouses or storage containers available locally on short notice? 3. Can these essential materials and supplies be safely, legally, and practically stored at regional distribution centers or at dispersed sites along likely travel routes? 4. Have you authorized essential workers to make purchases via credit card or purchase order?

to supply chain (i.e., who supplies your suppliers?). 5. Coordinate with all supply-chain vendors and normal support sites.	5. Do you have pre-established contracts with multiple vendors of essential supplies? 6. What happens if your supply chain cannot provide critical materials or supplies? How quickly would your ability to provide essential service be affected, and how will you notify and coordinate with customers, vendors, and government emergency response officials? 7. Have you integrated your planning with all your local/regional suppliers to promote priority support for your essential requirements (e.g., repair sites and fueling stations)? 8. Are there vulnerabilities in the support to your primary suppliers and supply sites (e.g., is there a priority for fuel distributors to re-supply specific gas stations and truck stops)? 9. How can you provide incentives for your essential suppliers and support contractors to become better prepared (e.g., collaborate on planning, integrate preparedness training, and stipulate pandemic planning and certification in all supply contracts)?

ESSENTIAL WORKERS	
A severe pandemic may generate extended absences for essential workers that might affect you and your supply chain. During a severe pandemic, the level of workforce absenteeism may approach 40 percent. To complicate matters, the disease will strike randomly among employees from the boardroom to the mailroom. Implementing disciplined personal hygiene and social distancing strategies in the workplace may reduce potential worker absenteeism for illness and other related reasons. Businesses may 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 will likely include: *trained and licensed drivers; scheduling and dispatch personnel; maintenance and repair technicians; intermodal transfer and warehouse specialists; Emergency Operations Center (EOC) and communications and computer support; security personnel; business and HR support; training specialists; operational and executive management.*	
ACTION: Identify the types and numbers of workers critical to sustain essential functions.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify essential workers based on their position/skills necessary to sustaining	1. Have you formally identified and communicated the worker categories and

essential functions and equipment. 2. Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, and staff medical personnel during an influenza pandemic. 3. Assess impacts from short-term and extended absences by essential workers. 4. Assess requirements given differences in operational demands for essential workers (e.g., independent long haul drivers vs. office-based dispatchers). Assess your options to obtain contractor backup support on essential operations and determine how quickly that can be started	specific workers who are essential to operate and maintain the essential functions and equipment necessary to sustain your most essential services? 2. Are there constraints in employing union workers for specific local worker contracts (e.g., can skilled maintenance technicians serve as long-haul drivers temporarily)? 3. What different challenges do you face with full-time, part-time, or seasonal employees, and how will you address these in your planning and preparedness efforts? Are there differences in your workforce by age and/or family status (e.g., employees with younger children may be affected more by school closures and self-quarantine or "boomer"- age workers who care for elder family members at home)?
ACTION: Identify policies and procedures to protect and sustain workers during an influenza pandemic	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Reduce demands on essential workers. 2. Temporarily augment essential worker ranks. 3. Coordinate with officials on using non-licensed workers during an influenza pandemic. 4. Emphasize worker/workplace disease control/ protection. See: www.pandemicflu.gov/plan/workplaceplanning/index.html. 5. Determine the types of Personal Protective Equipment (PPE) that may be best for your various worker types and worksites. 6. Consider, where practical, plans to have an increased number of employees work from a safer off-site location, such as their homes. 7. 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. 8. Consider implementing a process to screen employees and visitors at the entrances to your critical facilities.	1. Are there practical temporary options you can exploit to increase worker availability (e.g., extending shifts to 12 hours, adding overtime, and using other non-essential workers)? 2. Could you send non-essential staff home to reduce disease transmission at the workplace? 3. Have you considered the need for and conditions requiring more extreme measures, such as sequestering essential dispatch or distribution workers on-site? 4. Have you considered stockpiling emergency supplies such as food and water for workers who are "trapped" or sequestered at the worksite? 5. Will government temporarily waive Licenses needed to perform essential jobs temporarily? 6. In a crisis, will government recognize another State's operator's license (e.g., to allow qualified drivers to enter Saint Lucia and assist)?

	7. Have you cross-trained workers to perform essential jobs temporarily in an emergency (e.g., HR specialists cross-trained to perform dispatcher duties)? 8. Could you employ off-site work options for part of your staff (e.g., schedulers)? 9. How will you ensure IT systems can support any increases in employees working offsite? 10. Should you enhance your worksite and vehicle (driver, passenger and cargo areas) cleaning procedures? 11. How do you fund the costs associated with stocking worker protection items such as masks and additional cleaning materials, and possibly, with appropriate medical oversight and support, antiviral medications? 12. What impacts will disease protection options such as PPE use have on worker productivity (e.g., can you use PPE when performing your heavy physical labor in warehouse movement and truck loading operations)? 13. Have you established a process to monitor and support ill employees and their families? 14. Have you considered closing non-critical common areas, such as break and lunch rooms? 15. Have you considered the need and your ability to practically separate staff (e.g., material handlers and drivers) during transfers of goods at shippers and regional distribution centers?
ACTION: Identify Human Resource (HR) and protective actions to sustain essential workforce	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Assess standard Highway and Motor Carrier business HR policies and procedures. 2. Develop additional HR policies specific to pandemic response. 3. Identify likely legal considerations that may arise from these new HR actions. 4. Develop plans and procedures that provide support and assistance to employees'	1. Have you adapted existing and/or developed new sick leave policies to support ill workers and ill family members?** 2. Have you met with unions and other HR groups on implementing new policies temporarily? 3. Have you communicated with workers

families. Provide regular communication to all staff on the latest pandemic recommendations.	and their families about potential HR policy changes? 4. Have you identified possible actions to help reduce potential abuse of the leave policies you have adapted to account for the possible extended absences by employees? 5. Have you identified legal and business effects from employing emergency HR policies (e.g., costs associated with leave policies, essential vs. non-essential worker status)? 6. Have you considered relevant laws that govern extended emergency leave for employees?
** www.pandemicflu.gov/plan/community/commitigation.html	

ESSENTIAL INTERDEPENDENCIES	
When an influenza pandemic strikes, it will affect all sectors of society. Preparedness and response will require a coordinated nation-wide response, including government and most importantly the private sector. To enable a swift pandemic response and recovery, the Highway and Motor Carrier Sub-Sector must identify and be able to sustain its essential interdependencies within and across sectors. Interdependencies requiring advanced coordination include support from utilities, businesses, government agencies, as well as essential goods and services, including fuel, electricity, telecommunications, and first responders.	
ACTION: Identify the interdependent relationships and take actions to sustain this essential support.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Assess your sector and external cross-sector essential service support requirements. 2. Assess the capability of Highway and Motor Carrier sector associations and government alert networks, as well as other informal mutual aid and assistance networks in order to reduce vulnerabilities. 3. Collaborate with public/private partners, such as State/local health and emergency response authorities and first responders, who support and rely on you. 4. Consider developing joint operational plans with service providers, suppliers, and customers.	1. Within your sector, what other sub-sectors are you most reliant on for support and do you support (e.g., fuel tanker fleets, vehicle towing and emergency repair, and emergency bridge and roadway repair and inclement weather response teams)? 2. What other sectors (e.g., Communications, Energy, Emergency Services, Food and Agriculture, and Water) are you most reliant on to sustain your essential operations and what have you done to enhance your support priority from these sectors' businesses? 3. What critical customers (e.g., healthcare facilities, energy companies) depend most on your transportation operations, and what should you do to prioritize support for them? 4. Can you reduce your business' risk and reliance on municipal and cross-sector support (e.g., collaborating with other similar businesses to establish a mutual support pact for equipment, supplies and workers)? 5. Are you part of Saint Lucia's pandemic planning and preparedness process? 6. Have you integrated your pandemic plans with other sector and cross-sector plans? Do you participate in public and private pandemic planning and response training exercises?

REGULATORY ISSUES	
In response to an influenza pandemic, the government may provide direct support in the form of vaccines, antiviral medications, and personal protection supplies for essential workers; priority and clearances for a business' 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 businesses should not rely on possible regulatory relief and/or waivers in their pandemic planning.* Early discussions with regulatory officials can identify issues that may be appropriate to address before and during an influenza pandemic.	
ACTION: Identify regulatory requirements that may affect business operations	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify regulations that, if temporarily modified, would reduce impacts on your critical functions, resources, and workers. 2. Identify government direct and indirect support options that may be necessary to ensure sustaining your business or sector. 3. Coordinate possible direct and indirect support and specific regulatory constraints and relief options in advance with appropriate government officials. 4. Communicate potential relief actions in advance to workers, supporting businesses, insurance carriers and customers.	1. Are there direct or indirect impacts on business operations that should be addressed by safety requirements (e.g., hours of service, and oversize/overweight regulations) or other response government actions (e.g., travel restrictions, enforcement of fuel price gouging)? 2. Are there temporary waivers to consider? 3. What temporary government actions (e.g., EPA/IRD waivers and exemptions for fuel taxes, restrictions on purchasing and using off-road diesel fuel for on-road vehicles) may help with business continuity and shortages in essential transportation supplies? 4. Are there potential temporary relief options specific to an influenza pandemic scenario (e.g., temporarily waiving license/certification; recognizing another State's license; authorizing drivers to operate on recently expired licenses, after DMV credentialing offices are closed from pandemic impacts)? 5. What issues may arise from temporarily modifying safety/licensing procedures that business must plan to offset (e.g., insurance carrier restrictions, and greater monitoring by business of drivers who may be allowed to exceed hours of service)?

IMPACTS FROM COMMUNITY DISEASE MITIGATION STRATEGIES	
To reduce impacts from an influenza pandemic, government authorities, as well as private entities, may implement strategies, including: voluntary isolation, voluntary home quarantine, school closures, 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 also will have potentially significant consequences for businesses.	
ACTION: Identify effects from mitigation strategies; take actions to reduce negative impacts	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Calculate effects of Mitigation Strategies on your business, workers, and community. 2. Coordinate and determine the strategies your community may employ. 3. Discuss the potential impacts from strategies with your workers. 4. Familiarize yourself with your company's pandemic planning trigger points and the CDC's Pandemic Severity Index to determine the timing and use of mitigation interventions.	1. What impacts will the strategies have on worker absentee rates? For example, how will it affect your workers and their families if schools/childcare facilities close for weeks at a time? 2. What impacts will the strategies have on worker absentee rates? For example, how will it affect your workers and their families if schools/childcare facilities close for weeks? 3. What are the costs associated with expanding your sick leave policies to support mitigation strategies like home isolation and family quarantine? 4. How can you survey your employees to identify who may need to stay home, telework, or work an alternate schedule to care for children because they are dismissed from school or childcare? 5. If you do not have adequate sick leave or other compensation options available, what are the near- and long-term impacts on your workforce and your business if workers, especially independent drivers and workers from small businesses, are absent for prolonged periods? 6. What workplace social distancing measures (e.g., work-at-home options, split working/meal shifts, reduced non-essential travel, and physical separation throughout the worksite and at others' sites, like shippers distribution centers) can and should you implement? 7. Have you met with your local government and emergency response officials on timing of measures, alerts, and implementation and

	on the triggers for your operational response? 8. What are the potential demand changes for your business when schools and non-essential businesses close (e.g., curtailing charter bus operations significantly, along with normal truck distribution of various food and supplies to schools and other businesses)? 9. Do your pandemic plans integrate practical support options for worker families in order to directly and indirectly aid in decreasing worker absentee rates?

Mass Transit Sub-Sector Pandemic Influenza Planning Guidelines

MODELED UPON: USA Department of Transport
http://www.dot.gov/pandemicflu/masstransit.pdf

<table>
<tr><th colspan="2">ESSENTIAL SERVICES</th></tr>
<tr><td colspan="2">Every day, public- and private-sector mass transit organizations transport passengers, and to a lesser extent, goods and services, by various modes, including trucks, containerized tucks, bus, ferry and taxicab. Mass transit's role in sustaining the nation's economy is significant. Disruption to these services may cause local, national and regional challenges. Proactive planning with emergency management, public safety, and government officials will help integrate essential mass transit operations into community emergency response plans. Other specific functions and processes include: receiving, holding, securing and managing passengers and goods; providing customer service support; managing transit security operations; overseeing control center functions; coordinating scheduling and dispatch; collecting revenue; business and HR support operations; maintaining critical equipment; and ensuring passenger, worker, and operational safety.</td></tr>
<tr><td colspan="2">ACTION: Identify and assess essential services, functions, and processes.</td></tr>
<tr><td>SUPPORTING ACTIONS</td><td>QUESTIONS TO CONSIDER</td></tr>
<tr><td>1. Prioritize services/functions given their value to customers and the community (i.e. hours of service, routes and modes).
2. Maintain those essential functions and processes required to sustain essential services and operations.
3. Identify potential "non-essential" services, functions, and processes that can be suspended or adapted to other more essential uses.
4. Communicate with customers and local emergency response officials the need to jointly plan and prepare for an influenza pandemic.</td><td>1. How would a severe influenza pandemic affect customer demand and operations? For example, disease containment strategies may lower demand for mass passenger carriers (i.e., bus and ferry), while demand for taxicabs vehicles might increase.
2. At what level, if any, are businesses and other destinations where passengers typically travel likely to continue operating? What will the impact be if "non-essential" businesses reduce operations or close temporarily? Will transit demands decrease for such as transporting essential workers who need the transit service and for other typical individual requirements (i.e., medical care and food)?
3. Can bus routes be modified quickly based on changing demand (e.g., as the pandemic influenza unfolds potentially reducing low passenger load bus routes and beefing up service on service on arterial streets to provide better than normal service on fewer routes)?
4. How might the National Council for Public Transportation [NCOPT] and Trucking Companies creatively adapt its typical services to support the community or nation? For example, could buses increase capacity and reduce passenger contact? Will increased use of car</td></tr>
</table>

	pools improve protection? Can communities assign trained persons (doctors etc.) to buses to assess passengers, provide masks, and/or ensure social distancing measures are followed? Can priority status and handling be designated for passengers traveling to medical centers?

ESSENTIAL ASSETS AND EQUIPMENT	
Unlike other disasters, an influenza pandemic will not physically damage infrastructure. However, planners should assess the impact absenteeism could have on operations. High absentee rates will make it difficult to maintain repair sites. A worker shortage may delay in-house maintenance and repair of assets and equipment, including engines, electronics, rails, and roadways. For entities that remain operational, the impact on the supply chain may limit the availability and delivery of replacement parts and supplies. Essential assets and equipment include: *cars; buses; taxis; ferries; roadway maintenance, repair and safety equipment; refueling equipment and stations.*	
ACTION:	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify assets and equipment that must be operated continuously and/or at key periods to sustain essential functions processes. 2. Identify and prioritize safety and security requirements for maintaining essential equipment and assets. 3. Review all primary and supporting assets to identify potential single-point failures and possible cascading consequences. 4. Consider how each action relates to those developed to address other emergencies in existing Mass Transit business contingency plans, and in the National Transport Plan.	1. Can typical processes be modified temporarily to sustain essential assets and equipment? For example, could bus, trucks, and ferry equipment be used in a more efficient and less demanding manner to try and reduce maintenance and repair requirements? 2. Could non-essential facilities be closed to consolidate operations and supplies? For example, could fewer bus dispatch centers be operated and still adequately support all operations and equipment? 3. What are the recurring maintenance requirements for the facilities used to house equipment, passengers, and employees? 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 (e.g. flooding)? 4. How will public concern over disease transmission affect demand in public transit use, especially in urban areas?

	5. When assessing potential single-point failures, what are the possible and plausible primary and supporting asset/equipment challenges (e.g., special driver and maintenance technician availability; adequate fuel/electricity availability and security; bridge and roadway repair; non-standard replacement and repair part accessibility; backup generator, fuel supply, security and safety equipment availability; Internet and telecommunications scheduling and control; and dispatch resilience)? 6. Have standard operating and emergency procedures been developed for all essential processes and equipment? If so, have they been distributed broadly to managers and staff? 7. Has a full assessment (i.e., Preliminary Hazard Analysis) been conducted for all systems to identify potential single-point failures based on the pandemic influenza planning assumptions?
ACTION: Prepare to sustain essential equipment for a wave lasting up to three months.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Prioritize the options available to address demands on essential resources. 2. Plan to rely on in-house or available local maintenance and repair/replacement support for 2-3 months during a pandemic influenza wave. 3. Assess recurring and preventative maintenance requirements. 4. Assess implications if essential assets fail early on during the pandemic influenza outbreak. 5. Consider establishing a pandemic influenza mutual aid program among similar small/medium and even large businesses to assist each other with sustaining essential assets	1. Is there excess operational capacity available in the business' essential assets to sustain functions and reduce demand on equipment and workers? For example, are there typically more qualified drivers than operational buses, or more buses than driver shifts? 2. Are there other similar vehicles that may become available due to decreased demand that can be pressed into service, such as school buses being employed for public transport? 3. Without sufficient replacement parts on-site or locally, could a mutual aid pact be formed to sustain operations? For example, could taxicab, mini buses and

	trucking companies collaborate to share a maintenance site with adequate repair equipment and key workers? 4. What is the frequency for routine maintenance on essential primary/secondary assets and equipment? How critical is it to perform on this schedule? How easily can scheduled maintenance be deferred or accelerated on short notice? 5. What are the specific demands mass transit infrastructure components that must be frequently inspected and maintained, to include structures, signals, communications and vehicles? 6. Are there updated emergency operating plans for assets/equipment to address pandemic influenza conditions? For example, can social distancing strategies, disciplined personal hygiene, Personal Protective Equipment [PPE], and equipment decontamination be incorporated effectively and efficiently?

ESSENTIAL RAW MATERIALS AND SUPPLIES	
A severe pandemic influenza may disrupt access to suppliers and to supplier's manufacturers for up to three months – much longer than other disasters. Direct impacts on individuals, businesses, and the nation from the virus, and disease mitigation strategies indirectly, may affect production and delivery of materials and supplies. Mass transit entities should assess their supply chain networks from their in-house storage capacity to all 1st, 2nd, and beyond distributor levels. Given a reliance on "just-in-time" delivery and other potential impacts that could shut down the supply chain, entities may consider stockpiling essential items such as lubricants, filters, belts, tires, 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 three months.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify critical material and supplies (e.g., fuel, lubricants, refrigerants, filters, repair parts) necessary to maintain essential mass transit assets and equipment. 2. Prioritize essential material and supplies necessary to operate equipment and sustain essential functions.	1. How much of which materials/supplies (e.g., gallons of gasoline/diesel, quarts of lubricants) are required to sustain the most essential operations for up to three months? 2. How many days supply are stocked onsite for all essential fuels and supplies? How

3. Identify options to reduce demand for essential supplies and materials. 4. Assess all internal and external supply-chain support operations and contracts. 5. Explore options that might reduce the need to stockpile high-cost supplies or hazardous materials on-site at each business. 6. Assess costs to procure, stock, and/or ensure delivery of essential materials. 7. Identify physical/safety limitations in stocking sufficient essential supplies/materials locally. 8. Identify a formal chain of command to ensure someone is available to authorize major emergency procurements. 9. Identify additional security needs for expanded and newly created high-value or at-risk material stockpiles. 10. Identify potential risk through1st/2nd/3rd-order vulnerabilities or unintended effects to supply chain (i.e., who supplies the suppliers?). 11. Coordinate with all supply-chain vendors and normal support sites.	will the necessary difference between stocked and required be obtained during a pandemic emergency to support operations both locally and on the road? 3. What available supplies (e.g., other appropriate types of fuels and lubricants) might be substituted as backups temporarily for preferred essential ones? 4. Are there operations and maintenance processes that could be modified to reduce demand to stock supplies? For example, could you extend the period between lubricants and filter replacement? 5. How might small/medium-sized businesses collaborate to reduce their risk and vulnerability for obtaining essential supplies and materials? 6. Are there new or additional procedures and supplies necessary to ensure passenger and worker areas are cleaned and disinfected between trips/shifts and load changes? For example, does the business have sufficient and appropriate cleaning solutions to disinfect the interior of buses and trucks between shifts? Will this affect the durability of the interiors of these vehicles? 7. What can the business afford to stockpile and what must it stockpile? How might these additional extraordinary costs be funded (e.g., retained earnings, special disaster fund, and/or government support)? 8. Is there adequate space on-site at vehicle garages and maintenance and support areas to expand storage of fuels and supplies temporarily? 9. Are open warehouses or storage containers available locally on short notice to serve as temporary storage sites? 10. Can these essential materials and supplies be safely, legally, and practically stored at local/regional distribution centers or at dispersed sites along likely travel routes? 11. Are there realistic options for obtaining these essential materials/supplies

	elsewhere during an influenza pandemic (e.g. government stockpile, mutual assistance business stockpile, or excess capacity in large or "non-essential" businesses)? 12. Are essential workers authorized to expedite purchases of supplies and materials via credit card or purchase order when supervisors are not available to approve or make purchases? 13. To improve availability options, are there pre-established contracts with multiple vendors of essential supplies? Who do the business' vendors rely on for their supply and transport services; are they different or the same providers? 14. What happens if the supply chain cannot provide critical materials or supplies? How quickly would that affect your ability to provide essential services? How will customers, vendors, and government emergency response officials be notified of potential impacts? 15. Have planning and preparedness actions been integrated with local/regional suppliers to promote interface resilience and priority support for the business' essential requirements (e.g., repair sites and fueling stations)? 16. 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 in the area and are these the same ones on which the business relies? 17. How can you provide incentives for essential suppliers and support contractors to become better prepared? For example, can the business collaborate on planning, integrate preparedness training, and stipulate pandemic influenza certification in all supply contracts?

ACTION: Determine the most effective ways to ensure an adequate supply of essential materials.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify physical/safety limitations in stocking sufficient essential supplies/materials locally. 2. Identify a formal chain of command to ensure someone is available to authorize major emergency procurements. 3. Identify additional security needs for expanded and newly created high-value or at-risk material stockpiles. 4. Identify potential risk through1st/2nd/3rd-order vulnerabilities or unintended effects to supply chain (i.e., who supplies the suppliers?). 5. Coordinate with all supply-chain vendors and normal support sites.	1. Is there adequate space on-site at vehicle garages and maintenance and truck support areas to expand storage of fuels and supplies temporarily? 2. Are open warehouses or storage containers available locally on short notice to serve as temporary storage sites? 3. Can these essential materials and supplies be safely, legally, and practically stored at local/regional distribution centers or at dispersed sites along likely travel routes? 4. Are there realistic options for obtaining these essential materials/supplies elsewhere during an influenza pandemic (e.g., government stockpile, mutual assistance business stockpile, or excess capacity in large or "non-essential" businesses)? 5. Are essential workers authorized to expedite purchases of supplies and materials via credit card or purchase order when supervisors are not available to approve or make purchases? 6. To improve availability options, are there pre-established contracts with multiple vendors of essential supplies? Who do the business' vendors rely on for their supply and transport services; are they different or the same providers? 7. What happens if the supply chain cannot provide critical materials or supplies? How quickly would that affect your ability to provide essential services? How will customers, vendors, and government emergency response officials be notified of potential impacts? 8. Have planning and preparedness actions been integrated with local/regional suppliers to promote interface resilience and priority support for the business' essential requirements (e.g., repair sites and fueling stations)? 9. 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 in the area and are these the same ones on which the business relies? 10. How can you provide incentives for essential suppliers and support contractors to become better prepared? For example, can the business collaborate on planning, integrate preparedness training, and stipulate pandemic influenza certification in all supply contracts?

ESSENTIAL WORKERS	
A severe pandemic flu may cause extended absences for essential workers, which might affect the organization and its supply chain. During a severe pandemic influenza, workforce absenteeism may range from 25 to 40 percent. Complicating matters, the disease will strike randomly among employees from the boardroom to the mailroom. Ensuring 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,) and non-medical countermeasures (e.g., hand disinfectants, gloves, and masks). A list of essential workers may include: *bus drivers; taxicab and truck drivers; ferry operators; equipment and roadway maintenance and repair workers; operations center personnel, safety inspectors; security officers; passenger and vehicle scheduling; key administration workers; occupational health personnel; operations supervisors; and executive management.*	
ACTION: Identify the types and numbers of workers critical to sustain essential functions.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify essential workers based on their position/skills necessary to sustain essential functions and equipment. 2. Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, and staff medical personnel during an influenza pandemic. 3. Assess impacts from short-term and extended absences by essential workers. 4. Assess requirements given differences in operational demands for essential workers (e.g., truck and bus drivers vs. office- based dispatchers). 5. Assess the options to obtain contractor	1. Have the worker categories and specific workers who are essential to operate and maintain the essential functions and equipment necessary to sustain the most essential services been formally identified and communicated to the business' workers and appropriate unions and other organizations? 2. 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 road maintenance technicians serve as

backup support on essential operations and determine how quickly that can be started.	engineers temporarily, or non-union drivers fill in for ill union drivers)? 3. What different challenges does the organization face with full-time, part-time, or seasonal employees, and how are these addressed in planning and preparedness efforts? 4. Are there differences in the organization's workforce by age and/or family status? For example, a predominantly young workforce with employees with more school age children will likely be affected more profoundly by school closures and self-quarantine. 5. Do contract employees provide essential in-house or offsite services for vehicles, electronics, business functions and passenger support operations (e.g., workplace and vehicle cleaning, equipment repair, and telecommunications, critical business administrative operations, computer and internet access support)? 6. What are the different workforce challenges for on-site vs. off-site and full vs. part-time contractors to perform critical functions? 7. What are the potential impacts of changes in demand and adjustments in scalable operations (e.g., service routes, hours, modes) on essential worker requirements and numbers? 8. Have those workers who might not typically be considered "essential" in most disaster scenarios but will become so during a pandemic flu been assessed, such as vehicle cleaners and station janitors? 9. Are there ways to automate or electronically augment some of the essential functions of your workforce (i.e., safety inspectors and security workers)? What essential operations might need to be maintained temporarily through external contract?

ACTION: Identify policies and procedures to ensure a safe workplace.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Emphasize worker/workplace disease control/ protection. See: www.pandemicflu.gov/plan/workplaceplanning/index.html. 2. 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. 3. Consider implementing a process to screen employees and visitors at the entrances to critical facilities.	1. 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., control or emergency operations centers)? 2. 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 mass transit modes? 3. Should worksite and vehicle (driver, passenger and cargo areas) cleaning procedures be enhanced? 4. How will the costs be funded that are associated with stocking worker protection items such as masks and additional cleaning materials, and possibly, with appropriate medical oversight and support, antiviral medications? 5. If anticipated for use, have worker preparedness tasks such as mask and respirator training and fit testing been reviewed and incorporated in the plans based on WHO requirements? 6. What impacts will disease protection options such as PPE use have on worker productivity? For example, can PPE be used for extended periods when driving a truck, bus or taxicab? What are the impacts when performing heavy physical labor such as cargo handling if you are required to wear PPE? 7. Have closing non-critical common areas, such as break and lunch rooms, and ensuring that shifts do not commingle during shift changes been considered in the plans?

ACTION: Identify policies and procedures to protect and sustain workers during an influenza pandemic	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Reduce demands on essential workers. 2. Temporarily augment essential worker ranks. 3. Coordinate with officials on using non-licensed workers during an influenza pandemic. 4. Consider, where practical, plans to have an increased number of appropriate employees work from a safer off-site location (i.e., home). 5. 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.	1. Are there practical temporary options that can be exploited to increase worker availability (e.g., extending shifts to 12 hours, adding overtime, and using other non-essential workers)? 2. Could non-essential staff be sent home to reduce disease transmission at the workplace? 3. Has the need for and conditions requiring more extreme measures, such as sequestering essential drivers, repair technicians or dispatch workers on-site been considered? 4. In the event of an emergency, have less essential workers be cross-trained to perform essential jobs? Could off-site work options be employed for at least part of the organization's staff (e.g., payroll, bookkeeping)? 5. How will the organization ensure IT and telecommunications systems can support any increases in employees working offsite? 6. Has a process to monitor and support ill employees and their families been established? 7. Have locations to screen workers before they begin their shift been considered? Are there "self declaration" forms for workers to assess their and their family's health? 8. Can the business effectively separate workers (e.g., bus, taxicab, and truck drivers) from passengers by physical distancing and/or appropriate barriers during operations?

ACTION: Identify Human Resource (HR) and protective actions to sustain essential workforce.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Assess standard Mass Transit business HR policies and procedures. 2. Develop additional HR policies specific to pandemic influenza response. 3. Identify likely legal considerations that may arise from these new HR actions. 4. Develop plans and procedures that provide support and assistance to employees' families. 5. Provide regular communication to all staff on the latest pandemic influenza recommendations.	1. Have existing policies been adapted and/or new sick leave policies been developed to support ill workers and well workers with ill family members? 2. Has the organization met with worker unions and other HR groups on implementing new policies temporarily? 3. Has adding provisions in the relevant union/labor contracts been considered to address actions to be taken if a pandemic influenza emergency is officially proclaimed-- it may necessitate the temporary suspension of certain collective bargaining agreement provisions? 4. Have the potential risks and the organization's planning and preparedness actions for potential HR policy changes been communicated with workers and their families? 5. Have the actions to help reduce potential abuse of your leave policies been identified? 6. 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? 7. Have relevant laws that govern extended emergency leave been reviewed with workers?

ESSENTIAL INTERDEPENDENCIES	
When a pandemic influenza strikes, it will affect all sectors of society. Preparedness and response will require a coordinated nation-wide response, including governments and most importantly the private sector. To enable a swift pandemic influenza response and recovery, the Mass Transit 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 (gasoline and diesel), electricity, healthcare, telecommunications, and first responders.	
ACTION: Identify the interdependent relationships and take actions to sustain this essential support	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Assess sector and external cross-sector essential service support requirements. 2. Assess the capability of the sub-sector's associations and government alert networks, as well as other informal mutual aid and assistance networks to reduce vulnerabilities. 3. Collaborate with public/private partners, such as health authorities and first responders, who support and rely on the business. 4. Consider developing joint operational plans with service providers, suppliers, and customers.	1. Within the Transportation Sector and other sectors, which entities do you depend on most to sustain essential operations, and vice versa? 2. What has the organization done to coordinate with and enhance its priority for support from entities on which it depends inside and outside of the sector? 3. What critical customers (e.g., hospitals, critical manufacturing facilities, low-income housing) depend most on specific mass transit route operations? What should/could be done to prioritize support for them? 4. Can the organization's risk and reliance on municipal and cross-sector support be reduced through targeted preparedness activities? For example can the organization collaborate with similar entities to establish a mutual support pact for equipment, supplies and workers? 5. Does the organization participate in pandemic influenza planning and preparedness activities? 6. Are the organization's pandemic influenza plans integrated with other key sector and cross sector business continuity plans? 7. Does the organization participate with other stakeholders in public and private pandemic influenza planning and response training exercises?

REGULATORY ISSUES	
In response to a pandemic influenza, the government may provide direct support, including vaccines, antivirals, and personal protection supplies for essential workers; priority and clearances for an organization's supply deliveries; on-site public safety/physical security augmentation. Indirect support may include governmental waivers from sector-specific regulatory requirements. However, public and private sector entities should not rely on regulatory relief and/or waivers in their pandemic influenza planning. Early discussions with regulatory officials can identify issues that may be appropriate to address before and during a pandemic influenza.	
ACTION: Identify regulatory requirements that may affect business operations.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Identify regulations that, if temporarily modified, would reduce impacts on essential functions, resources, and workers. 2. Identify direct and indirect government support options that may be necessary to ensure sustaining the organization or sector. 3. Coordinate possible direct and indirect support and specific regulatory constraints and relief options in advance with the appropriate government officials. 4. Communicate potential relief actions in advance to workers, supporting organizations, insurance carriers and customers.	1. Are there direct/indirect impacts on operations to address, such as enacting temporary safety policies (e.g., authorities for transit police/security to manage ill passengers and workers; mandated social distancing procedures for bus and truck operations); and enhancing enforcement of existing regulations (e.g., fuel price gouging)? 2. What impacts could result from government response actions and cross-jurisdictional differences in response (e.g., quarantine of specific communities; local travel restrictions)? 3. Are there temporary regulatory waivers to consider in sustaining essential operations (e.g., extended hours of service, adjusting routine safety inspection schedules)? 4. Are there potential temporary worker and workforce regulatory challenges specific to a pandemic influenza that should be considered (e.g., authorizing drivers to operate on recently expired License and other credentials if credentialing offices are closed from pandemic influenza impacts)? 5. What issues may arise from temporarily modifying safety/licensing procedures that organization's must plan to offset (e.g., insurance carrier restrictions, and greater monitoring of those drivers who may be allowed to exceed hours of service)? Will the State temporarily waive driver's licensure and certification regulations to perform essential jobs

	temporarily? 6. In a crisis, will the State recognize another State's operator's License and certification (e.g., to allow qualified drivers to enter Saint Lucia and assist)?

IMPACTS FROM COMMUNITY DISEASE MITIGATION STRATEGIES	
To reduce health impacts from a pandemic influenza, government authorities, as well as private entities, may implement strategies, including: voluntary isolation, voluntary home quarantine, school closures, and social distancing of adults in the community and workplace. The public health and social distancing strategies may ultimately contain the disease and will reduce the risk of infection and death, but there may be significant negative consequences for the Mass Transit Sub-Sector.	
ACTION: Identify effects from mitigation strategies; take actions to reduce negative impacts.	
SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
1. Calculate effects of Community Disease Mitigation Strategies (www.pandemicflu.gov/plan/community/commitigation.html) on the organization, workers, and community. 2. Coordinate and determine the strategies the State/community may employ. 3. Discuss the potential impacts from strategies with the organization's workers. 4. Familiarize yourself with your Agency's pandemic influenza planning trigger points and the CDC's Pandemic Influenza Severity Index to determine the use of mitigation interventions.	1. 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? 2. What are the direct and indirect costs associated with expanding sick leave policies to support mitigation strategies like home isolation and family quarantine? 3. How can you survey your employees to identify who may need to stay home, telework, or work an alternate schedule to care for children because they are dismissed from school or childcare? 4. If you do not have adequate sick leave or other compensation options available, what are the near- and long-term impacts on the workforce and the business if workers are absent for prolonged periods? 5. What workplace enhanced social distancing, personal hygiene and environmental cleaning measures can and should you 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)? 6. Has the business met with government and emergency response officials on timing of their measures, alerts, and implementation and on response triggers? 7. What additional potential demand changes for the organization could occur when these strategies are implemented? 8. Do the organization's pandemic influenza plans integrate practical support options for worker families in order to directly and indirectly aid in decreasing worker absentee rates?

Maritime Sub-Sector Pandemic Influenza Planning Guidelines

MODELED UPON: USA Department of Transport
http://www.dot.gov/pandemicflu/maritime.pdf

ESSENTIAL SERVICES	
The Maritime sub-sector serves the nation by moving critical goods and people across the region and along the coast. Given the importance of maritime trade to Saint Lucia's economy [fishing, tourism, food security] disruptions to it can have immediate and significant economic, social and national 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**
1. 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. 2. Forecast and assess potential changes in normal demand for services and impacts on operations/ revenue. 3. Prioritize the organization's essential services and functions given their value to customers and the nation. 4. Sustain those essential supporting functions and processes required to maintain essential services and operations. 5. Identify potential "non-essential" services, functions, and processes that may be suspended or adapted to other more essential purposes. 6. Communicate with critical customers, suppliers, other stakeholders and emergency response officials on jointly	1. While each maritime vessel company (passenger, cargo and support), the marine police, 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 police 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? 2. What changes in passenger customer

planning and preparing for an influenza pandemic. 7. 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. 8. 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 enduser), consider ways to develop greater flexibility in modifying processes and/or ensuring sufficient advance planning and warning to more rapidly adapt services.	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? 3. 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 "nonessential" but high demand, maritime cargo businesses like automobile or clothing manufacturers reduce operations or close temporarily? If overall demand for certain "nonessential" 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)? 4. 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? 5. 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)?

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, marina as well as in harbors); 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**
1. Identify assets and equipment that must be operated continuously and/or at key periods to sustain essential functions and processes. 2. Identify and prioritize safety and security requirements for maintaining essential equipment and assets. 3. Review all primary and supporting assets and equipment to uncover potential single-point failures and possible cascading consequences. 4. Consider how each action relates to those developed to address other emergencies in existing Maritime business contingency plans, and in the National Transportation Plan.	1. 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 longshoreman and fire and rescue craft may be needed if fewer ships are being operated? 2. 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? Can non-essential facilities be closed to consolidate operations and supplies? 3. 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? 4. 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? 5. 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)? 6. 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)? 7. 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?
ACTION: Prepare to sustain essential equipment for a wave lasting up to 12 weeks.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Prioritize the options available to address demands on essential resources. 2. Plan to rely on in-house or available local maintenance and repair/replacement support for up to 12 weeks during a pandemic influenza wave. 3. Assess recurring and preventative maintenance requirements. 4. Assess implications if essential assets fail early on during the pandemic influenza outbreak. 5. Consider establishing a pandemic influenza mutual aid program among similar	1. 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? 2. 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?

small/medium and large businesses to assist each other with sustaining essential assets.	3. 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? 4. 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? 5. 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? 6. 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?

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**
1. Identify critical material and supplies (e.g., fuel, lubricants, refrigerants, filters, repair parts) necessary to maintain essential assets and equipment. 2. Prioritize essential material and supplies necessary to operate equipment and sustain essential functions. 3. Identify options to help reduce demand for essential supplies and materials. 4. Assess all internal and external supply-chain support operations and contracts. 5. Explore options that might reduce the need to stockpile high-cost supplies or hazardous materials on-site or onboard. 6. Assess costs to procure, stock, and/or ensure delivery of essential materials. 7. Identify physical/safety limitations in stocking sufficient essential supplies/materials locally at ports and onboard ships. 8. Identify a formal chain of command to ensure someone is available to authorize major emergency procurements. 9. Identify additional security needs for expanded and newly created high-value or at-risk material stockpiles. 10. Identify potential risk through1st/2nd/3rd-order vulnerabilities or unintended effects to supply chain (i.e., who supplies the suppliers?).	1. What quantities of which supplies (e.g., gallons of gasoline/ diesel/ ethanol, quarts of lubricants) are required to sustain essential operations for up to 12 weeks? 2. 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? 3. 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)? 4. 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? 5. 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

11. Coordinate with all supply-chain vendors and normal support sites.	in accordance with National Occupational Health and Safety guidance? 6. 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)? Can stockpiled essential materials and supplies be safely, legally, and practically stored at ports or other locations? 7. Is there adequate and useful space on-site, such as port maintenance and support areas, to expand storage of fuels and supplies temporarily? 8. Are open warehouses or storage containers available locally on short notice to serve as temporary storage sites for materials requiring environmental control or security? 9. Are there realistic options for obtaining these essential materials/supplies elsewhere during an influenza pandemic (e.g., Central/Local government stockpile, mutual assistance business stockpile, or excess capacity in large or "non-essential" businesses)? 10. How might small/medium-sized maritime organizations collaborate to reduce their risk and vulnerability for obtaining essential supplies and materials? 11. 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? 12. 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? 13. 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? 14. 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)? 15. 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? 16. 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 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); tanker man; 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**
1. Identify essential workers based on the position/skills necessary to sustain essential functions and equipment. 2. Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, and staff medical personnel during an influenza pandemic. 3. Assess impacts from short-term and extended absences by essential workers. 4. Assess requirements given differences in operational demands for essential workers (e.g., sea vs. river vessel crews vs. port dispatchers). 5. Assess the options to obtain contractor backup support on essential operations and determine how quickly that can be started.	1. 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? 2. What are the potential impacts on essential functions based on the differences between workers being employees of a maritime vessel company, National Police or Port Police and those hired under other circumstances such as from union labor pools for specific vessel deployments, short term dockside support or other purposes? 3. 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)? 4. 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? 5. 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? 6. 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? 7. 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? 8. 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 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? 9. 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)? 10. 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? 11. 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)?
ACTION: Identify policies and procedures to ensure a safe workplace.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Emphasize worker/workplace disease control/ protection. 2. Determine the types of Personal Protective Equipment (PPE) that may be best for various worker types and worksites. For information on suggested PPE use. 3. Consider implementing a process to screen employees and visitors for influenza symptoms at the entrances to critical facilities. 4. Identify which organization (e.g., port, ship, and/or government) will be responsible for officially declaring a port or ship contaminated. 5. 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. 6. Identify and enhance risk communications and incident communication protocols for the airport, airline, government, local communities and the public. 7. Coordinate with government officials on the priority release and process for administering medical countermeasures to identified essential workers.	1. 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? 2. Should port and ship (crew, passenger and cargo areas) cleaning procedures be modified and enhanced? 3. 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? 4. If anticipated for use, have worker preparedness tasks for mask and respirator training and fit testing been reviewed based on manufacturer and OSHA requirements and incorporated into the plans? 5. What impacts will disease protection options such as PPE use have on worker productivity? 6. For example, what are the impacts when performing heavy physical labor such as cargo handling if workers are required to wear PPE? 7. 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? 8. 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? 9. 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? 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)? 10. 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? 11. 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? 12. 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?
ACTION: Identify Human Resource (HR) and protective actions to sustain essential workforce.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Assess standard Maritime business HR policies and procedures. 2. Develop additional HR policies specific to pandemic influenza response. 3. Identify likely legal considerations that may arise from these new HR actions. 4. Identify and address other possible pandemicrelated worker issues, such as potential activation for essential workers who are members of the National Guard or Reserve. 5. Develop plans and procedures that provide support and assistance to workers' families. 6. Provide regular communication to all	1. 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? 2. 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? 3. Has the organization collaborated with all worker unions and other worker labor

workers and stakeholders on the latest HR pandemic influenza recommendations to better prepare them and to reduce uncertainty.	groups about developing and implementing temporary policies? 4. 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? 5. 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? 6. 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? 7. Have the actions to help reduce potential abuse of special leave policies been identified? 8. 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? 9. Have appropriate portions of relevant laws and regulations 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, between Government and 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**
1. Assess internal sector and external cross sector essential service support requirements. 2. Assess other external interdependent essential service support requirements (e.g., municipal infrastructure support). 3. 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. 4. Collaborate with public/private partners, such as health authorities and first responders, who support and rely on the business. 5. Consider developing joint operational plans with service providers, suppliers, customers and other stakeholders.	1. Within the Transportation Sector and for other Sectors (e.g., Communications, Emergency Services, and Water) which entities does the organization depend on most to sustain its essential operations, and vice versa? 2. 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 potable water and wastewater support as well as priority supply for electrical and telecommunications? 3. 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? 4. 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. 5. 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)? 6. Does the maritime port or primary or supporting vessel company participate in pandemic influenza planning and preparedness activities? 7. Are the maritime pandemic influenza plans shared and integrated with other key sector and cross sector business continuity plans? 8. How is coordination between the various Emergency Operations Centers at ports, with ship companies, and with Government being accomplished to ensure appropriate collaboration on processes and actions, and on shared needs identification? 9. 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?

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 National Regional and International regulatory requirements that may affect business operations.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Collaborate with government officials to determine potential priorities for defining essential goods/products and passengers. 2. Identify regulations that, if temporarily modified, would reduce impacts on essential functions, resources, and workers. 3. Identify direct and indirect government support options that may be necessary to ensure sustaining the organization or sector. 4. Coordinate possible direct and indirect support and specific regulatory constraints and relief options in advance with the appropriate government officials. Identify impacts that may result from changes in government actions as the pandemic influenza's affects on specific communities evolves. 5. 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	1. Are there direct/indirect impacts on business operations that should be addressed, such as: a. 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)? b. enhancing enforcement of existing regulations (e.g., the U.S. Caribbean ports; maritime "Declaration of Health" certification; and fuel price gouging)? c. authorizing temporary waivers to sustain essential operations (e.g., extended hours of service for licensed mariners; adjusting routine safety inspection schedules)? d. determining relative priority of military and civilian vessels to commercial vessels? 2. 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)? 3. 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? 4. 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? 5. 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)? 6. In a crisis, will the State recognize another State's certification (e.g., to allow qualified workers to cross national/state lines and assist)? 7. 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?

IMPACTS FROM COMMUNITY DISEASE MITIGATION STRATEGIES	
To reduce health impacts from an influenza pandemic, 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.	
ACTION: Identify effects from mitigation strategies; take actions to reduce negative impacts.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Calculate effects of CDC's Community Disease Mitigation Strategies on the organization, workers, and community. 2. Determine the strategies that your Agency/ community may/can employ. 3. Discuss the potential impacts from strategies with the organization's workers. 4. Familiarize yourself with your Agency and National influenza pandemic planning trigger points and the CDC's Pandemic Severity Index to determine the timing and use of mitigation interventions.	1. 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? 2. 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? 3. 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? 4. 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)? 5. Has the business met with government and emergency response officials on timing of their measures, alerts, and implementation and on response triggers? 6. What additional potential demand changes for the organization could occur when these strategies are implemented? 7. 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?

Aviation Sub-Sector Pandemic Influenza Planning Guidelines

MODELED UPON: USA Department of Transport
http://www.dot.gov/pandemicflu/aviation.pdf

ESSENTIAL SERVICES AND SUPPORTING FUNCTIONS AND PROCESSES	
The Aviation sub-sector is primarily a service industry that provides safe and secure domestic and international movement of goods and people by air. Aviation has two distinct roles in pandemic influenza planning. First, as a potential vector of disease, air travelers can spread infection around the globe in a matter of hours. Second, the Sub-sector supports pandemic influenza response needs while sustaining basic economic stability. Caribbean regional commercial passenger and cargo carriers as well as private aviation have grown rapidly in the last 30 years. As these critical capacities have increased, so too has the reliance on them for business and leisure travel and delivery of "just in time" goods. A service disruption may severely challenge local, regional, and national economic and social stability. In carrying out the primary service of transporting passengers and goods while ensuring passenger, worker, and operational safety and security, Aviation entities perform specific functions and processes, including: receiving, holding, securing and managing passengers and goods; providing customer service support; managing airport operations and intermodal transfers; providing passenger and cargo security functions, coordinating scheduling and dispatch; collecting revenue and paying accounts; providing HR support; sustaining business operations; meeting ISPS/ICAO/ECCAA and FAA safety standards; and maintaining critical equipment.	
ACTION: Identify and assess essential services, functions, and processes.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Forecast and assess potential changes, demand for services and impacts on operations/revenue under different pandemic influenza scenarios (e.g., pandemic severity ranging from 1 to 5; pandemic stage ranging from a localized outbreak overseas through widespread pandemic and recovery). 2. In collaboration with government officials, consider effects on aviation demand and operations from potential national/regional mitigation measures and priorities (to be identified) for the transportation of essential goods and people under each scenario. 3. Collaborate with government officials to	1. Each airline and airport may be effected and react differently during a pandemic influenza. Each entity is interdependent and its actions will have impacts on the others. For example, an airline may transfer resources between airports to support shifts in passenger or cargo demand. How would this change affect the airports in question as well as the communities they serve? 2. How might a pandemic affect demand for air transportation and how would these impacts affect your revenue and operations? a. Might disease containment strategies (or the" hassle factor "associated with them) and public fear reduce demand

define "essential" services (e.g., routes, frequencies, cargo lift, and service to small communities) for each pandemic influenza scenario. 4. Identify, assess, and rank services and functions for each scenario according to their value to critical customers and to the community/nation. 5. Identify and prioritize those functions and processes required to sustain operations under each scenario, based on forecast demand and national/community needs. 6. Identify and rank those available services, and supporting functions and processes that can be adjusted to maintain operations based on different impact scenarios and demand. 7. Identify potential "non-essential" services, functions, and processes that you may be able to suspend or adapt to other more essential uses. 8. Communicate with critical customers, suppliers, labor unions, other stakeholders and local emergency response officials on jointly planning and preparing for an influenza pandemic. 9. 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.	for non-essential travel or constrain the numbers of passengers you can transport safely? b. What are the impacts on passenger demand if air travel-intensive businesses restrict travel, reduce operations, or close temporarily during a pandemic influenza wave? c. Could media attention/public perception affect demand in the first days/weeks of a suspected outbreak, even if no pandemic influenza results (e.g., the outbreak is later proven to be a false alarm, the virus mutates to become less virulent, or the outbreak is contained effectively)? d. What are the potential challenges from multiple pandemic influenza waves lasting two to three months and recurring over a period of 12-18 months? How quickly or not will aviation demand rebound during the recovery period between each wave? e. What are the potential impacts on a major tourist and recreational destination such as Saint Lucia? How might this impact passenger demand? f. How might geographic and population differences affect passenger and cargo demand levels, routes, frequency, load factors, and/or aircraft size? Would rural isolated areas be more dependent on air service for essential goods and personal transportation? Would residents/businesses in urban/suburban corridors be more likely to shift to other models? g. Might disease containment strategies (or the" hassle factor "associated with them) and public fear reduce demand for non-essential travel or constrain the numbers of passengers you can transport safely? h. What are the impacts on passenger demand if air travel-intensive businesses restrict travel, reduce

	operations, or close temporarily during a pandemic influenza wave? i. Could media attention/public perception affect demand in the first days/weeks of a suspected outbreak, even if no pandemic influenza results (e.g., the outbreak is later proven to be a false alarm, the virus mutates to become less virulent, or the outbreak is contained effectively)? j. What are the potential challenges from multiple pandemic influenza waves lasting two to three months and recurring over a period of 12-18 months? How quickly or not will aviation demand rebound during the recovery period between each wave? k. How would impacts on international manufacturers and shippers affect domestic as well as international aviation? 3. Might there be increases in demand or need for certain services you provide, including: a. on-demand air transportation of essential medical personnel and supplies; b. cargo operations, including the delivery on essential and non-essential retail goods resulting from an increased public use of on-line electronic ordering; c. private aircraft and/or service from small airports from passengers hoping to avoid public contact; and d. cargo aircraft to deliver goods otherwise shipped as belly cargo on passenger airlines where commercial passenger carriers have suspended or reduced operations? 4. How can an airline or airport adapt its services to better support the community, region, or nation? a. Can passenger aircraft be used to haul appropriate types of essential cargo? b. Might airlines, with government public health guidance on appropriate spacing

	and possible economic support, reduce the number of passengers per flight to enhance social distancing and minimize person-to-person close contact? c. Can airports facilitate social distancing in terminals (e.g., blocking off or removing every other seat in waiting areas)? d. If international flights are routed to airports with CDC Quarantine Stations, can other airports shift essential equipment and personnel support to the ports of entry? e. In collaboration with government officials, can airlines, airports and freight forwarders prioritize cargo handling so the most essential goods/products (e.g., healthcare supplies and water treatment utility repair parts) are delivered first? f. How might the sector and the government together ensure that essential air transportation remains available to all regions, including rural areas? 5. How will pandemic influenza affect specialty aviation carriers (e.g., air ambulance, fire fighting, fixed/rotary wing safety inspectors, and offshore oilrig support)? How will priority delivery for essential items (i.e., fuel, repair parts) be maintained for these specialty carriers?

ESSENTIAL ASSETS AND EQUIPMENT	
Unlike other disasters, pandemic influenza will not directly damage physical assets and infrastructure. However, aviation planners should assess the indirect impacts absenteeism and potential supply chain disruptions could have on essential equipment operations and maintenance, and on other physical assets such as essential primary and supporting facilities. High absentee rates will not only make it difficult to operate equipment at normal levels but may also delay in-house and offsite maintenance and repair of essential assets and equipment. Essential aviation assets and equipment include: jet, propeller, and fixed and rotary wing aircraft; airport passenger and worker support vehicles; baggage and cargo transfer and intermodal material handling; fuel storage containers and pipelines; refueling and maintenance support; aircraft and airport housekeeping and food; customer ticketing and electronic computer/internet interface; Port Security and other airport and aircraft security and safety equipment; wireless/wired telecommunications; radar and other electronics for ISPS/ICAO/ECCAA and FAA and airport and airline movement monitoring, management and safety	
ACTION: Review equipment critical to support each essential function.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Identify assets, and equipment you must operate continuously and/or at key periods for each pandemic influenza scenario to sustain essential functions and processes. 2. Review your primary and supporting assets and equipment to identify potential single point failures and possible cascading consequences. 3. Consider how each action relates to those developed to address other emergencies in existing Aviation business contingency plans, and in the Transportation Sector-Specific Plan to the National Infrastructure Protection Plan.	1. How will a change in demand levels affect your need for equipment (e.g., fewer would be needed if you consolidate routes or reduce flight frequency on certain routes; fewer airport fire and rescue vehicles would be needed if runways shut down)? 2. Can you modify typical processes temporarily to sustain essential assets and equipment? For example, can you operate your essential aviation equipment differently to decrease maintenance/repair requirements (e.g., consolidate routes, reduce flights on certain routes, operate in daylight hours only, rotate aircraft in and out of service)? a. Can your organization close its non-essential facilities and consolidate operations and supplies? For example, can airlines consolidate and operate shared aviation maintenance sites at each airport or can major airline hub operators support all others at a large airport? b. What recurring maintenance requirements exist for the facilities used to house passengers, cargo,

	workers, equipment, and maintenance operations? Do they demand a continuous level of operations, maintenance, and repair? c. What backup options exist in cases where essential equipment such as heating, cooling and ventilation systems (HVAC) break down? d. Have you developed standard operating and emergency procedures for your essential processes and equipment under other types of emergencies? If so, have you distributed them broadly to managers and staff? Can they be adapted to pandemic flu scenarios lasting 6 months or longer? e. Have you considered primary/supporting asset/equipment challenges, including availability of operators, fuel/electricity, emergency part maintenance, critical radar repair parts, security/ safety equipment; and data management systems? f. Have you assessed all contractor-managed primary and supporting aviation systems with your contractors and other key stakeholders to identify potential single-point failures in their support networks (e.g., contractors operating intermodal cargo transfer sites, operational support equipment, aircraft catering suppliers, aircraft and airport cleaning and flight-line refueling crews)?
ACTION: ACTION Prepare to sustain essential equipment for a wave lasting as long as three months.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Identify and prioritize available options to reduce demands on essential resources under each pandemic influenza scenario. 2. For the severe scenario plan to rely on in house or locally available maintenance and repair/replacement support for up to three months during a pandemic influenza wave.	1. Do you possess sufficient operational capacity in your essential equipment and assets sustain functions and reduce demand on equipment and workers? For example, if essential equipment fails and repair parts become difficult to obtain, are there sufficient numbers of aircraft and

3. Assess and prioritize recurring and preventative maintenance requirements. 4. Assess implications if essential assets fail early on during the pandemic flu outbreak. 5. Consider establishing a pandemic influenza mutual aid program among businesses with similar assets or equipment needs.	support vehicles to rotate in service or "cannibalize"? 2. What is the frequency for routine maintenance on essential primary/secondary assets and equipment? How critical is it to perform on this schedule? Can you safely defer or accelerate essential equipment scheduled maintenance on short notice? 3. What is the frequency and intensity of typical safety inspections for key infrastructure such as aircraft, runways, control towers, radar, and electronics? In an extreme situation, with appropriate government waivers and other safety oversight, can you safely defer any of these to maximize availability of essential equipment and workers? 4. Do your emergency equipment operating plans adequately address pandemic influenza conditions? Can you effectively incorporate social distancing strategies for workers and enhanced workplace cleaning into protocols for operating and maintaining equipment? 5. With what other entities (airlines, airports, specialty aviation companies, such as air tour operators) can you share maintenance and repair facilities, equipment/supplies and/or workers?

ESSENTIAL 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, much longer than with other disasters. The effects on individuals, businesses, and the nation from the virus directly, and disease mitigation strategies indirectly, may affect the production and delivery of materials and supplies. Aviation owner-operators should assess supply chain networks from in-house storage capacity through all distributor and manufacturer levels. Businesses and organizations with lean warehouse support and reliance on "just-in-time" delivery should consider stockpiling specific essential items such as fuel, lubricants, filters, electronics and avionics parts as well as worker protection and environmental cleaning materials (e.g., masks, gloves, and hand and surface disinfectants).	
ACTION: Identify materials and supplies to sustain essential functions and equipment for up to 12 weeks	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Identify critical material and supplies (e.g., fuel, lubricants, refrigerants, filters, repair parts) necessary to maintain essential assets and equipment at the forecast level of operations for each pandemic flu scenario. 2. Prioritize essential material and supplies necessary to operate equipment and sustain essential functions for each pandemic flu scenario. 3. Identify options to reduce demand for essential supplies and materials. 4. Assess internal and external supply-chain support operations and contracts. 5. Address potential risk through 1st /2nd/3rd order vulnerabilities or unintended effects to supply chain for each pandemic influenza scenario. For example, be sure to determine who supplies your suppliers.	1. How much of which materials/supplies (e.g., aviation fuel, support vehicle gasoline lubricants, repair parts) are required to sustain essential operations for up to three months? a. How many days supply do you stock onsite for all essential fuels and materials? If supply chain disruptions occur, how will you ensure availability of adequate types and quantities? b. How is fuel typically delivered (e.g., truck, maritime)? What are the challenges for each delivery mode if you are to sustain operations during an influenza pandemic in which all sectors may be experiencing worker absenteeism? c. Are there options to obtain essential materials/ supplies elsewhere during an pandemic? For example, are similar types of supplies available in government stockpiles, from mutual assistance business stockpiles, or as excess capacity in "non-essential" businesses (i.e., #2 diesel from "non-essential" motor carrier bus fleets)? d. What available supplies (e.g., other appropriate types of fuels and lubricants) might you substitute

	temporarily for preferred essential ones (e.g., other dyed diesel)? Are there operations/maintenance processes you could modify to help reduce demands to stock supplies? For example, could you extend the period between lubricant and filter replacements for aircraft, vehicles and equipment? 2. Are there additional procedures and supplies necessary to protect workers and disinfect passenger and work areas between trips, shifts and cargo changes? For example, do you have sufficient supplies of appropriate cleaning solutions and trained cleaning crews to disinfect aircraft interiors and waiting areas in accordance with national guidance?
ACTION: Determine the most effective ways to ensure an adequate supply of essential materials.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Identify options and assess costs to procure, stock, and/or ensure delivery of essential materials in places where demand may spike and/or supply may diminish. 2. Identify physical/safety limitations in stocking sufficient essential supplies/materials locally. 3. Explore ways to reduce the need to stockpile additional expensive supplies or hazardous materials on-site. 4. Coordinate additional security needs for expanded and newly created high-value or asterisk material stockpiles. 5. Identify a formal chain of command to ensure someone is available to authorize major emergency procurements. 6. Coordinate with all supply-chain vendors and normal external support sites.	1. Is there adequate space on-site (i.e., fuel dumps, maintenance, and airport support areas to expand storage of fuels and supplies temporarily and safely? a. Are warehouses and storage containers available locally on short notice to serve as additional temporary storage sites? b. Can essential materials and supplies be stored safely and legally at local/regional distribution centers? c. How might airlines and airports collaborate to reduce the risk of pilfering and ensure access to stockpiled essential supplies and materials? 2. What essential materials/supplies can you afford to stockpile? What costs must you incur to ensure supply or delivery of essential materials? How do you fund these additional costs (e.g., retained earnings, special disaster fund, and other government support)? 3. Are sufficient appropriate workers authorized to expedite critical purchases of

	supplies via credit card or purchase order when the supervisors may not be available? 4. Are there potential vulnerabilities in the planned support to primary suppliers and supply sites? For example, how resilient are those businesses upon which you rely; and those businesses, which support and supply your essential first and second tier suppliers? a. Can you establish sufficient backup contracts with multiple vendors for essential supplies? b. What happens if the organization's supply chain cannot provide critical materials or supplies? How quickly would that affect your ability to provide essential services? c. How, and how quickly, will the organization notify customers, vendors, and government emergency response officials of potential impacts from supply chain and other disruptions? d. How can you provide incentives for your essential suppliers and support contractors to better prepare themselves? For example, can you collaborate with contractors on pandemic influenza planning, integrate preparedness training and exercises, provide mutual aid on key shared equipment and supplies, and/or stipulate pandemic influenza preparedness certification in contracts? 5. Have you integrated your planning with local/regional suppliers and other airlines and airports to promote priority support for essential requirements? For example, can you obtain priority for fuel distribution by leveraging others' repair sites and fueling stations)?

ESSENTIAL WORKER GROUPS	
A severe pandemic influenza scenario may result in absentee rates as high 40 percent among all worker groups. Air travelers, including passengers and flight crews, airport personnel, vendors, and others may be exposed to the virus and in turn could spread it to their families, co-workers, and the public. Essential aviation workers may be particularly vulnerable if their jobs require them to come into contact with the public. Implementing workplace personal hygiene and appropriate social distancing strategies based upon actual conditions may reduce rates of illness, but some workers may still stay away from the workplace to care for ill family members or to take care of children if schools are closed. Exposure and transmission risks within the workplace and at home should be addressed with a comprehensive worker and worker family protection program. Businesses may decide to provide medical countermeasures, such as antiviral medications, and non-medical countermeasures, such as surface disinfectants, gloves, and masks or respirators. Essential aviation workers may include: pilots, copilots and flight engineers; flight attendants; flight-line service personnel; ISPS/ICAO/ECCAA/FAA and Security employees; baggage, fuel and material handlers; mechanics and service technicians; airport maintenance and repair workers; other airport and airline safety, security and emergency response personnel; cargo and freight agents; airport and airline public health and healthcare personnel; passenger reservation and transportation ticket agents; aircraft and airport cleaning crews; HR and business support; executive management and operational supervisors.	
ACTION: Identify the types and numbers of workers critical to sustain essential functions	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Identify essential position/skills based on the tasks necessary to sustain essential functions and equipment for each scenario. 2. Define, coordinate, and communicate roles and responsibilities of employees, unions, staff, supervisors, managers, and staff medical personnel during an influenza pandemic. 3. Assess impacts from short-term and extended absences by essential workers. 4. Assess requirements and options given differences in operational demands for essential workers (e.g., aircraft crew vs. office-based dispatchers). 5. Assess options to obtain specific contractor backup support on essential operations and determine how feasibly and quickly that could be implemented in an influenza pandemic. Essential ISPS/ ICAO/ ECCAA/ FAA and security worker sustainment issues should be assessed for interface with airport and airline plans.	1. Have you identified the worker categories and specific skills/ certifications necessary to operate and maintain essential functions and equipment? If so, have you communicated these to the workforce, labor unions, and other appropriate organizations? 2. What different challenges does the organization face with full-time, part-time, contract or seasonal employees, and how will you address these in your planning and preparedness efforts? 3. Can you identify, with appropriate protection of privacy and other individual rights, demographic characteristics of essential worker groups that might affect absentee rates? For example, a mostly young workforce may have more school-age children and childcare needs and may be affected more profoundly by school closures and family self-quarantine, and thus may need to be specifically addressed for enhanced worker and family support

	actions. 4. What are the additional or different considerations for airlines and airports for functions and services provided by contractors/vendors? a. Should contractors be considered part of the primary essential workforce? For example, aircraft and workplace cleaning, equipment repair, tool calibration, fueling, computer support, and catering services? b. What are the different workforce challenges potentially resulting from on-site vs. offsite and full-time vs. part-time contractors and vendors performing critical functions for airports and airlines? c. What temporary workers might the organization need to implement special measures during an influenza pandemic (e.g., passenger waiting and terminal area public health and safety, expanded aviation supply stockpile security, aircraft disinfection)?
ACTION: Identify policies and procedures to ensure a safe workplace and minimize transmission of disease among workers and the traveling public.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Emphasize basic worker personal hygiene and workplace infection control/health protection, see: www.pandemicflu.gov/plan/workplaceplanning/index.html. 2. Following a detailed hazard assessment, determine the types of Personal Protective Equipment (PPE) that may be appropriate for your various worker types and worksites, and assess availability. 3. Identify appropriate cleaning/disinfection standards for specific worksites and public areas. 4. Identify when a potentially unclean site is safe for use by workers and the public. 5. Identify and review policies and procedures for protecting workers from exposure to air travelers and others in domestic and	1. What measures can/should you take or facilitate to protect passengers and other members of the public interacting with airport and airline personnel to reduce disease transmission and to protect airport and airline workers from potentially ill passengers and others? Following an appropriate risk assessment, non-medical countermeasure and strategies that should be developed with public health guidance, and which may be employed to help reduce disease transmission and protect workers and the public include: a. Social distancing strategies (e.g., limiting passenger congregation in ticketing areas, physically separating passengers and crew during boarding and deplaning, and maintaining an

international airports and aircraft. 6. Ensure that policies and procedures are sufficiently flexible to respond to the evolving nature of the pandemic influenza and its specific impacts by location. 7. Develop/enhance employee and public risk communications and incident communication protocols for the airport, airline, government, local communities and the public. 8. Review and update procedures for reporting ill passengers and crew members aboard aircraft, as required by International Health Regulations and Centre for Disease Control Regulations.	adequate quantity of unoccupied seats to isolate sick passengers or crew). b. Equipment cleaning and sanitizing (e.g., enhanced cleaning of aircraft, periodic wipe-down of kiosks and ticket counters) c. Personal protection strategies (e.g., use of gloves, masks, or other PPE, more frequent hand-washing). d. Screening/reporting suspected illness in workers and/or the travelling public. e. Isolation of ill persons and quarantine of exposed persons. f. Contact tracing (i.e., following up with individuals who have been exposed). 2. Other strategies to consider in managing passengers, the public, and aviation workers in aircraft and airports, and which may need additional government/private research and coordination: a. What are the differences in the health risks for aviation workers who encounter passengers and the public in aircraft versus airports? b. How are potentially ill passengers and the public managed in all airports and aircraft? c. Who has the authority to detain potentially ill passengers in an airport or domestic flight? 3. Are there any impacts that these measures might have on worker safety/productivity, operational efficiency and/or passenger experience? a. For example, what would be the impact of social distancing measures on security and customs lines? b. How might enhanced aircraft cleaning measures affect turn around times? c. If determined necessary to reduce exposures to specific hazards, can workers safely use N-95 respiratory masks for extended periods while performing tasks such as those requiring heavy physical labor or in a pressurized aircraft cabin?

	d. How would passengers react to health screening, temporary quarantine, or requirements for additional contact information? 4. Have you identified and established contact with the Port Health Station and the Department of Environment Health that covers your airport or the airports you serve? 5. What level of training do various employee groups receive on medical/health issues? Can you provide generic or disease-specific information (e.g., symptoms to watch for, infection control strategies) as part of this training? 6. Should the organization augment its airport worksite and aircraft/vehicle (air traffic controller, flight crew, ground staff, and passenger and freight areas) environmental cleaning procedures? 7. Have you considered closing or restricting use of non-critical common areas, such as break and lunchrooms? How could you ensure that workers do not commingle during shift changes? 8. Have you reviewed and incorporated worker preparedness tasks for personal safety and protection requirements (i.e., mask and respirator training and fit testing) in your plans based on guidance such as that provided by the manufacturer and Ministry of Health? 9. What are your responsibilities and liabilities to the public? Does your status as a public or private entity affect your ability or obligations to implement public health measures? 10. Do you have procedures in place to undertake appropriate cleaning and/or disinfection of an aircraft or area of an airport that has been occupied by an ill person(s)? Do you have procedures to consult with the appropriate government agency and obtain clearance to put the area back into public or employee use following an incident of this sort?

ESSENTIAL INTERDEPENDENCIES	
When an influenza pandemic strikes, it will affect all sectors of society. Preparedness requires a coordinated nation-wide response, including government and the private sector. While perhaps most directly affecting airport operations, to facilitate a swift pandemic influenza response and recovery all the individual owners and operators within the Aviation Sub-Sector should identify and sustain those essential dependencies and interdependencies within and across critical sectors and others. Interdependencies requiring advanced coordination include support from municipal utilities, businesses, government health, safety, security and emergency response agencies, as well as essential dependent goods and services from others such as fuel, electricity, healthcare, telecommunications, and first responders.	
ACTION: Identify the interdependent relationships and take actions to sustain this essential support.	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Assess the sector and external cross-sector essential service support requirements. 2. Assess the capability of the Sub-Sector's associations and government alert networks, as well as other informal mutual aid and assistance networks to reduce vulnerabilities. 3. Work with government and community partners (e.g., public health officials, first responders), who support and rely on your services. 4. Consider developing joint pandemic influenza-specific operational plans with service providers, suppliers, customers and other stakeholders.	1. What Transportation sub-sectors (e.g., pipeline, short and long-haul trucking, mass and maritime) does your organization rely on most for support and vice versa? How can your organization assist to enhance resilience within those other essential sub-sectors? 2. What sectors other than transportation (e.g., Communications, Water, Food and Commercial Facilities) does your organization depend on most to sustain its essential operations? What can you do to enhance resilience within those Sectors and at the interface points with Aviation? 3. Have you coordinated your essential support priorities with businesses inside and outside of the Sector (e.g., producers and suppliers to ensure priority for aviation fuel, electrical supply, and contractor off-site services support) and government and community agencies (water, physical security, and public health)? 4. What critical customers (e.g., Saint Lucia Postal Service, critical infrastructure just-in-time essential supply deliveries, air ambulance operations) depend most on aviation operations? What should the airport and airline do to prioritize support for them? What is the government's role in setting priorities?

	5. Can you reduce the organization's reliance on municipal and cross-sector emergency response? For example, can you reduce your vulnerability in these areas by working with local similar cross-sector organizations to share compatible backup power generation equipment, comparable critical equipment maintenance supplies, and infrastructure maintenance and repair workers (e.g., plumbers, electricians, backhoe operators)? 6. Have you integrated your organization's pandemic influenza plans, actions and trigger points with relevant pandemic plans? 7. Has your organization integrated its pandemic influenza plans with its interdependent sector and cross-sector business'/organization's plans? 8. How is coordination between the various Emergency Operations Centers at airports, within airlines, and with government being accomplished to ensure appropriate collaboration on processes and actions and shared needs identification? 9. Does the organization participate in public and private sector business pandemic influenza planning and response training and exercises?

REGULATORY AND GOVERNMENT POLICY ISSUES	
In response to an influenza pandemic, the government may provide direct support in the form of vaccines, antiviral medications, and personal protection supplies for essential workers; priority and clearances for a business' supply deliveries; on-site public safety and physical security augmentation; and possibly financial support. Indirect support may come from governmental relief and waivers from sector-specific regulatory requirements. It is important that public and private sector businesses not rely on specific regulatory relief and/or waivers in their pandemic influenza planning. Many of the government policy issues specific to pandemic influenza have not yet been finalized, however early discussions with regulatory and policy officials can identify issues that may be appropriate to address before and during an influenza pandemic.	
ACTION:	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Collaborate with government officials to determine potential priorities for defining essential goods and passengers and service areas (e.g., routes, frequencies) for each pandemic influenza scenario. 2. Identify regulations that, if temporarily modified or waived, would reduce impacts on critical functions, resources, and workers. 3. Identify government direct and indirect support options that may be necessary to ensure sustaining the business and/or essential services provided by the sector. 4. Explore possible direct and indirect support and specific regulatory constraints and relief options in advance with appropriate Government Officials. 5. Identify impacts that may result from changes in government actions as the pandemic influenza's affects on specific communities evolves. 6. Communicate potential relief actions to all stakeholders, such as workers, unions, supporting businesses, insurance carriers and customers, and clarify "who is in charge" for each action in advance.	1. What statutory and regulatory issues exist regarding management of ill employees, travelers, such as privacy and nondiscrimination? How might compliance with these laws be balanced with public health concerns during an influenza pandemic? 2. Familiarize yourself with the existing statutory and regulatory authority of government agencies for detaining and managing potentially ill passengers in airports and on domestic and international flights. How, when and by whom might these be invoked during an influenza pandemic? 3. Consult with officials on how government actions and regulatory enforcement may change as an influenza pandemic evolves and moves through a community or the Caribbean (e.g., would passenger screening and travel restrictions be more vigorously applied at the start of an influenza pandemic?) 4. Are there temporary regulatory waivers (with ensuing consequences) to consider in addressing challenges and sustaining essential operations (e.g., exceed regular duty or flight time limitations with right of refusal; inspection standards for aircraft and "deviations for the preservation of life"; certification for aircraft mechanics and repair personnel; airfield safety

	inspections; pre-employment drug testing; utilizing passenger facility charges and airport improvement funds for temporary emergency requirements)? 5. What issues may arise from temporarily modifying safety/licensing procedures that airlines and airports should plan to offset (e.g., potential insurance carrier restrictions, incentives for workers, and greater safety monitoring by business and regulators of workers who may be allowed to exceed regular duty or flight time limitations)? 6. Given that airlines may face anti-trust challenges if they attempt to coordinate priorities for routes, schedules and cargo shipments among themselves, which organization(s) should determine how priorities for essential passenger service and goods transported by air are met? How will this be coordinated with the aviation sector in a timely manner? 7. Will the Civil Aviation Authority enforce maintaining services during an influenza pandemic to rural areas it currently covers, and how will other critical rural areas not now covered be supported?

IMPACTS FROM COMMUNITY MITIGATION STRATEGIES	
To protect the public's health in an influenza pandemic, government authorities, as well as private entities, may implement pandemic influenza community mitigation strategies, including: voluntary isolation, voluntary home quarantine, school and daycare closures, and social distancing of adults in the community and workplace. These strategies are intended to aid in containing the disease and/or slowing its spread and thereby reducing the risk of infection and death, but they may also cause major operational impacts and business consequences for the Aviation Sub-Sector.	
ACTION: Identify effects from mitigation strategies; take actions to reduce negative impacts	
SUPPORTING ACTIONS	**QUESTIONS TO CONSIDER**
1. Coordinate with communities in areas where you have concentrations of workers and/or customers and determine the mitigation strategies that they may employ. 2. Calculate potential effects of specific Community Disease Mitigation Strategies on your business, workers, and community or customer base. 3. Discuss the potential impacts of these strategies with workers, their families, and with customers, supporting businesses and other stakeholders. 4. Familiarize yourself with your community's pandemic influenza planning trigger points use of community mitigation interventions.	1. What impacts will mitigation strategies have on worker absenteeism? For example, will it affect workers and their families if schools/daycare facilities close for weeks at a time? 2. What can be done to support strategies of voluntary self isolation and family quarantine? 3. What will be the effects on passenger demand of community mitigation strategies? 4. Do workers have adequate sick leave or other compensation options available if they need to be self-quarantined and cannot work from home, and what is the near-term response and the long-term recovery impacts on the workforce and the organization? 5. What workplace enhanced social distancing, personal hygiene, and environmental cleaning measures (e.g., teleworking, split working/meal shifts, reduced non-essential travel, and physical separation) can and should your organization implement to support community mitigation strategies? 6. Has the organization met with government agencies its emergency response officials on the timing of their measures, alerts, and actions based on their specific response triggers? 7. What additional external demand changes might occur when these strategies are

	implemented (e.g., university dismissals resulting in a sudden increase in student travel)? 8. As a substantial percentage of workers absent during an influenza pandemic may not be ill (e.g., absent due to fear, family support, resulting from impacts of mitigation strategies), does the organization's influenza pandemic plan integrate practical worker support options for these situations?