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General Information

The National Strategy for Pandemic Influenza states: “The U.S. faces a burden of influenza that results in approximately 36,000 deaths and more than 200,000 hospitalizations each year. In addition to this human toll, influenza is annually responsible for a total cost of over $10 billion in the U.S. A pandemic, or worldwide outbreak of a new influenza virus, could dwarf this impact by overwhelming our health and medical capabilities, potentially resulting in hundreds of thousands of deaths, millions of hospitalizations, and hundreds of billions of dollars in direct and indirect costs.” (National Strategy for Pandemic Influenza)

The Texas Transportation Institute’s (TTI and the Institute) Pandemic Influenza Plan (PIP) has been designed to address employee health and safety issues, avoid or minimize disruption of critical functions and to return the agency to normal operations as quickly as possible. The PIP supplements and closely relates to other relevant agency crisis planning documents including the Crisis Management Plan (CMP), Business Continuity Plan (BCP) and the Disaster Recovery Plan (DRP).

The CMP outlines the agency’s response to potential disasters, whether from natural causes such as a weather-related event (hurricane, tornado, flood, etc.) or from human causes including sabotage or terrorist attacks. The BCP shadows the CMP and focuses on ensuring continuity of agency fiduciary and research sponsor services. The DRP targets the Information Resources (IR) environment and is designed to respond to IR-related emergencies and to restore operability of all information systems. All plans address the relocation of employees, services or research project work at alternate sites if necessary.

Agency Background

The Institute is housed in the CE/TTI Building on the main campus of Texas A&M University (TAMU) and in the Gibb Gilchrist Transportation Research Center in the Texas A&M Research Park. Vehicle proving grounds and various roadside safety facilities and other laboratories are located at the University’s Riverside Campus in Bryan, Texas. All agency facilities in Bryan and College Station are located in buildings owned by TAMU, with TTI contracting for services such as telecommunications, networking, safety and security and maintenance. The Institute maintains a close relationship with the University in terms of facilities planning, maintenance and recovery. TTI also maintains research offices in Arlington, Austin, Dallas, El Paso, Houston, San Antonio and Texas A&M University at Galveston, as well as regional divisions at universities around the state. The Institute is home to nine national research centers as well as several multi-disciplinary centers and programs.

TTI is the nation’s largest university-affiliated transportation research organization, employing some 600 people, including full-time research staff, faculty members with joint appointments with Texas A&M and other universities, technical and support staff, and graduate and undergraduate students.

Mission and Primary Customers

The mission of TTI is to solve transportation problems through research, to transfer technology, and to develop diverse human resources to meet the transportation challenges of tomorrow. Established in 1950, TTI has earned a reputation for conducting high quality, practical research, the results of which have been put into practice throughout the transportation industry. TTI is an
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official research agency for the Texas Department of Transportation and the Texas Railroad Commission, and works closely with state and federal agencies as well as the private sector to improve the safety and efficiency of the transportation system. Although the Institute was created in response to the needs of the Texas Highway Department, TTI has since broadened its focus to address all modes of transportation - highway, air, water, rail and pipeline. Through research, development and technology transfer, TTI is helping to meet the transportation needs of tomorrow.

TTI transfers the knowledge gained from research to its primary customers—the Texas Department of Transportation (TxDOT), Federal Highway Administration (FHWA), other state and Federal transportation agencies, and private transportation entities—through a comprehensive technology transfer program, including the patenting and licensing of technologies developed by Institute staff. The agency’s primary customers include research sponsors and those interested in commercializing research results; faculty and staff researchers and their technical and administrative support; and students dependent upon research projects as part of their educational experience and/or for employment.

TTI operates a local area network with its main servers running a Microsoft Windows operating system. TTI’s College Station based facilities are connected via the TAMU campus network backbone/LAN operated by the Computing and Information Services (CIS) Network group. Our wide area network connections which provide connectivity to our urban offices, is maintained by the TTVN Wide Area Network group. Internet service is provided by The Texas A&M University System and also managed by TAMU CIS.

Because nearly every aspect of TTI’s business depends upon computer systems, TTI’s Network and Information Systems group (NIS) works closely with the various research and administrative units within the Institute to design and maintain a state-of-the-art network infrastructure and management information system.

The agency mission during a pandemic will be:

- To address and protect employee and visitor health and safety.
- To mitigate the proliferation of influenza
- Provide continuance of employee payroll and benefits assistance.
- Provide continuance of critical services to sponsors and reporting entities.
- Meet fiduciary responsibilities to employees and sponsors.
- To return to normal operations as quickly as possible.

Purpose and Scope

The purpose of this plan (PIP) is to provide guidelines, procedures and information necessary to enable TTI to continue its business functions in the event of an influenza pandemic. While the DRP focuses on the recovery of TTI’s information resources, the BCP includes consideration of other factors such as identifying safe locations for research to continue, resumption of telephone service, selecting locations for employees to work, the salvage of building contents and records, etc. in the case of a crisis situation. The aim of the PIP is to achieve a systematic and orderly continuation of agency services as efficiently as possible.

The scope of the BCP is broader than the DRP, but contains some of the same elements, particularly those relating to information resources. The PIP and BCP are designed to enable all
programs responsible for core functions to continue to provide their services and to ensure that agency business can be conducted in the face of a disaster. An important element of the plans is identifying key personnel and facilities that could assist in continuation, restoration and/or recovery operations.

The PIP will be reviewed at least annually to ensure that it addresses core functions/needs and that personnel/location/contact information is current.

Objectives

- To address employee health and safety issues as related to an influenza pandemic
- To identify core agency functions and set priorities for their continuation as quickly and safely as possible
- To identify available resources, establish the level of support needed by the various functions, and determine the methods to be used in providing that support
- To develop procedures and identify key personnel who can direct and assist and clarify their roles and responsibilities in carrying out the BCP
- To ensure coordination with TAMUS, TAMU and emergency officials as appropriate

Assumptions

- TTI will coordinate PIP management and operations with the appropriate TAMU/TAMUS organizations such as the police, medical, technology/information services, telecommunications, Physical Plant, etc. or emergency response organizations in the cities where the agency’s urban offices are located.
- Because TTI offices are distributed statewide, some senior managers will be available to oversee operations and make administrative decisions.
- The risk of gathering people together and travel restrictions during a pandemic will have significant impact on TTI.
- 20% to 40% of the general work force may be affected during the peak.
- Hospitalizations and death of employees are possible.
- General absenteeism rate could be 40% as employees, who may not be infected, will need to remain home to care for infected family members.
- A pandemic is likely to occur in waves, each lasting approximately eight weeks and separated by several weeks of sporadic inactivity.
- TTI may not be able to rely on various TAMU support units to provide essential services. The same may occur at leased office space locations.
- Texas A&M University may close the campus to quarantine student areas.
- As TTI’s population may be affected, it would likely follow a similar infection rate as those of our sponsors (customers) and other entities with whom we interact.
- Meetings and gathering of people will likely be conducted by teleconferencing.
- Reduction of paper transmissions may be enacted.
- Travel will be severely restricted to mitigate the possibility of infection or spreading the influenza.
- Quarantine requirements and travel restrictions may be enacted by governmental organizations to limit the spread of influenza.
- Antiviral medications may be in short supply with a vaccine not available for four to six months following the emergence of a particular strain.
- Health care facilities and providers may be overwhelmed with limited resources.
Agency operations and customer services will be limited. Prioritization of these items will be required based upon current reporting requirements (critical, intermediate, non-essential, etc.).

TTI may experience a temporary closure to ensure limitation of reinfection.

**Category of Functions and Services**

Should Texas A&M University or leaseholders mandate a complete closure of their facilities, agency executive staff and many employees have the capabilities of tele-working from their homes. Network connections ensuring access to e-mail and electronic files, laptops or home computers, printers with fax and copy capabilities and telephones (land-line or wireless) provide necessary connectivity.

**Critical - Conduct of Research**

In order to meet contract obligations, deadlines, and deliverables, TTI must provide the workspace, tools and information needed for employees to perform the research in accordance with the agreement and in return for the funds provided by their contracts. Researchers, technical and support personnel must have ready access to sufficient equipment, tools and information resources that allow the research to be performed and administered in compliance with sponsor, state and federal regulations.

In addition to securing safe and appropriate workspace for research projects to be continued in the face of a pandemic, agency administrators must assure that functions relating to acquisition and management of new contracts (including on-line submission of proposals and deliverables, including technical reports for editing) are continued or restored as quickly as possible.

Depending upon the functions that are disrupted and their location, the agency has available other locations where research projects and staff could be relocated on an interim basis. The DRP and CMP outline plans and arrangements for relocating research and/or support personnel and functions to various TTI locations.

In the event of a major crisis involving all Bryan and College Station TTI facilities, the Institute’s urban offices could provide some assistance and even (in the event of long-term needs) space and facilities for the continuation of research projects.

Because of its heavy reliance on the IT function, continuation of the intranet as well as the MIS system is especially important. Reliance upon the TAMU Computing Information Services (CIS) is of the utmost to ensure connectivity of agency servers and computers. E-mail will be essential for communication needs for employees and sponsors.

The agency is required to produce high quality results for research sponsors and meet sponsor, state and Federal regulations on the conduct of research. The Institute uses ‘publish on demand’ for the technical reports, using electronic submission of manuscripts, maintenance of publications on disk with paper copies only being produced when requested by the sponsor or by persons interested in the research. Restoration of this function would be critical to the agency’s ability to meet customer and sponsor demand for technical information.
Critical - Agency Administration and Support

As a relatively small agency, most financial services such as general accounting, accounts payable and receivable, property, payroll interface, personnel services, budget preparation and supervision and facilities management are handled at the agency level, with divisions/centers utilizing centrally gathered and maintained data. These functions are supported via TTI’s financial accounting and payroll processing systems, FAMIS and BPP, which are centrally housed and supported by the Texas A & M University System. TTI fiscal and Human Resource personnel have direct access to these systems which reside on mainframe computers maintained by Texas A & M University’s Computing and Information Services’ organization.

The agency has for several years relied on electronic transmittal of administrative and fiscal memoranda, as well as the agency intranet to keep agency employees aware of the latest news and information regarding agency initiatives. TTI must also comply with numerous state and Federal policies and budgetary requirements (such as performance measures established by the LBB, DIR etc.) which require accurate and rapid reporting of electronic information from the agency’s accounting and financial systems, as well as the research project database. Continuation or restoration of these functions is critical to the agency’s ability to meet state requirements and are therefore to its overall performance. The agency’s DRP outlines plans to restore information resources and the TTI network.

The agency’s Communications program, particularly the Media Representative, is essential to ensuring accurate, effective communication through the media and other resources.

Critical - Maintenance and Security of Active Agency Facilities

Agency occupied facilities that remain active during a pandemic must be coordinated by agency facilities and safety personnel. This staff will be responsible for coordination of custodial services and proper maintenance to ensure mitigation of influenza infection. They will maintain and distribute disinfecting wipes and sprays, hand sanitizers and surgical masks as appropriate.

Agency facilities on the TAMU main campus have the capability of securing through a magnetic lock/card reader system. Buildings can be closed to non-employees. Additionally, known infected employee’s access rights can be terminated to mitigate infection.

Agency facilities and safety staff will work directly with TAMU Physical Plant, Environmental Health and Safety Department (EHSD) and other support units as necessary. Additionally, they will coordinate activities with the various Lessors as related to leased office spaces throughout Texas.

Essential - Proposal Development and Submission

As a contract research agency, TTI is dependent upon the acquisition of external funding by responding to Requests for Proposal (RFPs) from state, federal and other public and private transportation organizations, most of which now encourage on-line submission.

To compete effectively, researchers must have access to these entities via the internet, and also need detailed information about facilities and expertise available to conduct the proposed research. All of this information can be accessed via TTI’s intranet, TTINet. Most communication during the proposal development and subsequent phases is via e-mail. To ensure a steady stream of external funds and that critical proposal deadlines are met, this function should be continued as much as possible.
Essential - Intellectual Property Development and Management

TTI is widely known for its ability to retain the intellectual property that results from research to those agencies and organizations that can put the new technologies and processes into practice. One key element of that technology transfer program is the patenting and licensing of new discoveries. Patenting research results protects TTI’s and research sponsors’ investments as well as providing faculty and staff researchers with incentives to move new knowledge and products to the marketplace to spur economic development. Most technologies are licensed through the TAMU System’s Technology Licensing Office, which also assists with patent submission. Continuation of this function and continuation of the technology transfer/intellectual property development process is important for the Institute and for the transportation sector at large.

Desirable - Supporting Collaborations and Partnerships

TTI has emphasized developing research collaborations and partnerships with industry, government at all levels, and with other institutions of higher education. The Institute’s Regional Division program has facilitated multi-institutional; and multi-disciplinary efforts in research and educational programs such as the Southwest Region University Transportation Center and the National Summer Transportation Institute. Research areas of expertise and abstracts contained in the MIS help support potential collaborations as well as the agency’s ability to develop proposals for significant Federal transportation research and education programs.

Assigned Tasks and Operations

In accordance with the agency Business Continuity Plan (BCP), the following teams will activate and respond to address relevant issues.

Business Continuity Management Team Operations

- Oversee the progress of all teams and the schedule for continuation of all business functions.
- Identify minimum functions necessary to meet fiduciary requirements to employees and sponsors during the various pandemic phases.
- Make final decisions regarding the actions of the teams, including relocation of personnel, equipment and operations.
- Approve the schedule for function restoration as necessary.
- Assist with internal and external communications as necessary.
- Clarify team responsibilities and assign/reassign responsibilities if necessary.
- Assess phase of pandemic and procedures to follow as relevant to that phase.
- Work with agency programs to establish lists of essential personnel, functions and resources as pandemic moves through phases.
- Ensure Human Resources maintain necessary personnel services and coordinate appropriate personnel actions. HR will also receive employee status reports from divisions and/or programs.

Business Function Team Operations

TTI’s information system supports agency business functions, delivers decision support and provides strategic business data. In the event of an emergency that disrupts the system at any of
our locations, NIS has offices with comparable facilities that can be used for disaster recovery purposes. The hardware each facility has all networking capabilities readily available. The DRP outlines TTI recovery procedures for critical computing and network functions. They include:

- Remote site preparation.
- Installation of essential software on servers.
- Testing of all systems at the remote site.
- Continuation or restoration of normal operations.
- Oversee continuation of all essential IR functions: fiscal affairs, research development, pre- and post-award activities, personnel and general issues.
- Ensure accessibility for employees to e-mail and TTINet.

Communications Coordination Team Operations

The Communications Coordination Team will implement the crisis communications plan that includes:

- Notifying employees, sponsors and visitors and the media about the emergency.
- Arranging for land-line and cell phone ‘hot lines’ for inquiries from media and agency personnel.
- Developing (with senior management) the agency response to media and client/customer inquiries, in coordination with Texas A&M’s Office of University Relations and The Texas A&M University System’s Office of Communications.
- Providing regular communications via e-mail, agency intranet and website to agency personnel regarding the status of business functions.
- Overseeing internal and external communications links, including updates on the agency’s website, electronic and paper news releases.

Facilities and Safety Team Operations

- Provide awareness information to employees regarding influenza symptoms and mitigation measures.
- Coordinate necessary emergency response efforts with appropriate University or local emergency response agencies: University Police Department, local fire and police, safety offices and emergency responders.
- Ensure security of facilities, working with local authorities.
- Identify necessary resources and prepare alternative voice and data communication services.
- Establish alternate work sites for business functions.
- Direct relocation of people and equipment to alternate work sites as necessary.
- Arrange for distribution of surface and express mail to alternate work sites.
- Oversee custodial and maintenance services of facilities.
- Coordinate maintenance and distribution of safety related disinfectant wipes and sprays, hand sanitizers and surgical masks as necessary.

Employee Responsibilities

TTI is committed to ensuring a safe and healthful environment for all employees and visitors. While the agency will take many steps necessary to assure safety and protection, it is ultimately reliant upon the cooperation and assistance of the individual employees to:
• Be aware of symptoms of influenza.
• Be alert to potential infection of influenza and practice safe hygiene procedures.
• Be prepared to conduct their assigned tasks to the extent possible if facilities are closed AND they are not suffering from influenza symptoms.
• Immediately report symptoms of illness and ensure a proper recovery phase away from the workplace.
• Adhere to all advisements and procedures as established by the agency or emergency officials.
• Personnel reporting to regular work locations for essential functions will wear TTI provided surgical masks and make frequent use of provided hand sanitizers and disinfectant wipes and sprays.
• Make frequent use of disinfectants on door handles, railings, telephones, keyboards, light switches, office equipment and restroom appliances.
• Avoid gathering with others by using phone and electronic communications.
• If away from regular workplace, maintain contact with supervisor and pay attention to agency communications.

Potential Pandemic Phases and Responses

Phase I – Identified influenza virus has not yet resulted in sustained human-to-human transmission

• Communicate awareness information to employees.
• Identify essential personnel, functions and necessary resources for continuation of work at regular workplace as well as at alternate work sites (homes).
• Divisions and/or programs will identify personnel with network/computer capability from alternate work site (homes). This does not infer a requirement to provide such capability to the employee.
  1. Employee has TTI provided equipment and connectivity.
  2. Employee has TTI provided equipment and is willing to use their personal connection as their personal expense.
  3. Employee is willing to use personal equipment and personal connection at their personal expense.
• Divisions and/or programs will develop employee contact and work status rosters. Call rosters should contain land-line and cell phone numbers.
• Prepare lists of supplies necessary to mitigate spread of influenza (surgical masks, hand sanitizers, disinfectant wipes and sprays, etc.
• Ensure that Management Team and emergency plan teams have current copies of plans.
• Update emergency plans and lists as necessary.

Phase II – Confirmed or suspected cases of sustained human-to-human transmission in the world

• Center for Disease Control (CDC) or World Health Organization (WHO) may issue alerts.
• TTI complies with any travel restrictions imposed. Non-restricted travel will be evaluated for risk to employees (infection, ability to return, etc.). Employees on official travel status and unable to return home (designated workplace) due to restrictions or quarantines imposed while on official travel status will continue to receive travel reimbursement.
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- Employees that are on a leave status at the time of the quarantine or activation of travel restriction will remain in a leave status until they are able to resume official travel to return to their designated headquarters.
- Review and confirm items under Phase I.
- Conduct tests of PIP teams, contacts, succession lists to ensure accuracy.
- Confirm to Agency Director success of tests.
- Begin procurement and coordination of sanitation supplies.

Phase III – Confirmed or suspected cases in the United States

- CDC may issue alerts or warnings.
- Review and confirm items under Phases I and II.
- Divisions and/or programs will develop work assignments and tasks for employees to complete at alternate work sites (home). Complete in first five days of this phase.
- Meetings in and travel to identified locations may be cancelled.
- Coordinate with TAMU and TAMUS administrative and service units regarding possible suspension of activities (meetings, events, etc.).
- Employees appearing symptomatic to influenza will be encouraged to contact their physician and remain at home. Such employees will be placed on personal leave.
- Employees at the workplace with known influenza symptoms will be required to leave (go home) and placed on personal leave status. They will be encouraged to contact their physician and seek medical attention.
- Employee contact and respective work status rosters should be maintained by their respective program manager or designee.
- Employees not reporting to work must be contacted (or attempt to contact) to determine reason for absence. Any absences related to influenza symptoms or confirmed cases of influenza must be reported to TTI Human Resources Office.
- Programs must finalize plans for alternate work locations during possible suspension of operations or facilities.

Phase IV – Confirmed or suspected cases in Texas

- CDC and the Texas Department of State Health Services (DSHS) may issue alerts or warnings.
- State Emergency plans may be activated.
- Review, confirm and ensure activation of items under Phases I through III.
- All agency activities and events will be reviewed by Management Team and respective divisions, centers and programs and categorized (critical, essential, desirable, non-essential).
- Final procurement and distribution of additional sanitation supplies is completed.

Phase V – Event classified as pandemic and action is directed by Director of TTI or designee

- Public health officials declare a pandemic event
- Texas A&M University or System officials or the Agency Director or designee, possibly in the absence of an official declaration, decide to take action appropriate for a pandemic event.
- Review, confirm and ensure activation of items under Phases I through IV.
After consulting with TAMU System and University officials, Agency Director or designee will make decision on suspension of all but essential activities and personnel.

Divisions and/or programs will be responsible for notification of directives to their employees.

Essential services will include communications, network connectivity, facilities’ security, financial, and meeting fiduciary responsibilities to employees and sponsors to the extent possible. Essential functions listed in the PIP will be evaluated and augmented as feasible.

Required organizational meetings shall be conducted via telephone or by electronic means.

Agency Director or designee will make the decision to direct employees, with the exception of critically essential personnel for payroll, financial, network connectivity, facility security and communications functions who cannot perform the necessary work from home, to shelter in place at home.

Divisions and/or programs will be responsible for determining work that could be performed at home. Not all work requires computer connectivity.

Supervisors are responsible for determining completion status of assigned work.

Employees (with benefits) not accomplishing the expected work at home will be considered as on personal leave status. Once sick leave and vacation leave are exhausted, the employee will be placed on leave-without-pay.

Wage employees (without benefits) not working or accomplishing expected work at home will not be paid for the period.

Employees directed to shelter in place at home will be in at least one of the following categories:

1. Employee is ill.
2. Employee is caring for ill family member(s).
3. Non-essential employees directed to perform work from home.

Divisions and/or programs will track employee status (working from home, on personal leave, infection and/or deaths of employees or family members).

Personnel reporting to workplace facilities will:

1. Wear protective masks (as provided by TTI) and gloves as necessary
2. Make frequent use of hand sanitizers.
3. Use disinfectant wipes and sprays, as appropriate, to mitigate the proliferation of influenza.
4. Avoid gathering with others and use phone or electronic communications.
5. Maintain contact with their supervisors regarding their status and progression of work.

An essential function employee who is ill will notify their supervisor so that backup personnel can be directed to report.

Phase VI – Operations are able to resume with some limitations

- Outbreaks may still be prevalent in some areas.
- Travel, meeting and quarantine restrictions may still be in place.
- Employees previously unable to return to home workplace might be allowed to return at this time.
- Elevated levels of absenteeism may continue as infected employees and/or family members recover.
- Worst case for agency – death of employees.
- Potential for diminished services and functions.
- Return to work for those not infected, not exhibiting symptoms and/or fully recovered.
• Continue aggressive disinfection procedures to prevent reoccurrence.

Phase VII – Recovery of operations, functions and facilities

• Pandemic is declared over. Infection rates have resumed to normal annual rates for influenza.
• Travel, meeting and quarantine restrictions lifted.
• Employees previously unable to return to home workplace allowed to return at this time.
• Ensure all employee leave and pay data is accurately reconciled.
• Proceed with position replacements as necessary.
• Reschedule activities and events.
• Complete review of event and update of emergency plans.