NATIONAL STRATEGY FOR PANDEMIC INFLUENZA IMPLEMENTATION PLAN

SUMMARY OF PROGRESS

DECEMBER 2006

INTRODUCTION

This document consists of a compendium of actions due to be completed within 6 months of the release of the *National Strategy for Pandemic Influenza Implementation Plan* (*Implementation Plan*), along with responses from Departments and Agencies.

The actions below are reproduced from the *Implementation Plan.* Each action is followed by a summary of progress, in italics, prepared by the relevant Department(s) and Agency(ies) for this report. The assessment is indicated directly after the action number. A determination of "complete" indicates that the measure of performance has been met, but does not necessarily mean that work has ended; in many cases work is ongoing.

CHAPTER 4: INTERNATIONAL EFFORTS[1]

4.1.2.1. Complete
DOS shall ensure strong USG engagement in and follow-up on bilateral and multilateral initiatives to build cooperation and capacity to fight pandemic influenza internationally, including the Asia-Pacific Economic Cooperation (APEC) initiatives (inventory of resources and regional expertise to fight pandemic influenza, a region-wide tabletop exercise, a Symposium on Emerging Infectious Diseases to be held in Beijing in April 2006 and the Regional Emerging Disease Intervention (REDI) Center in Singapore), the U.S.-China Joint Initiative on Avian Influenza, and the U.S.-Indonesia-Singapore Joint Avian Influenza Demonstration Project; and should develop a strategy to expand the number of countries fully cooperating with U.S. and/or international technical agencies in the fight against pandemic influenza, within 6 months. Measure of performance: finalized action plans that outline goals to be achieved and timeframes in which they will be achieved.
We have engaged in a broad range of bilateral and multilateral initiatives to build cooperation and capacity to fight pandemic influenza internationally. For example we continue to work through the APEC Health Task Force to develop exercises and protocols to facilitate collaboration in response to a developing pandemic. In addition, we are near completion of an integrated U.S. Government strategy for priority countries. The strategy will be updated as risk assessments change and as future developments warrants a change in priority countries.

4.1.2.2. Complete
HHS shall staff the REDI Center in Singapore within 3 months. Measure of performance: USG staff provided to REDI Center.
Dr. Rod Hoff, formerly of the National Institute of Allergy and Infectious Diseases, within the HHS National Institutes of Health, has assumed the position of Executive Director of the REDI Center.

4.1.2.7. Complete
Treasury shall encourage and support MDB programs to improve health surveillance systems, strengthen priority countries' response to outbreaks, and boost health systems' readiness, consistent with legislative voting requirements, within 12 months. Measure of performance: projects that fit relevant MDB criteria approved in at least 50 percent of priority countries.
We have encouraged the multilateral development banks to undertake programs to improve health surveillance systems, strengthen countries' response to outbreaks, and boost health systems' readiness, and they have responded quickly. The World Bank has pledged up to $500 million for country programs

[1] Item numbers refer to actions contained in the *Implementation Plan.* Chapters four through nine contain action items, chapters one, two and three do not.

to counter pandemic and is administering a multi-donor trust fund. The Asian Development Bank has pledged up to $470 million, focusing on regional approaches to prevent and control pandemic influenza. The World Bank is also playing a critical role in tracking and coordinating donor funding.

4.1.4.2. Complete
DOS and HHS, in coordination with other agencies, shall implement programs within 3 months to inform U.S. citizens, including businesses, NGO personnel, DOD personnel, and military family members residing and traveling abroad, where they may obtain accurate, timely information, including risk level assessments, to enable them to make informed decisions and take appropriate personal measures. Measure of performance: majority of registered U.S. citizens abroad have access to accurate and current information on influenza.
We have provided up-to-date information on avian and pandemic influenza to the majority of the over two million Americans registered with each of our 260 Embassies or Consulates abroad. The U.S. Government's official avian and pandemic influenza Website—www.pandemicflu.gov— serves as the primary information resource for Americans residing and traveling abroad. This is supplemented by the distribution of materials in consular waiting rooms and through warden networks to Americans residing and traveling abroad. Our efforts ensure that Americans outside the United States are informed of the risks of a pandemic, and measures to take in the event of an outbreak.

4.1.4.3. Complete
DOS and HHS shall ensure that adequate guidance is provided to Federal, State, tribal, and local authorities regarding the inviolability of diplomatic personnel and facilities and shall work with such authorities to develop methods of obtaining voluntary cooperation from the foreign diplomatic community within the United States consistent with USG treaty obligations within 6 months. Measure of performance: briefing materials and an action plan in place for engaging with relevant Federal, State, tribal and local authorities.
We are providing guidance to Federal, State, tribal, and local authorities regarding the inviolability of diplomatic personnel and facilities through existing networks. An action plan is in place, and briefing materials for the diplomatic community stand ready to be circulated should events warrant. We are taking measures to obtain voluntary cooperation from the foreign diplomatic community in this country in our efforts to limit the consequences of a pandemic outbreak.

4.1.5.3. Complete
HHS shall provide technical expertise, information, and guidelines for stockpiling and use of pandemic influenza vaccines within 6 months. Measure of performance: all priority countries and partner organizations have received relevant information on influenza vaccines and application strategies.
We developed and produced a package of materials on pandemic influenza preparedness, and more specifically, pandemic influenza vaccine strategies and capacity building. The information contained staff contact information and relevant FDA (Food and Drug Administration) and WHO (World Health Organization) website links related to vaccine production and licensing. This package was disseminated, via fax and/or email, to all 18 State Department-designated pandemic influenza focus countries. The package was also sent to WHO Headquarters and distributed to GHSAG (Global Health Security Action Group countries via the GHSAG Secretariat and others.

4.1.5.4. Complete
USDA and USAID, in cooperation with FAO and OIE, shall provide technical expertise, information and guidelines for stockpiling and use of animal vaccines, especially to avian influenza affected countries and those countries at highest risk, within 6 months. Measure of performance: all priority countries and relevant international organizations have received information on animal vaccines' efficacy and application strategies to guide country-specific decisions about preparedness options.

U.S. Embassies and missions have assured that all priority countries have received international guidance on the use of animal vaccines. We are also working with academic institutions to produce a training program on the use of animal vaccines and vaccination strategies, and are providing support for an international scientific conference in March, 2007, on avian influenza vaccination standards, trade implications, strategies for implementation, and experiences to date.

4.1.6.3. Complete
USDA shall generate new information on avian vaccine efficacy and production technologies and disseminate to international organizations, animal vaccine manufacturers, and countries at highest risk within 6 months. Measure of performance: information disseminated to priority entities.
We have distributed information on avian influenza vaccines and vaccination to the two primary international animal health organizations (FAO and OIE), to multiple national and international animal health industry and trade associations, and to representatives of international vaccine manufacturers. Information is also being provided directly to governments and poultry industries in key priority and at-risk countries. Our dissemination of vaccine efficacy information will be ongoing as experiments with new vaccines are completed. In addition, a training symposium is being developed for distribution in Asia, Africa, and Central and South America.

4.1.7.1. Complete
DOS shall work with HHS and USAID, in collaboration with the WHO Secretariat, to coordinate the USG contribution to an international stockpile of antiviral medications and other medical countermeasures, including international countermeasure distribution plans and mechanisms and agreed prioritization of allocation, within 6 months. Measure of performance: release of proposed doctrine of deployment and concept of operations for an international stockpile.
We have formulated a policy on our contribution to international stockpiles, as well as for the deployment and use of antiviral medications, that will serve as guidance for the distribution and allocation of supplies. The U.S. Government is coordinating with the World Health Organization, which is at present reviewing this strategy, which will enable us to direct and apply limited resources in an effective manner.

4.1.7.2. Complete
The Department of Justice (DOJ) and DOS, in coordination with HHS, shall consider whether the USG, in order to benefit from the protections of the Defense Appropriations Act, should seek to negotiate liability-limiting treaties or arrangements covering U.S. contributions to an international stockpile of vaccine and other medical countermeasures, within 6 months. Measure of performance: review initiated and decision rendered.
We have conducted a review as to whether we should seek to negotiate liability-limiting treaties or arrangements covering U.S. contributions to an international stockpile of vaccines. We find that at this time there is no compelling need to seek such arrangements, but will continue to monitor relevant factors that could require a change in finding.

4.1.7.3. Complete
USDA, in collaboration with FAO and OIE, shall develop and provide best-practice guidelines and technical expertise to countries that express interest in obtaining aid in the implementation of a national animal vaccination program, within 4 months. Measure of performance: interested countries receive guidelines and other assistance within 3 months of their request.
To prepare for meeting requests from interested countries, we have collaborated with academic institutions to develop a multi-media training module on animal vaccines and vaccination strategies. International partners have been educated on animal vaccines' efficacy and application strategies, as well as potential organizational models, for collaboration that are necessary to implement a national animal vaccination program.

4.2.1.4. Complete
HHS shall, to the extent feasible, negotiate agreements with established networks of laboratories around the world to enhance its ability to perform laboratory analysis of human and animal virus isolates and to train in-country government staff on influenza-related surveillance and laboratory diagnostics, within 6 months. Measure of performance: completed, negotiated agreement, and financing mechanism with at least one laboratory network outside the United States.
Agreements with Institute Pasteur and Gorgas institute have been developed, including $1,550,066 obligated to Institute Pasteur and $775,000 to Gorgas Institute for projects under this item.

4.2.1.6. Complete
USAID, in coordination with USDA, shall initiate a pilot program to evaluate strategies for farmer compensation and shall engage and leverage the private sector and other donors to increase the availability of key commodities, compensation, financing and technical support for the control of avian influenza within 6 months. Measure of performance: a model compensation program measured in value of goods and services available for compensation is developed.
To address the challenging issue of compensation, we have developed a replicable compensation model in partnership with the World Bank, FAO and the Government of Indonesia. This program will be launched in early 2007, and will integrate compensation into ongoing community-based surveillance and response efforts. We are also working with international organizations such as the World Bank to research and recommend compensation strategies, including non-monetary incentives, and to develop approaches to indemnity programs that could be used in other priority and high-risk countries.

4.2.1.7. Complete
USAID, HHS, USDA, and DOS shall support NGOs, FAO, OIE, WHO, the Office of the Senior UN System Coordinator for Avian and Human Influenza, and host governments to expand the scope, accuracy, and transparency of human and animal surveillance systems and to streamline and strengthen official protocols for reporting avian influenza cases, within 6 months. Measure of performance: 75 percent of priority countries have established early warning networks, international case definitions, and standards for laboratory diagnostics of human and animal samples.
All priority countries have established early-warning networks for H5N1 in animals and conform to disease definitions and diagnostic standards for influenza established by the World Organization for Animal Health (OIE). More than 75 percent of priority countries have human influenza early-warning capabilities and all abide by international case definitions; more than 75 percent meet laboratory standards for human diagnosis. We have provided technical assistance to strengthen national surveillance systems in all priority countries, support to international organizations for human and animal health to promote early warning surveillance for influenza outbreaks in member countries, and technical training to strengthen human and animal diagnostic laboratories in the detection of influenza virus in priority countries.

4.2.3.3. Complete
HHS, in cooperation with the WHO Secretariat and other donor countries, shall expand an existing specimen transport fund that enables developing countries to transport influenza samples to WHO regional reference laboratories and collaborating centers, within 6 months. Measure of performance: 100 percent of priority countries funded for sending influenza samples to WHO regional reference laboratories.
To ensure that all priority countries have the ability to rapidly transport influenza samples to the WHO for analysis, we have provided $400,000 to WHO to conduct five training workshops focused on proper transport of dangerous materials, as well as to provide consultations with priority African partners regarding the proper protocol for specimen transport.

4.3.1.2. Complete

DOS, in coordination with HHS, shall work with WHO and the international community to secure agreement (e.g., through a resolution at the World Health Assembly in May 2006) on an international containment strategy to be activated in the event of a human outbreak, including an accepted definition of a "triggering event" and an agreed doctrine for coordinated international action, responsibilities of nations, and steps they will take, within 4 months. Measure of performance: international agreement on a response and containment strategy.
We have implemented numerous efforts to build response and containment capacity in at-risk countries, and to reinforce broad acceptance of the International Health Regulations and related protocols and standards of the WHO. We are finalizing protocols on the response to and containment of outbreaks and have developed a curriculum to teach principles of rapid pandemic response to public health personnel in other countries. These initiatives are essential for our efforts at the early containment of outbreaks, and thereby for our goal of preventing a pandemic from reaching the United States.

4.3.1.8. Complete
DOS, in coordination with HHS, USDA, USAID, and DHS, and in collaboration with WHO, FAO, OIE, the World Bank and regional institutions such as APEC, the Association of Southeast Asian Nations and the European Community, shall, to the extent feasible, improve public affairs coordination and establish a set of agreed upon operating principles among these international organizations and the United States that describe the actions and expectations of the public affairs strategies of these entities that would be implemented in the event of a pandemic, within 6 months. Measure of performance: list of key public affairs contacts developed, planning documents shared, and coordinated public affairs strategy developed.
A coordinated public affairs strategy based on WHO guidelines that were developed with U.S. assistance has been shared with an extensive list of public affairs contacts we have established throughout the U.N. system, the World Organization for Animal Health, the World Bank, and regional organizations. We have provided this contact list and the reference to U.S. planning documents posted on www.pandemicflu.gov to all. We are working with our partners to increase the sharing of communications plans.

4.3.1.9. Complete
DOS and DOC, in collaboration with NGOs and private sector groups representing business with activities abroad, shall develop and disseminate checklists of key activities to prepare for and respond to a pandemic, within 6 months. Measure of performance: checklists developed and disseminated.
DOS and DOC, in collaboration with CDC, drafted a checklist entitled "Pandemic Preparedness Planning for U.S. Businesses with Overseas Operations," which has been vetted with the three business associations engaged in avian influenza outreach: the National Associations of Manufactures, the Business Round Table, and the U.S. Chamber of Commerce. Once final clearance is obtained, the document will be disseminated via the pandemicflu.gov website. The International Trade Administration (DOC) in conjunction with the Bureau of East Asian Affairs and the Office of Economic Policy (DOS) developed informational guidance for small/medium businesses targeting APEC countries. The guidance was derived from the CDC checklist, the ABAC (APEC Business Advisory Council) checklist, and various private sector business checklists. The guidance was distributed at the September Vietnam SME Working Group Meeting. The guidance is expected to be placed on the APEC website for use by all APEC member countries but is primarily for those APEC members that do not have robust pandemic preparedness plans.

4.3.2.2. Complete
DOD, in coordination with DOS, HHS, DOT, and DHS, will limit official DOD military travel between affected areas and the United States. Measure of performance: DOD identifies military facilities in the United States and OCONUS that will serve as the points of entry for all official travelers from affected areas, within 6 months.

We are prepared to support the National Strategy for Pandemic Influenza Implementation Plan in a World Health Organization Phase 4 situation. We will asses the restricted/modified movement of our agency personnel to designated Points of Entry. These restrictions and/or modifications will limit the potential spread of influenza by enabling proper medical screening and in some cases isolation and quarantine of personnel traveling to/from affected areas. Further assessment regarding logistics, medical support, Host Nation coordination etc continue.

4.3.5.1. Complete
DOS shall organize an interagency group to analyze the potential economic and social impact of a pandemic on the stability and security of the international community, within 3 months. Measure of performance: issues identified and policy recommendations prepared.
We have formed an interagency group to examine the potential global economic impact of a pandemic. The group has addressed a preliminary set of issues and has formulated policy recommendations. It has also succeeded in identifying border policies with the aim of preventing the arrival of a pandemic in the United States. Our efforts will assist us to weigh the economic implications and costs of various policy alternatives.

4.3.5.2. Complete
Treasury shall urge the IMF to enhance its surveillance of priority countries and regions, including further assessment of the macroeconomic and financial vulnerability to an influenza pandemic, within 3 months. Measure of performance: updated, expanded IMF analysis of the potential impact of an influenza pandemic on priority countries and regions, as defined above.
We have encouraged the IMF to enhance its surveillance of countries and regions, including further assessment of the macroeconomic and financial vulnerability to an influenza pandemic. To this end, the IMF published an analysis in early 2006 on the potential economic impact of a pandemic, and it continues to look at pandemic risks in select countries. The IMF has also conducted regional seminars to promote and share information on effective contingency planning.

4.3.5.3. Complete
Treasury, in collaboration with the IMF and the multilateral development banks, shall take the lead on dialogue with creditor countries to ensure that financial assistance to affected economies is provided on terms consistent with the goals of restoring economic activity and maximizing economic growth (within existing international financial agreements), within 6 months. Measure of performance: official financing strategies in place that are consistent with the goals above.
In collaboration with the IMF and the multilateral development banks, we plan to ensure that financial assistance to affected economies is provided on terms consistent with the goals of restoring economic activity and maximizing economic growth (within existing international financial agreements). The IMF stands ready to help address countries' balance of payments needs in response to a pandemic. The World Bank is tracking donor commitments for avian influenza programs, and the Asian Development Bank is taking the lead in coordinating donor actions in Asia.

4.3.6.1. Complete
DOS, in coordination with HHS, USAID, USDA, DOD, and DHS, shall lead an interagency public diplomacy group to develop a coordinated, integrated, and prioritized plan to communicate U.S. foreign policy objectives relating to our international engagement on avian and pandemic influenza to key stakeholders (e.g., the American people, the foreign public, NGOs, international businesses), within 3 months. Measure of performance: number and range of target audiences reached with core public affairs and public diplomacy messages, and impact of these messages on public responses to avian and pandemic influenza.
Information on pandemic preparedness and U.S. international policy and activities for broad domestic and international audiences has been posted on U.S. Government web sites, including

www.pandemicflu.gov, www.state.gov/g/avianflu, and www.usinfo.state.gov. Key U.S. officials have also reached out to the American public through speeches in public forum. Through international media orientation, TV documentaries, web sites, news stories, and enhanced Voice of America broadcasting we have reached an estimated audience of more than 300 million.

CHAPTER 5: TRANSPORTATION AND BORDERS

5.1.1.2. Complete
HHS and DHS, in coordination with the National Economic Council (NEC), DOD, DOC, U.S. Trade Representative (USTR), DOT, DOS, USDA, Treasury, and key transportation and border stakeholders, shall establish an interagency modeling group to examine the effects of transportation and border decisions on delaying spread of a pandemic, and the associated health benefits, the societal and economic consequences, and the international implications, within 6 months. Measure of performance: interagency working group established, planning assumptions developed, priorities established, and recommendations made on which models are best suited to address priorities.
We have convened an interagency working group to address modeling and economic analysis issues, establish Federal-level priorities, develop an inventory of modeling capabilities for each priority, and recommend what priorities should be modeled. We evaluated a wide range of modeling and simulation tools—some of which have been used to support analysis of the economic impacts of a pandemic. We developed initial planning assumptions (e.g., morbidity, mortality, absenteeism) which are included in department pandemic influenza plans, and have made recommendations related to which models are best suited to address priorities.

5.1.2.1. Complete
DHS and HHS, in coordination with DOT and USDA, shall review existing grants or Federal funding that could be used to support transportation and border-related pandemic planning, within 4 months. Measure of performance: all State, local, and tribal governments are in receipt of, or have access to, guidance for grant applications.
We reviewed grants and other Federal funding programs to determine which ones allowed for expenditures on transportation and other border-related pandemic planning, and provided program guidance on the availability of funding to all eligible entities.

5.1.4.1. Complete
HHS, in coordination with DHS, DOT, and DOL, shall establish workforce protection guidelines and develop targeted educational materials addressing the risk of contracting pandemic influenza for transportation and border workers, within 6 months. Measure of performance: guidelines and materials developed that meet the diverse needs of border and transportation workers (e.g., customs officers or agents, air traffic controllers, train conductors, dock workers, flight attendants, transit workers, ship crews, and interstate truckers).
We have prepared a Travel Industry Pandemic Influenza Planning Checklist, as well as workforce protection guidelines for airline crew and persons meeting passengers arriving from affected areas, airline cleaning crews and baggage handlers, and airline workers who clean aircraft that have collided with birds.

5.2.1.1. Complete
HHS and USDA, in coordination with DHS, DOT, DOS, DOD, DOI, and State, local, and international stakeholders, shall review existing transportation and border notification protocols to ensure timely information sharing in cases of quarantinable disease, within 6 months. Measure of performance: coordinated, clear interagency notification protocols disseminated and available for transportation and border stakeholders.

We have reviewed notification protocols to ensure that accurate information is available to border and transportation stakeholders in a timely manner. Several stakeholders have been added to notification distributions, and protocols include communication chains for notification of Federal, State, and local stakeholders throughout the country, both public and private. The protocols codify procedures already in use, as 16 notifications of embargoes of live birds or unprocessed bird products have been issued since March 2006. Information about specific embargoes, import restrictions, or other regulatory actions is available to all stakeholders and the public via the web at www.aphis.usda.gov/vs/ncie/country.html#HPAI and www.cdc.gov/flu/avian/outbreaks/embargo.htm.

5.2.3.1. Complete
DHS, in coordination with HHS, DOT, DOS, and DOD, shall work closely with domestic and international air carriers and cruise lines to develop and implement protocols (in accordance with U.S. privacy law) to retrieve and rapidly share information on travelers who may be carrying or may have been exposed to a pandemic strain of influenza, within 6 months. Measure of performance: aviation and maritime protocols implemented and information on potentially infected travelers available to appropriate authorities.
We utilize well-established aviation and maritime protocols to acquire and track public health data related to ill passengers. We have been working to make information on potentially infected travelers available to the appropriate authorities. We have developed a Memorandum of Understanding between Customs and Border Patrol and the Centers for Disease Control to facilitate requests for information on potentially infected international travelers in the event of a health emergency.

5.2.4.1. Complete
HHS, in coordination with DHS, DOT, DOS, DOC, and DOJ, shall develop policy recommendations for aviation, land border, and maritime entry and exit protocols and/or screening and review the need for domestic response protocols or screening within 6 months. Measure of performance: policy recommendations for response protocols and/or screening.
We have developed policy recommendations for response protocols and screening, as well as interagency working groups to develop the above protocols.

5.2.4.9. Complete
DHS, in coordination with DOS, HHS, Treasury, and the travel and trade industry, shall tailor existing automated screening programs and extended border programs to increase scrutiny of travelers and cargo based on potential risk factors (e.g., shipment from or traveling through areas with pandemic outbreaks) within 6 months. Measure of performance: enhanced risk-based screening protocols implemented.
We currently prohibit certain cargo from affected countries and perform screening for potentially infected cargo from affected countries. We are developing risk-based screening protocols to engage airlines and air carriers on the issue of en route screening. We are working with foreign governments on the performance of the screening of international travelers at connection and transit points.

5.2.5.2. Complete
USDA, in coordination with DHS, DOI, and HHS, shall review the process for withdrawing permits for importation of live avian species or products and identify ways to increase timeliness, improve detection of high-risk importers, and increase outreach to importers and their distributors, within 6 months. Measure of performance: revised process for withdrawing permits of high-risk importers.
We have revised the process for the review and cancellation of high-risk permits and communicated notification protocols to stakeholders. A new electronic permitting system has increased the efficiency of permit cancellations and withdrawals, although no permits have yet had to be withdrawn due to embargoes placed on H5N1 influenza affected regions.

5.2.5.3. Complete

USDA, in coordination with DOI, DHS, shall enhance protocols at air, land, and sea ports of entry to identify and contain animals, animal products, and/or cargo that may harbor viruses with pandemic potential and review procedures to quickly impose restrictions, within 6 months. Measure of performance: risk-based protocols established and in use.
We currently have protocols in place to identify and contain animals, animal products, or cargo that could harbor influenza viruses with pandemic potential. The protocols have been reviewed to ensure that restrictions can be imposed quickly. Training seminars on the handling and quarantine of live birds have been completed by designated personnel and made available via intranet.

5.2.5.4. Complete
USDA, in coordination with DHS, shall review the protocols, procedures, and capacity at animal quarantine centers to meet the requirements outlined in Part 93 of Title 9 of the Code of Federal Regulations, within 4 months. Measure of performance: procedures in place to respond effectively and efficiently to the arrival of potentially infected avian species, including provisions for adequate quarantine surge capacity.
We have updated protocols for handling birds encountered at U.S. ports of entry. Based on these protocols, which call for humane euthanasia of birds that are potentially infected with a virus with pandemic potential due to their known or suspected region of origin, we have determined that surge capacity is currently adequate at animal quarantine centers. In addition, training seminars on the handling and quarantine of live birds have been completed by the responsible personnel.

5.3.4.6. Complete
DOJ and DHS shall protect targeted shipments of critical supplies and facilities by providing limited Federal security forces under Emergency Support Function #13 - Public Safety and Security (ESF #13) of the NRP, as needed. Measure of performance: all appropriate Federal, State, local, and tribal requests for Federal law enforcement and security assistance met via activation of ESF #13 of the NRP. (See also Chapter 8 - Law Enforcement, Public Safety, and Security.)
Emergency Support Function 13 coordinating officials have been briefed on pandemic issues and are formulating contingency plans to carry out security responsibilities.

CHAPTER 6: PROTECTING HUMAN HEALTH

6.1.1.3. Complete
DHS, in coordination with HHS, DOJ, DOT, and DOD, shall be prepared to provide emergency response element training (e.g., incident management, triage, security, and communications) and exercise assistance upon request of State, local, and tribal communities and public health entities within 6 months. Measure of performance: percentage of requests for training and assistance fulfilled.
Our exercise and evaluation program provides direct support for State, local, and tribal exercises upon request. Exercises which address pandemic influenza response are eligible for funding support and vendor assistance. Thus far, we have fulfilled 70 percent of submitted training requests.

6.1.2.3. Complete
HHS, in coordination with DHS, DOT, DOD, and VA, shall work with State, local, and tribal governments and leverage Emergency Management Assistance Compact agreements to develop protocols for distribution of critical medical materiel (e.g., ventilators) in times of medical emergency within 6 months. Measure of performance: critical medical material distribution protocols completed and tested.
We convened an internal and external stakeholder working group to review existing protocols for distribution of critical medical material in times of medical emergencies. The workgroup developed a concise protocol that: 1) provides basic information on EMAC, 2) refers practitioners to their state emergency management agency, 3) provides links to other resources, and 4) provides space for

documenting state-specific information. It has utility both prior to an event and during an event. The partner agencies represented in the workgroup sent the finished product to their respective constituency groups for wide distribution.

6.1.2.4. Complete
HHS, in coordination with DOD and VA, in collaboration with medical professional and specialty societies, within their domains of expertise, shall develop guidance for allocating scarce health and medical resources during a pandemic, within 6 months. Measure of performance: guidance developed and disseminated.
We developed a guidance document entitled "Providing Mass Casualty Care with Scarce Resources: A Community Planning Guide." The Community Planning Guide was created to provide community planners – as well as planners at the institutional, State, and Federal levels - with valuable information and insights that will help them in their efforts to plan for and respond to a mass casualty event (MCE). The document is not intended to reflect Federal policy, but to provide State and local planners with options to consider when planning their response to a MCE. The guide is available at www.pandemicflu.gov and http://www.ahrq.gov/research/mce/. Additionally, we will distribute widely to target audiences, including Emergency Medical Professionals, FEMA Regional Offices, Child Health-related institutions, Hospital Officials, Nursing Managers, and State Emergency Management Agencies, Homeland Security Offices, and Public Health Departments.

6.1.2.7. Complete
HHS, in coordination with DHS, DOD, VA and the USA Freedom Corps and Citizen Corps programs, shall prepare guidance for local Medical Reserve Corps coordinators describing the role of the Medical Reserve Corps during a pandemic, within 3 months. Measure of performance: guidance materials developed and published on Medical Reserve Corps website (www.medicalreservecorps.gov).
We posted MRC Pandemic guidance posted on website in May, 2006 (http://www.medicalreservecorps.gov/POUpdates/PandemicFluGuidance)

6.1.2.8. Complete
DHS, in coordination with the USA Freedom Corps, shall direct other Citizen Corps programs to prepare guidance detailing appropriate pandemic preparedness activities for each program, within 3 months. Measure of performance: guidance materials developed and published on Citizen Corps website and component program websites.
We have included specific links to preparedness checklists and current information on the Citizen Corps home website (www.citizencorps.gov) with instructions for each component on how to access updated information. Affiliates have included specific pandemic influenza guidelines on their respective websites to ensure that current information is available. We are working with all Citizen Corps components related to developing and disseminating specific guidance pandemic influenza preparedness activities. We are distributing an article on pandemic influenza and citizen preparedness to all 25 affiliate organizations and to main program partners such as Fire Corps, Volunteer in Police Service, and Medical Reserve Corps.

6.1.3.2. Complete
HHS, in coordination with DHS, shall develop, test, update and implement (if necessary) a multilingual and multimedia public engagement and risk communications strategy within 6 months. Measure of performance: risk communication material completed and published on www.pandemicflu.gov and other venues; State summit meetings held.
Multiple public engagement and risk communication materials targeting key audiences have been produced and distributed via multiple channels. All checklists are available on PandemicFlu.gov and were distributed at all state summits (all state summits are completed). The Spanish language version of PandemicFlu.gov was launched on August 24, 2006. Translations of checklists and other key materials

in Spanish, Chinese, and Vietnamese are underway. Video versions of select Q&As are available on PandemicFlu.gov. Ten regional risk communications trainings have been held, and 50 state risk communications train-the-trainer sessions were completed by November 3, 2006. Crisis and Emergency Risk Communication (CERC) By Leaders for Leaders has been completed and posted on PandemicFlu.gov.

6.1.3.3. Complete
HHS, in coordination with DHS, DOD, and the VA, and in collaboration with State, local, and tribal health agencies and the academic community, shall select and retain opinion leaders and medical experts to serve as credible spokespersons to coordinate and effectively communicate important and informative messages to the public, within 6 months. Measure of performance: national spokespersons engaged in communications campaign.
USG Public Health Pandemic Communications Plan (Action Item 6.1.3.1) includes messaging and spokesperson development components. Medical, public health, tribal health, and the academic community local and regional spokespersons have been engaged (leadership provided by CDC) during nine regional risk communications trainings to discuss pandemic influenza crisis and emergency risk communication, support pandemic community and individual countermeasures to reduce illness and death, restore or maintain calm, and engender confidence in the operational response. Trainings have created a cadre of fifty train-the-trainers to increase the numbers of credible spokespersons on this subject. The 2006 National Public Health Information Coalition Annual meeting, which was supported by CDC, included numerous messaging and spokesperson sessions. CDC and ASPA maintain a Speaker's Bureau database of internal experts to serve as spokespersons. Both Bureaus work cooperatively with other agencies to identify and provide speakers, as appropriate. Finally, a list of national third-party spokespeople was developed and distributed to key departments.

6.1.4.1. Complete
State, local, and tribal public health and health care authorities, in collaboration with DHS, HHS, and the Department of Labor (DOL), should coordinate emergency communication protocols with print and broadcast media, private industry, academic, and nonprofit partners within 6 months. Measure of performance: coordinated messages from communities identified above.
In collaboration with other Federal departments, a risk communication strategy is being developed including risk communications training sessions in 10 regions for local public health, community, and tribal leaders. Participants will be trained to serve as local spokespeople before, during, and after a pandemic. Third-party outreach efforts include: (1) development of planning checklists for state and local governments, the business community, schools, healthcare groups, and faith-based and community organizations (these checklist include recommendation to exercise communications plans); (2) on-going sector briefings; and (3) the development of "push" communications mechanisms to the private sector.

6.1.6.4. Complete
HHS, DOD, VA and the States shall maintain antiviral and vaccine stockpiles in a manner consistent with the requirements of FDA's Shelf Life Extension Program (SLEP) and explore the possibility of broadening SLEP to include equivalently maintained State stockpiles, within 6 months. Measure of performance: compliance with SLEP requirements documented; decision made on broadening SLEP to State stockpiles.
For the first performance measure (compliance with SLEP requirements documented), current SLEP participants (DOD, CDC, and VA) state their compliance with existing SLEP requirements as set forth in the Interagency Agreement and respective Memoranda of Agreement. For the second performance measure (decision made on broadening SLEP to State stockpiles), after careful consideration of this matter, HHS, DOD and VA have determined that the inclusion of State stockpiles in the SLEP program is not feasible at this time.

6.1.10.1. Complete
HHS, in coordination with the private sector, shall assess the ability of U.S.-based pharmaceutical manufacturing facilities to contribute surge capacity and to retrofit existing facilities for pandemic vaccine production. This assessment will be completed within 6 months and should inform efforts to expand vaccine capacity. Measure of performance: completed assessment.
Assessment of U.S. and global influenza vaccine manufacturers is made quarterly through visits and other communications to manufacturers and WHO. A summary table and graph of influenza vaccine manufacturing pandemic capacity and vaccine forecasts are provided after each analysis. Request for Information was issued to ascertain manufacturer's influenza vaccine capacity and needs for retrofitting existing facilities to produce pandemic influenza vaccines in an emergency. This resulted in the issuance of a RFP solicitation in June 2006 for retrofitting of existing facilities for pandemic influenza vaccine manufacturing.

6.1.10.2. In Progress
HHS, in coordination with DHS, DOD, VA, DOC, DOJ, and Treasury, shall assess within whether use of the Defense Production Act or other authorities would provide sustained advantages in procuring medical countermeasures, within 6 months. Measure of performance: analytical report completed on the advantages/disadvantages of invoking the Defense Production Act to facilitate medical countermeasure production and procurement.
A draft analytical report on the advantages/disadvantages of invoking the Defense Production Act to facilitate medical countermeasure production and procurement has been developed and put into clearance.

6.1.11.2. Complete
HHS shall develop a protocol and decision tools to implement liability protections and compensation, as authorized by the Public Readiness and Emergency Preparedness Act (Pub. L. 109-148), within 6 months. Measure of performance: publication of protocol and decision tools.
Pandemic influenza PREP Act protocol & decision tools have been developed and published on www.pandemicflu.gov.

6.1.13.7. Complete
HHS, in coordination with DHS, DOT, DOD, and VA, shall work with State, local, and tribal governments and private sector partners to develop and test plans to allocate and distribute critical medical materiel (e.g., ventilators with accessories, resuscitator bags, gloves, face masks, gowns) in a health emergency, within 6 months. Measure of performance: plans developed, tested, and incorporated into department plan, and disseminated to States and tribes for incorporation into their pandemic response plans.
The plan to allocate and distribute federally held materiel has been developed and tested from the federal standpoint. The plan entitled, Pandemic Influenza Allocation and Distribution Plan: Guidance to Project Areas, was developed by the Department of Health and Human Services (HHS) and supported by the Department of Defense (DOD), Department of Veterans Affairs (VA), Department of Transportation (DOT), Department of Homeland Security (DHS), Public Health Emergency Preparedness (PHEP) Project Areas, and commercial partners. The plan was tested in October 2006 and further testing of the response plan by HHS is scheduled from November 2006-March 2007. The aforementioned plan has been incorporated into the department's CDC Operations Plan. The Pandemic Influenza Allocation and Distribution Plan: Guidance to Project Areas has also been disseminated to States for incorporation into their pandemic influenza response plans and for coordination with their respective local and tribal authorities.

6.1.15.1. Complete

HHS shall develop capability, protocols, and procedures to ensure that viral isolates obtained during investigation of human outbreaks of influenza with pandemic potential are sequenced and that sequences are published on GenBank within 1 week of confirmation of diagnosis in index case, within 6 months. Measure of performance: viral isolate sequences from outbreaks published on GenBank within 1 week of confirmation of diagnosis.
We support a high throughput genome sequencing center that is currently generating high quality influenza genome sequence data for avian and human influenza viruses in a state-of-the-art microbial genome sequencing facility at the Institute for Genomic Research (TIGR). As of October 25, 2006, 1,660 human and avian isolates have been completely sequenced, and genomic sequencing data has been released to GenBank in 45 days of completing the sequence for rapid and unrestricted access of the data by the scientific community. The facility is operating at a capacity to sequence 200 complete influenza genomes per month with capabilities in place to expand the number of viral genomes sequenced per month, in the event of a pandemic. In addition, the center can generate the complete viral genome sequence from a clinical sample in 2-3 days. We, in partnership with the Association of Public Health Laboratories (APHL), are prepared to publish sequence data on any human isolate of H5N1 detected in the United States within 1 week of obtaining a viral isolate.

6.1.15.2. Complete
HHS shall increase and accelerate genomic sequencing of known human and avian influenza viruses and shall rapidly make this sequence information publicly available, within 6 months. Measure of performance: increased throughput of genomes sequenced (versus FY 2005 baseline) and decreased time interval between completion of sequencing and publication on GenBank.
We support a high throughput genome sequencing center that is currently generating high quality influenza genome sequence data for avian and human influenza viruses in a state-of-the-art microbial genome sequencing facility at the Institute for Genomic Research (TIGR). As of October 25, 2006, 1,660 human and avian isolates have been completely sequenced, and genomic sequencing data has been released to GenBank in 45 days of completing the sequence for rapid and unrestricted access of the data by the scientific community. The facility is operating at a capacity to sequence 200 complete influenza genomes per month with capabilities in place to expand the number of viral genomes sequenced per month, in the event of a pandemic. In addition, the center can generate the complete viral genome sequence from a clinical sample in 2-3 days. We, in partnership with the Association of Public Health Laboratories (APHL), are prepared to publish sequence data on any human isolate of H5N1 detected in the United States within 1 week of obtaining a viral isolate. Internationally, we work with the World Health Organization (WHO) to encourage sharing of viruses from countries with avian flu activity.

6.1.15.3. Complete
HHS shall develop protocols and procedures to ensure timely reporting to Federal agencies and submission for publication of data from HHS-supported influenza vaccine, antiviral medication, and diagnostic evaluation studies, within 6 months. Measure of performance: study data shared with Federal agencies within 1 month of analysis and publication of clinical trial data following completion of studies.
We convened a working group that developed and approved protocols, including the mechanism for dissemination and notification of publication.

6.1.16.1. Complete
HHS shall continue to support the advanced development of cell-culture based influenza vaccine candidates. Measure of performance: research grants and/or contracts awarded to develop cell-culture based influenza vaccines against currently circulating influenza strains with pandemic potential within 6 months.
We announced awards totaling over $1 billion for advancing cell culture technology on May 4, 2006. We provided draft guidance to industry, "Clinical Data Needed to Support the Licensure of Pandemic

Influenza Vaccines, March 2, 2006" and "Clinical Data Needed to Support the Licensure of Trivalent Inactivated Influenza Vaccines, March 2, 2006."

6.1.17.4. Complete
HHS shall increase access to standardized influenza reagents for use in influenza tests and research, within 6 months. Measure of performance: standardized influenza reagents distributed to domestic and international partners within 3 business days of a request.
We distribute standardized influenza reagents to diagnostic laboratories and research partners within 3 business days of a request. Recipients must sign an electronic material transfer agreement.

6.2.1.1. Complete
HHS shall provide guidance to public health and clinical laboratories on the different types of diagnostic tests and the case definitions to use for influenza at the time of each pandemic phase. Guidelines for the current pandemic alert phase will be disseminated within 3 months. Measure of performance: dissemination on www.pandemicflu.gov and through other channels of guidance on the use of diagnostic tests for H5N1 and other potential pandemic influenza subtypes.
We disseminated updated guidelines on diagnostic testing for avian influenza A(H5N1) virus and other potential pandemic influenza subtypes. "Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) Virus in the United States" was prepared in collaboration with the Council of State and Territorial Epidemiologists (CSTE), the Infectious Diseases Society of American (IDSA), and other partners. It includes a case definition for suspected U.S. cases of human infection with avian influenza A(H5N1) to help decide when and how laboratory testing should be done. The guidelines have been posted on the Internet (http://www2a.cdc.gov/han/ArchiveSys/ViewMsgV.asp?AlertNum=00246) and distributed to public health and medical partners via the Health Alert Network. The guidelines will be updated as new information becomes available.

6.2.1.2. Complete
HHS shall ensure that testing by reverse transcriptase-polymerase chain reaction (RT-PCR) for H5N1 and other influenza viruses with pandemic potential is available at LRN laboratories and CDC within 3 months. Measure of performance: RT-PCR for H5N1 and other potential pandemic influenza subtypes and strains in use at CDC and LRN laboratories.
All members of the U.S. Laboratory Response Network (LRN)—which includes state public health laboratories—have the capacity to perform tests using the real-time reverse transcriptase-polymerase chain reaction (RT-PCR) technique. Reagents and protocols for RT-PCR testing for H5N1 influenza have been distributed to 99 LRN laboratories across the country. Laboratory protocols for other influenza A subtypes with pandemic potential can be made available, as needed.

6.2.1.3. Complete
HHS, in coordination with DOD, VA, USDA, DHS, EPA, and other partners, in collaboration with its LRN Reference Laboratories, shall be prepared within 6 months to conduct laboratory analyses to detect pandemic subtypes and strains in referred specimens and conduct confirmatory testing, as requested. Measure of performance: initial testing and identification of suspect pandemic influenza specimens completed at LRN Reference and National Laboratories within 24 hours.
LRN laboratories in all 50 states are prepared to conduct initial or confirmatory testing of suspected pandemic strains within 24 hours of receipt, using reverse transcriptase-polymerase chain reaction (RT-PCR) primers and probes developed and validated at CDC. Reagents and protocols for testing for H5N1 influenza have been distributed to 99 LRN laboratories throughout the country. Laboratory protocols for other influenza A subtypes with pandemic potential can be made available, as needed. Through the Integrated Consortium of Laboratory Networks, several other laboratories--including facilities operated by the Department of Defense, the Department of Veterans Affairs, the U.S. Department of Agriculture,

the Department of Homeland Security, and the Environmental Protection Agency--are also prepared to detect pandemic subtypes and strains in referred specimens and to conduct confirmatory testing.

6.2.2.1. Complete
HHS shall be prepared to provide ongoing information from the national influenza surveillance system on the pandemic's impact on health and the health care system, within 6 months. Measure of performance: surveillance data aggregated and disseminated every 7 days, or as often as the situation warrants, to DHS, Sector-Specific Agencies, and State, territorial, tribal, and local partners.
We aggregate and disseminate influenza data to national and domestic partners on a weekly basis. During an influenza pandemic, we will disseminate data on a more frequent basis, if needed.

6.2.2.4. Complete
HHS shall reduce the time between reporting of virologic laboratory data from State, local, tribal, and private sector partners and collation, analysis, and reporting to key stakeholders, within 6 months. Measure of performance: time delay between receipt of data and collation, analysis, and reporting of results of 7 days or less.
CDC has the ability to collate, analyze, and report results to stakeholders within 7 days of receiving virologic data from state, local, and tribal partners.

6.2.2.5. Complete
HHS shall increase the frequency of reporting and the number and geographic location of reporting health care providers from which outpatient surveillance data are collected through the Sentinel Provider Network (SPN), the Emerging Infections Program (EIP) influenza project, and the New Vaccine Surveillance Network (NVSN), within 6 months. Measure of performance: number of reporting healthcare providers increased to one or more per 250,000 population.
The Sentinel Provider Network (SPN) includes approximately 2,300 healthcare providers nationwide who report the number of weekly outpatient visits for influenza-like illness (ILI) and submit specimens to state public health laboratories for influenza virus testing. This information helps CDC detect emerging influenza strains and monitor disease patterns. The number of regularly reporting sentinel providers reached the national goal of one or more providers per 250,000 population during the 2005-06 influenza season.

6.2.2.6. In Progress
HHS shall improve the speed at which it performs mortality surveillance through the 122 Cities Mortality Reporting System within 3 months. Measure of performance: mortality data collected at CDC within 1 week of decedent's demise increased by 25 percent compared with 2005.
We have enhanced the completeness and timeliness of reporting by the 122 Cities Mortality Surveillance System, which receives reports of pneumonia and influenza-related deaths from vital statistics offices in 122 U.S. cities. This information helps us monitor the impact of influenza on health, track trends in disease spread, and identify severely affected populations. The completeness of 122 Cities reporting is now 97-98 percent, with approximately 118-119 cities reporting each week. The timeliness of 122 Cities reporting was confirmed by a recent study that compared the seasonal peak in pneumonia and influenza (P&I) activity reported to 122 Cities during 30 influenza seasons with mortality data. The study indicated that the peak activity reported to 122 Cities was delayed by only 1 week relative to the peak identified by analysis of the data.

6.2.3.2. Complete
HHS, in coordination with DHS, DOD, and VA, shall compile an inventory of all research and product development work on rapid diagnostic testing for influenza and shall reach consensus on sets of requirements meeting national needs and a common test methodology to drive further private-sector

investment and product development, within 6 months. Measure of performance: inventory developed and requirements paper disseminated.
A partnership of Federal departments and agencies developed an inventory of research and development work on rapid diagnostic testing for influenza and disseminated a set of technical requirements for further product development.

6.2.3.4. Complete
HHS-, DOD-, and VA-funded hospitals and health facilities shall have access to improved rapid diagnostic tests for influenza A, including influenza with pandemic potential, within 6 months of when tests become available. Measure of performance: diagnostic tests, if found to be useful, are accessible to federally funded health facilities.
CDC will work in partnership with Health Resources and Services Administration (HRSA) to assist HHS-funded hospitals and healthcare facilities in gaining access to improved rapid diagnostic tests for influenza A—including influenza with pandemic potential—as soon as such tests become available. DOD plans to purchase and distribute such rapid diagnostics throughout the Military Health System.

6.2.4.2. Complete
DHS, in coordination with Sector-Specific Agencies, HHS, DOD, DOJ, and VA and in collaboration with the private sector, shall be prepared to track integrity of critical infrastructure function, including the health care sector, to determine whether ongoing strategies of ensuring workplace safety and operational continuity need to be altered as a pandemic evolves, within 6 months. Measure of performance: tracking system in place to monitor integrity of critical infrastructure function and operational continuity in near real time.
We completed the IT Architecture/Platform for the tracking system which is compatible with the Common Operating Picture (COP), to monitor the integrity of critical infrastructure function and operational continuity in near real time. This platform is currently capable of near real-time information collection, tracking, and collaboration with Critical Infrastructure and Key Resource (CI/KR) owners and operators, including the healthcare sector. We are working with sector-specific agencies, Federal partners, and the private sector to develop the data and reporting requirements.

6.2.5.1. Complete
HHS, in coordination with DOD and DHS, shall develop and maintain a real-time epidemic analysis and modeling hub that will explore and characterize response options as a support to policy and decision makers within 6 months. Measure of performance: modeling center with real-time epidemic analysis capabilities established.
Using the capabilities of the Defense Department's Defense Threat Reduction Agency, its modeling tools, as well as software from other agencies, we have established a real-time epidemic analysis capability that is focused on public health and emergency preparedness.

6.3.2.5. Complete
All HHS-, DOD-, and VA-funded hospitals and health facilities shall develop, test, and be prepared to implement infection control campaigns for pandemic influenza, within 3 months. Measure of performance: guidance materials on infection control developed and disseminated on www.pandemicflu.gov and through other channels.
Guidance on hospital infection control during an influenza pandemic is provided in Supplement 4 of the HHS Pandemic Influenza Plan (www.hhs.gov/pandemicflu/plan/sup4.html). The supplement includes recommendations for infection control in healthcare settings that cover basic infection control principles, management of infectious patients, infection control practices for healthcare personnel. We have posted supplementary information on the use of PPE on www.pandemicflu.gov (Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Health Care Settings during an Influenza Pandemic.)

6.3.3.1. Complete
HHS, in coordination with DHS, VA, and DOD, shall develop and disseminate guidance that explains steps individuals can take to decrease their risk of acquiring or transmitting influenza infection during a pandemic, within 3 months. Measure of performance: guidance disseminated on www.pandemicflu.gov and through VA and DOD channels.
We have developed guidance that explains steps individuals can take to decrease their risk of acquiring or transmitting influenza infection during a pandemic. Guidance products are posted on www.pandemicflu.gov and disseminated through medical and public health partners, as well as through interagency channels, including the websites of the Department of Defense and the Department of Veterans Affairs. We have also developed communications tools to assist states and localities in providing public health information before and during a pandemic. These include public service announcements and standardized public health messages.

6.3.4.3. Complete
HHS shall work with State Medicaid and SCHIP programs to ensure that Federal standards and requirements for reimbursement or enrollment are applied with the flexibilities appropriate to a pandemic, consistent with applicable law. Preliminary strategies shall be developed within 6 months. Measure of performance: draft policies and guidance developed concerning emergency enrollment in and reimbursement through State Medicaid and SCHIP programs during a pandemic.
We have held meetings with State Medical Directors, who have confirmed that existing Medicaid and SCHP flexibilities are sufficient to meet their needs in the event of pandemic influenza. Related to Medicare, pandemic-specific policies, frequently asked questions, and instructions to contractors are in the final stages of review and approval. Questionnaires have been issued to State Survey Agencies to gather current contact, emergency policies and procedures, and IT capability (including provider tracking capability) information. A Survey & Certification emergency preparedness stakeholder workgroup has been established, which includes representatives from State Survey Agencies, provider associations, accreditation organizations, and resident/patient advocates. Recommendations and improvements for a robust, effective and integrated, governmental and provider emergency planning, and response requirements are being developed.

6.3.4.4. Complete
DHS assets, including NDMS medical materiel and mobile medical units, and HHS assets, such as the USPHS Commissioned Corps and FMSs, shall be deployed in a manner consistent with pre-defined strategic considerations. Measure of performance: development, within 6 months, of strategic principles for deployment of Federal medical assets in a pandemic; consistency of deployments during a pandemic with these principles.
The National Disaster Medical System (NDMS) has developed strategic principles to ensure the appropriate use of Federal medical assets in the event of a pandemic.

6.3.7.1. Complete
HHS, in coordination with DHS, DOD, VA, and DOT, and as the lead for ESF #8, shall identify public health and medical capabilities required to support a pandemic response and work with other supporting agencies to identify and deploy or otherwise deliver the required capability or asset, if available. Measure of performance: inventory of public health and medical capabilities within 6 months; available public health or medical capabilities or assets deployed or delivered during a pandemic.
We have developed an Emergency Support Function #8 Pandemic Influenza Playbook. This playbook describes the public health and medical capabilities the Federal government will bring to bear to support State responses to pandemic influenza. It also describes the strategic utilization plan for Federal ESF #8 assets. The strategic principles we will use to guide the deployment of ESF #8 assets may evolve as we learn more about how a pandemic may affect our population and critical infrastructures.

6.3.7.2. Complete
DOD and VA assets and capabilities shall be postured to provide care for military personnel and eligible civilians, contractors, dependants, other beneficiaries, and veterans and shall be prepared to augment the medical response of State, territorial, tribal, or local governments and other Federal agencies consistent with their ESF #8 support roles, within 3 months. Measure of performance: DOD and VA pandemic preparedness plans developed; in a pandemic, adequate health response provided to military and associated personnel.
We currently have pandemic influenza plans in place that address how we would take care of DOD and VA patient populations and others, as well. DOD and VA are authorized by several laws and policies to provide care to persons who are not their usual patients in the event of national or local emergencies or disasters.

6.3.7.3. Complete
VA shall develop draft emergency policies and directives allowing VA personnel and resources to be used for the treatment of non-veteran patients with pandemic influenza within 3 months. Measure of performance: emergency policies and directives drafted.
We currently have pandemic influenza plans in place that address how we would take care of VA patient populations and others, as well. VA is authorized by several laws and policies to provide care to persons who are not usual VA patients in the event of national or local emergencies or disasters.

6.3.7.4. Complete
VA shall develop, test, and implement protocols and policies allowing VA personnel and resources to be used for the treatment of non-veteran patients during health emergencies, within 3 months. Measure of performance: protocols and policies developed and implemented.
We are already authorized by several laws and policies to provide care to persons who are not our usual VA patients in the event of national or local emergencies or disasters. We have included information on these policies and laws in our emergency plans and our pandemic influenza plan. We exercise our emergency plans regularly and are doing a series of national pandemic influenza exercises in 2006 and 2007.

6.3.8.1. Complete
HHS, in coordination with DHS, DOD, and VA, shall develop and disseminate a risk communication strategy within 6 months, updating it as required. Measure of performance: implementation of risk communication strategy on www.pandemicflu.gov and elsewhere.
Overall USG risk communications principles are based on the principles described in the "World Health Organization's Outbreak Communications Guidelines". This risk communications strategy is being applied in the development, testing and distribution of message maps that are used to support public communications in the event of an emergency. Message maps inform the development of all subsequent outreach materials developed by all levels of government and third-parties. The following pandemic influenza message maps have been developed, tested and posted on PandemicFlu.gov: Preparedness, H5N1 avian influenza, pandemic influenza, antiviral medications, vaccines, human to human transmission, "first bird", pandemic response, and mental health. All message maps and supporting audience research findings have been distributed to all National Public Health Information Coalition (NPHIC) members for local use and adoption. Message map development is an on-going activity based on the availability of new science and policy relating to pandemic preparedness and response.

6.3.8.2. Complete
DOD and VA, in coordination with HHS, shall develop and disseminate educational materials, coordinated with and complementary to messages developed by HHS but tailored for their respective departments, within 6 months. Measure of performance: up-to-date risk communication material

published on DOD and VA pandemic influenza websites, HHS website www.pandemicflu.gov, and in other venues.
We have developed pandemic influenza educational materials that are tailored to our personnel and our patients. These materials are aligned with messages of other agencies and we have worked together with other agencies to produce some materials. Specific topics include general information on pandemic influenza, how to protect oneself and one's family from respiratory illnesses, how to wash hands and control coughing and sneezing, how to correctly put on and take off protective equipment, and how to care for someone who is sick with influenza. These materials are available in our agency's distribution systems and some are available to the public at: http://www.publichealth.va.gov/infectionDontPassItOn and http://deploymenthealthlibrary.fhp.osd.mil .

CHAPTER 7: PROTECTING ANIMAL HEALTH

7.1.1.1. Complete
USDA, in coordination with DHS, HHS, DOD, and DOI, and in partnership with State and tribal entities, animal industry groups, and (as appropriate) the animal health authorities of Canada and Mexico, shall establish and exercise animal influenza response plans within 6 months. Measure of performance: plans in place at specified Federal agencies and exercised in collaboration with States believed to be at highest risk for an introduction into animals of an influenza virus with human pandemic potential.
We have led or participated in multiple exercises of Federal and State response plans in States at high risk for avian influenza introduction, and worked with Tribal Nations to refine and coordinate influenza response plans. Many exercises have involved industry experts, and at least two major exercises focused on national stockpile issues, including assessment of materiel to be stockpiled and methods of materiel delivery. We have also established contracts for the development and delivery of additional influenza exercises.

7.1.2.2. Complete
USDA, in coordination with DOD, HHS, DHS, and DOI, shall partner with States and tribal entities to ensure sufficient veterinary diagnostic laboratory surge capacity for response to an outbreak of avian or other influenza virus with human pandemic potential, within 6 months. Measure of performance: plans and necessary agreements to meet laboratory capacity needs for a worst case scenario influenza outbreak in animals validated by utilization in exercises.
Plans have been made for the use of high throughput equipment to bolster veterinary diagnostic laboratory surge capacity during an influenza outbreak. Estimates of necessary capacity have been refined through exercises held in major poultry production States and equipment is being distributed to laboratories within the National Animal Health Laboratory Network based on the assessment of various influenza related risk factors. In addition, an exercise is being developed through the Integrated Consortium of Laboratory Networks to verify the current assessment of necessary laboratory capacity.

7.1.3.1. Complete
USDA, in coordination with DHS, shall develop, disseminate, and encourage adoption of best practices and recommendations for maintaining the biosecurity of animals, especially poultry and swine, against infection and spread of influenza viruses and for reporting suspected cases of influenza with human pandemic potential in animals to State or Federal authorities, within 4 months. Measure of performance: incorporation of best practices by industry.
We have significantly enhanced an informational campaign targeted at maintaining the biosecurity of domesticated animals. Reporting of signs of disease that would be seen with influenza infection is specifically encouraged through the program, which includes the dissemination of a toll-free reporting number. The campaign has distributed nearly 1 million copies of materials to 50 States and over 50 countries, and placed bilingual information on more than 1.7 million poultry feed sacks, ads on national

and regional agricultural radio networks reaching 23 million listeners, and ads in newspapers and magazines with nearly 30 million readers.

7.1.3.3. Complete
HHS, in coordination with USDA, DHS, and the Department of Labor (DOL), shall work with the poultry and swine industries to provide information regarding strategies to prevent avian and swine influenza infection among animal workers and producers, within 6 months. Measure of performance: guidelines developed and disseminated to poultry and swine industries.
We developed avian influenza infection control guidance for the poultry industry, working in partnership with the poultry industry and labor unions. USDA has posted draft guidance for the swine industry: Management of Highly Pathogenic Avian Influenza H5N1 Virus: Policy Impact and Management of Swine (USDA Draft, 2006)

7.1.3.4. Complete
USDA, in coordination with DOI, shall collaborate with DHS and other Federal partners, with State, local, and tribal partners, including State wildlife authorities, and with industry groups and other stakeholders, to develop guidelines to reduce the risk of transmission between domestic animals and wildlife during an animal influenza outbreak, within 6 months. Measure of performance: guidelines for various outbreak scenarios produced, disseminated, and incorporated by partners.
We have developed response guidelines to reduce the risk of transmission between domestic animals and wildlife during an influenza outbreak in animals. Federal partners have participated in an interagency planning process that specifies roles, responsibilities, and the timing of actions to be taken in outbreak scenarios involving wildlife and domestic animals. Actions in these guidelines have been incorporated into individual agency response plans that continue to be updated via collaboration with industry, States, and other partners. Response guidelines, informational material, and communication plans have been disseminated to State and Federal partners, including wildlife agencies and diagnostic laboratories.

7.1.3.5. Complete
DOI, in coordination with USDA, shall work with other Federal, State, and tribal partners to develop appropriate response strategies for use in the event of an outbreak in wild birds, within 4 months. Measure of performance: coordinated response strategies in place that can rapidly be tailored to a specific outbreak scenario.
We are working under a coordinated interagency response strategy to engage States and other partners in the event of an avian influenza outbreak in wild birds. Guidance has been issued for response contingency planning to National Wildlife Refuges in Pacific Flyway. Workshops have been conducted with State, Federal, tribal and territorial entities on responding to disease outbreaks, including avian influenza.

7.1.5.5. Complete
USDA, in coordination with DHS, shall identify any deficiencies relative to needs for Federal animal research facility capacity, including appropriate biosafety levels, for performing studies of avian, swine, and other animal influenza viruses with pandemic potential, and establish a plan of action to ensure that needed facilities will be available to carry out those studies, within 6 months. Measure of performance: deficiencies in capacity of Federal animal research facilities identified and plans developed for addressing those needs.
We have identified deficiencies in the capacity of an important animal influenza research facility. A study of the deficiencies and plans to address needs has been completed.

7.1.5.6. Complete
USDA, in coordination with DHS, DOI, and DOD, shall partner with State and tribal authorities to refine disease mitigation strategies for avian influenza in poultry or other animals through outbreak simulation

modeling, within 6 months. Measure of performance: simulation models produced and reports issued on the results of influenza outbreak scenario modeling.
We have developed a disease model that has been used to examine the potential spread of highly pathogenic avian influenza in a population of farmed birds. The model has been used in State-level exercises to assist in response planning based on the specific farmed bird population of a given State. Reports have been produced on the exercises, including the results of the outbreak scenario modeling. Further scenario-building and model development is ongoing through collaboration with multiple academic institutions, with the goal of examining, among other things, how highly pathogenic avian influenza spreads within a wild bird population and between wild and farmed birds.

7.2.1.2. Complete
USDA and DOI shall collaborate to develop and distribute information to State and tribal entities on the detection, identification, and reporting of influenza viruses in wild bird populations, within 6 months. Measure of performance: information distributed and a report available describing the type, amount, and audiences for the information.
The Highly Pathogenic Avian Influenza (HPAI) Early Detection Data System (HEDDS) has been established to distribute information on the detection, identification and reporting of influenza viruses in wild birds. As of November 29, 2006, 46,250 DOI and USDA testing results from all 50 states and 3 Pacific Trust Territories are available to partner agencies thru HEDDS. In addition, HEDDS now catalogues all low pathogenicity avian influenza viruses detected by DOI and USDA at http://wildlifedisease.nbii.gov/ai/LPAI-Table.jsp. We have provided training on use of HEDDS to contributors and have distributed Wildlife Health Bulletins and Fact Sheets on Avian Influenza to partner agencies and stakeholders.

7.3.1.3. Complete
USDA shall be prepared to provide near real-time technical information and policy guidance for State and tribal entities, animal industries, and individuals, on best practices to prevent the spread of avian influenza in commercial and other domestic birds and animals during an outbreak, within 4 months. Measure of performance: information and guidance distributed within 72 hours of confirmed outbreak and report available describing type and amount of information, and audiences to whom delivered.
We have developed, and continue to update, response guidelines that incorporate best practices to prevent the spread of avian influenza during an outbreak. These response plans are a joint effort among industry and Federal, State, and Tribal governments. Plans are in place to provide near real-time technical information and policy guidance to our response partners and members of the public affected by the outbreak. Information and guidance is also provided through ongoing media communications and industry outreach efforts.

7.3.4.1. Complete
USDA shall assess the outbreak response surge capacity activities that other Federal partners, including the DOD, may be able to support during an outbreak of influenza in animals and ensure that mechanisms are in place to request such support, within 6 months. Measure of performance: written assessment completed and all necessary activation mechanisms in place.
The resources and surge capacity activities that Federal partners will be able to provide during an animal influenza outbreak have been assessed through an interagency process. We have produced a document that defines the processes to be used to obtain those resources, along with the roles and responsibilities of various partner agencies. As a result, necessary activation mechanisms have been clarified and are in place.

7.3.5.1. Complete
USDA, in coordination with DHS, DOI, and HHS, shall work with State, local, and tribal partners, industry groups, and other stakeholders to develop, clear and coordinated pre-scripted public messages

that can later be tailored to the specifics of a given outbreak and delivered by trained spokespersons, within 3 months. Measure of performance: appropriate informational and risk mitigation messages developed prior to an outbreak, then shared with the public within 24 hours of an outbreak.
We developed the pre-scripted messages in partnership with HHS, DOI, and DHS in February 2006. After interagency review, these messages were finalized and reformatted into a series of three avian influenza scenarios and key messages in the event of a detection in the United States. These pre-scripted messages were posted on the www.pandemicflu.gov and www.usda.gov/birdflu websites on August 3, 2006. We continue to work with its partners to develop additional messages about animal health, food safety, and guidance for the public.

7.3.5.2. Complete
USDA and HHS, in coordination with DHS, State, local, and tribal partners, industry groups, and other stakeholders, shall develop guidelines to assure the public of the safety of the food supply during an outbreak of influenza in animals, within 6 months. Measure of performance: guidelines for various outbreak scenarios produced and shared with partners; within first 24 hours of an outbreak, appropriately updated guidelines on food safety shared with the public.
Food safety guidelines for avian influenza have been developed in the form of message maps for various potential influenza outbreak scenarios. These guidelines have been shared with stakeholders and are available via the web at www.usda.gov/birdflu. The messages can be quickly modified, as needed, to serve other outbreak scenarios.

CHAPTER 8: LAW ENFORCEMENT, PUBLIC SAFETY AND SECURITY

8.1.1.2. Complete
DHS, in coordination with DOJ, HHS, DOL, and DOD, shall develop a pandemic influenza tabletop exercise for State, local, and tribal law enforcement/public safety officials that they can conduct in concert with public health and medical partners, and ensure it is distributed nationwide within 4 months. Measure of performance: percent of State, local, and tribal law enforcement/public safety agencies that have received the pandemic influenza tabletop exercise.
A tabletop exercise template has been developed for use by public health authorities. We are continuing to work with Federal partners to develop additional pandemic influenza tabletop exercises for State, local, territorial, and tribal law enforcement/public safety officials that can be conducted with broader participation and focus. All State, local, territorial, and tribal entities have access to this resource and may utilize it in their exercise program.

8.1.2.1. Complete
DOJ, in coordination with HHS, DOL, and DHS, shall convene a forum for selected Federal, State, local, and tribal law enforcement/public safety personnel to discuss the issues they will face in a pandemic influenza outbreak and then publish the results in the form of best practices and model protocols within 4 months. Measure of performance: best practices and model protocols published and distributed.
We sponsored a forum in Chicago for over 200 criminal justice professionals on May 24-25, 2006. The challenges which various segments of the criminal justice system would potentially face were discussed along with best practices to confront the challenges. A website (www.ojp.usdoj.gov/BJA/pandemic/pandemic_main.html) is being used to post information covered at the forum and is being updated continuously. As an outgrowth of the forum a consortium of justice system experts was created to facilitate assisting local justice system planning efforts.

8.1.2.2. Complete
DOJ shall advise State Governors of the processes for obtaining emergency Federal law enforcement assistance, within 3 months. Measure of performance: all State Governors advised.

On May 31, 2006, the Attorney General sent a letter to each Governor outlining the procedures for obtaining federal law enforcement assistance under the Emergency Federal Law Enforcement Assistance provisions of the Justice Assistance Act of 1984. The letter recognized that pre-event collaborative planning would have improved the Katrina response and stressed that the goal was "to ensure that any future response, whether to a natural disaster, a pandemic influenza outbreak, or an act of terrorism occurs as expeditiously as possible." A sample form for making the required written response was provided as well as the name and telephone number of a person to contact with any questions regarding the procedures.

8.1.2.3. In Progress
DOJ shall advise State Governors of the processes for requesting Federal military assistance under the Insurrection Act within 3 months. DOD, after coordination with DOJ, shall publish updated policy guidance on Military Assistance during Civil Disturbances, within 6 months. Measure of performance: all State Governors advised and guidance published.
We are preparing a detailed summary of processes as noted above and expect to transmit to all States governors soon.

8.1.2.4. Complete
HHS and DOJ shall ensure consistency of the CDC Public Health Emergency Law Course with the National Strategy for Pandemic Influenza (Strategy), this Plan and other Federal pandemic documents and then disseminate the CDC Public Health Emergency Law Course across the United States within 6 months. Measure of performance: distribution of presentations of reviewed public health emergency law course to all States.
We collaborated on the design and delivery of the PHEL course, which largely reflected the model of CDC's experience with "Forensic Epidemiology." The course has been distributed to all States. As of February 2006, PHEL already had been delivered, or was planned for delivery in, 30 states. PHEL was delivered to CDC professional staff in mid-March 2006.

8.1.2.6. Complete
DOD, in consultation with DOJ, shall advise State Governors of the procedures for requesting military equipment and facilities, training and maintenance support as authorized by 10 U.S.C. §§ 372-74, within 6 months. Measure of performance: all State governors advised.
We are supporting other agencies in the coordination/liaison for Federal/State response and support. An all states memorandum to The Adjutant General of each state and is currently in distribution. There have been numerous conferences, Table Top Exercises, and Field Training Exercises to prepare for dealing with a broad range of hazards. Review of standing procedures along with refining plans will continue.

8.1.2.7. In Progress
DHS, in coordination with DOJ, DOD, DOT, HHS, and other appropriate Federal Sector-Specific Agencies, shall convene a forum for selected Federal, State, local, and tribal personnel to discuss EMS, fire, emergency management, public works, and other emergency response issues they will face in a pandemic influenza outbreak and then publish the results in the form of best practices and model protocols within four months. Measure of performance: best practices and model protocols published and distributed.
A planning and preparation model guide was made available on the United States Fire Administration website. A forum is scheduled for February 16-19, 2007 to review interim guidance and formally adopt a pandemic influenza planning and preparation model of best practices for national publication and distribution.

8.1.3.1. Complete

HHS, in coordination with DOL, shall provide clear guidance to law enforcement and other emergency responders on recommended preventive measures, including pre-pandemic vaccination, to be taken by law enforcement and emergency responders to minimize risk of infection from pandemic influenza, within 6 months. Measure of performance: development and dissemination of guidance for law enforcement and other emergency responders.
Working in partnership with the Department of Justice, CDC has prepared pandemic influenza checklists for law enforcement personnel and other emergency responders. These documents have received extensive review from police unions and professional organizations. Documents include "Correctional Facilities Pandemic Influenza Planning Checklist" (for use in jails and prisons) and "Law Enforcement Pandemic Influenza Planning Checklist (for police chiefs and sheriffs)."

8.3.2.2. In Progress
DHS, in coordination with DOJ, DOD, DOT, HHS, and other appropriate Federal Sector-Specific Agencies, shall engage in contingency planning and related exercises to ensure they are prepared to sustain EMS, fire, emergency management, public works, and other emergency response functions during a pandemic, within 6 months. Measure of performance: completed plans (validated by exercise(s)) for supporting EMS, fire, emergency management, public works, and other emergency response functions.
A forum is scheduled for February 16-19, 2007 to review interim guidance and formally adopt a pandemic influenza planning and preparation model of best practices for national publication and distribution. Following this forum, exercises will be developed to validate these plans.

CHAPTER 9: INSTITUTIONS: PROTECTING PERSONNEL AND ENSURING CONTINUITY OF OPERATIONS

9.1.1.1. Complete
DHS, in coordination with HHS, DOD, and DOL shall provide pandemic influenza COOP guidance to the Federal departments and agencies within 6 months. Measure of performance: COOP planning and personnel protection guidance provided to all departments for use, as necessary, in updating departmental pandemic influenza response plans.
We worked within a Homeland Security Council-led interagency process to develop pandemic influenza continuity of operations guidance for the Federal departments and agencies. The guidance was distributed to the interagency community on March 1, 2006.

9.1.1.2. Complete
The Office of Personnel Management (OPM), in coordination with DHS, HHS, DOD, and DOL, shall provide guidance to the Federal departments and agencies on human capital management and COOP planning criteria related to pandemic influenza, within 3 months. Measure of performance: guidance provided to all departments for use, as necessary, in adjusting departmental COOP plans related to pandemic influenza.
We developed and distributed web-based human capital management guidance to Federal departments and agencies for use in protecting the civilian Federal workforce and ensuring the continuity of operations of the Federal Government in the event of a pandemic influenza outbreak. In addition, we provided training for the Federal human resources and emergency management communities regarding this guidance.

9.1.1.3. Complete
OPM, in coordination with DHS, HHS, DOD, and DOL, shall update the guides Telework: A Management Priority, A Guide for Managers, Supervisors, and Telework Coordinators; Telework 101 for Managers: Making Telework Work for You; and, Telework 101 for Employees: Making Telework Work for You, to provide guidance to Federal departments regarding workplace options during a pandemic,

within 3 months. Measure of performance: updated telework guidance provided to all departments for use, as necessary, in updating departmental COOP plans related to pandemic influenza.
We developed and distributed web-based guidance regarding the policies and procedures to be followed by Federal agencies if and when it becomes necessary for civilian Federal employees to work at home or at another location (i.e., "telework") in the event of a pandemic influenza outbreak. We also provided training for the Federal human resources and emergency management communities regarding this guidance.

9.1.2.1. In Progress
DHS, in coordination with Sector-Specific Agencies, critical infrastructure owners and operators, and States, localities and tribal entities, shall develop sector-specific planning guidelines focused on sector-specific requirements and cross-sector dependencies, within 6 months. Measure of performance: planning guidelines developed for each sector.
In coordination with the interagency partners, we have a plan to produce final guidelines for all 17 Critical Infrastructure/Key Resources (CI/KR) sectors in early 2007.

9.1.2.2. Complete
DHS, in coordination with States, localities and tribal entities, shall support private sector preparedness with education, exercise, training, and information sharing outreach programs, within 6 months. Measure of performance: preparedness exercises established with private sector partners in all States and U.S. territories.
Grant guidance from multiple sources including DHS and HHS requires and supports the private sector involvement in State preparedness programs. Templates for exercises of this type are available for use by all interested entities.

9.1.3.1. In Progress
DHS, in coordination with all the Sector-Specific Agencies, shall conduct forums, conferences, and exercises with key critical infrastructure private sector entities and international partners to identify essential functions and critical planning, response and mitigation needs within and across sectors, and validate planning guidelines, within 6 months. Measure of performance: planning guidelines validated by collaborative exercises that test essential functions and critical planning, response, and mitigation needs.
We have conducted multiple workshops and forums attended by more than 30 stakeholders with critical infrastructure entities (e.g., operations centers, retail operations, supply warehousing operations, and supply distributors) to identify essential functions and critical planning elements and to discuss continuity of business operations during a pandemic. As further guidelines are released, we will assist private sector entities in the efforts to validate these guidelines by collaborative exercises.

9.1.3.2. Complete
DHS, in coordination with all the Sector-Specific Agencies, shall develop and coordinate guidance regarding business continuity planning and preparedness with the owners/operators of critical infrastructure and develop a Critical Infrastructure Influenza Pandemic Preparedness, Response, and Recovery Guide tailored to national goals and capabilities and to the specific needs identified by the private sector, within 6 months. Measure of performance: Critical Infrastructure Influenza Pandemic Preparedness, Response, and Recovery Guide developed and published (www.pandemicflu.gov).
We worked collaboratively to create the Critical Infrastructure Influenza Pandemic Preparedness, Response, and Recovery Guide. This guide is available at www.pandemicflu.gov and www.ready.gov

9.1.4.2. In Progress
HHS, in coordination with DHS, DOL, EPA, Department of Education, VA, and DOD, shall develop interim guidance regarding environmental management and cleaning practices including the handling of

potentially contaminated waste material, within 3 months, and revise as additional data becomes available. Measure of performance: development and publication of guidance and checklists on www.pandemicflu.gov and disseminated through other channels.
We developed guidance on environmental management and cleaning practices for use during an influenza pandemic. The Interim Guidance on Environmental Management of Pandemic Influenza A Virus includes: (1) Cleaning and disinfection of surfaces in healthcare facilities, homes, schools, and businesses; (2) Cleaning and disinfection of laundry; (3) Disposal of solid waste; and (4) Disposal of regulated medical waste.

9.3.1.1. Complete
DHS shall map and model critical infrastructure interdependencies across and within sectors to share critical information with sectors and identify national challenges during a pandemic, within 6 months. Measure of performance: critical infrastructure modeling capability established and mapping of critical infrastructure interdependencies completed.
We have maintained a critical infrastructure modeling capability. This capability drives the mapping of critical infrastructure interdependencies. An ongoing effort using these capabilities examines the potential impact of a pandemic.