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A.1: Purpose

A.1.1 Continuity of Operations (COOP) for various agencies, businesses, and governmental jurisdictions may be disrupted during an influenza pandemic; therefore, it is important for these entities, in particular, NASA Headquarters (HQ), to ensure it can execute its mission essential functions. COOP planning is intended to ensure the performance of NASA HQ mission essential functions (MEF) across a wide range of all-hazards emergencies.

A.1.2 An influenza pandemic creates a new operating reality as the main impact will be on the workforce. An influenza pandemic is caused by a novel strain of influenza virus for which there is little resistance and therefore is highly transmissible among humans. Influenza pandemic poses a grave threat to global public health. Influenza pandemics have spread worldwide within months, and a future pandemic is expected to spread even more quickly given modern travel patterns. An influenza pandemic is not a singular event, but is likely to come in waves, each lasting weeks or months, and pass through communities of all sizes across the nation and the world simultaneously. While a pandemic will not directly damage physical infrastructure such as power lines or computer systems, it threatens the operation of critical systems by potentially removing the essential personnel needed to operate them from the workplace for weeks or months.

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A.2: Applicability

A.2.1 This Appendix provides guidance to NASA HQ and serves as the plan for maintaining mission essential functions and services during an influenza pandemic. This Appendix neither replaces nor supersedes the current approved NASA HQ COOP Plan; rather it supplements it, bridging the gap between the traditional all-hazards COOP planning and the specialized planning required for a pandemic. The 11 elements of a viable COOP capability (Plans and Procedures; Essential Functions; Delegations of Authority; Orders of Succession; Alternate Operating Facilities; Interoperable Communications; Vital Records and Databases; Human Capital; Test, Training, and Exercise Program; Devolution; and Reconstitution) are addressed in the NASA HQ COOP Plan.

A.2.2 This Appendix emphasizes that maintaining mission essential functions in a pandemic environment may not entail an official COOP declaration, maintaining mission essential functions may be accomplished through contact intervention (social distancing) strategies, and may not require relocation of the entire NASA HQ Emergency Relocation Group (ERG) to an Alternate Operating Facility (AOF).

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A.3: Authorities

- a. NPD 8710.1, “NASA Emergency Preparedness Program.”
- b. NPR 8715.2, “NASA Emergency Preparedness Plan Procedural Requirements.”

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A.4: References

- a. Draft NASA Pandemic Plan, Office of the Chief Health and Medical Officer, May 6, 2006
- b. National Strategy for Pandemic Influenza, Implementation Plan, Homeland Security Council, May 2006
- c. Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States, CDC, February 2007
- d. WHO Checklist for Influenza Pandemic Preparedness Planning
- e. Department of Health and Human Services (HHS) pandemic guidance on masks and antiviral (June 3, 2008)
- f. HHS Pandemic Influenza Plan, Supplement 4 Infection Control
<http://www.hhs.gov/pandemicflu/plan/sup4.html#box1>
- g. HHS Pandemic Influenza Plan
<http://www.hhs.gov/pandemicflu/plan/pdf/HHSPandemicInfluenzaPlan.pdf>
- h. OCHM Guidelines for Use During National and Regional Emergency Situations (including pandemic health crisis), Version 2, April 2008.
- i. OPM Planning for Pandemic Influenza, Human Resources Information for Agencies and Departments, May 2009.
- j. OPM Pandemic Influenza, Additional Guidance, July 31, 2009.

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A.5: Pandemic Planning Assumptions

A.5.1 General Assumptions

A.5.1.1 Pandemics are unpredictable. While history offers useful benchmarks, there is no way to know the characteristics of a pandemic virus before it emerges. Nevertheless, we must make assumptions to facilitate planning efforts. Federal planning efforts assume the following:

- a. Susceptibility to an influenza pandemic virus will be universal.
- b. Efficient and sustained person-to-person transmission signals an imminent pandemic.
- c. The clinical disease attack rate will be 30 percent in the overall population during the pandemic. Illness rates will be highest among school-aged children (about 40 percent) and decline with age. Among working adults, an average of 20 percent will become ill during a community outbreak.
- d. Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- e. While the number of patients seeking medical care cannot be predicted with certainty, in previous pandemics about half of those who became ill sought care. With the availability of effective antiviral medications for treatment, this proportion may be higher in the next pandemic.
- f. Rates of serious illness, hospitalization, and deaths will depend on the virulence of the pandemic virus and differ by an order of magnitude between more and less severe scenarios. Risk groups for severe and fatal infection cannot be predicted with certainty but are likely to include infants, the elderly, pregnant women, and persons with chronic or immunosuppressive medical conditions.
- g. Rates of absenteeism will depend on the severity of the pandemic. In a severe pandemic, absenteeism attributable to illness, the need to care for ill family members and fear of infection may reach 40 percent during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak. Certain public health measures (closing schools, quarantining household contacts of infected individuals) are likely to increase rates of absenteeism.
- h. The typical incubation period (interval between infection and onset of symptoms) for influenza is approximately 2 days.
- i. Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk of transmission will be greatest during the first 2 days of illness. Children will play a major role in transmission of infection as their illness rates are likely to be higher, they shed more viruses over a longer period of time, and they control their secretions less well.

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- j. On average, infected persons will transmit infection to approximately two other people.
- k. Epidemics will last 6 to 8 weeks in affected communities.
- l. Multiple waves (periods, during which community outbreaks occur across the country) of illness are likely to occur with each wave lasting 2 to 3 months. Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic cannot be predicted with certainty.

A.5.2 NASA HQ Planning Assumptions

A.5.2.1 Planning assumptions specific to NASA HQ are detailed below.

- a. The Designated Official has the authority to close certain support services, while maintaining operations at the HQ building, due to an influenza pandemic (such as: fitness center, library, auditorium, Columbia Café).
- b. The Designated Official may also limit public access to the NASA HQ building in order to prevent infection of individuals on-site.
- c. The AOF may be activated during an influenza pandemic to be used as a precaution to separate staff. Staff identified as part of the ERG include: the Emergency Leadership Team (ELT), Emergency Staff Designees (ESD), Incident Command Post (ICP) staff, and Agency Emergency Operations Center (EOC) staff. ERG staff required to report to the AOF will be dependent upon the situation. An influenza pandemic does not require use of an AOF.
- d. NASA HQ mission essential functions and operations will continue to be people-dependent. These activities require human interactions, however many interactions may not require face-to-face contact or can be conducted with precautionary measures such as social distancing.

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A.6: Roles and Responsibilities

A.6.1 Introduction

A.6.1.1 The following roles and responsibilities are identified by both office and individual as appropriate. During an influenza pandemic, responsibilities as outlined in the NASA HQ COOP plan are expanded. Emphasis on Human Resources and Occupational Health and Safety concerns will be in the forefront; however, NASA HQ employees also have specific responsibilities to assist in the overall response to an influenza pandemic.

A.6.2 Designated Official

A.6.2.1 The Designated Official (Executive Director, Headquarters Operations) provides guidance to NASA HQ on overall COOP and pandemic objectives. The Designated Official sets goals and holds the authority to activate elements of this Appendix based on the needs of NASA HQ, and provides Senior Leadership with situational updates concerning activation and mitigating measures.

A.6.3 The Facilities and Administrative Services Division (FASD)

A.6.3.1 FASD is responsible for managing the ICP under the direction of the NASA HQ Incident Commander (NHIC). The ICP, at the direction of the Designated Official, will conduct surveillance of the influenza pandemic effect on NASA HQ operations. ICP staff under the NHIC will conduct data collection and analysis and provide situational updates on a daily basis or as directed by the Designated Official. The NHIC will direct the distribution of communications utilizing the Emergency Notification System (ENS). FASD will prepare pre-scripted correspondence for each group identifying action items and mitigating concerns. All pre-scripted communications will be stored in the ICP Standard Operating Procedures (SOP). All communications will be authorized by the Designated Official prior to distribution. FASD will also prepare Security and Building Management for possible courses of action to include, but not limited to full building closure or partial use/reduced staffing.

A.6.3.2 Occupational Health and Safety personnel, under the direction of FASD, will provide expertise and regular updates to the NHIC on emerging infectious diseases and pandemics, and:

- a. Provide recommendations on planning and coordination for a pandemic event, surveillance and investigation during an incident, protection of employee health, availability of vaccines and antiviral drugs, isolation and quarantine, and outreach measures.
- b. Coordinate Clinic operations during pandemic (hours of operation, social distancing of ill patients, limited service, staffing the on-site clinic).
 - 1) As part of the ICP staff, personnel will assist with the surveillance and reporting process designed to track the impact of an influenza pandemic on NASA HQ to include information provided by the Centers for Disease Control (CDC).
 - 2) The Occupational Health and Safety personnel will also work with the Office of the Chief Health and Medical Officer (OCHMO) and the Office of Protective

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Services (OPS) to distribute vaccines through the Health Clinic in accordance with CDC and Federal Emergency Management Agency (FEMA) direction.

- c. Coordinate with local, state and Federal health officials to provide vaccine for priority employee population and/or the essential personnel. Occupational Health and Safety personnel and/or the Health Clinic will stockpile hand sanitizer, vaccine and needles, personal protective equipment (PPE), and develop plans for administering such supplies at the direction of the Designated Official.
- d. Inform and educate employees about infectious diseases. This includes distinguishing between seasonal and pandemic virus types.
- e. Cooperate with the local community (National Capital Region) to increase awareness about disease transmission and prevention.
- f. Collaborate with industrial hygiene and safety personnel in meeting Occupational Safety and Health Administration (OSHA) regulations to ensure facility and building safety.

A.6.3.3 The Facilities personnel will develop cleaning requirements for janitorial support in the case of an influenza pandemic. The goals of the cleaning requirements include: reduce transmission and maintain a safe working environment.

- a. Cleaning frequency will be determined by FASD in coordination with the identified contractor providing janitorial support. The cleaning frequency will be increased as appropriate based on the severity of the event and direction from the Designated Official.
- b. Common areas will be the main focus during a pandemic situation. These areas will be cleaned with EPA –registered disinfectant solution.

A.6.4 Information Technology & Communications Division (ITCD)

6.4.1 It is vital to ensure personnel have operational equipment and systems. During an influenza pandemic, personnel may be asked to telework. ITCD will support and initiate tests of tokens for all staff and Virtual Private Network (VPN) client access for the ELT, EOC, and ICP staff. ITCD will also initiate contact with the IT Help Desk Support to ensure continued service even if the sponsoring Center closes or operates at less than full capacity.

A.6.4.2 If personnel move to an AOF, ITCD representatives will be responsible for maintaining HQ IT infrastructure at the HQ building as detailed in the IT Contingency plan.

A.6.5 Human Resources Management Division (HRMD)

A.6.5.1 NASA HQ human resource policies and procedures will be a focal point during an influenza pandemic. If the pandemic escalates it may result in high absenteeism, social distancing, and high volumes of emergency telework requests. Individuals will use annual leave, or sick leave if ill (or caring for an ill family member) or other category of approved absence on a case by case basis. NASA HQ has defined the NASA policy in three identified priorities: 1. Individuals will telework; 2. Individuals will use annual leave (sick leave if ill); 3. Administrative leave will be granted to individuals on a case by case basis. The HRMD policies

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are incorporated into Appendix B: Human Resources Management Guidelines. NASA HQ employees will receive guidance and direction on appropriate telework and/or leave options from their front line supervisors. Appendix B includes but is not limited to, policies regarding liberal leave, sick leave, mandatory sick leave, family medical leave, grievances, telework, survivor assistance programs, annual leave, administrative leave and furloughs.

A.6.6 NASA HQ Employees

A.6.6.1 NASA HQ employees will be kept abreast of information concerning an influenza pandemic through four main sources:

- a. Employees can dial into the HQ Operations Information line (recording) at 202-358-3000.
- b. Employees can monitor the on-site closed circuit television system.
- c. Employees can be contacted using ENS and/or InformaCast as appropriate.
- d. A link will be available to the NASA HQ Pandemic Preparedness website <http://www.hq.nasa.gov/flu>.

A.6.6.2 NASA HQ employees will receive guidance and implementing instruction from their supervisor prior to and during an escalation of the pandemic. Each employee has the responsibility for adhering to guidance regarding the various actions to take in safeguarding one's self from the influenza pandemic and /or minimizing its effects. Employees who become ill with flu like symptoms (fever, cough, sore throat, muscle aches, nausea, vomiting, diarrhea, eye infections, pneumonia, acute respiratory distress, viral pneumonia, and other severe and life-threatening complications) should not attempt to report for work and are encouraged to seek early care with their primary care physician as appropriate. Employees must ensure that their work areas are kept sanitary during work and prior to departing from work.

A.6.7 NASA HQ Contractors

Contractors doing business with the agency are also employers in their own right and as such, are responsible for protecting their employees, the environment, and property from the effects of hazardous events. It is recommended that contractor Project Managers doing business at NASA HQ develop continuity of operations and emergency preparedness plans for their employees and operations that complement the NASA HQ Influenza Pandemic Appendix. During the pandemic period, it is recommended that the contractor Project Manager or other line manager maintain open communication lines with their NASA HQ counterpart to ensure effective communications regarding the HQ status during the pandemic period. NASA HQ contractors will receive guidance from their COTR and should follow internal pandemic plans.

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A.7: Concept of Operations

A.7.1 Introduction

A.7.1.1 This section focuses on the customized approach of NASA HQ leadership and personnel in relation to an influenza pandemic. The customized approach offers a higher state of readiness. The speed of transmission may drive the amount of time the Designated Official is allotted to activate and initiate mitigating and preventative actions. Decisions concerning what actions should be taken or what tools should be used during a pandemic will be based on the infection rate, the observed severity of the event, its impact on NASA HQ employees, the expected benefit of the action, and the consequence to mission essential functions.

A.7.2 Activation

A.7.2.1 This Appendix details tools and actions the Designated Official can use in the event of an influenza pandemic. All actions taken during an influenza pandemic will be based on the severity of the situation and its affect on NASA HQ personnel specifically, unless otherwise directed by local or federal agencies. Triggers dependent upon the World Health Organization (WHO) Phases and the Federal Reponses Stages will not be utilized. Activation of identified response actions will be the responsibility of the Designated Official. The Designated Official will employ the actions detailed in the Threshold Response Table A.1 in coordination with recommendations from identified offices within NASA HQ that will monitor the situation and analyze the impact on NASA HQ.

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Table A.1: Threshold Response

NASA HQ Pandemic Level Descriptions and Actions by Threshold			
Pandemic Level	Statistics	Response	Actions
Green	Under 5% of absentee rate for flu-like symptoms	Public Outreach	Informational brochures and flyers posted to pandemic preparedness website with general guidance for employees, contactors, and supervisors.
		Infection Control	Reinforce preventative techniques like good hygiene can limit the spread of the flu.
		Surveillance	Initiate weekly reporting requirement.
		Telework	Initiate telework drills to test IT capability and individual familiarity.
		Cleaning Frequency	Double Cleaning Frequency for all common areas (one extra cleaning and refresh)
Yellow	5% to 10% absentee rate for flu like symptoms	Public Outreach	Continue communications to all employees concerning the incident.
		Infection Control	Place hand sanitizers at heavy traffic areas with large contact surfaces.
		Surveillance	Initiate daily reporting requirement.
		Cleaning Frequency	By Request - Double Cleaning Frequency for all common areas.
		Social Distancing	Consider canceling or modifying large group activities.
Orange	10% to 15% absentee rate for flu like symptoms	Public Outreach	Continue communications to all employees concerning the incident.
		Infection Control	Encourage good hygiene at home and at work. Distribute more hand sanitizers.
		Surveillance	Continue daily reporting requirement.
		Cleaning Frequency	To be determined (based on severity of event)
		Social Distancing	Consider canceling or modifying large group activities.
		Building Operations	Consider initiating shift work for further social distancing
		Travel Restrictions	Instituted as necessary.
Red	20% absentee rate for flu like symptoms	Building Operations	Building Operational Alternatives include Partial Closure or Full Closure.
		Telework	Initiate full telework status for all staff.

A.7.3 Response Actions

A.7.3.1 The response actions available to the Designated Official during an influenza pandemic outbreak are detailed further below. The actions offer both mitigating and preventative measures that can be taken based on the severity of the influenza pandemic and its impact on NASA HQ personnel.

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- a. Public Outreach Campaign
- b. Surveillance
- c. Infection Control (Personal Hygiene, Work Station Sanitation, etc.)
- d. Health Clinic Operations
- e. Travel Restrictions
- f. Social Distancing
- g. Human Resources Alternatives
- h. Building Operational Alternatives

A.7.4 Public Outreach

A.7.4.1 FASD will lead the public outreach campaign in coordination with the Occupational Health and Safety personnel. The public outreach campaign will consist of a variety of materials delivered in multiple mediums. Brochures will be created to address Frequently Asked Questions (FAQ) and general information. Signs will be posted regarding good hygiene and infection prevention. The Occupational Health and Safety staff will also provide education to all NASA HQ employees and contractors concerning reducing the risk of infection, reducing the risk of transmission, identifying symptoms of influenza, self care, and when to seek medical treatment.

A.7.5 Surveillance

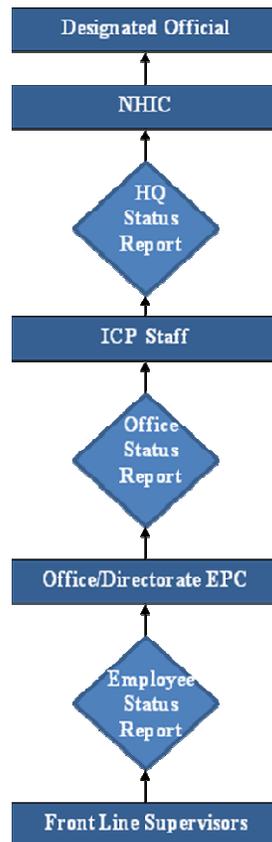
A.7.5.1 ICP staff, as defined in the Occupant Emergency Plan (OEP), will be responsible for collecting and managing information concerning absenteeism due to the influenza pandemic and those who are teleworking. The report form (see Table A.2) will be completed by the Emergency Planning Coordinator (EPC) for each office. The data gathering methods can be determined internally; however data should come from supervisors and/or COTRs within the office. This will enable each office to maintain a firm understanding of which groups may be experiencing staffing shortages that could affect critical mission objectives and overarching mission essential functions. Only individuals assigned to NASA HQ and located on-site should be included in the reporting process. Data should be collected by each office on a weekly basis. The reporting period is defined as Thursday through Close of Business (COB) Wednesday each week. Reports should be submitted by noon on Thursday. Each individual government employee or contractor counts numerically as 1. The numeric representation of the individual is not dependent on the duration of their absence during the reporting period.

A.7.5.2 The Surveillance Report Form will provide the data necessary to create a realistic snapshot of the impact of the influenza at NASA HQ. The data provided on these forms will assist senior leadership in implementing the appropriate mitigating and/or response actions necessary to protect NASA HQ employees.

A.7.5.3 Frequency of the reporting requirement can be augmented by the Designated Official based on the severity of the pandemic. These reports will include identification of the number of individuals absent due to flu, flu-like symptoms, caring for a family member with the flu, or

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Figure A.1: Surveillance and Reporting Process



A.7.6 Infection Control

A.7.6.1 The Occupational Health and Safety personnel will provide education on infection control to include personal hygiene and workstation sanitation. NASA HQ employees will be responsible for taking action to assist in all infection control measures. If employees or visitors present symptoms at NASA HQ they may be asked to exit the building. Please refer to Appendix B: Human Resource Management Guidelines for more information on the authority and responsibilities involved with such an action.

A.7.6.2 According to the CDC the influenza virus can survive on environmental surfaces and can infect a person for up to 2-8 hours after being deposited on the surface. Employees are encouraged to sanitize their workstation regularly. Cleaning frequency will be based on the current threshold of action and the Designated Official.

- a. To reduce the chance of spread of an influenza pandemic, the cleaning staff will disinfect common areas by wiping them down with an EPA-registered disinfectant. At the onset of a influenza pandemic the janitorial support will double the cleaning frequency. Janitorial support is prepared to offer up to three additional cleanings a day based on the event and the

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identified best course of action for NASA HQ. Janitorial support staff will pay specific attention to the following common areas.

- 1) Wipe down all entry (offices, street entries, main entries, exchange store, Columbia Café, conference rooms, PODS, MICs, VITS rooms, mail room, etc.) door hardware, door push plates, and door services.
- 2) Wipe down all drinking fountains, tables, and frequently touched areas in the break room, conference rooms, PODS, MICs, VITS rooms, galleys, Columbia Café, break areas, etc.
- 3) Wipe down East and West lobby turnstile surfaces and badge readers.
- 4) Clean all elevator control/call buttons.
- 5) Clean office copier machine controls.
- 6) Clean refrigerator and microwave handles in galleys and break rooms.
- 7) Clean stairwell railings.

A.7.7 Health Clinic Operations

A.7.7.1 Employees who develop flu-like symptoms at work should not report to the Health Clinic, but should call the Health Unit at ext. 2600. The clinic staff will conduct a telephone interview to determine the appropriate course of action. Employees who develop flu-like symptoms at work will be advised to go home and seek medical attention from their private health care professionals. It is the employee's responsibility to contact their supervisor for available leave options. Individuals, whose illness is determined to be severe by the health unit staff, will be evaluated in the clinic. Employees who are evaluated in the clinic will be required to:

- a. Use an alcohol based hand sanitizer after entering the Health Unit waiting room; rubbing onto hands until dry.
- b. Use a mask (will be provided by the Health Unit) during length of clinic visit.
- c. Sit in a separate waiting room until evaluated by clinic staff.

A.7.7.2 In accordance with CDC recommendations, the Health Clinic will direct individuals with influenza-like illness to remain at home until at least 24 hours after they are free of fever (100° F [37.8°C]), or signs of a fever without the use of fever-reducing medications.

A.7.8 Travel Restrictions

A.7.8.1 The Office of the Chief Health and Medical Officer (OCHMO) will provide travel restriction guidance and policy to be disseminated to NASA Centers. NASA HQ will follow the guidance issued by the OCHMO.

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A.7.9 Social Distancing

A.7.9.1 Social distancing measures are intended to slow the spread of disease and can reduce an outbreak. Social distancing consists of measures such as: maintaining a distance of 6 feet from others; avoiding physical contact (handshakes), holding meetings via teleconference, etc.

A.7.9.2 Communities may take containment measures such as: closure of stores, schools, and public transportation systems. All of these have significant impact on the community and the workforce, however, and careful consideration should be focused on their potential effectiveness, how they can most effectively be implemented, and how to maintain critical supplies and infrastructure while limiting interaction.

A.7.9.3 Although data is limited, school closures may be effective in decreasing spread of influenza and reducing the overall magnitude of disease in a community. In addition, the risk of infection and illness among children is likely to be decreased, which would be particularly important if the pandemic strain causes significant morbidity and mortality among children. Children are known to be efficient transmitters of seasonal influenza and other respiratory illnesses. Community containment measures may impact NASA HQ personnel requiring a higher percentage of telework needs. The Designated Official, in coordination with HRMD and Occupational Health and Safety personnel, will identify social distancing measures for NASA HQ personnel.

A.7.10 Human Resources Alternatives

A.7.10.1 Emergency Telework - In the event of an influenza pandemic, emergency telework will allow for minimal disruption to operations and enable NASA HQ to continue business operations. Telework can also help NASA HQ retain functionality as workforce issues and other challenges (transportation) make the main worksite difficult to access, such as a pandemic health crisis. Except when there is a Government or NASA-wide requirement, the Designated Official has the authority to implement and terminate the emergency telework program. If necessary, the Designated Official may invoke and terminate the program in phases to meet NASA HQ needs and requirements. Guidance on eligibility and approval criteria for emergency telework can be found in Appendix B.

A.7.10.2 Leave Options - Various situations can occur where Federal employees are approved for delayed arrival, not required to report to work, or are dismissed before the end of their workday. Determining the leave status can be complicated depending on an employee's work schedule and/or leave situation. Clarification, instructions and guidance on requesting and approving leave will be communicated by HRMD based on the specific nature of the emergency.

A.7.10.2.1 If during a pandemic health crisis a supervisor/manager observes an employee exhibiting signs of illness, general concern may be expressed regarding the employee's health and a reminder may be made to the employee of leave options for seeking medical attention, such as requesting sick or annual leave. Although leave is generally voluntary, a supervisor may direct an employee to take leave; however, directing an employee to take leave may constitute enforced leave, which is an adverse action. Any action to direct an employee to take leave for medical reasons must be coordinated with HRMD and the Occupational Health and Safety personnel. See Appendix B: Human Resources for more information.

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A.7.10.3 Building Operational Alternatives In the event the pandemic reaches a critical level it will be necessary to determine Headquarters' organizational capacity to continue operations at the HQ building. Onsite NASA HQ contractors will receive direction from their COTR through their program managers. Each option outlined below is situation dependent and at the discretion of the Designated Official. The following options are not presented in an escalating scale, but as separate operational alternatives.

- a. Option 1: Partial Use of the HQ Building (Reduced Operations) - Direct the ELT, EOC, and ICP staff to report to the HQ building, and direct all other staff to telework. This operational alternative would increase social distancing, but maintain critical operations at the NASA HQ building. NASA HQ will maintain mission essential functions and operations on a priority basis throughout regularly assigned workdays and duty hours to the extent possible. Alternatively or concurrently, the Designated Official may elect to close individual directorates, divisions, branches, or offices on a case by case basis as well as curtail those activities deemed "hazardous" due to the potential for exposure to infection. These activities encompass the Fitness Center, Library, NASA Exchange Store and the Columbia Café. These locations offer a lot of contact surfaces, little social distancing, and increased risk for infection. In a reduced staffing scenario, the Designated Official may also limit public access to the NASA HQ Building in order to prevent spread of the disease to those personnel who guard the entrances and run the NASA Exchange Store. Other activities that may curtailed include the auditorium, MIC and POD rooms, break rooms on the concourse level, VITs rooms, and any other identified common area.
- b. Option 2: Close NASA HQ Building - If the influenza pandemic and/or absenteeism reach a critical level, it may be necessary to close the NASA HQ building. The NASA Pandemic Plan (May 2006) states that, a closing order may be given prior to or during a pandemic due to:
 - 1) Increased absenteeism that affects support services to the point of creating unsafe working conditions.
 - 2) A quarantine order from local, state or Federal officials.

A.7.10.3.1 In the event of a full closure, all non-essential utility services will be deactivated. As circumstances warrant, EOC and/or ICP staff will remain at the NASA HQ building. FASD will coordinate the security at the building. ITCD will conduct server maintenance in accordance with the maintenance plan. All staff will be directed to telework. This option may involve shifting support of some mission essential functions to an AOF.

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A.8: Personal Protective Equipment (PPE)

A.8.1 Introduction

A.8.1.1 PPE may further decrease, but will not eliminate the possibility of being infected. The Department of Health and Human Services (HHS) recommends individuals wear face mask if they must go into crowded settings or deal with a large population during an influenza pandemic. HHS also recommends individuals who must commute on public transit stockpile 100 or more face masks. The estimated cost of stockpiling basic respirator protection is \$35 to \$75 per household. Stockpiling of PPE for individual households is a NASA employee responsibility.

A.8.1.2 NASA HQ will not provide PPE to all NASA HQ employees and contractors. NASA HQ will provide PPE to staff identified as at risk (defined in 8.2). Utilization of PPE is at the discretion of the individual and is voluntary. PPE is effective if: the correct respirator is used, it is available when you need it, and you know how and when to put it on and take it off. Training on the proper use and disposal of PPE will be provided by the Occupational Health and Safety Personnel/Health Clinic.

A.8.2 Respiratory Protection

A.8.2.1 Surgical or face masks are loose fitting disposable devices that create a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment. They may help prevent the spread of germs from one person to another, but are only one part of an infection control strategy that also includes hand washing/hygiene and social distancing. A face mask does not block very small particles because of the loose fit.

- a. N95 Respirators may help prevent the spread of germs from one person to another. The N95 mask is designed to achieve a very close fit and very efficient filtration of airborne particles. Testing showed the respirator blocks at least 95% of very small test particles. It does not completely eliminate the risk of illness or death. It is not designed for children or people with facial hair (due to fit – may not provide full protection).
- b. According to the CDC, use of N95 respirators or facemasks generally is not recommended for workers in non-healthcare occupational settings for general work activities. For specific work activities that involve contact with people who have influenza like illness, such as escorting a person, interviewing a person, or providing assistance to an individual with influenza like illness, the following are recommended:
 - 1) Workers should try to maintain a distance of 6 feet or more from the person with influenza like illness;
 - 2) Workers should keep their interactions with ill persons as brief as possible;
 - 3) The ill person should be asked to follow good cough etiquette and hand hygiene and to wear a facemask, if able, and one is available;
 - 4) Where workers cannot avoid close contact with persons with influenza like illness, some workers may choose to wear a facemask or N95 respirator on a voluntary basis.

APPENDIX A: Influenza Pandemic

A.8.3 Distribution

A.8.3.1 In the event the situation reaches a critical level, the Designated Official will authorize the distribution of PPE to at risk employees. At risk employees are defined as those individuals that have constant and unavoidable interaction with the public and/or overall NASA HQ employees due to their job responsibilities. At risk employees, in the event of influenza pandemic, have been defined as: security guards, mail room staff, cleaning staff, Columbia Café staff, Library Staff, and NASA Exchange Store staff. PPE will be distributed to supervisors of at risk employees by the Occupational Health and Safety personnel or Health Clinic. Information on proper fit, wear, and disposal of PPE will be provided by the Occupational Health and Safety personnel or Health Clinic upon distribution. Employees provided with PPE that have questions or concerns are encouraged to contact the Occupational Health and Safety Personnel or Health Clinic.

A.8.3.2 NASA security guards interact with a large population on a daily basis to include: the general public, visitors, and NASA employees. The constant interaction with these populations required by their position increases the risk to these employees. If the Designated Official determines that there is a need to protect these employees, the security guards supervisor will report to the Health Clinic at the beginning of each shift to procure the identified respiratory protection.

A.8.3.3 Mail room staff interacts with a variety of postal entities: FedEx, United States Postal Service (USPS), drivers, as well as the NASA HQ employees. The constant interaction as well as the number of contact surfaces mail room staff are exposed to each day warrants PPE distribution. The supervisor or identified POC for the mail room will report to the Health Clinic to procure PPE (face masks and gloves) for the staff.

A.8.3.4 Cleaning staff will be provided with plastic gloves. Gloves will be worn throughout the shift to protect worker from coming into contact with infectious particles. Cleaning staff should also practice good hygiene including frequent hand washing.

A.8.3.5 At the direction of the Designated Official, staff working in the Columbia Café will be provided with face masks and gloves to both protect themselves and individuals frequenting the establishment. A hand sanitizer station will also be setup at the entrance.

A.8.3.6 Staff in the NASA Exchange Store comes into contact with the general public, visitors, and NASA HQ employees. PPE will be provided to the staff at the direction of the Designated Official.

A.8.3.7 Staff in the NASA Library comes into contact with the general public, visitors, and NASA HQ employees. PPE will be provided to the staff at the direction of the Designated Official.

APPENDIX A: Influenza Pandemic

A.9: Communications Plan

A.9.1 Introduction

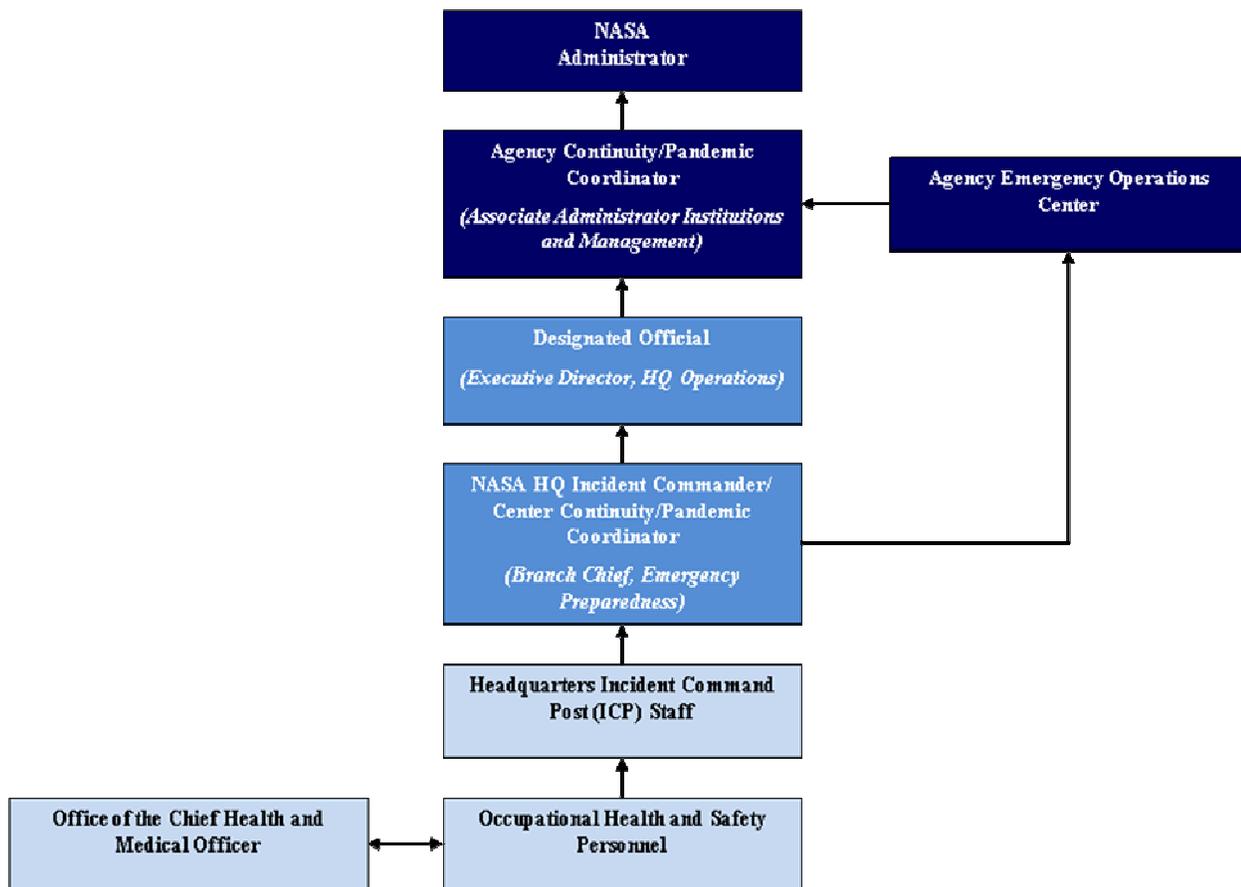
A.9.1.1 There are many different types of communication that will need to take place prior to and during an influenza pandemic to ensure that timely, clear, coordinated messages are delivered to NASA HQ personnel. The public outreach campaign detailed in section 7.2.1 identifies the first step in the overall NASA HQ communications plan. The Designated Official will identify the appropriate time to make these materials available to the NASA HQ population.

A.9.1.2 The ICP will track the impact of the influenza pandemic on NASA HQ and provide situational updates to the Designated Official. The situational updates will provide a detailed analysis of the number of individuals impacted by the pandemic and overall staff shortages.

A.9.2 Lines of Communication

A.9.2.1 The Designated Official will rely on input from the NHIC to make critical decisions. The NHIC will rely on the Occupational Health and Safety Office, the Chief Health and Medical Officer, and Emergency Preparedness Personnel to provide comprehensive situational updates and recommended actions. Figure 2 provides an overview of the defined lines of communication during an influenza pandemic.

Figure A.3: Communication Flow During a Pandemic Situation



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A.9.3 General Communications

FASD Personnel in conjunction with HRMD and Occupational Health and Safety will develop pre-scripted communications to be utilized by the Designated Official. Pre-scripted communications will be incorporated into the ICP Standard Operating Procedures (SOP). ENS will be utilized to provide updates to the general NASA HQ population.