EMERGENCY PREPAREDNESS REVIEW COMMITTEE REPORT

City of Philadelphia
June 30, 2006

Table of Contents

Table of Contents

Letter Of Transmittal

June 30, 2006

Mayor John F. Street
Mayor's Executive Office
Room 215 City Hall
Philadelphia, PA 19107

Dear Mayor Street:

We commend your foresight and leadership in establishing the Emergency Preparedness Review Committee (EPRC) to examine, with the assistance of independent experts, the status of Philadelphia's emergency preparedness and response capabilities. The formation of the EPRC came on the heels of the devastating Hurricane Katrina nearly one year ago and against the long shadow of the events of September 11, 2001.

Over the past six months, the EPRC conducted a comprehensive review of thousands of pages of existing documents, agreements and plans—coupled with more than 200 extensive in-depth interviews and site visits—as part of the process designed to evaluate the current state of emergency planning and response and to offer specific recommendations for improvement.

This report would not have been possible without the hard work, dedication and candor of numerous City officials and staff from every area of the government, and particularly those involved on a daily basis with emergency preparedness and response. These departments include, but are not limited to, emergency management, police, fire and public health. We are grateful to them all as well as to representatives of other governments of the region, members of the greater Philadelphia business community, civic leaders, other stakeholders, and the James Lee Witt Associates (JLWA) team. We thank them for their commitment and service to this effort.

The recommendations address the most pressing issues facing City emergency preparedness and response. The City has taken a significant step forward by commissioning this review and implemented several recommendations before the report is released. For example, a task force of transportation, law enforcement and emergency management officials has been working for several months to develop regional emergency evacuation plans. The City recently installed additional barriers around the Police Administration Building to protect the City's critical emergency communications center. Finally, scores of City departments have been working diligently to develop and implement continuity of government plans.

Now it is time to focus on implementing the remaining recommendations to make Philadelphia a better prepared and more resilient community for all its citizens and those in the greater Philadelphia region.

Sincerely,

Pedro A. Ramos, Esq., Managing Director
City of Philadelphia
Co-Chair, EPRC

Dr. Harvey Rubin, Director
Institute for Strategic Threat
Analysis and Response
University of Pennsylvania
Co-Chair, EPRC

Emergency Preparedness Review Committee Members

EPRC Co-Chairs

Pedro A. Ramos, Esq., Managing Director, City of Philadelphia
Harvey Rubin, M.D., Ph.D., Director of the Institute for Strategic Threat Analysis and Response (ISTAR), University of Pennsylvania

General Counsel to the EPRC

Romulo L. Diaz, Jr., Esq., City Solicitor, Philadelphia Law Department

Subcommittee Chairs

Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response Subcommittee
David Binder, Director of Quality, Safety & Regulatory Affairs, Tanner Industries, Chairman, Philadelphia Local Emergency Planning Committee

Continuity of Government Subcommittee
John Carrow, Chairman, American Red Cross—Southeastern Pennsylvania Chapter,
Chief Information Officer and President, Worldwide Information Technology, Unisys

Critical Infrastructure Subcommittee
Joseph Certaine, Director, Governor's Office for Southeastern Region of Pennsylvania, Commonwealth of Pennsylvania, Former Managing Director, City of Philadelphia

Health and Human Services Subcommittee
Andrew Wigglesworth, President, Delaware Valley Healthcare Council

Richard Negrin, Esq., Vice President and Associate General Counsel, Aramark

Legal & Intergovernmental Subcommittee
James Eisenhower, Esq., Chair, Government and Regulatory Affairs Practice, Schnader Harrison Segal & Lewis LLP

Public Information & Community Engagement Subcommittee
Stephan Rosenfeld, President, Identity Advisors, LLC

Vulnerable Populations Subcommittee
Dorothy Sumners Rush, M.Ed., Retired Educator, Community College of Pennsylvania, Former Vice President, Philadelphia Board of Education

Special Thanks To
Loree D. Jones, Secretary of External Affairs, City of Philadelphia

Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response Subcommittee
David Binder, Chair, Director of Quality, Safety & Regulatory Affairs, Tanner Industries,
Chairman, Philadelphia Local Emergency Planning Committee
Lloyd Ayers, Fire Commissioner, Philadelphia Fire Department
Stephen Cunnion, M.D., Ph.D., Partner, Diogenec Group, Health Intelligence Advisory Board
Sylvester Johnson, Police Commissioner, Philadelphia Police Department
Richard Krimm, Former Executive Associate Director, Mitigation of FEMA
Joseph O'Connor, Chief Inspector, Philadelphia Police Department
Andrew Rosini, Deputy Fire Chief, Philadelphia Fire Department
Zohreh Nabavi, Esq., Staff Coordinator, Special Advisor, Philadelphia Police Department
Jonathan Best, Subject Matter Expert, James Lee Witt Associates

Emergency Preparedness Review Committee Members

The Committee would like to acknowledge the support of:

Joseph Mack, Deputy Chief, Special Operations Command, Philadelphia Fire Department

Joseph McGraw, Battalion Chief, Hazardous Material Administrative Unit, Philadelphia Fire Department

Michael Nucci, Director, Philadelphia Office of Emergency Management

Kendall O. Banks, Director of Safety and Loss Prevention, Philadelphia Office of Risk Management

Barry Scott, Risk Manager, Philadelphia Office of Risk Management

William Jackson, Manager of Chemical and Environmental Services, Philadelphia Gas Works

Robert Tucker, Inspector, Philadelphia Police Department

Walter Smith, Captain, Philadelphia Police Department

Edward Baldini, Lieutenant, Philadelphia Police Department

Thomas Fitzpatrick, Lieutenant, Philadelphia Police Department

Pamela Street, Support Staff, Philadelphia Police Department

Esther Chernak, M.D., Medical Specialist, Philadelphia Department of Public Health

Armand Alessi, Director of Disaster Services, American Red Cross—Southeastern Pennsylvania Chapter

Ted Bateman, CFPS, Chief of Fire and Emergency Services, University of Pennsylvania/ Division of Public Safety

Stephen Roth, Fire and Safety Specialist, University of Pennsylvania/ Division of Public Safety

Charles Newton, DMV, Deputy Associate Dean, Professor of Orthopedic Surgery, University of Pennsylvania Veterinary School

Continuity of Government Subcommittee

John Carrow, Chair, Chairman, American Red Cross—Southeastern Pennsylvania Chapter, Chief Information Officer and President, Worldwide Information Technology, Unisys

Vincent Jannetti, Director of Finance, Philadelphia Department of Finance

Sylvester Johnson, Police Commissioner, Philadelphia Police Department

Michelle Lai, Office of the Director of Finance

Edward McBride, County Affairs Manager, Philadelphia Electric Company (PECO)

Dianah Neff, Chief Information Officer, Mayor's Office of Information Services

Crafton Timmerman, Program Administrator, Director of Public Safety Technology, Mayor's Office of Information Services

Paul Sager, Staff Coordinator, Management Analyst, Office of the Managing Director

James Jones, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:

Karl Bortnick, Mayor's Office of Information Services

Galen Conley, Philadelphia School District

Critical Infrastructure Subcommittee

Joseph Certaine, Chair, Director, Governor's Office for Southeastern Region of Pennsylvania, Commonwealth of Pennsylvania, Former Managing Director, City of Philadelphia

Julius Becton, Jr., Former Director, Federal Emergency Management Agency

Karin Crawford, Program Coordination Branch Chief, FEMA Region 3

Mark Gale, Deputy Director of Aviation Operations and Facilities, Philadelphia International Airport

Charles Isdell, Director of Aviation, Philadelphia International Airport

James Jordan, Assistant General Manager, Southeastern Pennsylvania Transportation Authority (SEPTA)

James Joseph, Director, Pennsylvania Emergency Management Agency (PEMA)

Faye Moore, General Manager, Southeastern Pennsylvania Transportation Authority (SEPTA)

Michael Nucci, Director, Philadelphia Office of Emergency Management

Joseph O'Connor, Chief Inspector, Philadelphia Police Department

Andrew Rosini, Deputy Chief, Philadelphia Fire Department

Robert Welch, Director, National Preparedness Division, Department of Homeland Security, Eastern Region
Sandra Carter, Staff Coordinator, Project Manager, Department of Public Property
Sherri Leak, Staff Coordinator, Project Manager, Department of Public Property
Charlie Fisher, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:
Joseph James, Deputy Commissioner, Public Property, City of Philadelphia
John MacLean, Deputy Director, Philadelphia Office of Emergency Management
Michael Feeney, Chief Inspector, Philadelphia Police Department
Thomas Lippo, Inspector, Philadelphia Police Department
Dennis Salkowski, Captain, Philadelphia Police Department
Greg Masi, Sergeant, Philadelphia Police Department
Nicholas Martino, PennDOT
Michael Zaccagni, Philadelphia Streets Department
Charlie Trainor, Philadelphia Streets Department
Charles Denny, Philadelphia Streets Department
Don Shanis, Delaware Valley Regional Planning Commission
Stanley Platt, Delaware Valley Regional Planning Commission
John Haak, Planning Commission
Gary Jastrzab, Planning Commission
Jametta Johnson, Planning Commission
William Copes, Philadelphia School District
James Lewis, Philadelphia School District
Judi Cornelious, Executive Assistant, Philadelphia International Airport
David Williams, Planning, Eastern Area, Pennsylvania Emergency Management Agency

Health and Human Services Subcommittee

Richard Negrin, Esq., Co-Chair, Vice President and Associate General Counsel, Aramark
Andrew Wigglesworth, Co-Chair, President, Delaware Valley Healthcare Council

Patrick Brennan, Chief Medical Officer/Senior Vice President, University of Pennsylvania Health System
Esther Chernak, M.D., Medical Specialist, Philadelphia Department of Public Health
Tom Foley, Chief Executive Officer, American Red Cross—Southeastern Pennsylvania Chapter Anthony Gray, COTA, 56th Striker Brigade, Pennsylvania National Guard
James Joseph, Director, Pennsylvania Emergency Management Agency
Rick Martella, Vice President, Government Affairs, Aramark
Michael Nucci, Director, Philadelphia Office of Emergency Management
Carmen Paris, Acting Health Commissioner, Philadelphia Department of Public Health, City of Philadelphia
Christine Stainton, Advanced Practice Nurse, John Hopkins School of Nursing, Johns Hopkins University
Maureen Tomoschuk, Senior Director, Emergency Services, American Red Cross—Southeastern Pennsylvania Chapter
Paul Vallas, CEO, School District of Philadelphia
Shannon Fitzgerald, Staff Coordinator, Emergency Preparedness Coordinator, Philadelphia Department of Public Health
Jonathan Best, Subject Matter Expert, James Lee Witt Associates
Mukesh Roy, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:
Anthony Camillocci, Eastern Area Director, Pennsylvania Emergency Management Agency
Verna Cole, Emergency Management Liaison, School District of Philadelphia
Michelle Davis, Ph.D., Deputy Secretary for Health Planning and Assessment, Pennsylvania Department of Public Health
Phil DeMara, Emergency Preparedness Coordinator, Department of Behavioral Health and Mental Retardation Services
Fred Farlino, Office of the CEO, School District of Philadelphia
Major James Fluck, Civil Affairs Officer, 56th Stryker Brigade, Pennsylvania National Guard

Tom Grace, Vice President, Delaware Valley Healthcare Council

Chief Ralph Halper, FPOC, Regional Director of EMS, Philadelphia Fire Department

George Heake, Information and Technology Accessibility Coordinator, Temple University, Institute on Disabilities; Emergency Management Coordinator, Pennsylvania Initiative for Assistive Technology

Gregg McDonald, D.O., Assistant Medical Examiner, Philadelphia Department of Public Health

Haresh Mirchandani, M.D., Medical Examiner, Philadelphia Department of Public Health

Major Mark O'Hanlon, Brigade Executive Officer, 56th Stryker Bridge Combat Team

William Shaner, Emergency Management Specialist, Eastern Area, Pennsylvania Emergency Management Agency

Vernard Trent, Director, Safety Programs and Incident Management, Office of School Climate and Safety, School District of Philadelphia

Legal & Intergovernmental Subcommittee

James Eisenhower, Esq., Chair, Government and Regulatory Affairs Practice, Schnader Harrison Segal & Lewis LLP

Romulo Diaz, Jr., Esq., City Solicitor, Philadelphia Law Department

Joseph McLaughlin, Assistant Dean, College of Liberal Arts, Temple University

Donna Mouzayck, Esq., 1st Deputy City Solicitor, Philadelphia Law Department

Shelly Smith, Esq., Chair, Corporate & Tax Group, Philadelphia Law Department

Gabriel Chorno, Esq., Staff Coordinator, Assistant City Solicitor, Philadelphia Law Department

Ernie Abbott, Esq., Subject Matter Expert, James Lee Witt Associates

Patrick Crawford, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:
Kate Kleba, Esq., Associate, Schnader Harrison Segal & Lewis LLP

Public Information & Community Engagement Subcommittee

Stephan Rosenfeld, Chair, President, Identity Advisors, LLC

Payne Brown, Vice President, Strategic Initiatives, Comcast Corporation

Eileen Sullivan-Marx, PhD, CRN, Associate Professor and Associate Dean for Practice Community Affairs, University of Pennsylvania

Laura Copeland, Staff Coordinator, Public Relations Specialist II, Philadelphia Water Department

Joan Przybylowicz, Staff Coordinator, Manager of Public Relations, Philadelphia Water Department

Heidi Gold, Subject Matter Expert, Ross Associates

William Miller, Subject Matter Expert, Ross Associates

Laura Hagg, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:

Jacqueline Barnett, Secretary of Education

Kristin Beck, VOAD Manager, Voluntary Organizations Active in Disaster of Southeastern Pennsylvania

Patrick Boyle, Director of Communication, American Red Cross—Southeastern Pennsylvania Chapter

Officer Yolanda Dawkins, Police Dept., Philadelphia Police Department

Joe Grace, Communications Director, Office of the Mayor

Michael Hagen, Director, Institute for Public Affairs, Temple University

Alice Hausman, Director, Center for Preparedness Research, Temple University

George Heake, Information & Technology Accessibility Coordinator, Institute on Disabilities, Temple University; Emergency Management Coordinator, Pennsylvania Initiative for Assistive Technology; (member of Vulnerable Populations)

Bishop Ernest Morris, Pastor, Mount Airy Church of God in Christ (original member of Vulnerable Populations)

Daniel Williams, Executive Chief, Fire Department

Ted Qualli, Deputy Communications Director, Office of the Mayor

Vulnerable Populations Subcommittee

Dorothy Sumners Rush, M.Ed., Chair, Retired Educator, Community College of Pennsylvania, Former Vice President, Philadelphia Board of Education

Jacqueline Barnett, Secretary of Education, City of Philadelphia

Fred Farlino, Office of the CEO, School District of Philadelphia

Carl Greene, Executive Director, Philadelphia Housing Authority

George Heake, Information & Technology, Accessibility Coordinator, Temple University,
Institute on Disabilities

Roger Margulies, Assistant Deputy Mayor, Mayor's Commission on People with Disabilities

Bishop Ernest Morris, Mount Airy Church of God in Christ

Vincent Morris, Philadelphia Housing Authority

Charles Newton, DVM, Deputy Associate Dean, Professor of Orthopedic Surgery,
School of Veterinary Medicine, University of Pennsylvania

Paul Vallas, CEO, School District of Philadelphia

Shelly Yanoff, Children's Advocate

Kevin Breazeale, Staff Coordinator, Deputy Director, Office of Emergency Shelter and Services

Katrina Pratt, Staff Coordinator, Assistant Managing Director, Adult Services

Jennifer Holt, Subject Matter Expert, James Lee Witt Associates

The Committee would like to acknowledge the support of:

Phil DeMara, Emergency Preparedness Coordinator, Department of Behavioral Health and Mental Retardation Services

Mark Whitlock, Real Property Evaluator, Philadelphia Board of Revision of Taxes AFSCME, DC47, Local 2187 Executive Board Member

City Project Management

Howard Moseley, Project Manager, Emergency Preparedness Review Committee

Stanley Olkowski III, Assistant Project Manager, Emergency Preparedness Review Committee

Special Thanks To

Kevin E. Vaughan, Chief of Staff, Managing Director's Office, City of Philadelphia

Staff Coordinators

Kevin Breazeale, Vulnerable Populations Subcommittee, Deputy Director, Philadelphia Office of Emergency Shelter and Services

Katrina Pratt, Vulnerable Populations Subcommittee, Assistant Managing Director, Adult Services

Sandra Carter, Critical Infrastructure Subcommittee, Project Manager, Philadelphia Department of Public Property

Sherri Leak, Critical Infrastructure Subcommittee, Project Manager, Philadelphia Department of Public Property

Gabriel Chorno, Esq., Legal and Intergovernmental Subcommittee, Assistant City Solicitor, Philadelphia Law Department

Laura Copeland, Public Information & Community Engagement Subcommittee, Public Relations Specialist II, Philadelphia Water Department

Joan Przybylowicz, Public Information& Community Engagement Subcommittee, Manager of Public Relations, Philadelphia Water Department

Shannon Fitzgerald, Health and Human Services Subcommittee, Emergency Preparedness Coordinator, Philadelphia Department of Public Health

Zohreh Nabavi, Esq., Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response Subcommittee, Special Advisor, Philadelphia Police Department

Paul Sager, Continuity of Government Subcommittee, Management Analyst, Philadelphia Managing Director's Office

The Staff would like to acknowledge the support of:

Catherine M. Burke, Administrative Technician, Department of Human Services

Patti McLaughlin, Philadelphia Free Library

Daniel L. Tavana, Student, University of Pennsylvania

James Lee Witt Associates

James Lee Witt, Project Oversight

Laura Hagg, Project Manager & Public Information & Community Engagement Subcommittee

Nicole Brode, Deputy Project Manager

Charlie Fisher, Deputy Project Manager and Critical Infrastructure Subcommittee

Ernie Abbott, Esq., Legal and Intergovernmental Subcommittee

Patrick Crawford, Legal and Intergovernmental Subcommittee

Jonathan Best, Health and Human Services and Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response Subcommittees

Mukesh Roy, Health and Human Services Subcommittee

Heidi Gold, Public Information & Community Engagement Subcommittee

Jennifer Holt, Vulnerable Populations Subcommittee

James Jones, Continuity of Government Subcommittee

Ray Williams, Senior Public Safety Advisor

Dallas Jones, Senior Public Safety Advisor

Project Management Support

Matthew Oster, Client Executive, James Lee Witt Associates

Kristin Roy, Project Assistant, James Lee Witt Associates

Fels Institute of Government, University of Pennsylvania

The students assisted the subcommittees in their work for class credit.

Adrian Arroyo, Teaching Assistant

Shari Astalos, Graduate Student

Michael Cassidy, Graduate Student

Simran Dhillon, Graduate Student

Phil Gommels, Graduate Student

Matt Gorski, Graduate Student

Joanna Johnston, Graduate Student

Scott Kahn, Graduate Student

Maura Kelley, Graduate Student

Brian London, Graduate Student

Sam McCallum, Graduate Student

Daniel Milich, Graduate Student

Pat Mulqueen, Graduate Student

Mara Pillinger, Graduate Student

Adam Rothblatt, Graduate Student

O.H. Skinner, Graduate Student

Samantha Springer, Graduate Student

John Stott, Graduate Student

Emily Watson, Graduate Student

Executive Summary

The scenes are permanently seared into memory. An entire American city is flooded, causing the loss of more than 1,300 lives. Fearing a similar fate, millions in another city try to flee the hurricane only to find gas stations closed not for the shortage of fuel, but for the lack of security. And in Europe, a major city is devastated when a terrorist attack on the transit system kills more than 50 and injures hundreds.

In the aftermath of such catastrophes, government leaders have been forced to reflect on the emergency response effort, focus on lessons to be learned and take action to prevent, if possible, a recurrence. In Philadelphia and other cities around the country, leaders closely followed the events in New Orleans, Houston, and London and resolved to become better prepared. On September 16, 2005, Philadelphia Mayor John F. Street announced:

Mayor John F. Street

> *I am establishing an emergency preparedness review committee to evaluate all our existing emergency medical, evacuation and business continuity plans; it will thoroughly analyze the potential catastrophic threats we face and recommend measures to both deter as well as respond to those threats.*

The Mayor created the Emergency Preparedness Review Committee (EPRC), and appointed 45 individuals to the EPRC, including the Commissioners of Police, Fire and Public Health, leaders from the private sector and academia, leaders from the critical non-profit sector, representatives of special needs populations, and representatives of the Commonwealth of Pennsylvania and Federal government. He appointed Pedro A. Ramos, Esq., the City's Managing Director, and Harvey Rubin, M.D.,

Courtesy of City Representative's Office

Ph.D., Director of the Institute for Strategic Threat Analysis and Response (ISTAR) at the University of Pennsylvania, to serve as co-chairs.

Eight of the appointees, non-City employees, were asked to serve as chairs and co-chairs of the seven subcommittees: Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response; Continuity of Government; Critical Infrastructure; Health and Human Services; Legal and Intergovernmental Affairs; Public Information and Community Engagement; and Vulnerable Populations. The Managing Director appointed 11 City staff to manage and support the effort. Recognizing the importance of the task, the Committee, following a competitive solicitation process, engaged James Lee Witt, an internationally recognized leader in emergency management, and his firm, James Lee Witt Associates (JLWA), to serve as its outside consultant.

The Committee has identified and included in its report the City's numerous strengths in emergency preparedness and response. However, the primary purpose of the EPRC was to identify gaps between where the City is and where it should be based on generally accepted standards and best practices and, more importantly, to identify ways to address those gaps before they are revealed during an actual major disaster.

The City of Philadelphia, the second largest city on the East Coast, must be well prepared for any emergency. The City is America's Birthplace, home to many of our most important icons and institutions, and serves as the economic and social center of the eleven-county, tri-state region, which has a population of 6.2 million people, according to the United States Census Bureau.

The Committee, which made more than 200 specific recommendations for improvement, is unanimous in its view that while the City has performed well with limited resources dedicated to emergency management, it must act to make emergency management, planning, and response a significantly higher priority of the government. This includes, but is not limited to, committing to additional staff and resources to enhance its emergency preparedness capabilities. Clearly, the EPRC process has generated tremendous momentum for positive change. With leadership and continuing support from the City government, businesses, civic organizations and concerned citizens, the City of Philadelphia can become one of the best prepared and most resilient communities in the nation.

The City of Philadelphia repeatedly displays the ability to come together when faced with a major event. Local, state and federal governments, the private sector and many non-governmental and civic organizations worked together to successfully host the National Republican Presidential Nominating Convention in 2000. With 32 days advance notice, the City planned and hosted Live 8 in July 2005, a free, all-day benefit concert featuring some of the world's most popular performers. Over one million people attended the event without significant incident. Similarly, it is common for the City of Philadelphia to simultaneously manage multiple, highly-visible, challenging events, such as a Presidential visit, a public protest, winter storm and a multi-alarm fire. Fortunately, in recent history Philadelphia has not faced a citywide catastrophic event.

The Committee identified resource and procedural gaps, both within the City government as well as between the City and key sectors such as the hospital sector, which could result in the City becoming quickly overwhelmed in a large-scale or catastrophic event.

The gap analysis also revealed that the City relies heavily on individual staff knowledge and relationships, and has been inconsistent in up-to-date documentation of its plans, protocols and procedures to plan, prepare and respond to major events. Relationships and situational knowledge are important for disaster planning and training to ensure effective response and long-term resilience. However, in a catastrophic event, select, veteran City staff may be unavailable, and personnel that will be called upon to provide relief or assist in the response and recovery may not have the same knowledge or relationships.

The City needs well-defined processes to assist individuals with special needs as well as educate all citizens on how to best prepare themselves and their families in an event of an emergency.

Background and Process

The process adopted by the EPRC was a comprehensive review of existing documents, agreements and plans as well as in-depth interviews with more than 200 individuals. It was designed to capture the City's current state of emergency preparedness and response capabilities. Through this methodology, gaps and areas for improvement were identified.

This approach, while helpful, tends to overlook the thousands of actions performed daily to protect the citizens of the City of Philadelphia. This report attempts to recognize some of the most notable of those strengths, while at the same time address gaps that can lead to recommendations for improvement.

The gap analysis was enhanced through: investigative field trips to New York City, Chicago and Washington, D.C. to further identify best practices and hear about lessons learned; observation of the regional training exercise in response to a hypothetical terrorist attack at the Philadelphia International Airport on May 10; Congressional visits in May; meetings with former City officials; and other regional planning and private sector meetings, such as the tour of SunGard data recovery and storage facility.

The EPRC members are grateful to those who volunteered their time and provided frank comments and recommendations to help in this process. With their help, the EPRC team crafted recommendations to address the gaps found in Philadelphia's emergency preparedness.

The analysis also showed that the City already participates in regional disaster planning and resource sharing, especially regarding potential threats from terrorism and industrial accidents. However, the City must do more regionally on additional issues, such

as creating a comprehensive evacuation plan, which includes scenarios where communities outside the City seek to evacuate citizens to Philadelphia.

The City should quickly fix two significant communications issues: the lack of interoperable communications in underground SEPTA tunnels and the one way communications from EMS ambulances to area hospitals. Although the City leads efforts to establish interoperable public safety communications regionally among first responders, resolving these communication challenges are critical to emergency preparedness and response.

The Committee noted examples of the public and private sectors working closely on public safety efforts, including the Center City District and the Delaware Valley Healthcare Council. However, it also documented ways that Philadelphia can benefit from adopting best practices from other cities and regions to create stronger public-private partnerships. Among these leaders are the public private partnerships in the City of New York and the City of Chicago. Similarly, strengths and vulnerabilities were identified in the joint efforts to prepare for utility and communication outages.

The Committee found that most City departments had not sufficiently planned to ensure the continuity of government operations in the event of a major disaster. Fortunately, this finding surfaced very early in the review and already is being addressed.

A simultaneous review of 75 of the nation's largest urban areas, released just a few weeks ago, found that many other cities share in some of the shortcomings identified above. Additionally, the London Assembly released a report last month, which examined the lessons learned from the response to the bombings on July 7, 2005. That report makes 54 recommendations, focusing on the need for interoperable communication in its Underground, better communications with the Ambulance Service, the need to enhance citizen education about preparedness, and the dissemination of more frequent updates to citizens during an emergency.

Strategic Themes: Assessment and Recommendations

When compiling and reviewing the recommendations from the individual subcommittees, many recommendations overlapped or addressed similar issues. Eight primary themes of recommendations emerged:

- 1.0 Enhance Emergency Management Capacity
- 2.0 Enhance Emergency Communications
- 3.0 Integrate Health and Human Services into Emergency Management
- 4.0 Enhance Federal, State, Regional and Local Partnerships
- 5.0 Promote Transparency and Community Engagement in Emergency Management
- 6.0 Ensure Continuity of Government and Continuity of Operations Planning
- 7.0 Protect Critical Infrastructure and Promote Public-Private Partnerships
- 8.0 Develop Comprehensive Evacuation Plans

Each strategic theme is summarized briefly below with background information on the City of Philadelphia's current strengths and gaps. **Following each summary, key recommendations are listed in bold.**

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMullin, Philadelphia International Airport

1.0 Enhance Emergency Management Capacity

1.1 Increase the Capabilities of the Office of Emergency Management

The size and scope of the Philadelphia Office of Emergency Management (OEM) is severely limited given the City's profile in terms of population, economic and historic importance, and the natural and potential terrorist threats it faces. Even with such limits, much has been accomplished during the past few years, especially with other jurisdictions within the region. However, due to a general lack of resources, the City's OEM has not been able to comprehensively address many standard emergency management functions, such as:

- Long-term, strategic planning
- Annual updates of emergency plans
- After-action reports that document lessons learned and that are incorporated into plans
- Ongoing citizen education and training on emergency preparedness
- City-only table top or senior-level exercises
- Facility and logistics planning for mass casualty events
- Coordination of efforts for special needs/vulnerable populations and for service animals and pets
- Training of City personnel on the National Incident Management System (NIMS) or Incident Command System (ICS)
- Enhanced coordination with other key segments of the private and non profit sectors, such as business/finance/hospital associations, the healthcare community, faith-based organizations, and universities

Recommendations:

1. Increase the authority and raise the profile of the OEM by appointing a Deputy Managing Director of Emergency Management within the Office of the Managing Director. This would further recognize the critical role of civilian oversight and accountability for public safety and preparedness.
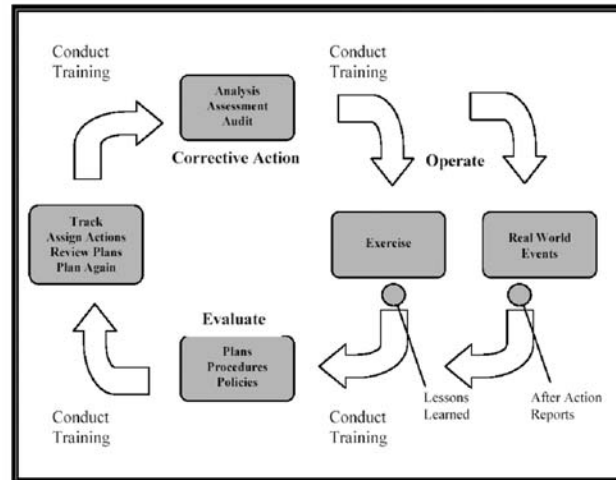
Figure 1: Emergency Management Planning Cycle

2. Increase staff in the OEM to perform the following functions: planning, training, exercising, citizen education, and coordination with local businesses, universities, the medical community, and other entities that assist individuals with special needs.

3. Staff the OEM 24 hours a day, seven days a week. The City of Philadelphia warrants a 24/7 emergency management function beyond the tactical presence provided by police and fire dispatch operations. Other cities, such as New York, Chicago and Washington, DC operate 24 hours a day, seven days a week.

4. Develop stronger situational awareness capabilities. Though the City has the capacity to tactically manage events, the ability to strategically plan for and anticipate events is limited. The City should work to develop strategic emergency management capabilities, deploy appropriate technology to monitor and assess impending emergency events, and enhance overall situational awareness capacity.

5. Assign positions in the OEM with the responsibility to work with special needs/vulnerable populations and organizations that provide services to special needs/vulnerable populations. Although several positions will have responsibilities for special needs

Courtesy of Philadelphia International Airport

populations, designate a single point-of-contact for outside agencies who work with special needs populations.

1.2 Adopt National Best Practices and Standards for Emergency Planning and Response

The scope of the City's emergency management planning and response needs extend far beyond the roles and responsibilities of the OEM. To some, it is obvious that emergency management authority includes at least the *Police* and *Fire Departments*. The recent focus on the potential threat of pandemic flu underscores that the *Public Health Department* also clearly has a role in emergency management. In fact, all departments of City government have roles and responsibilities regarding emergency management.

The scale of some emergencies may even exceed the capacity of the City to handle them alone and may require the assistance and cooperation of national, Commonwealth, and regional partners as well as the active participation of private and non-profit sectors and an educated and prepared general public.

The National Response Plan (NRP), developed by the Department of Homeland Security (DHS), establishes a comprehensive, all-hazards approach to

National Incident Management System (NIMS)

NIMS is a system mandated by Homeland Security Presidential Directive (HSPD) 5 that provides a consistent nationwide approach for federal, state, local and tribal governments; the private-sector and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from all types of emergencies, regardless of cause, size or complexity. To provide for interoperability and compatibility among federal, state, local and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

For more information on HSPD 5 that mandates NIMS, please see (http://www.fema.gov/pdf/reg-ii/hspd_5.pdf). Visit the FEMA website, http://www.fema.gov/emergency/nims/index.shtm for more information on NIMS.

enhance the ability of the United States to manage domestic incidents. It forms the basis for federal government coordination with state, local and tribal governments and the private sector during presidential disaster declarations and other major events. The NRP is predicated on NIMS, adopted as federal policy in 2004. Together, the NRP and NIMS provide a nationwide template for coordination to prevent or respond to threats and disasters.

The NRP identifies Emergency Support Functions (ESFs) to provide the structure for coordinating interagency support for emergencies. This approach is based on the accepted premise that effective responses to all disasters have common elements and that those elements form the basis for comprehensive and collaborative disaster planning. The ESFs that are recommended in NIMS are organized into

the following categories:

1. Transportation
2. Communications
3. Public Works
4. Fire
5. Emergency Management
6. Mass Care
7. Resource Support
8. Public Health
9. Search and Rescue
10. Oil and Hazardous Materials
11. Agriculture/Food/Natural Resources
12. Energy
13. Public Safety
14. Long-Term Recovery
15. External Affairs

The federal government and the Commonwealth of Pennsylvania adopted similar versions of the functional approach to emergency management. The Pennsylvania Emergency Management Agency (PEMA) issued guidance in 2003 requiring the use of ESFs in operation plans and approach. Currently, the City of Philadelphia does not organize their Emergency Operations Plan (EOP) or their planning efforts by ESFs. This could create confusion during an event that required state and federal assistance.

Recommendation:

1. Revise the EOP to adopt the established functional approach for preparing for and responding to emergencies, thereby providing a common method, language, and protocol for responding to disasters. Adopt this DHS functional approach to disaster preparedness and response.

1.3 Clarify Command and Control

Command and control refers to the process of directing, controlling, and coordinating response and recovery operations at any incident. As disasters cross jurisdictional and organizational lines of responsibility, direct lines of command and control can be strained and confused at the exact time they are

The Incident Command System (ICS)

ICS was developed after a series of wildland fires in southern California in 1970. Federal, state, and local fire services involved in the fire siege recognized hundreds of problems with their response and coordination during the fires. The fire services joined together in the FIRESCOPE Program to resolve those problems. The ICS was a major product of their joint effort.

ICS is a management system, developed around specific design criteria and modern management concepts. ICS is organized into the following functions, which are led by an Incident Commander: planning, finance and administration, operations, and logistics. ICS uses an incident action planning process that is systematic and comprehensive; multiple agencies and emergency response disciplines can be integrated into a common organization using the process. The unified command concept used in ICS provides the most effective means of coordinating and directing multiple disciplines on major civilian emergencies.

needed most. Because this has become a common problem among jurisdictions throughout the United States, NIMS has adopted the principles of Incident Command System (ICS), long used by fire departments throughout the country.

Command and control are divided between operations at the field level and strategic and coordinated response at the Managing Director level. Important aspects of command and control include the following:

• Adoption and use of ICS and NIMS throughout City government
• Detailed organizational roles, titles and responsibilities for each incident management function that is specified in the emergency operations plan
• Sustainable, ongoing planning functions, such as policies and procedures, that detail response and training activities

As noted previously, the City of Philadelphia has repeatedly come together to manage significant

Courtesy of Philadelphia Fire Department

planned events and moderate unplanned events. Through the EPRC process, it has been noted that much of this is accomplished without standing formal structures or a practice of writing comprehensive after action reports. Given the lack of depth in the emergency management area, the possible retirement of key city staff through the Deferred Retirement Option Plan (DROP) program, and the recognized need for intergovernmental cooperation, it is even more important that the City adopt, implement, and exercise the formal structures used by the Federal Government and the Commonwealth.

NIMS training is a requirement for preparedness funding from DHS, and training for designated personnel and select elected officials must be in place by September 30, 2006. The City utilizes some elements of both of these systems, especially for first responders. However, the City would benefit from more complete adoption of these standards, as they allow a clearer understanding of roles before the disaster and facilitate outside assistance and coordinating activities when other jurisdictions become involved.

Recommendations:

1. Adopt ICS and NIMS as City policy.

2. Provide focused training on ICS and NIMS within all organizations and departments that have a role in emergency management.

1.4 Enhance Drills, Exercises and Training

The City of Philadelphia's first responders extensively participate in regional terrorism training exercises. However, such exercises have not involved full activation of the Emergency Operations Center (EOC). The City also has not held exercises involving full activation of the EOC in recent years. Senior-level training and exercises have not occurred in years. Aside from first responders, City staff members often do not have a clear understanding of their roles and responsibilities during a disaster or the roles and responsibilities of others under the City's emergency operations plan. Thus, additional training and exercising should be a priority.

The City should continue to support training to respond to Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) events to ensure that the City maintains the necessary depth of trained personnel.

Training and exercises require up-to-date plans. Unfortunately, existing written plans and associated planning activities are insufficient. Many departments, nonprofit organizations, and other civic entities are working to help the City be prepared for future disasters, yet these organizations are not included in plans, efforts with them are not well coordinated, and interdepartmental awareness of what others are doing is minimal.

Recommendations:

1. Schedule exercises to test City plans and the City's EOC.

2. Designate a person or agency to focus on citywide training. Designate staff in the OEM to focus on conducting exercises for City staff, including Cabinet-level staff and elected officials, who would be expected to lead in a real event.

3. Enhance CBRNE detection and response capabilities through special operations training and resources, specifically, but not limited to training on technical rescue, hazmat response teams, decontamination operations, bomb squad, and police Major Incident Response Team.

4. Include organizations that work with the special needs population in exercises and training to ensure effective planning. Develop a list of community organizations and individuals that can assist the City in these efforts.

1.5 Upgrade Emergency Operations Systems and Facilities

The EOC shows age and little investment. The adequacy of the EOC will directly affect the likelihood of effective coordination and command and control in

Courtesy of Philadelphia Fire Department

a disaster. The 911 call center and police communications centers have physical vulnerabilities. Security enhancements and damage mitigation opportunities provided by modern surveillance systems are relatively absent in most aspects of the City's operations and systems. However, in a non-binding referendum held in May, City residents overwhelmingly voted for the expanded use of surveillance cameras.

Recommendations:

1. Create a new Joint Emergency Operations Center outside the immediate Center City area. The

21

Center could provide a common location for important objectives:

- Integrate the OEM and the EOC, the 911 Center, and Police and Fire dispatch
- Establish an appropriate facility for the Bomb Squad
- Locate a consolidated Public Health lab, including Level 3 lab
- Create a new Philadelphia regional operation center for other entities such as a replacement backup center for Southeastern Pennsylvania Transportation Authority (SEPTA) operations

2. Recognizing the time required to achieve a Joint Emergency Operations Center, address the following in the short-run:

- Designate and develop immediately sufficient backup sites, outside Center City, for the 911 Center, police communications, fire communications, a communications center for continuity of government, and the EOC.

3. Incorporate state-of-the-art technology in the EOC that fully integrates other City software systems and capabilities.

4. Increase the disaster recovery and backup capability of citywide and department mission critical information technology systems.

5. Install barriers to protect the Police Administration Building, which houses the City's entire 911 operations and Police dispatch operations.

1.6 Update Policies and Clarify Legal Authorities

The Philadelphia City Solicitor committed significant staff and resources to City emergency preparedness planning and to the EPRC process. Since September 11, 2001, a full-time attorney is dedicated to issues of homeland security and emergency management. An extensive analysis of the policies and laws pertaining to emergency preparedness was conducted by the Law Department, and new legislation that addresses current gaps in the Philadelphia Code will be drafted for consideration by the Mayor and City Council. A

Definition of Special Needs/Vulnerable Populations

When addressing the needs of vulnerable populations, the leadership of the EPRC came to consensus on the term and definition used to refer to vulnerable populations. The EPRC has accepted the definition, as created by the Vulnerable Populations Subcommittee.

The Subcommittee's definition includes:

> ...the segment of the community with increased risk in a disaster. The term encompasses groups that may not be able to access (or have reduced access to) the information, resources or services offered by the community in disaster preparedness, response and recovery. Traditionally, the vulnerable populations include subgroups such as those with physical, mental or cognitive disabilities (e.g., who rely on augmented hearing or mobility devices); illiterate or non-English speaking; the homeless; people who depend on continuous care from a hospital, nursing home, drug rehabilitation facility, prison facility, or home healthcare; individuals or families living in poverty; the unemployed; the elderly and frail; pets and service animals and the people who depend on them; and children.

legal resource guide that outlines the legal framework relating to emergency preparedness is being produced to support the City's first responders.

The Philadelphia Code § 10-819 provides the Mayor with authority to declare a state of emergency and with broad powers to control or halt the movement of people and transportation in and out of the City, restrict the sale of gasoline and firearms, establish a curfew, and other related powers that deal with civil unrest or disturbance. However, it does not explicitly authorize the Mayor to evacuate the City, order a large-scale shelter-in-place of citizens, or address today's natural and man-made threats.

Under current law, the City Council cannot act on emergency legislation unless a majority of its statutory members are available. Finally, few formal partnerships, agreements, and pre-event contracts exist to address City needs during a disaster, such as debris removal, food, water, fuel, or other disaster-related services that affect special needs/vulnerable populations. The complete list of the Legal/Intergovernmental Subcommittee recommendations can be found at Appendix A.

Recommendations:

1. Update the Mayor's authority to declare a state of emergency. An updated Code provision will more effectively address today's threats of natural or man-made disasters and terrorist attacks and will ensure and clarify as appropriate the Mayor's authority in an emergency.

2. Create an Interagency Procurement Committee by Executive Order to evaluate the need for various goods and services to be contracted prior to a disaster. Federal Emergency Management Agency regulations require competitively bid contracts for goods and services, such as debris removal, for federal reimbursement. For example, the Office of Adult Services (OAS) has the resources to provide relief (food, water and shelter) for 1,000

to 2,000 citizens, and the American Red Cross—Southeastern Pennsylvania Chapter can provide for up to 10,000 or more citizens, but any event that would affect 100,000 or more citizens will require significant resources that may be difficult to acquire during or immediately after any event. Pre-event contracts for these goods and services would enhance the City's ability to respond to a disaster, and would enable the City to sustain itself for 72 hours or more following a major disaster.

3. Consider Council legislation to authorize mutual aid agreements and conform Council rules and voting requirements to emergency conditions.

4. Incorporate the term "individuals with special needs" or "Special Needs Population" to refer to the groups who have unique needs in an emergency, as identified in the Vulnerable Populations Subcommittee's definition. This definition and terminology should be incorporated throughout the City's emergency preparedness efforts.

2.0 Enhance Emergency Communications

Recent terrorist and natural disaster events make evident the importance of communications and communications systems and the severe impairment on effective command and control when key communication systems are unavailable.

The City recognized problems of interoperability with its regional partners and, with the substantial assistance of federal Urban Area Security Initiative (UASI) grants, has led and participated in several ongoing initiatives, such as the SmartZone© switch, which links the trunked radio systems among Fire, EMS and Police.

The City is in the process of installing a new Computer Assisted Dispatch (CAD) system that will be used by Police, Fire, and City Communications. SEPTA will correspondingly enhance its current capabilities[1]. The 911 Center at the Police Administration Building also is being upgraded. Two separate telephone central offices provide redundant operations support for police communications.

The hospitals, in coordination with the Southeastern Pennsylvania Regional Task Force, are conducting a limited, nine-hospital demonstration pilot of the Collaborative Active Response Emergency System (CARES). If fully implemented, it would utilize both E Team, an incident management software that the region currently uses, and data mining software to link all hospitals, public health, emergency management, and other appropriate agencies into a common incident management and Web-based communications system.

The job of ensuring the safety of the public in the City of Philadelphia is shared by many different agencies at every level of government. The need for cooperation and communication among these various agencies, especially in the mass-transit underground areas, is critical to disaster mitigation and mass evacuation from any emergency event.

Although significant steps are under way to address radio communications interoperability within the City and surrounding areas, the major deficiency identified is the lack of radio communications in the underground portions of the subway system. Within the medical sector, no two-way radio capability exists between City EMS/ambulances and hospitals.

These and other communication deficiencies identified in the report should be addressed by establishing more structured institutional relationships within City government and among the City and outside entities, including SEPTA, other mass transit providers, the medical sector, the School District, the financial sector, the federal sector, and other private and nongovernmental entities.

The City continues to maintain separate departments for communications and information technology services. Police and Fire also have individual communications departments. The EPRC review revealed instances of a lack of a unified approach to communications challenges.

Finally, emergency communication to citizens will be addressed under the separate theme Promoting Transparency and Community Engagement.

Recommendations:

1. Focus and consolidate current efforts to urgently address underground communication issues under a single City/Commonwealth/SEPTA Task Force. This Task Force should be charged with identifying, obtaining funding for, and implementing a solution for underground communications. This should be among the highest priorities of the EPRC implementation effort.

2. Continue to implement ongoing initiatives de-

Courtesy of Philadelphia Fire Department

signed to address critical interoperable communications gaps, including the Tier I Short Range Tactical Communications Interoperability initiative and the Tier II Microwave Communications Technology effort, to link the eleven-county dispatch center consoles together. Coordinate these efforts with those of the Commonwealth.

3. Support implementation of CARES to enhance E Team and automate the collection of key data to maintain a "real-time" picture of the operational readiness of the healthcare system in order to increase surge capacity, facilitate victim tracking, strengthen surveillance, and more efficiently respond to state and federal reporting requirements.

4. Continue to expand the utilization of the E Team emergency management internet-based software to regional and other appropriate partners. Clarify Police and Fire Department procedures regarding the utilization of the E Team software.

5. Push the development of two-way radio capability among hospitals, private ambulances, and City EMS ambulances.

6. Lead a comprehensive evaluation of current communications capabilities for healthcare organizations and develop an integrated plan for use of satellite phones, 800 MHz radios, paging systems, HAM radios, text messaging, and other technologies. Coordinate these efforts with those of the Commonwealth.

7. Establish a comprehensive approach for the purchase and integration of communication and information technology. Ensure that all technology and information that is provided to the public, whether distributed electronically or in print, is accessible according to the guidelines provided by Section 508 of the Rehabilitation Act. This should include information concerning accessible shelters and shelters for pets.

8. Authorize and support console integration of certain Commonwealth and Philadelphia radio frequencies. Develop a list of the systems that each department uses and the representative or manager of those systems.

3.0 Integrate Health and Human Services into Emergency Management

With the possibility of chemical and biological attacks or pandemic disease outbreaks that would force cities to treat or shelter mass numbers of casualties, emergency management professionals have realized the importance of planning, training and exercising more closely with hospitals, public health facilities, the broader medical community, and agencies that provide emergency shelter and support services.

The City of Philadelphia has tremendous public health resources and hospitals available in the city and in the region. The hospitals employ more than 100,000 people, maintain comprehensive disaster plans, and conduct annual disaster drills. As part of a broader regional plan, all the city's hospitals participate in one of the nine Emergency Health Care Support Zones which meet on a monthly basis to plan and coordinate the healthcare delivery system's response to potential natural or man-made disasters. In addition to hospital personnel, each "Zone" meeting includes other healthcare organizations, public health, emergency management, and other relevant public and private sector organizations. Aside from building relationships, the zone structure has facilitated multi-hospital training and exercises.

Between 28 and 42 municipal ambulances are on duty in the city daily, depending on demand. Approximately 100 non-municipal ambulances provide patient transportation every day.

Although the Philadelphia Department of Public Health has conducted two points of dispensing (POD) exercises, the City should more formally integrate hospitals into their planning, training, and exercise efforts and programs. The City also should designate hospitals as part of the City's critical infrastructure. Hospitals are a significant resource for the city, especially in large scale emergencies. As planning efforts continue, hospitals can work to ensure interoperable equipment purchases between institutions and with the City. Thus, in the future, this equipment can be used seamlessly with City assets in a catastrophic event.

The Office of Adult Services (OAS) drafted an agreement with the American Red Cross—Southeastern Pennsylvania Chapter for emergency shelter services and has a contract for emergency food services. OAS should develop plans to provide appropriate facilities to shelter and feed large numbers of people in need of isolation or quarantine. In addition, OAS should develop procedures for supporting families isolated or quarantined in their homes, including delivery of food and necessary supplies. See Appendix A for all recommendations pertaining to Philadelphia Code amendments.

If a pandemic flu event occurs, clear understanding of quarantine authority must be developed. Currently, Commonwealth law and the City Health Code provide the necessary authority to manage and monitor ill or infected persons in the event of a flu pandemic or biological attack. However, the City should review its ability to establish mass quarantine or shelter-in-place of citizens who may not yet have been infected or who show no symptoms of illness but are potentially infected with a disease.

Recommendations:

1. Designate hospitals as part of the critical infrastructure of the City.

2. Assign a seat at the Emergency Operations Center for hospitals, and include them in the City's emergency operations plans and all future City drills and exercises.

3. Develop a comprehensive policy and plan for

standardizing, stockpiling, storing, tracking and distributing critical medical supplies, equipment, and pharmaceuticals. While the City and region fully expect support from state and federal agencies, recent experience has demonstrated that prudent steps are necessary to ensure key supplies are readily available on a local basis during the early stages of an emergency or disaster.

4. Evaluate the optimal daily EMS service capabilities and the capacity of EMS to surge in response to a major incident, including private ambulances and any National Guard resources.

5. Develop large-scale shelter-in-place and quarantine protocols and clarify legal authority requiring shelter-in-place for the unexposed. Ensure integration with agencies and the courts to include a plan for a comprehensive system for services and resource management—social services, logistical supplies and food, staff, volunteers, facilities, donations, pet care, transportation, and emergency court orders and hearings—that can support a major sheltering or quarantine effort.

4.0 Enhance Federal, State, Regional and Local Partnerships

While the EPRC's primary focus was on the steps Philadelphia could take on its own to enhance the emergency preparedness of the City, the review also identified the need for a more seamlessly coordinated approach by all levels of government on a range of issues.

Furthermore, it is an accepted principle, and a requirement for federal DHS funding, that jurisdictions pursue a regional approach to emergency management. The City of Philadelphia enhanced its relationship with neighboring jurisdictions through the Southeastern Pennsylvania Regional Task Force (formerly the Southeastern Pennsylvania Regional Counter Terrorism Task Force), which was set up by the Commonwealth. The Task Force coordinated regional training and drills for first responders and purchased equipment, which are critical components for enhancing regional capacity to respond to emergencies.

The City needs to expand its regional cooperation by better integrating the private sector, elected officials and the National Guard into emergency preparedness efforts. Previous disasters, including Hurricane Katrina, demonstrated that the federal government may not be able to assist jurisdictions and that regions must be fully self-sufficient for at least 72 hours to one week. This can occur only when strong relationships exist among political and business leadership, emergency management directors, governors, mayors, and city and county managers.

Certain aspects of emergency preparedness are directly linked to federal and Commonwealth policies, laws, regulations, and resources. These policies can serve to either advance or hinder the ability of local governments and their private sector partners to plan for and respond to community emergencies. There are areas where the federal, state and city partnership is working on behalf of Philadelphia's citizens, such as the Southeastern Pennsylvania Regional Task Force.

However, federal policies designed to address the nation and state policies protecting the entire Commonwealth do not always fit with the needs of a complex urban area like Philadelphia, such as the need for increased staffing at the airport and ports. Passenger numbers at the airport have increased from 28.5 million in 2004 to 31.5 million in 2005, straining infrastructure and creating tension with the Transportation Security Agency (TSA) over staffing and jurisdiction. The Philadelphia International Airport (PHL) is more than 100 staff short of the TSA model. Finally, despite a 50 percent increase in annual commercial vessel boarding since 2002, there has been no increase in overall United States Coast Guard (USCG) staffing in Philadelphia.

Recommendations:

1. Create an ongoing forum for the region's highest elected officials and private sector leaders to regularly meet to review key strategic emergency preparedness issues and develop coordinated approaches to region-wide challenges.

2. Conduct a detailed briefing each year or as needed on the status of Philadelphia's emergency preparedness plans and response capabilities for the City's representatives in the General Assembly and in the U.S. Congress.

3. Initiate discussions with the Governor to establish a process for relevant City agencies to meet with their corresponding state agency partners to identify, review, and develop recommendations to resolve key policy questions and adopt operating protocols within the context of NIMS to govern interaction and the sharing of information between these agencies.

4. Amend Commonwealth Law requiring seven day ratification by the City Council of the Mayor's declaration of a state of emergency.

5. Work to amend Commonwealth law that di-

rectly affects the City of Philadelphia. Title 35 of the Pennsylvania Emergency Management Services Code is currently being reviewed by the Commonwealth. In addition to those proposed amendments already identified by the Commonwealth such as expanded protections regarding volunteer liability and worker's compensation, the EPRC recommends an amendment to Commonwealth Law delegating to the Mayor similar powers as provided to the Governor to exercise temporary control of any private, public or quasi-public property if necessary to respond to a disaster, subject to applicable compensation requirements. Without an amendment, there could be delays in responding to large scale evacuations, mass shelter-in-place or quarantine orders relating to disasters affecting Philadelphia. In addition, the EPRC recommends amending the Pennsylvania Juvenile Act to provide county children and youth agencies with greater flexibility to obtain emergency court orders and blanket waivers for the emergency placement of children who may have lost family following a disaster and sharing information with law enforcement agencies to assist with identifying, locating and protecting children.

6. Develop communications and coordination protocols with the Pennsylvania National Guard to support emergency response needs. Agree with the Pennsylvania National Guard to:
   - Develop preplanned force allocation orders
   - Provide a list of its emergency response capabilities and assets
   - Have a seat at the City's EOC during an emergency

7. Work with the City's congressional delegation and state and regional partners to support increased TSA staffing, given the significant growth in airline passenger activity at PHL and declining resources from TSA.

8. Work with the City's congressional delegation and state and regional partners to achieve increased resources for the USCG Station in Philadelphia and for related public and private sector security resources.

9. Execute the Mutual Aid Agreement that will institutionalize the eleven county tri-state regional task force/workgroup that brings together the five counties of the Southeastern Pennsylvania Regional Task Force with five counties in Southern New Jersey and New Castle County, Delaware.

5.0 Promote Transparency and Community Engagement in Emergency Management

Public participation entails a multitude of efforts to engage, educate, and train citizens. It also includes creating a more open City government that encourages sharing critical information for public benefit. Posting the City's Pandemic Flu Plan was an important step in this direction. Citizens must trust that government will provide reliable and timely information so they can make the best decisions for themselves and their families during a crisis. Absent good information from the City, citizens may make unwise and uninformed decisions based on fear and rumors.

The importance of communicating with the public (residents and visitors) before, during, and after a major crisis cannot be overstated. Residents expect more from government in a crisis, at a time when government capabilities are stretched to or beyond their limits. Public participation necessarily entails participation of people with special needs. The City should plan to focus not only on the needs but also on the capabilities of the City's special needs population.

Currently, the City does not conduct an ongoing program of citizen education concerning basic levels of emergency preparedness to ensure, at minimum, self sufficiency during the first 72 hours of a disaster. Although different departments and nonprofit agencies have reached out to select constituents around certain issues, such as fire prevention, there is no comprehensive, coordinated citywide effort to increase awareness at home, work, school, and throughout the community. City department and agency communications plans generally lack details and thorough command and control protocols, and they do not always contain pre-scripted public protective action recommendations.

Recommendations:

1. Launch, with the assistance of partners from the public and private sectors, a sustainable, regional public education, awareness, and training program focusing on emergency preparedness. Important aspects of this program should include conducting the necessary research, developing measurable performance indicators, working with existing public and private community groups, and targeting populations with special needs.

2. Continue to publish non-confidential emergency plans and information to the City's website for public consumption, and distribute printed copies to publicly accessible facilities such as the libraries, health centers and post offices. Ensure that all technology and information that is provided to the public, whether distributed electronically or in print, is accessible according the guidelines provided by Section 508 of the Rehabilitation Act.

3. Assign a full-time, dedicated Public Information Officer (PIO) for the Philadelphia OEM who would work with the Mayor's Office of Communications to coordinate crisis communications planning, training, and exercises, and all other aspects of public information that would be required by PIOs during an emergency. If the OEM is the lead agency during emergencies and activates the Emergency Operations Center (EOC), the department must have a PIO to facilitate emergency response information with the other departments.

4. Create a strong partnership with the media to create the most effective tools to reach the public before, during, and after disasters. The media wants to work with the City to assist ongoing citizen education efforts as well as to disseminate critical messages during emergencies. Some media

outlets have offered to host phone banks and air public service announcements, among other programs, to help citizens be better prepared.

5. Create a Crisis Communications Plan for communicating to the public during an emergency. Create a crisis communication plan template for use by all City PIOs for departmental plans. Involve all City departments, agencies, boards, and commissions, with the assistance and oversight of the Mayor's Office of Communications, in creating this template. Create a system to ensure that the plans are reviewed and updated at least annually by the PIOs and to ensure that contact information is accurate at all times. Establish a seamless line of communication during a time of crisis with specific protocols and step-by-step procedures. Develop a plan that can stand alone and is not dependent on a specific individual or individual's knowledge. Create and maintain a standard for how City departments respond to an emergency and how they communicate to the public. As part of this plan, the City should develop protocols with relevant private sector partners, such as hospitals, Red Cross and others, to help ensure consistent communications to the public.

6.0 Ensure Continuity of Government and Continuity of Operations Planning

Recent disasters and today's threat environment demonstrate the need for local jurisdictions to annually examine and assess their Continuity of Government (COG)/Continuity of Operations Planning (COOP). Public and private stakeholders must work in concert on preparedness efforts, since governments and businesses rely on each other for essential services before, during, and after disasters. A concerted continuity planning effort would enhance the locality's response and recovery capacity by providing additional resources during a disaster. Successful planning and execution require that businesses and service providers help planners understand the interrelationship of the City government's business processes with those of other governments and the private sector.

The gap analysis focused primarily on identifying essential functions, critical records, alternate work facilities, IT backup and recovery systems, and lines of succession to facilitate an effective recovery of the City's critical functions. That review also discovered that departmental COG planning activities were weak. Recognizing this, the City of Philadelphia hosted a training seminar on May 30, 2006, to help City agencies write their plans.

Recommendations:

1. Establish the responsibility and functions for continuity planning within an enhanced OEM.

2. Require each department to create, finalize, and update their COOP and COG plans annually;

review essential functions, succession plans, and equipment needs; and develop specific budgetary line items to support annual COG exercises.

3. Work with the private sector, especially with critical infrastructure and businesses that provide goods and services to the City, to encourage the development of business continuity plans through training and other resources.

4. Support an integrated enterprise information system, which is software for human resource departments to manage thousands of employee records including skills, benefits, and payroll. Such software can be used for all employees of the City government to facilitate business impact analysis, departmental emergency management planning, notification and incident management before, during and after times of emergency.

7.0 Protect Critical Infrastructure and Promote Public-Private Partnerships

The definition of critical infrastructure evolved over time but is generally recognized to include the utility, communications, transportation, financial, energy, chemicals, and healthcare sectors. Current federal, Commonwealth and City efforts to identify, classify and protect critical infrastructure fall under the Department of Homeland Security's National Infrastructure Protection Plan.

The Critical Infrastructure Subcommittee of the EPRC focused heavily on the utility, communications, and transportation sectors, and briefly addressed the financial sector, the Independence Mall District, and other private sectors.

The Subcommittee identified the need for a closer relationship between the utilities and the City's emergency management leadership and found that the City-controlled utilities had varying levels of emergency preparedness.

Significant increases in economic activity at airports and maritime ports, as well as the Delaware Riverfront in general will necessitate increases in law enforcement and first responder personnel at the Federal levels.

Additionally, the EPRC identified impressive public-private partnerships already under way, such as the Center City District, which can serve as a model for other efforts in the future.

Recommendations:

1. Utilities: Coordinate with the primary electricity and telecommunications providers and with the publicly-owned water and natural gas utilities to jointly develop a list of restoration priorities and a plan of action to ensure COG and effective emergency management capabilities. Conduct joint table top exercises with the utilities to test the efficacy of such plans.

2. Road and Rail Transportation: Create a high-level position at the Deputy Managing Director level to coordinate transportation planning and functions within the City, including coordination of the interaction of city departments, such as the OEM, Police, Fire, Office of Emergency Shelter Services, Streets, Public Property and the Managing Directors Office. This position also will coordinate the City's interaction with SEPTA and other transit agencies, the Pennsylvania Department of Transportation and regional partners. Continue efforts to improve the cooperation and sharing of information between the rail freight industry and the City.

3. Maritime Ports: Strengthen City policy and operational linkages with the Philadelphia Regional Port Authority in traffic engineering, security and other operational areas, given the current and likely continued growth of activity along the Delaware Riverfront. In addition, work with the City's Congressional Delegation and state and regional partners to achieve increased resources for the United States Coast Guard Station at Philadelphia and for related public and private sector security resources.

4. Airports: Work with the City's congressional delegation and with state and regional partners to

Independence Hall, Courtesy of City Representatives Office

support increased TSA staffing, given the significant growth in airline passenger activity at PHL and declining resources from TSA. Also, consider creating an airport-based bomb squad or establish a site in closer proximity to PHL. Continue to work with the Federal Aviation Authority on Air Traffic Control backup scenarios.

5. Financial Sector: Work with the financial sector to develop a program of emergency preparedness and credentialing based on national best practices.

6. National Critical Infrastructure: Continue to build upon current efforts, including Federal Homeland Security-funded safety and security enhancements to refinery facilities to protect the nation's critical infrastructure located within the City of Philadelphia, as well as protecting the residents of Philadelphia.

7. Public-Private Partnerships: Continue to work with the specific industries noted above and other sectors, including the substantial federal employee sector represented by the Federal Executive Board, to identify critical facilities and work to address vulnerabilities. Build on the work of the national Critical Infrastructure Partnership Council and the respective Sector Coordinating Councils.

8.0 Develop Comprehensive Evacuation Plans

Hurricane Katrina demonstrated the need not only for cities to have evacuation plans but also to have plans to accept, shelter, feed and protect those who are evacuating from other areas. Comprehensive evacuation plans include planning for the care of special needs populations; evacuation of hospitals and long-term care facilities; the use of school facilities and transportation assets; and shelter provisioning, traffic planning, crisis communications, and the care of animals.

Although the City has an Emergency Traffic Management Plan and can use a reverse 911 calling system to notify residents during an event, these plans are not equivalent to a comprehensive evacuation plan and represent just two of the critical components of an overall effort.

During the course of this preparedness review, and at least in part due to questions raised during the review, the Delaware Valley Regional Planning Commission hosted an initial meeting of regional transportation, law enforcement, and emergency management officials from Pennsylvania, Delaware, and New Jersey to consider development of an in-depth regional traffic control evacuation plan. This type of comprehensive plan will enable the City to better plan not only for a catastrophic event, but further enhance its capacity for large scale planned events.

Recommendations:

1. Develop a comprehensive emergency traffic management evacuation plan with the Southeastern Pennsylvania Regional Task Force that would include identification of evacuation scenarios, traffic control points, potential shelters, location of hospitals and other critical care facilities, staging areas, and required traffic management resources. Incorporate appropriate use of Incident Command System, pre-event contracts with towing services, and traffic signal coordination.

2. Prepare and coordinate plans for Philadelphia as a destination site for evacuations from nearby urban and coastal regions.

3. Initiate and actively participate in the development of a regional evacuation plan that incorporates federal, state and local government partners, including EMS, transit agencies with rail and bus assets, SEPTA, the Port Authority Transit Corporation (PATCO), New Jersey Transit, and Amtrak. Explore agreements with agencies such as Maryland's MARC system, which are powered by diesel fuel, in the event of a severe loss of electricity. (This strategy was used by Amtrak on May 25 following the Northeast Power Outage). Include the private sector, such as the Center City District and the Chamber of Commerce, in the development of plans. Include the following components in any evacuations plan in the future:
   - Special needs population planning, to include planning for pets and service animals
   - Hospital and other care facilities planning
   - Traffic management planning
   - Criteria for shelter-in-place vs. evacuation
   - Public information

4. Draft language either as an enumerated power under § 10-819 or in a separate Code provision that gives the Mayor the explicit power to order, but not compel, an evacuation. The Code provision gives the Mayor the authority to halt access or egress upon public highways to or from the

City and any part thereof and halt the movement of trains, boats, or other vehicles into, within, or from the City. The Philadelphia Code, Home Rule Charter, and Police Department Directives provide the commissioners of Fire, Police, and Licenses and Inspection the authority to order evacuations of dangerous structures in the event of a fire or imminent building collapse, evacuations of a building or neighborhood in the event of a hazardous materials spill, or evacuations in the interest of public safety and security if there is a threat of imminent danger. The EOP has extended this authority to the Mayor to order evacuations without any legal basis, so it is recommended that the EOP be reviewed and revised for legal sufficiency.

5. In the Critical Infrastructure section, there was a recommendation to create a Deputy Managing Director to coordinate transportation. This position should also be responsible for the transportation aspects of evacuation planning.

8.0 Next Steps

While many activities to implement these recommendations have already begun, many recommendations may languish if the effort to advance Philadelphia's emergency management capabilities is not institutionalized within the City's agencies, operations, budgeting, and politics. Institutionalization means that the processes needed for implementation become integrated into daily operations; the people who are involved see these implementation steps as the normal and right way to proceed with their day-to-day activities while also advancing the emergency management agenda. Institutionalizing and implementing emergency preparedness recommendations serve dual functions: they help the City become better prepared and foster standardization and efficiencies within daily operations. For example, comprehensive evacuation/emergency traffic management plans can help daily vehicle flow and can assist in managing the traffic from major planned events.

In addition, the integration of emergency management into daily operations is the means by which communities truly become resilient in their preparedness and response capabilities. This new culture will benefit individuals, departments, and agencies within the City government and throughout the community.

Achieving rapid implementation requires the formation of an Emergency Preparedness and Response Coordination & Implementation Team, consisting of up to 15 members, with no more than one half the members being City staff. Similar to the EPRC structure, it should be directed by two co-chairs, one from the City and one from outside City government. Representation on the committee should include the business community, hospital sector, and an organization that works with special needs populations.

Within 90 days, the team should present to Mayor Street a progress report detailing, at minimum:
- Timeline of accountability
- Prioritized list of recommendations
- Project management scope and need
- Plan to develop partnerships with the private and non-profit sectors
- Financial and personnel resource development plan
- Examination of the City's Hazard Vulnerability Risk Assessment after it has been externally reviewed, vetted and validated

After the initial report, progress reports should be given to the Mayor quarterly. Included within those reports should be observations regarding departmental participation, and the need for, or conduct of, table top and major exercises.

Background

Mayor's Charge

On September 16, 2005, Philadelphia Mayor John F. Street established an Emergency Preparedness Review Committee to examine the City's existing emergency infrastructure and recommend areas for improvement. Part of the initiative came as a response to the tragedy following Hurricane Katrina, where inadequate government preparedness and response exacerbated an already desperate situation. The Committee's charge was to find out whether the City of Philadelphia was prepared to respond to a similarly catastrophic event. Recognizing the importance of the endeavor, the EPRC engaged James Lee Witt, a recognized leader in emergency management, and his firm James Lee Witt Associates (JLWA), to assist in their review.

The Mayor's Emergency Preparedness Review Committee (EPRC) was charged with reviewing the emergency management structure and plans for multiple issue areas. The EPRC conducted a thorough review of existing documents and performed in-depth interviews with City staff and the business and non-profit communities to achieve a complete understanding of the current emergency management situation. Meetings, presentations and tours were conducted of the emergency headquarters of Chicago, New York City, and Washington, D.C., to provide further examples of emergency management.

The EPRC would not have successfully completed its charge without the leadership of its two co-chairs, Pedro A. Ramos, Managing Director for the City of Philadelphia, and Dr. Harvey Rubin, Director of the Institute for Strategic Threat Analysis & Response (ISTAR) at the University of Pennsylvania, as well as the Subcommittee chairs:

- David Binder, Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response (CBRNE) Director of Quality, Safety & Regulatory Affairs, Tanner Industries, Chairman, Philadelphia Local Emergency Planning Committee
- John Carrow, Continuity of Government Chairman, American Red Cross—Southeastern Pennsylvania Chapter, Chief Information Officer and President, Worldwide Information Technology, Unisys
- Joseph Certaine, Critical Infrastructure Director, Governor's Office for Southeastern Region of Pennsylvania, Commonwealth of Pennsylvania, Former Managing Director, City of Philadelphia
- Rich Negrin, Health and Human Services Vice President and General Counsel, Aramark
- Andrew Wigglesworth, Health and Human Services President, Delaware Valley Healthcare Council
- James Eisenhower, Esq., Legal and Intergovernmental Chair, Government and Regulatory Affairs Practice, Schnader Harrison Segal & Lewis LLP
- Stephan Rosenfeld, Public Information and Community Engagement President, Identity Advisors, LLC
- Dorothy Sumners Rush, M.Ed., Vulnerable Populations Retired Educator, Community College of Pennsylvania, Former Vice President, Philadelphia Board of Education

Statement by Mayor John F. Street
September 16, 2005

If disaster strikes, will the City be ready? In the weeks following Hurricane Katrina the attention of the nation has been focused on our readiness to respond to catastrophic events. Government response at all levels was anemic and ineffective in stark contrast to the civic relief response, which was caring, generous and universal.

But even as those relief efforts continue, a major question confronts those of us charged with the responsibility of protecting large populations: What would we do if a catastrophic disaster happened here? Would we be adequately prepared?

I began considering that question soon after Katrina struck – and even more so as the days and tragic circumstances unfolded. The sad plight of the people was moving! We had to act. Thus the initiation of Project Brotherly Love. Even as the entire country responded, I knew more would be required.

I subsequently instructed top Administration, management and response officials to undertake a comprehensive review and reassessment of our emergency response and evacuation plans for Philadelphia in the event of a disaster.

Philadelphia unlike many jurisdictions has seasoned and skilled police, fire, health, and emergency management personnel with decades of experience. These officials undergo and supervise constant training in emergency management. I'm confident we are ready to respond to your typical incident. Post Katrina, however, the bar has been raised.

What about a cataclysmic event - a major natural disaster or intentional attack on our City? Would we have the capacity to safely and efficiently evacuate the entire city in the unlikely event it became necessary? What are our risks, and vulnerabilities? We may not even know the questions, much less the answers!

Accordingly, I am establishing an emergency preparedness review committee to evaluate all our existing emergency medical, evacuation and business continuity plans; it will thoroughly analyze the potential catastrophic threats we face and recommend measures to both deter as well as respond to those threats.

This taskforce will be co-chaired by the managing director and a disaster professional to be named within 10 business days. The taskforce will be authorized to hire the appropriate professionals.

Council President Verna on behalf of City Council has agreed to recommend two private sector persons to serve on the taskforce, which will have approximately 10 members including the Finance Director, Fire Commissioner, Health Commissioner, Police Commissioner and 4 private citizens (two recommended by City Council).

Our citizens should be assured the City of Philadelphia is determined to learn from the bad experience of Hurricane Katrina. So the question recurs -- If disaster strikes, will we be ready? The answer is YES!

Process and Methodology

Overview

The process adopted by the EPRC was a comprehensive review of existing documents, agreements and plans, coupled with extensive in-depth interviews designed to capture the most reliable picture of the current state of emergency preparedness and response capabilities and ideas for improvement. With the foundation of document review and interviews, the EPRC was able to construct a comprehensive gap analysis of Philadelphia's capabilities. The gap analysis was a tool to accomplish the goal of the

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMullin, Philadelphia International Airport

EPRC: a Final Report, which lays out comprehensive recommendations for improvement.

The expertise of the members of the EPRC proved invaluable to identify areas requiring improvement. JLWA added to this process by contributing subject matter experts, arranging visits to other jurisdictions, identifying best practices, and providing structure and support to the process. Using these inputs, the EPRC crafted recommendations to address the gaps that exist in Philadelphia's current state of emergency preparedness.

Approach

The EPRC formed seven Subcommittees, which in turn established their charge, goals, and a process for achieving their goals. The EPRC reviewed documents and conducted in-depth interviews from which they formulated a comprehensive gap analysis of emergency management capabilities and planning. The seven Subcommittees established by the EPRC comprise the breadth of emergency management: Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response; Continuity of Government; Critical Infrastructure; Health and Human Services; Legal and Intergovernmental Affairs; Public Information and Community Engagement; and Vulnerable Populations. Subject matter experts were assigned to each Subcommittee.

Under the leadership of the Subcommittee chairs, with the assistance of the staff coordinators, and led overall by the Project Manager and Assistant Project

Manager, a series of Subcommittee meetings provided direction and opportunity for feedback from the EPRC members. These sessions proved valuable and served to facilitate discussions and relationships amongst representatives of disparate entities, both within and outside City government.

The EPRC conducted in-depth interviews with hundreds of individuals throughout the Philadelphia region, including government officials at the federal, state, and local level, and scores of people from the private and non-profit sectors. A complete list of interviews is found in Appendix F. In great part, those interviewed were frank and forthcoming in their responses, comments, and recommendations. The EPRC sincerely appreciates their time, cooperation, and assistance.

Hazard Analysis as Basis of Gap Analysis

The absence of a current hazard analysis and vulnerability assessment was soon identified as a serious gap in itself, making a detailed gap analysis more difficult. By way of background, "Hazards" are natural or man-made events that have the potential for disruption and cause loss of life and property. "Vulnerabilities" are the aspects of a system that allow hazards to have negative effects within the jurisdiction experiencing the hazard, and include vulnerable population groups, vulnerable structures and systems, and vulnerable emergency response capabilities. "Risk" is a function of the likelihood of a disastrous event versus the consequences should that event actually occur.

To reduce the adverse effects of an out-of-date hazard and vulnerability assessment, the City began an effort to update their 1998 Hazard/Vulnerability Analysis (HVA) during the ongoing document review and in-depth analysis. The update will include the degree of risk involved for each hazard, which will help to prioritize remedial actions and update emergency management plans. The City is currently updating the HVA.

Fundamental Principles

Critical to the successful completion of the mission

assigned to the EPRC was agreement on some basic principles of emergency management that would guide their effort. Accordingly, on January 27, the EPRC adopted the following concepts, which have been utilized successfully in addressing disasters nationwide.

- All-hazards approach to emergency management
- Regional approach rather than jurisdictional approach for capability improvement
- Adoption of uniform standards for equipment, training, and performance where the tasks are common
- Adoption of common standard operating procedures
- Partnerships with the private and non-profit sectors
- Dedicated, sustainable and adequate funding for emergency management projects, programs, and personnel; recognition that the distribution of funds will and should be impacted by the results of the Recommendations Report
- Adoption and use of National Incident Management System (NIMS) and Incident Command System (ICS)
- Emphasis on crisis management training, coordinated public information, and community outreach
- Need for clear responsibilities and timelines
- Importance of reliability and redundancy in emergency response
- Support from key elected and appointed officials
- Emphasis on the four phases of emergency management (preparedness, response, recovery, and mitigation) for a comprehensive and effective program
- Recognition that all strategies and plans are works in progress and must be periodically revisited and revised using collaborative, community-wide processes wherever possible

In consultation with Mike Nucci, the Director of the OEM for the City, the EPRC also reviewed and adopted at the January 27 meeting the top three scenarios for which the City needs to be prepared. These scenarios did not take the place of a thorough review of the City's all-hazard preparedness by the EPRC subcommittees. Instead, these scenarios provided an additional guideline for subcommittees

in their review. The scenarios the EPRC developed were:

1. An ice storm that causes severe power outages, not fully restored for two weeks.
2. An incident which causes a large scale chemical spill or explosion.
3. An incident which forces the City of Philadelphia to shelter 100,000 people.

Document Review and In-Depth Interviews

The EPRC selected documents for review that reflected the capabilities or the intentions of the emergency management programs of Philadelphia. These included plans, vulnerability assessments, planning assumptions, standard operating procedures, mutual aid agreements, public information and education programs, surveys, protocols, after-action reports, and other documented initiatives that together form the City's emergency response capabilities. As with any endeavor of this scope, not all documents were obtained and, in some cases, documents were too sensitive to allow routine treatment. These limitations are minor, however, and the document review process was sufficient to guide the in-depth interviews and to provide more depth and substance to the interview process.

The in-depth interviews were designed and conducted by subject matter experts to capture a complete picture of the current state of emergency preparedness in the City and provide suggestions for improvement. Consequently, it was not a goal to randomly select respondents or otherwise craft an interview approach that would meet scientifically valid sampling criteria. The EPRC did not take polls to capture public opinion but recognized the role public opinion plays in the effectiveness of response options, such as weighing shelter-in-place versus evacuation.

Both document reviews and interviews were designed to gauge the strengths and weaknesses of the City's existing emergency management capabilities. Taken together, they attempted to answer the following questions:
• Which threats are being addressed and which are not?

• What are the City's strengths and weaknesses in addressing those threats?
• What actionable, time-specific, measurable, and cost-effective remedies can be used to address gaps?
• Whose responsibility is it to address neglected threats and/or inadequately addressed threats?

Development of Recommendations

The in-depth interview effort contained questions designed to elicit proposed changes to the City's existing public and private systems, plans, and capabilities. In addition, the EPRC compiled documents describing best practices nationwide as a source of recommendations to address existing gaps. EPRC members also visited New York City, Chicago, and Washington, D.C., to review aspects of their emergency management programs. The EPRC members also met to identify potential recommendations using the gap analysis. Based on these sources, and their own professional backgrounds, the EPRC developed recommendations for improvements.

Limitations and Conditions

It is important to note certain limitations and conditions that qualify the use of this report. Some limitations were mentioned in the sections above. These include the availability of documents reviewed, absence of formalized public opinion research, and the lack of an up-to-date Hazard, Vulnerability and Risk Assessment.

Other limitations should be noted. While wherever possible each Subcommittee did attempt to include consideration of fiscal resources, it was not possible within the time constraints of this process to develop precise estimates of the cost of each recommendation. Further, the Committee viewed its charge as developing recommendations, regardless of cost, that would help the City become better prepared. The Committee notes that a number of recommendations have been incorporated into pending federal and state grant proposals. The EPRC believes the implementation team to be appointed by the Mayor should build on the work of the Committee to develop detailed cost estimates of each recommendation along with an accounting of what projects have

been approved for funding from Federal and Commonwealth resources and what recommendations can be implemented within existing City resources.

The EPRC sought input from the US Coast Guard and local representatives of the Department of Homeland Security (DHS) and included FEMA and the Pennsylvania National Guard in this effort. However, the EPRC did not further consult with the military or other components of the federal government because their capabilities, protocols, responsibilities, and authorities for disasters are not unique to Philadelphia and were reviewed as a consequence of Hurricane Katrina.

Time and resource constraints limited our review. For example, the EPRC spoke to representatives of the City's financial sector, but did not interview representatives of all the major financial institutions in Philadelphia.

Understandably, the EPRC had more access to detailed information, including highly confidential information, from City of Philadelphia departments than from private sector entities. In some cases, information of an extremely confidential nature was provided only to specific JLWA experts.

It is well established that mitigation projects and efforts are well worth the initial costs. Katrina is only the latest example of how structural mitigation, such as adequate levies, and non-structural mitigation, such as zoning, would have saved billions of dollars. Nevertheless, mitigation is not the focus of the EPRC effort, and will be covered only tangentially, as a consequence of the comprehensive look into preparedness and response.

The EPRC expects that aspects of the report might be of interest to those outside the City and hopes that ideas of value to others can be found within its pages. But it is important for readers to understand that these recommendations apply to a particular jurisdiction with capabilities and challenges that are not likely identical to those of other jurisdictions and which are not necessarily described comprehensively in the text.

Background Data

Demographics

The City of Philadelphia has experienced tremendous changes in the last fifty years. With over two million residents in 1950, the City's population has leveled off at around 1.5 million today, according to the United States Census, as businesses and workers have relocated to the surrounding suburbs and beyond. The City suffered large population losses in the 1990s, when more than 100,000 residents and 100,000 jobs left the City, but has slowed to a present rate of loss of about 3% between 2000 and 2004, according to the United States Census.

Over that time, the City's special needs population, the part of the community that is most at-risk during an emergency, has grown steadily. The Philadelphia Corporation for Aging (PCA) in its January 2006 report, "Looking Ahead: Philadelphia's Aging Population in 2015," found that Philadelphia is the seventh poorest city in the U.S. Those citizens living below the poverty level stood at almost 25% in 2004; the corresponding national average is around 13%. Philadelphia's non-English speaking population has grown to around 20% of the overall population as of 2004. The City's senior citizens (aged 65 and older) represented around 13% of the total in 2004. This demographic growth of the City's special needs populations underscores the necessity to develop an inclusive emergency management strategy that protects the most at-risk citizens.

Representing other special needs populations, the 2000 United States Census reported that within the City and County of Philadelphia: 7,102 adults were incarcerated and 381 children were housed in juvenile institutions; 10,164 people lived in nursing homes; 251,514 residents spoke a language other than English at home; and, 354,409 listed themselves as having a disability, which does not consider the number of residents who may have a disability but did not report it.

The City's Office of Adult Services (OAS) serves approximately 15,000 people in shelters each year. OAS reports that "on any given night, up to 350 people might be found sleeping on the streets of Center City and vicinity."

Demographic change within the City's neighborhoods should be noted to develop an efficient response to disasters. For example, the population of Center City has grown significantly in the last ten years and is now the third largest residential downtown behind Manhattan and Chicago. Center City's population is 88,000 but on an average workday that number balloons to around 235,000, according to centercityphila.org. Coupled with the shrinking population overall, emergency managers should recognize and consider Center City's high population density in their planning.

Economics

Philadelphia's economic outlook has evolved in recent years as its downtown experiences a renaissance through the refurbishment of historic Center City. The City has soaring real estate values and is seeing an unprecedented boom in new and restorative housing construction.

Significant development is occurring on the Delaware Riverfront as well. The New River City initiative is stimulating private investment on the riverfront; a 2004 Mayoral plan for the riverfront included estimates of $2 billion in private investment and 25,000 new jobs, according to city-data.com. Development has also occurred at the Philadelphia International Airport, with the recent completion of new international and commuter terminals and refurbished airport roadways.

The Ports of Philadelphia, made up of the port of Philadelphia and the ports of southern New Jersey and Delaware, experienced healthy growth this de-

cade. The Ports' central facility is the largest freshwater shipping complex in the world. They handle the largest volume of international tonnage on the East Coast and constitute one of the highest revenue streams for City business. Recent infusion of state funds for capital improvements guarantees the Ports' continued viability in the coming years.

Philadelphia continues to be an attraction for tourists. In 2005, the metropolitan area hosted almost 9 million people per year, which resulted in around $6.8 billion in direct tourism revenues in 2004 and over $7 billion in 2005, according to the Greater Philadelphia Tourism Marketing Corporation. Any comprehensive and effective emergency plans must take into account this non-residential population.

Strategic Themes: Assessment and Recommendations

The Strategic Themes are the major, cross-cutting recommendations that were identified by more than one subcommittee. The themes represent the areas in which the City can take a comprehensive, coordinated approach to implementing recommendations. The EPRC grouped the major recommendations into the following themes:

- Enhance Emergency Management Capacity

- Enhance Emergency Communications

- Integrate Health and Human Services into Emergency Management

- Enhance Federal, State, Regional and Local Partnerships

- Promote Transparency and Community Engagement in Emergency Management

- Ensure Continuity of Government and Continuity of Operations Planning

- Protect Critical Infrastructure and Promote Public-Private Partnerships

- Develop Comprehensive Evacuation Plans

Each theme is organized into three main categories: current strengths, gaps identified by the EPRC, and recommendations on how to improve overall levels of emergency management. **The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.**

1.0 Enhance Emergency Management Capacity

For a city of the size and economic and historic significance of Philadelphia, and given the natural and potential terrorist threats faced by the City, the size and scope of the Philadelphia OEM are severely limited. However, much work has been done to address communications systems interoperability problems (see Emergency Communications Theme for detailed information), and tremendous work has been accomplished with other jurisdictions in the region.

The EPRC found that, although the Police, Fire, and Public Health departments were deeply involved in emergency preparation activities, other departments were not as familiar with the development of plans and ongoing exercises. Familiarity and use of the Incident Command System (ICS), a formal policy of the City, varied across departments as well.

Therefore, there is a need to enhance the emergency management capacity of the City of Philadelphia, its regional partners, and its private and non-profit sector partners. In the following section, recommendations address the most salient needs for emergency management capacity for the City of Philadelphia:

- 1.1 Enhance the capabilities of its OEM
- 1.2 Adopt national best practices and standards for emergency planning and response
- 1.3 Clarify and communicate command and control
- 1.4 Enhance drills, exercises and training, clearly documenting the outcome for improved future exercises and emergency procedures
- 1.5 Upgrade Citywide emergency operations systems and facilities
- 1.6 Update policies and clarify legal authorities

1.1 Enhance the Capabilities of the Office of Emergency Management

1.11 Strengths

For special events, such as the Republican National Convention, OEM, with other City agencies, undertakes extensive preparedness and planning.

The Local Emergency Planning Committee (LEPC), formed by the Superfund Amendment and Reauthorization Act, is charged to protect the health and safety of people, communities and the environment from hazardous materials incidents through planning, prevention and preparedness efforts. It specifically conducts citizen education and training on shelter-in-place and hazardous materials.

The Southeastern Pennsylvania Regional Task Force helped to develop regional response relationships that would aid in response and mitigation of a chemical, biological, radiological, nuclear or explosive (CBRNE) event. City departments also have a high awareness for CBRNE events.

1.12 Gaps

Only five employees are assigned to the OEM. The small number of staff resources severely limits capacity and is insufficient to handle emergency response for a city the size of Philadelphia.

Although the City of Philadelphia has strong tactical ability to manage events, almost no emergency preparedness strategic planning exists with the City. Furthermore, the City has not taken a proactive stance on activation of the Emergency Operations Center (EOC) and has not focused on intelligence
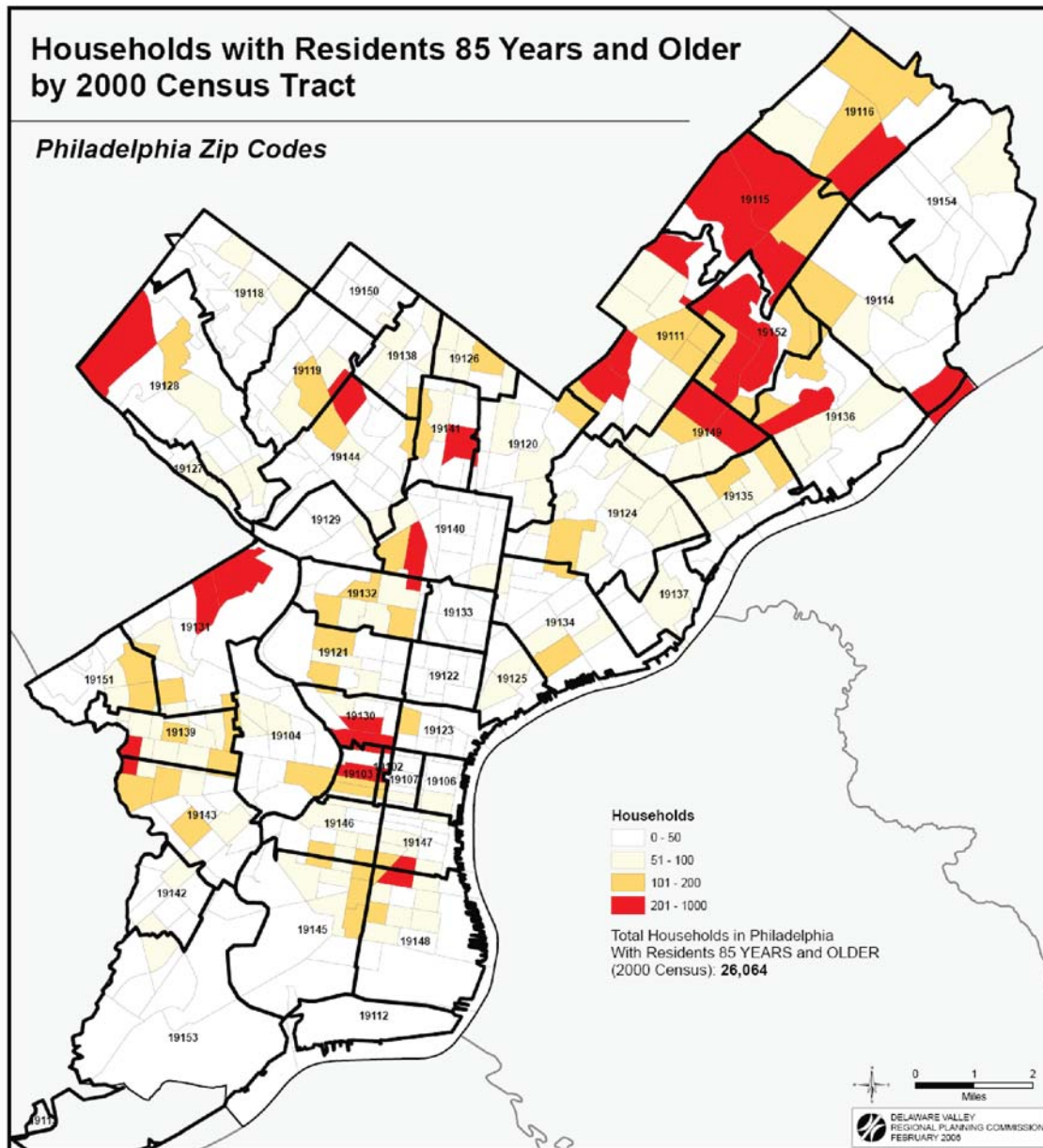
Table1. Source: Delaware Valley Regional Planning Commission

development regarding terrorist or natural threats.

Strategic partners and critical assets to the City are not regularly included in the planning process. This filters down to the departments, which are operating without the benefit of coordination of information and/or citywide resources. The lack of sustainability of emergency preparedness efforts in the City also is a concern of the Committee.

Although the City has experience in planning for large-scale events— such as the Republican National Convention and the Army-Navy Football Game— there is limited effort made to sustain systems once

they have been designed. Each event is viewed as a unique occurrence, and lessons learned from these events are not used for enhancing emergency preparedness. The EPRC team was unable to find written after-action reports (AARs) that document lessons learned from emergencies and major events and that were incorporated into plans. Writing AARs is a common practice for emergency management agencies and is one mechanism to ensure that plans are updated.

Currently, the City does not annually update emergency plans. The current Emergency Operations Plan (EOP) was updated in 2002 and the Hazard

and Vulnerability Analysis was last updated in 1998.

The OEM did not have a copy of the School District's list of Americans with Disabilities Act (ADA)-compliant schools for shelter planning. There is no written plan for distribution of emergency meals at shelters should a large-scale event occur.

No written set of procedures exists for activating non-profit service providers, such as the United Way, to respond to emergencies in coordination with the City's efforts. Additionally, there is confusion among service providers to special needs populations concerning who within the OEM is responsible for working with these citizens, as there is no single point of contact. Service organizations for people with disabilities or other special needs are not involved in training City employees and first responders, identifying individuals with special needs at shelters, or providing assistance as exercise evaluators and as plan reviewers.

1.13 Recommendations

• **Increase the authority and raise the profile of the OEM by appointing a Deputy Managing Director of Emergency Management within the Office of the Managing Director. This would further recognize the critical role of civilian oversight and accountability for public safety and preparedness.**

• **Increase staff in the OEM to perform the following functions: planning, training, exercising, citizen education, and coordination with local businesses, universities, the medical community, and other entities that assist special needs populations.**

• **Staff the OEM 24 hours a day, seven days a week. The City of Philadelphia warrants a 24/7 emergency management function beyond the tactical presence provided by police and fire dispatch operations. Other cities, such as New York, Chicago and Washington, DC operate 24/7.**

• **Develop stronger situational awareness capabilities. Though the City has the capacity to tactically manage events, the ability to strategically plan for and anticipate events is limited. The City**

should work to develop strategic emergency management capabilities, deploy appropriate technology to monitor and assess impending emergency events, and enhance overall situational awareness capacity.

• **Assign positions in the OEM with the responsibility to work with special needs/vulnerable populations and organizations that provide services to special needs/vulnerable populations. Although several positions will have responsibilities for special needs populations, designate a single point-of-contact for outside agencies who work with special needs populations.**

Planning
• Develop a plan that appropriately staffs and funds the OEM to perform its essential functions, including :
  o Long-term, strategic planning
  o Resource and logistics plan
  o Prophylaxis plans and protocols
  o Respiratory protection program
  o Hazardous materials response through expansion of capacity
  o Evacuation plans
  o Citizen education and training
  o Volunteer management and credentialing
  o Donations management
  o Annual update of emergency plans
  o Integration of hospitals, businesses, utilities, universities and other critical stakeholders into the City's emergency planning process
  o After-action reports that document lessons learned to be incorporated into plans

Technology
• Identify and incorporate interoperable technology that can effectively combat new threats.

• Prepare comprehensive Geographic Information Systems (GIS) plotting of all shelters with overlays to show various levels of accessibility and/or related utilities and accommodations. (For example, is there available backup power for medication refrigeration and for powered ventilating equipment?)

EMERGENCY
PREPAREDNESS,
RESPONSE AND
RECOVERY

Federal agencies

State agencies

Regional government partners

POLICE · FIRE · HEALTH · OTHER DEPTS. · EMERG. MGT.

<- Horizontal Integration →

Medical Community

Utilities & Critical Infrastructure

Informed Citizenry

VERTICAL INTEGRATION
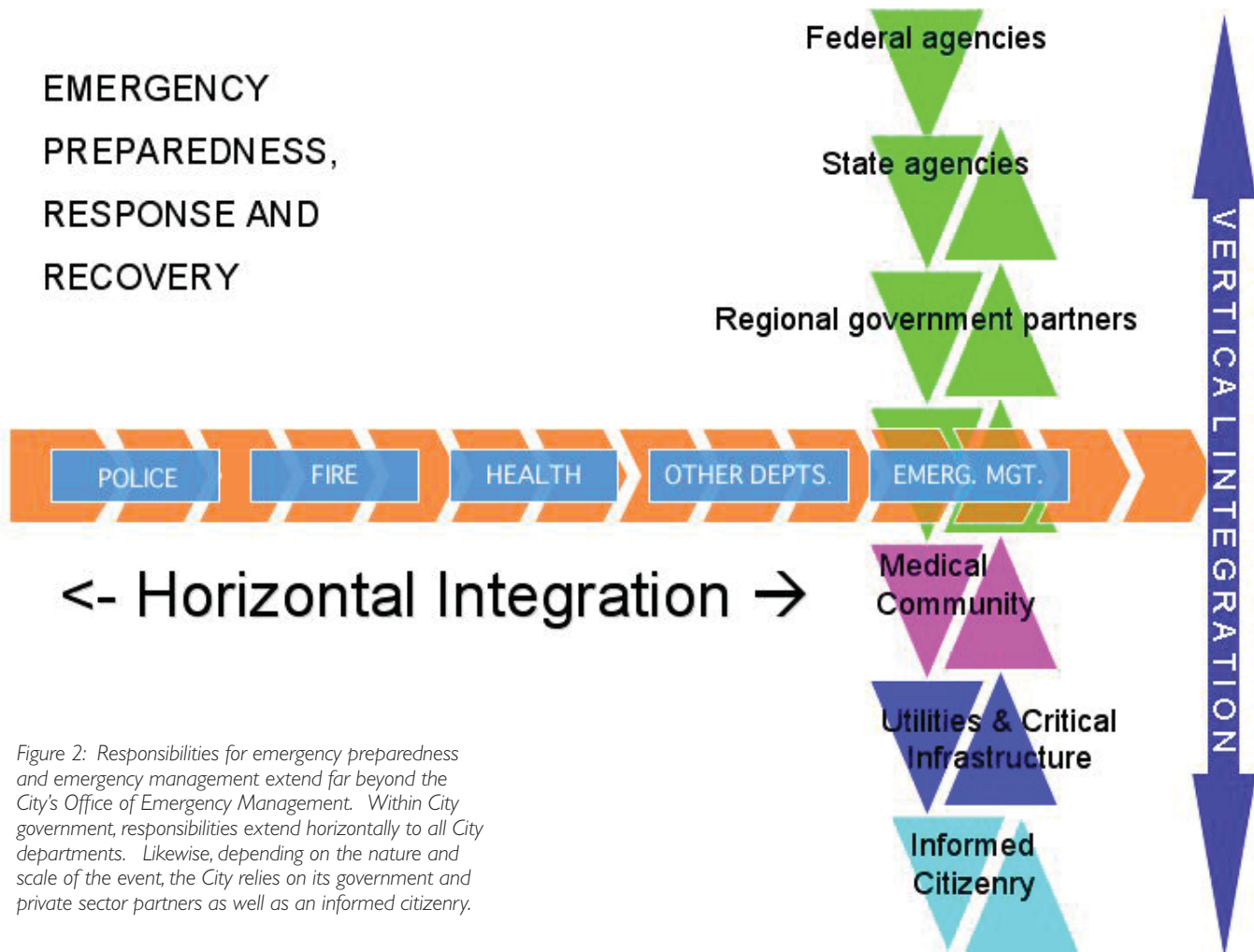
Figure 2: Responsibilities for emergency preparedness and emergency management extend far beyond the City's Office of Emergency Management. Within City government, responsibilities extend horizontally to all City departments. Likewise, depending on the nature and scale of the event, the City relies on its government and private sector partners as well as an informed citizenry.

Coordination and Organizational Communications
• Improve organizational communications, which will result in a similar improvement in preparedness and response activities.

• Work with and coordinate with other City agencies to identify appropriate resources for successful emergency preparedness and to sustain any preparedness efforts.

1.2 Adopt National Best Practices and Standards for Emergency Planning and Response

The capacity of the City's emergency management extends far beyond the roles and responsibilities of

the OEM. To some, it is obvious that emergency management authority includes at least the Police and Fire Departments. The recent focus on the potential threat of pandemic flu clarifies that the Public Health Department clearly has a role in emergency management. In fact, all departments of City government have roles and responsibilities regarding emergency management.

The scale of some emergencies may even exceed the capacity of the City to handle it alone, requiring the assistance and cooperation not only of national, Commonwealth, and regional partners, but also the active participation of the private and non-profit sectors and an educated and prepared general public.

The National Response Plan (NRP), developed

by the Department of Homeland Security (DHS), establishes a comprehensive, all-hazards approach to enhance the ability of the United States to manage domestic incidents. The plan incorporates best practices and procedures from incident management disciplines—homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector—and integrates them into a unified structure. It forms the basis of federal government coordination with state, local and tribal governments and the private sector during incidents. The NRP is predicated on NIMS.

Together the NRP and NIMS provide a nationwide template for coordination to prevent or respond to threats and incidents regardless of cause, size or complexity.

The NRP identifies Emergency Support Functions (ESFs) to provide the structure for coordinating interagency support for emergencies. This approach is based on the accepted premise that effective responses to all disasters have common elements and that those elements form the basis for comprehensive and collaborative disaster planning. The ESFs that are recommended in NIMS are organized into the following categories:

1. Transportation
2. Communications
3. Public Works
4. Fire
5. Emergency Management
6. Mass Care
7. Resource Support
8. Public Health
9. Search and Rescue
10. Oil and Hazardous Materials
11. Agriculture/Food/Natural Resources
12. Energy
13. Public Safety
14. Long-Term Recovery
15. External Affairs

1.21 Strengths

The City has a detailed Emergency Operations Plan with annexes addressing roles and responsibilities for emergency management response. Extensive regional planning has been, and continues to be, completed through the Southeastern Pennsylvania Regional Task Force and other regional groups.

1.22 Gaps

The federal government and the Commonwealth of Pennsylvania adopted similar versions of the functional approach to emergency management. The Pennsylvania Emergency Management Agency (PEMA) issued guidance in 2003 requiring the use of ESFs in operation plans and approach. Currently, the City of Philadelphia does not organize their Emergency Operations Plan (EOP) or their planning efforts by ESFs. This could create confusion during an event that required state and federal assistance.

1.23 Recommendation

• **Revise the EOP to adopt the established functional approach for preparing for and responding to emergencies, thereby providing a common method, language, and protocol for responding to disasters. Adopt this DHS functional approach to disaster preparedness and response.**

1.3 Clarify Command and Control

Command and control involve directing, controlling, and coordinating response and recovery operations at any incident. When disasters cross jurisdictional and organizational lines of responsibility, direct lines of command and control can be strained and confused at the time they are most needed. Because this has become a common problem among jurisdictions throughout the United States, ICS and NIMS evolved to address this issue.

Command and control are divided between operations at the field level and strategic and coordinated

Philadelphia Fire Department

response at the Managing Director level. Important aspects of command and control include the following:

• Adoption and use of the ICS
• Detailed organizational roles, titles and responsibilities for each incident management function that is specified in the emergency operations plan
• Sustainable, ongoing planning functions, such as policies and procedures, that detail response and training activities

As noted previously, the City of Philadelphia has repeatedly come together to manage significant planned events and moderate unplanned events. Through the EPRC process, it has been noted that much of this is accomplished through informal networks with limited documentation and procedures.

Given the lack of depth in emergency management, the possible retirement of key city staff through the Deferred Retirement Option Plan, and the recognized need for intergovernmental cooperation, it is even more important that the City adopt, implement, and exercise the formal structures used by the

Federal Government and the Commonwealth.

NIMS training is a requirement to receive preparedness funding from DHS, and training for designated personnel and select elected officials must be in place by September 2006. The City has adopted some elements of these systems, especially for first responders. However, the City would benefit from more complete compliance with these standards by developing a clear understanding of roles before the disaster and facilitating outside assistance and coordinating activities when other jurisdictions become involved.

1.31 Strengths

The City has adopted some elements of the NIMS and ICS systems, especially for first responders.

1.32 Gaps

NIMS and ICS training have not been promoted or integrated across City departments. Not all City leaders and personnel have completed NIMS training, as is required for preparedness grant funding

from DHS.

1.33 Recommendations

• Adopt ICS and NIMS as City policy.

• Provide focused training on ICS and NIMS within all organizations and departments that have a role in emergency management.

• Enhance and sustain command-level training for police and fire personnel.

1.4 Enhance Drills, Exercises and Training

1.41 Strengths

The City of Philadelphia participates in a variety of emergency preparedness drills. Both the Police and Fire Departments have training divisions for emergency response. For instance, many personnel in both organizations have been trained in CBRNE activities, including hazardous material operational response, decontamination, and personal protective equipment. Furthermore, City hospitals regularly conduct disaster drills. Regional after-action reports identified areas of improvement for emergency response activities.

Some City agencies have built strong connections with local community organizations to provide planning, training and exercises for populations with special needs. The City's Police Department is working with City schools to assess plans regarding special needs populations. Special needs registries already are in place through City departments such as police and housing and can be used in emergency planning.

1.42 Gaps

Although the City has participated in drills that test single functional areas, the City has not conducted a comprehensive, citywide drill to establish a baseline of performance. Few process exists to coordinate information regarding training or exercises. Senior personnel need strategic command training for large incidents. The ability to train large numbers

of personnel is limited due to the lack of training resource coordination. Core competencies, levels of performance, and performance expectations should be developed. Emergency preparedness training programs are not standardized, and data collection tools to help develop training needs are not in place.

Special Needs/Vulnerable Populations are not clearly defined and are not integrated in City plans. FEMA Course G197, "Emergency Planning and Special Needs Populations", or similar courses that would help City officials prepare for special needs populations are not available through the City or Commonwealth.

1.43 Recommendations

• Schedule exercises to test City plans and the City's EOC.

• Designate a person or agency to focus on city-wide training. Designate staff in the OEM to focus on conducting exercises for City staff, including Cabinet-level staff and elected officials, who would be expected to lead in a real event.

• Enhance CBRNE detection and response capabilities through special operations training and resources, specifically, but not limited to training on technical rescue, hazmat response teams, decontamination operations, bomb squad, and police Major Incident Response Team.

• Include organizations that work with the special needs population in exercises and training to ensure effective planning. Develop a list of community organizations and individuals that can assist the City in these efforts.

Exercises
• Organize and conduct City-only table top or senior-level exercises.

Training
• Increase departmental depth of knowledge in the area of emergency preparedness through training and coordination. Train city personnel on the National Incident Management System (NIMS)

and Incident Command System (ICS).

- Consider a training exchange program between City agencies and organizations that work with special needs populations.

- Require OEM and other key staff to take FEMA Course G197, available online. G197 is a basic course for emergency planning and special needs populations. The Institute on Disabilities is developing a more robust version of this course to include in-depth information on assistive technology and how it relates to emergency preparedness, readiness, and response. The model will include live, interactive online course sessions and a virtual table top exercise.

- Train City Council, staff, and other City personnel on NIMS and ICS.

- Work with strategic partners and local hospitals to coordinate training and standardize equipment and personnel. Equipment purchased should be interoperable between institutions and agencies.

- Sustain efforts of providing financial support to continue training and maintain equipment.

1.5 Upgrade Citywide Emergency Operations Systems and Facilities

The EOC shows age and little investment. The adequacy of the EOC will directly affect the likelihood of effective coordination and command and control in a disaster. The 911 call center and police communications centers have physical vulnerabilities. Security enhancements and damage mitigation opportunities provided by modern surveillance systems are relatively absent in most aspects of the City's operations and systems. However, in a non-binding referendum held in May, City residents overwhelmingly voted for the expanded use of surveillance cameras.

1.51 Strengths

Federal funding has been provided to expand and upgrade the current EOC, located in the basement of the Fire Administration Building. The City will be receiving Map Table technology that will enhance the City's ability to assess the ramifications of emergency events on specific geographic areas and populations. Seats also are assigned in the EOC for primary utilities and for SEPTA.

The Fire and Police Departments have developed and equipped personnel to address the CBRNE response. Most recently, the Fire Department Special Operations Division received two new command post vehicles to serve the north and south sides of the City. These vehicles will support command stations and provide specialized equipment.

1.52 Gaps

Even with the planned expansion and upgrade, the EOC is underdeveloped compared to those in similar urban areas. The current EOC backup that is located at the former Navy Yard has limited capabilities. No exercise has been conducted at the EOC in several years, although numerous regional exercises have occurred during the past few years.

Police Communications, including Dispatch and 911 Center, are located on the second floor of headquarters. No barriers on the street prohibit vehicles from driving into the building, threatening police command and communications infrastructure.

In addition, two physical facilities, the Health Department Laboratory and the Bomb Squad Facility, are in desperate need of replacement.

1.53 Recommendations

- Create a new Joint Emergency Operations Center outside the immediate Center City area. The Center could provide a common location for important objectives:
    o The integration of the OEM and the EOC, the 911 Center, and Police and Fire dispatch
    o The establishment of an appropriate facility for the Bomb Squad
    o A consolidated Public Health Lab, including a Level 3 Lab
    o A Philadelphia regional operation center for other entities such as a replacement backup

center for Southeastern Pennsylvania Transportation Authority (SEPTA) operations

• Recognizing the time required to achieve a Joint Emergency Operations Center, address the following in the short-run:

> o Designate and develop immediately sufficient backup sites, outside Center City, for the 911 Center, police communications, fire communications, a communications center for continuity of government, and the EOC.

• Incorporate state-of-the-art technology in the EOC that fully integrates other City software systems and capabilities.

• Increase the disaster recovery and backup capability of citywide and department mission critical information technology systems.

• Install barriers to protect the Police Administration Building, which houses the City's entire 911 operations and Police dispatch operations.

• Enhance CBRNE operations and systems through Special Operations to address the increasing natural and terrorist threats to the City of Philadelphia, specifically including but not limited to:

> o Identification of Critical Personnel
> o Technical Rescue
> o Hazardous Materials Teams
> o Decontamination Operations
> o Bomb Squad
> o MIRT Team

• Sustain CBRNE operations through yearly budgetary support for training and education to ensure the staff is knowledgeable and fully equipped to deal with a CBRNE incident.

• Enhance the utilization of surveillance cameras and technology, allowing the City to improve its situational awareness capabilities.

1.6 Update Policies and Clarify Legal Authorities

The Philadelphia City Solicitor is committing significant staff and resources to City emergency preparedness planning and to the EPRC process. Since September 11, 2001, the City dedicated a full-time attorney to issues of homeland security and emergency management. An extensive analysis of the policies and laws pertaining to emergency preparedness was conducted by the Law Department, and new legislation that addresses current gaps in the Philadelphia Code is being drafted. A legal resource guide that outlines the legal framework relating to emergency preparedness is being produced to support the City's first responders.

1.61 Strengths

The Legal and Intergovernmental Subcommittee identified that Federal Emergency Management Agency (FEMA) regulations require competitively bid contracts for goods and services such as debris removal in order for federal reimbursement to be available.

The Office of Adult Services (OAS) can provide 1,000 meals every eight hours. Currently OAS has the resources to shelter approximately 2,500 and its goal is to shelter 10,000 or more citizens.

When addressing the needs of vulnerable populations, the leadership of the EPRC has come to consensus on the term and definition used to refer to vulnerable populations. The City has accepted the definition, as created by the EPRC Vulnerable Populations Subcommittee.

The Subcommittee's definition includes:

> ...the segment of the community with increased risk in a disaster. The term encompasses groups that may not be able to access (or have reduced access to) the information, resources or services offered by the community in disaster preparedness, response and recovery. Traditionally, the vulnerable populations include

subgroups such as those with physical, mental or cognitive disabilities (e.g., who rely on augmented hearing or mobility devices); illiterate or non-English speaking; the homeless; people who depend on continuous care from a hospital, nursing home, drug rehabilitation facility, prison facility, or home healthcare; individuals or families living in poverty; the unemployed; the elderly and frail; pets and service animals and the people who depend on them; and children.

However, the term "vulnerable populations," as it has been used in the context of the Subcommittee's work, differs from commonly used emergency management terminology. Although the federal government is not wholly consistent in its terminology, most national literature uses the term "special needs" population to refer to individuals who have added requirements in an emergency. For the public safety community, the term "vulnerable populations" generally refers to the population who is at risk due to their close proximity to a hazardous location. For example, the residents who live within a 10-mile radius of a nuclear power plant often are referred to as a "vulnerable population." "Vulnerable populations" for health workers can have a slightly different meaning. It can signify those whose ability to give informed consent may be compromised due to their religion, sex, income level, etc.

1.62 Gaps

Although a City attorney from the Law Department is designated as a resource on homeland security and emergency management issues, the Law Department has not traditionally and consistently been involved in emergency preparedness planning and response operations.

The Philadelphia Code § 10-819 (see Appendix A for a detailed review of the code) provides the Mayor with authority to declare a state of emergency and with broad powers to control or halt the movement of people and transportation in and out of the City, restrict the sale of gasoline and firearms, and establish a curfew; however, it does not explicitly authorize the Mayor to evacuate the City, order a large-scale shelter-in place of citizens, or address current threat types and levels.

Pennsylvania Law requires that City Council ratify the Mayor's declaration of a state of emergency within seven days. The Philadelphia Code can be interpreted to provide that City Council has "pre-ratified" an emergency declaration for up to two weeks. In order to provide greater flexibility, the Philadelphia Code should be amended to extend the pre-ratification of a Mayor's declaration of emergency from two weeks to 30 days.

The City must rely on volunteers to supplement its workforce in the event of a disaster, especially for skilled workers such as doctors and nurses. If these skilled professionals are not guaranteed sufficient protections under state law, they may be hesitant to jeopardize their careers on the chance that they may be injured or sued should they volunteer. The City should not be required to accept such liability without increased state funded liability and worker's compensation protections.

Few formal partnerships, agreements, and/or organizational structures exist between the City and organizations that either serve or provide disaster-related services that affect special needs populations. For instance, there are no formal, written agreements with the School District to use school facilities as shelters or dispensing sites in an emergency.

The City has not initiated a comprehensive effort to identify the pre-event contracts that would be required to shelter and feed mass numbers of citizens in a catastrophic event.

In addition, the City's MOU for construction and other services with Philadelphia Housing Authority (PHA) expired in September 2005.

No pre-event contracts are in place for animal cremation in the event of a large-scale disaster. Though the Department of Human Services has a contract for sign language interpreting services, it is not part of Global Philadelphia's citywide interpretation services and therefore is not widely known.

1.63 Recommendations

• Update the Mayor's authority to declare a state

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMiullin, Philadelphia International Airport

of emergency. An updated Code provision will more effectively address today's threats of natural or man-made disasters and terrorist attacks.

• Work to amend Commonwealth law that directly affects the City of Philadelphia. Title 35 of the Pennsylvania Emergency Management Services Code is currently being reviewed by the Commonwealth. In addition to those proposed amendments already identified by the Commonwealth such as expanded protections regarding volunteer liability and worker's compensation, the EPRC recommends an amendment to Commonwealth Law delegating to the Mayor similar powers as provided to the Governor to exercise temporary control of any private, public or quasi-public property if necessary to respond to a disaster, subject to applicable compensation requirements. Without an amendment, there could be delays in responding to large scale evacuations, mass shelter-in-place or quarantine orders relating to disasters affecting Philadelphia. In addition, the EPRC recommends amending the Pennsylvania Juvenile Act to provide county children and youth agencies with greater flexibility to obtain emergency court orders and blanket waivers for the emergency placement of children who may have lost family following a disaster and sharing information with law enforcement agencies to assist with identifying, locating and protecting children.

• Create an Interagency Procurement Committee by Executive Order to evaluate the need for various goods and services to be contracted prior to a disaster. Federal Emergency Management Agency regulations require competitively bid contracts for goods and services, such as debris removal, for federal reimbursement. For example, the Office of Adult Services (OAS) has the resources to provide relief (food, water and shelter) for 1,000 to 2,000 citizens, and the American Red Cross—Southeastern Pennsylvania Chapter can provide for up to 10,000 or more citizens, but any event that would affect 100,000 or more citizens may require significant resources that may be difficult to acquire during or immediately after any event. Pre-event contracts for these

goods and services would enhance the City's ability to respond effectively to a disaster, and would enable the City to sustain itself for 72 hours or more following a major disaster.

- **Consider Council legislation to conform Council rules and voting requirements to emergency conditions. Specifically, consider legislation to respond to an emergency situation where less than a quorum of statutory members may be available. A rule change could define a quorum as consisting of all members of Council known to be available. Similar changes to the Home Rule Charter should be considered to permit less than a majority of available Council members to adopt legislation, following a declaration of emergency by the Mayor.**

- **Incorporate the term "individuals with special needs" or "Special Needs Population" to refer to the groups who have unique needs in an emergency as identified in the Vulnerable Populations Subcommittee's definition. This definition and terminology should be incorporated throughout the City's emergency preparedness efforts.**

- Expand current Commonwealth laws regarding volunteer protection of workers' compensation and immunity from liability. An amendment to the state law has already been proposed in the Pennsylvania General Assembly for workers' compensation protection and immunity from liability for volunteers. The City recommends that increased worker's compensation payments be provided to volunteers to encourage volunteerism after a disaster. The City must rely on volunteers to supplement its workforce in the event of a disaster, especially skilled workers such as doctors and nurses. If these skilled professionals are not guaranteed sufficient protections under state and local law, then they may be hesitant to jeopardize their careers on the chance that they may get injured or sued should they volunteer. The City should not be required to accept such liability without increased state funded liability and workman's compensation protections.

Planning
- Fully integrate the Law Department into emergency preparedness planning and response functions. It is essential that the Law Department assist in the review and implementation of training, planning, and response standards for first responders in accordance with federal and state requirements. Once the City's EOP is revised, a complete legal review by the Law Department will ensure compliance with local, state, and federal laws.

Agreements
- Sign an updated version of the MOU between the PHA and the City, detailing services that the PHA provides to the City in an emergency.

- Set meetings with the School District General Counsel, the Office of the Managing Director, and the Law Department to develop agreements for the use of school district facilities and resources (including vehicles) in a disaster. Discussions should address available resources, expectations, authority, liability, and reimbursement issues, among other areas. Risk Management offices of the School District and City should help to craft liability language.

- Create contracts with one or more organizations for the removal and disposition of deceased animals in an emergency.

2.0 Enhance Emergency Communications

Communication ^{and} communications systems are critical to effective command and control. The shortcomings identified in this report should be addressed by establishing more structured institutional relationships both within the City government and among the City and outside entities, including the Southeastern Pennsylvania Transportation Authority (SEPTA), other mass transit providers, the medical sector, the School District, the financial sector, the federal sector, and other private and non-government sector entities.

The City has long recognized the importance of creating and strengthening interoperable communication with its regional partners. With the substantial assistance of federal Urban Area Security Initiative (UASI) grants, the City has both led and participated in several ongoing initiatives. Although significant steps are under way to address radio communications interoperability within the City and surrounding areas, the lack of radio communications in the underground portions of the subway system stands out as a major gap.

The City should continue to enhance awareness of potential threats to improve command and control through new technologies.

Recommendations for emergency communications are organized by the following components:
- 2.1 Primary Communication Infrastructure
- 2.2 Police and Fire Department Communications
- 2.3 Interoperability
- 2.4 Public and Private Health Network Communications
- 2.5 Information Technology

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

2.1 Primary Communication Infrastructure

2.11 Strengths

Verizon is the sole provider of landline phone service for the City government. Extensive redundancies and backup systems are in place. It is relevant to note that Verizon did not lose any operations or the ability to provide service during the 2003 three-day blackout in the Northeast.

2.12 Gaps

The City and Verizon have not conducted a joint exercise to test communication systems during a major power outage.

2.13 Recommendation

- Initiate a joint exercise between PECO and Verizon concerning loss of power and primary communications systems for first responders, hospitals and the City.

2.2 Police and Fire Department Communications

2.21 Strengths

The job of ensuring the safety of the public in the City of Philadelphia is shared by many different agencies at every level of government. The need for cooperation and communication among these various agencies, especially in the underground areas, is critical for event mitigation or mass evacuation from any emergency event.

The Motorola 800 MHz ASTRO™ Digital Trunk Radio Communications System is the current public safety radio communications system used in Philadelphia. The overall system consists of two identical 15-channel simulcast trunked systems connected

through a SmartZone® switch. One 15-channel system, dubbed System "A", is used by most City agencies, including Fire and EMS, with the exception of the Police Department. The second system, System "B", is used solely by the Police Department. All 30 channels are located at each of 10 tower sites located within the city. The Police Department was the final City agency to make the transition to the new radio system in 2002.

The SmartZone® switch allows for communication between users and increased reliability through redundancy of key system components. The City contracted for 95 percent above ground, in-building coverage. Additional coverage was provided for high-density buildings in the downtown area. The implementation of this radio system gave public safety agencies within the City the ability to communicate with one another over common talk groups. Two fully interoperable talk groups use a multidisciplinary approach between the Police and Fire departments that is programmed into every agency radio. In addition, there are three interoperable talk groups for the Philadelphia Emergency Operations Center (EOC) and three citywide event talk groups that enable all City departments to communicate in the event of a planned major event or an emergency.

The City is in the process of installing a new Computer Assisted Dispatch (CAD) system to be used by Police and Fire and City Communications. SEPTA has purchased the same CAD system, which will provide interoperability with city departments. This will be the first installation of this system, provided by Northrop Grumman, and is expected to be completed in October, 2006.

The 911 Center at the Police Administration Building is also being upgraded. Two separate telephone central offices provide redundant operations support for police communications. As a matter of policy, the City will not certify new phone providers, including those providing Voice Over Internet Protocol (VOIP) service, until a demonstrated 911 functionality is in place.

The work of the Center City Crime Control unit provides an effective mechanism for a major public-private emergency communications system through

the Roam Secure/text messaging system.

2.22 Gaps

Police and Fire radios do not work in underground transit tunnels. Given a history of incidents underground, including a major derailment in 1990, and the apparent increasing threat of terrorist attacks in transit systems worldwide, this is one of the most serious gaps identified through the EPRC process.

Neither the existing nor the new Police and Fire CAD system is available in the EOC other than by bringing in mobile units from vehicles. Sufficient backup sites for the 911 Center, police communications, fire communications, and the EOC are required.

SEPTA's backup communications facility is located near its primary site in Center City Philadelphia. Its close proximity to the primary communications systems and its position in a vulnerable location makes SEPTA's entire communication system susceptible to a possible terrorist attack.

Unlike many private and public sector entities, the City maintains separate departments for communications and information services. This includes the Police and Fire Departments, which also have individual communication departments. The EPRC review revealed that a lack of a united approach to communications challenges may cause problems in certain instances. Also, federal government agency (non-law enforcement) employee communications during emergencies require better coordination.

2.23 Recommendations

• **Focus and consolidate current efforts to urgently address underground communication issues under a single City/Commonwealth/SEPTA Task Force. This Task Force should be charged with identifying, obtaining funding for, and implementing a solution for underground communications. This should be among the highest priorities of the EPRC implementation effort.**

• Continue upgrading the capabilities of the EOC. Subject to appropriate grant funding, opportunities

PEIRS

Camden County

Bulington County

Delaware County

Bucks County

Chester County

Salem County

Montgomery County

Internet

Regional

Philadelphia

Gloucester County

University of Pennsylvania

Delaware River Port Authority

DVHC

Temple University

EPTA
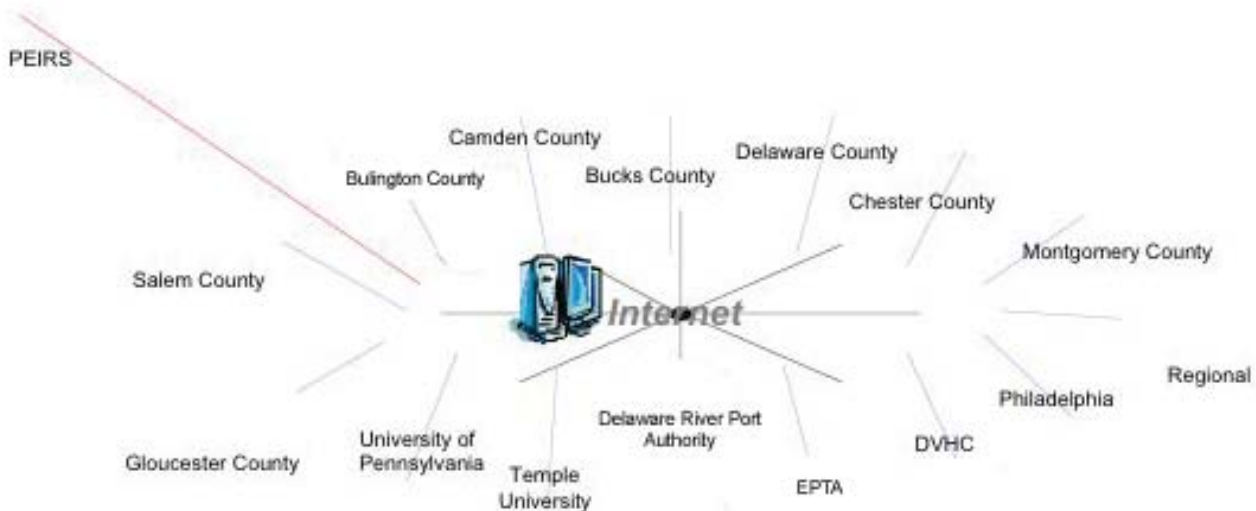
Credit: John MacLean, Philadelphia Office of Emergency Management

exist for acquisition and deployment of additional technologies and should be pursued after appropriate analysis.

- Explore granting limited Fire Department communications system access to private ambulance services when required by the event. The radios would be activated by the Fire Department.

- Consider consolidating the City's disparate communication functions, especially between Police and Fire.

2.3 Interoperability

2.31 Strengths

Several interoperability initiatives are under way and are intended to provide short- and long-term solutions to address known interoperability problems within the region.   Each is described briefly below.

U.S. Department of Justice (DOJ) High Risk Metropolitan Area Interoperability Assistance Project
Under the leadership of the DOJ, an effort was launched to address the inability of major federal agencies to communicate with each other in the largest 25 major metropolitan regions.   As part of this effort, the Commonwealth and City of Philadelphia public safety agencies were included in the de-

ployed technical solution. Philadelphia attached the DOJ-supplied communications equipment directly to the City's 800 MHz Motorola Radio system. Once fully installed, the federal channel will be available for use through any of the dispatch consoles in the City's four communication centers.

Southeastern Pennsylvania Regional Task Force Radio Interoperability Projects:
Tier I Short Range Tactical Communications Interoperability Solution
Designed to provide short-range tactical communications between first responder agencies from multiple jurisdictions, this solution uses a mobile radio communications gateway patching device in addition to 10 programmed mobile radios, one from each of the participating counties. The device and radios are to be transported to an emergency incident scene using the City's Mobile Command Post 1 vehicle. The Tactical Communications Bridge (TCB-2) device manufactured by Link Communications was selected for deployment due to its ease of use, performance in the testing review process and price. Through this Tier I solution, first responders can communicate across agencies or jurisdictions while on the scene. Full roll-out is expected in the third quarter of 2006.

Tier II Long Term Solution
The Task Force requested and received a $6.4 million federal UASI grant to implement a longer-term solution that uses Microwave Communications Technology to link the 11-county dispatch center

Courtesy of Philadelphia Fire Department

consoles in a Console-to-Console bridge link. To date, the Pennsylvania counties of Philadelphia, Bucks, Chester, Delaware, and Montgomery; the New Jersey Counties of Burlington, Camden, Salem, Gloucester, and Cumberland; and New Castle County, Delaware, are participating in the project. When fully implemented, dispatchers from any of the participating Philadelphia dispatch centers will be able to select any other county's dispatch console as a channel and communicate directly with the participating county. For example, Philadelphia would be able to communicate with Delaware County for an incident at the Philadelphia International Airport. The engineering study phase is scheduled to be completed as of the writing of this report.

Tier III Data Communications Interoperability: E Team Emergency Event Management and Tracking System
Also fully funded through a $2.6 million UASI grant, this solution uses the Internet as a common communications media to link the 15 project servers located in participating regional agencies. This solution significantly enhances the City's and the region's real-time situational awareness in preparation for, and in response to, an emergency event. For example, the system offers the ability to share incident data among regional emergency managers and first responders as well as participating counties, regional agencies, hospitals, universities and appropriate

Commonwealth agencies such as PEMA. The system also offers general flexibility to add or remove users at will. Incident reports, situation reports, and resource requests can be simultaneously communicated to appropriate parties through system alert bulletins.

The Alert Philadelphia emergency notification system, operated by the Center City District in cooperation with the Police Department, proved to be effective and popular.

The Pennsylvania National Guard has substantial satellite and emergency communications capabilities, most of which are vehicle-based and supported by back-up generators. The Guard also offers both secure and open video conferencing capabilities.

With leadership by the City's Office of Emergency Management (OEM), most, if not all, of the 11-county region has installed the E Team incident management system software through a joint licensing agreement.

2.32 Gaps

The first step in the EPRC process was to identify known gaps. Interoperability issues were identified in the first meeting of the EPRC's Critical Infrastruc-

ture Task Force. Potential solutions to those issues were also described as noted in the strengths above. Therefore it is not necessary to reiterate the individual gaps to be addressed by these initiatives.

As the City and participants become more reliant on the Alert Philadelphia emergency notification system, the need for additional personnel support for this and related functions becomes more apparent.

Even though the OEM is promoting use of the E Team incident management system software throughout the region, the Police and Fire Departments do not use E Team and have not agreed to use it. A technical solution was identified, but will not be included in the current installation; it requires policy changes and cooperation by Police and Fire command.

2.33 Recommendations

• Continue to implement ongoing interoperability initiatives:

o Federal: DOJ High Risk Metropolitan Area Interoperability Assistance Project.

    o Tier I: Tactical Communications Bridge.

    o Tier II: Long -Term Solution. Use Microwave Communications Technology to link the 11-county dispatch center consoles in a Console-to-Console bridge link that, as noted, has been fully funded using $6.4 million in UASI funds.

    o Tier III: E Team Emergency Management Information Software. Increase the aggressive implementation and use of the E Team emergency management information software.

• Continue to expand the utilization of the E Team emergency management internet-based software to regional and other appropriate partners. Clarify Police and Fire Department procedures regarding the utilization of the E Team software.

• Authorize and support console integration of

certain Commonwealth and Philadelphia radio frequencies. **Develop a list of the systems that each department uses and the representative or manager of those systems.**

• Acquire command and management real-time communications capability by using satellite equipment or a technically available alternative in the event of major communication systems break down.

• Establish rules for the purchase or maintenance of radios for disaster management purposes by all non-municipal ambulances that have direct radio contact to units in the field.

• Invest in a uniform alerting system to expand current capacity for urgent notification of critical government personnel to other critical populations, including schools (staff and families), volunteer partners, and other stakeholders. The City's and the Center City District's current investment in the Alert Philadelphia system with the Roam Secure Alert Network (RSAN) might support this recommendation. Prioritize standardization and interoperability with existing systems. Consider adding functionality that would require specific recipients to acknowledge receipt of messages.

• Integrate the School District into existing or future notification systems for compatibility and uniform knowledge of use. Combine radio, TV, web, and land-line, cellular, and TTY phones in the notification system. Establish web-based notification protocols throughout school systems and the homes of students, faculty, and staff, and integrate with the e-mail notification systems for parents and employers of caregivers. Ensure that the system is compatible with the various emergency notification broadcast systems that are used by OEM, Fire and Police Departments.

• Develop a plan to integrate community-based communications support (similar to the existing Philadelphia Operation Town Watch communications) with response and recovery efforts for natural disasters.

2.4 Public and Private Health Network Communications

2.41 Strengths

The Commonwealth provided most hospitals in the region with 800 MHz radios.

2.42 Gaps

The radio system between EMS ambulances and hospitals is one-way, and no formalized radio communications system exists between non-municipal ambulances and the Fire Department or hospitals. No protocols are in place for the use or implementation of the state 800 MHz system for hospitals. The current paging system for hospitals depends upon a vendor with limited capability that can become overwhelmed during a disaster.

2.43 Recommendations

• **Support implementation of CARES to enhance E Team and automate the collection of key data to maintain a "real-time" picture of the operational readiness of the healthcare system in order to increase surge capacity, facilitate victim tracking, strengthen surveillance, and more efficiently respond to state and federal reporting requirements.**

• **Push the development of two-way radio capability among hospitals, private ambulances, and City EMS ambulances.**

• **Lead a comprehensive evaluation of current communications capabilities for healthcare organizations and develop an integrated plan for use of satellite phones, 800 MHz radios, paging systems, HAM radios, text messaging, and other technologies. Coordinate these efforts with those of the Commonwealth.**

• Require non-municipal ambulances to maintain 800 MHz radios for disaster management as part of licensure process.

• Assess tactical communications and coordination

needs for emergency response personnel and purchase additional equipment.

• Develop plans for redundancy and identify needs and sources for supplemental power and technology to support communications during emergency settings, such as extended power outages and telephone failures.

2.5 Information Technology

2.51 Recommendations

• **Establish a comprehensive approach for the purchase and integration of communication and information technology. Ensure that all technology and information that is provided to the public, whether distributed electronically or in print, is accessible according the guidelines provided by Section 508 of the Rehabilitation Act. This should include information concerning accessible shelters and shelters for pets.**

• Develop citywide use of Geographic Information Systems (GIS). Use the databases and GIS capabilities of the Delaware Valley Regional Planning Commission and the City Planning Department to provide intelligence for emergency preparedness. Also, use the available GIS resources to provide intelligence on emergency preparation issues, which will enhance the City's ability to simulate emergency situations and manage actual situations.

    o Example of the value of the GIS system and related technology are as follows:

• Maps were developed in the EPRC process to identify regions of the City with higher concentrations of senior citizens.

• The acquisition of Map Table software and the integration of this tool with existing capabilities will allow for more efficient and detailed information to be used in the emergency preparedness process.

3.0 Integrate Health And Human Services Into Emergency Management

With the possibility of chemical and biological attacks or pandemic disease outbreaks that would force cities to treat mass numbers of casualties, emergency management professionals have realized the importance of planning, training, and exercising more closely with hospitals, public health facilities, the broader medical community, and agencies that provide emergency shelter and support services.

The city of Philadelphia and the surrounding region have tremendous health resources and hospitals available. The hospitals employ more than 100,000 people in the regional area. The hospitals maintain comprehensive disaster plans and conduct annual disaster drills.

The City's Office of Adult Services (OAS) and American Red Cross—Southeastern Pennsylvania Chapter (ARC-SEPA) have developed detailed emergency response plans and demonstrated the capability to effectively comfort, shelter, and feed the victims of fire and other emergencies that have the scale and complexity encountered in a city the size of Philadelphia.

The City needs to more closely integrate hospitals, the OAS, and ARC-SEPA into its planning, training, and exercise efforts and programs. Hospitals need to be designated as part of the City's critical and critical infrastructure. With joint planning efforts, the City becomes better prepared to manage large-scale emergencies because the hospitals represent a significant resource to the City. As planning efforts continue, hospitals can work to ensure interoperable equipment purchases between institutions and with the City. Thus, in the future, this equipment can be used seamlessly with City assets in a catastrophic event.

Recommendations for integrating the medical and public health sectors into emergency management are organized by the following components:
- 3.1 Policy
- 3.1 Planning
- 3.3 Training and Exercises
- 3.4 Personnel
- 3.5 Public Private Partnership
- 3.6 Logistics and Equipment

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

3.1 Policy

3.11 Strengths

The Office of Adult Services (OAS) drafted an agreement with ARC-SEPA for emergency shelter services and has a contract for emergency food services to the City. Also, OAS has met with additional vendors and other City agencies to discuss large-scale emergency feeding operations.

The hospitals, through the Delaware Valley Healthcare Council (DVHC), have developed standards for decontamination and personal protective equipment (PPE), drafted public and media communications policies and procedures, conducted three region-wide assessments of hospital emergency preparedness capabilities, developed a region-wide hospital emergency preparedness plan, and developed model mutual aid agreements for all hospitals.

Since 2004, Global Philadelphia, a part of the Office of the Managing Director, has had emergency standby contracts for language interpretation, which are available to all City agencies and departments, including the Police Department's 911 Call Center.

3.12 Gaps

Although a review of the Mayor's and Health Commissioner's powers under the Health Code was determined to be sufficient to protect the citizens of Philadelphia by managing ill or infected persons, greater clarity in the Code related to mass quarantine or shelter-in-place is needed for citizens who are not sick and for judges to assist in efforts to

protect civil rights of citizens while, at the same time, safeguarding public health and safety.

Additional clarity is needed about the authority of the Health Department to order the destruction of property that poses a clear threat to public health. These expanded powers would serve as necessary preventive efforts in the event of an outbreak.

No policy includes healthcare delivery organizations, such as nursing homes, home health agencies, and community health centers, in the City's emergency preparedness activities. If community health centers, both City-run District Health Centers and Federally Qualified Health Centers (FQHCs), are designated as alternate care sites, they lack appropriate supplies of PPE and negative pressure examination rooms to support the evaluation of individuals with contagious respiratory illnesses. (Note: This finding is from the FQHC capacity assessment completed by the Philadelphia Department of Public Health in 2003.)

3.13 Recommendations

• **Develop large-scale shelter-in-place and quarantine protocols and clarify legal authority requiring shelter-in-place for the unexposed. The City needs to ensure integration with agencies and the courts to include a plan for a comprehensive system for services and resource management— social services, logistical supplies and food, staff, volunteers, facilities, donations, pet care, transportation and emergency court orders and hearings—that can support a major sheltering or quarantine effort.**

• Establish shelter agreements with large facilities such as arenas and the convention center to ensure the City can shelter up to 100,000 people. Ensure pre-identified facilities can support long-term sheltering operations, including generators, showers, and air conditioning.

• Continue to increase the emergency feeding capacity and develop memoranda of understanding (MOUs) with large corporations to support an emergency feeding operation.

• Ensure policies and plans are in place to address

the mass care needs of special populations. Identify a lead agency to develop and implement the plan.

• Conduct a review and develop a policy that identifies other facilities, sources, and/or capabilities to be used as resources, including use as alternative decontamination sites. Ensure that alternate care sites have the appropriate supplies of PPE and negative pressure examination rooms to support the evaluation of individuals with contagious respiratory illnesses.

• Develop agreements concerning surge situations for laboratories including research, clinical and pharmaceutical organizations.

3.2 Planning

3.21 Strengths

Regional hospitals are members of the DVHC. Through the DVHC, the hospitals have formed nine emergency healthcare support zones based on referral patterns, trauma centers, transportation, and other considerations. The members of the DVHC have shared disaster plans and hazard vulnerability analysis documents, executed mutual aid agreements, established a regional hospital emergency management plan, and created guidance for public information and communication.

The hospitals have participated in the development and implementation of specific incident plans for special events such as the 2000 Republican National Convention. Hospitals are required to maintain comprehensive disaster plans under the Joint Commission for the Accreditation of Healthcare Organizations and are compliant with this requirement.

The Philadelphia Department of Public Health has developed a comprehensive public health emergency response plan, which includes a mass prophylaxis and a pandemic influenza component.

The Department of Behavioral Health and Mental Retardation Services was established as a separate agency from the Department of Public Health;

therefore, the City has one department focused exclusively on the behavioral health needs of the community.

3.22 Gaps

Neither the hospitals nor the Department of Behavioral Health and Mental Retardation Services have a seat at the Emergency Operations Center (EOC), nor are involved in planning activities. The Department of Behavioral Health and Mental Retardation Services was previously represented in the EOC when they were part of the Department of Public Health. Although there is behavioral health support for first responders, there is no comprehensive behavioral health plan for the rest of the workforce who support the City during disaster. Also, there is no plan for the public, who may be traumatized by a catastrophic event.

No consistent guidelines or policy currently exist to determine what types of materials, equipment, or pharmaceuticals are needed for emergency use in mass casualty events for hospitals, nursing homes, home healthcare agencies, community health centers, and EMS and health departments. Most facilities store these materials as needed, with little or no additional capacity. A method needs to be developed to finance stand-by or surge equipment, pharmaceuticals, and other resources to be utilized during a catastrophic event. This includes the securing of grant dollars for initial purchases.

The cache of pharmaceuticals maintained by the Philadelphia Fire Department for the City's Metropolitan Medical Response System project requires ongoing replacement to ensure sustainability once shelf-lives expire.

There has been increased demand for EMS services across the region, and it appears that there is a need for greater EMS capacity in the City. Some key aspects of the present EMS system are fragmented as non-municipal and municipal ambulances do not plan or communicate with one another. As a result, the availability and coordination of medical transportation capabilities is limited. Additionally, there is only a one-way communications system for fire ambu-

lances to the hospitals, which does not meet national standards.

The Office of Adult Services currently does not have the resources or a plan to deliver meals in a large-scale emergency to populations with special needs.

The Medical Examiner's Office (MEO) does not presently have E Team or any system in place to collect ante-mortem data. This limits the ability of the MEO to identify deaths and potential surges in work volume.

Memoranda of understanding do not exist for using City facilities during a large-scale event that includes mass fatalities. The current mass fatality plan is limited in scope and would not be sufficient to address a large-scale mass casualty incident or pandemic over an extended period of time.

There are no formal agreements in place for hospitals to perform autopsies. In addition, there is no clarity about the cremation or burial of large numbers of victims.

3.23 Recommendations

• Designate hospitals as part of the critical infrastructure of the City.

• Assign a seat at the EOC for hospitals, and include them in the City's emergency operations plans and all future City drills and exercises.

• Develop a comprehensive policy and plan for standardizing, stockpiling, storing, tracking and distributing critical medical supplies, equipment, and pharmaceuticals. While the City and region fully expect support from state and federal agencies, recent experience has demonstrated that prudent steps are necessary to ensure key supplies are readily available on a local basis during the early stages of an emergency or disaster.

• Evaluate the optimal daily EMS service capabilities and the capacity of EMS to surge in response to a major incident, including private ambulances and any National Guard resources.

Behavioral Health
• Develop of community wide plan for behavioral health during and after major emergencies or disasters. This plan would address the needs of city staff and others, other than first responders, who support disaster efforts as well as for the public who may be affected.

Surge Capacity and Mass Prophylaxis
• Support proposed Urban Area Security Initiative (UASI) projects related to medical surge and mass prophylaxis critical tasks, including: Collaborative Active Response Emergency System (CARES) Project, Improved Interagency Communications capabilities, Hospital Emergency Response Team (HERT) formation, Medical Reserve Corps (MRC) and Behavioral Health MRC growth and development, regional medical supply and medication cache development, continuation of medical surge capacity study and interviews with hospitals, regional healthcare coordination activities, and mass care capacity increases for EMS and Public Health Department mass prophylaxis equipment.

• Develop a surge capacity plan for labs that includes the use of clinical and research facilities existent in the community.

• Expand the existing DVHC disaster preparedness task force (and the "hospital" subcommittee of the Southeastern Pennsylvania Regional Counter Terrorism Task Force) to include Federally Qualified Health Centers, long-term care facilities, home health agencies, and other healthcare service agencies. This expanded task force should work with the City agency responsible for coordinating emergency preparedness planning to: a) identify training requirements and standards; b) identify opportunities to meet training standards; and c) identify ways to track trainings using Pennsylvania Department of Health Learning Management System and other modalities.

• Ensure that triage protocols are in place at community health centers to rapidly identify and evaluate individuals with possible contagious illnesses and remove them from potential exposure areas.

• Ensure that community health centers have the ca-pability to convert at least one examination room to negative pressure to support the evaluation of individuals with contagious respiratory illnesses.

• Clarify expectations for decontamination capacity for community health centers and nursing homes.

Mass Feeding
• Assess available resources and develop a plan for delivery of meals. It should be noted that, although the delivery of meals in a large-scale disaster is not part of the Office of Adult Services mission, the agency volunteered to coordinate resources and planning. Design Modular Mobile Accessible Feeding sites and prepare them to be mobilized in the event of a disaster. Community members who are home-bound must be included in this plan. All hot or cold sites and any emergency meal distribution activities should be planned for locations that are accessible to people with disabilities.

• Continue City efforts to develop a written plan for the distribution of emergency meals at shelters in case of a large-scale event. Include Fleet Management and the Streets Department in the meal distribution plans, in case additional vehicles are needed from Fleet Management or roadways need to be cleared by the Streets Department. Identify and train essential workers in the partner groups to navigate the City quickly in a disaster. Create MOUs and contracts to formalize the cooperative efforts used to produce and distribute meals in an emergency. Exercise the MOU and plan. Identify distribution sites, all of which should be accessible to people with disabilities.

Medical Examiners Office
• Provide the MEO with E Team or another disaster-related data system to collect ante-mortem data.

• Develop a community-wide plan for mass fatalities, incorporating input from hospitals, funeral home directors, local Disaster Mortuary Operational Response Team assets, and other key stakeholders, under the leadership of the MEO.

   o Create a mass fatality working group to develop the plan.

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMullin, Philadelphia International Airport

o Develop agreements between the MEO and hospitals to perform autopsies in a mass fatality event.

o Develop memoranda of understanding for using City facilities during a large-scale event that includes mass fatalities.

o Conduct a legal review of on the issue of cremation or burial of large numbers of victims.

3.3 Training and Exercise

3.31 Strengths

The hospitals conduct semi-annual disaster drills. Over the past few years there has been a series of regional exercises involving all disciplines, including hospitals, public health, law enforcement, fire and police personnel, and "specialized teams" associated with each entity.

The Philadelphia Department of Public Health has conducted two points of dispensing (POD) exer-

cises and has trained more than 75 POD leadership staff and several hundred general POD staff, including Medical Reserve Corps volunteers. In addition, the Philadelphia Department of Public Health conducted Incident Command System (ICS) training for senior management staff.

3.32 Gaps

Integrated training involving fire, police, EMS, public health, and hospital personnel does not routinely occur in the City. The relationships between fire suppression forces or police response units and hospitals during a crisis have limited success due to lack of joint trainings and meetings, particularly pertaining to situations where a hospital is the actual location of an emergency or disaster incident.

Hospitals do not have an adequate number of trained staff to conduct sustained decontamination over an extended period of time in response to a major incident or a mass casualty event. In planning for decontamination, healthcare delivery staff is directed to healthcare responsibilities rather than

decontamination issues, which could result in insuf-
ficient staffing of decontamination stations during an
incident.

3.33 Recommendations

Exercises
- Exercise City, state, and hospital emergency re-
sponse plans. Identify and hire Office of Emer-
gency Management (OEM) exercise staff to
coordinate and support regional emergency
preparedness exercises. Ensure that the Pennsyl-
vania Department of Health (PA DOH) conducts
a CDC-sponsored statewide Strategic National
Stockpile (SNS) exercise on a regular basis. Ex-
ercise SNS Operations, including receipt, stor-
age, and staging, as well as distribution and POD
operations. Exercise state and regional plans to
"push" SNS supplies to colleges, hospitals, and
other organizations to support mass prophylaxis.

Training
- Designate a City agency with the overarching re-
sponsibility for planning, coordination, and training
for public health agency staff, healthcare workers,
and others involved in public health emergency
response and preparedness. Provide staff and re-
sources to the agency to accomplish new respon-
sibilities.

- Determine which emergency preparedness train-
ing programs should be coordinated citywide.
Training programs to coordinate include Health
Department programs, Fire/EMS Department
programs, Department of Behavioral Health and
Mental Retardation Services programs, hospi-
tal decontamination training, ICS/NIMS training,
emergency response plans, E Team, PA DOH 800
MHz radios, and Critical Incident Stress Manage-
ment (CISM). Ensure that training is uniform and
standardized.

- Identify an individual or department to be respon-
sible for establishing training requirements and
communicate requirements to departments. Iden-
tify an individual or department to be responsible
for collecting training data, including:
  - o Creating a calendar of training programs

o Developing a training website
o Maintaining credentialing and training records
in a database
o Developing training programs that include
uniform standards for emergency preparedness
and decontamination procedures throughout
the City
o Maintaining training records and tracking
training programs citywide
o Conducting regular incident command train-
ing and drills

- Expand the number of public agency and private
organization healthcare personnel trained in the
following areas:
  - o Decontamination
  - o Incident Command System/National Incident
Management System (ICS/NIMS)
  - o Emergency Response Plans
  - o E Team (including E Team integration with
listed agencies)
  - o PA DOH and City 800 MHz radio systems
  - o Disaster Mental Health, including ensuring
CISM to support city workers during a disaster

- Work with the PA DOH to develop a plan to
make better use of the Learning Management
System in the City.

3.4 Personell

3.41 Strengths

Philadelphia and the surrounding region have a
tremendous concentration of health and medical
expertise. The hospitals employ more than 100,000
people in the area, and the staff at the hospitals rep-
resents trained, organized, and managed personnel
who could be utilized to volunteer and assist during
a catastrophic incident. Many of the hospital person-
nel have been trained in decontamination activities.

The Philadelphia Department of Public Health re-
cently established a Medical Reserve Corps (MRC)
volunteer program, which pre-identifies, credentials,
and trains medical and behavioral health profession-
als. MRC can augment existing community health

response systems during a catastrophic event.

ARC-SEPA has more than 4,000 volunteers, with more than 800 volunteers trained in emergency services. The SEPA Voluntary Organizations Active in Disaster (VOAD) and Citizen Corps programs train more than 1,500 volunteers regionally.

3.42 Gaps

While all hospitals have emergency credentialing procedures, there is no systematic credential verification and privileging program in place between health systems to enable, identify, and utilize medical professionals, volunteers, and other healthcare providers before or during a mass casualty event. There are no comprehensive plans for addressing issues of volunteer convergence in healthcare institutions. There is no system to identify, qualify, or credential individuals who have capacity to help in a large-scale emergency.

Overall, staff shortages exist throughout the Health Department and other government agencies, undermining surge capacity for epidemiological activities and implementation of disease control measures, mass prophylaxis activities, and pre-hospital and other activities requiring government response to large disasters. While the MRC may develop a training curriculum to address the specialized training needed for effective integration of volunteers into hospitals during emergencies, there is currently no "ready force" for healthcare staff augmentation, such as a disaster medical assistance/response team, in place in the region.

The MEO currently has a shortage of staff, due to lack of qualified professionals. The forensic consultants used by the MEO may not be available to the MEO in a large-scale emergency.

3.43 Recommendations

• Evaluate current public health staffing levels to determine if they are adequate to perform disease control, surveillance, and emergency response functions commensurate with the population and perceived threat.

• Develop a central, coordinated plan to recruit, accept, and credential volunteers. Ensure that individual agencies have plans in place to manage and refer spontaneous volunteers. Focus volunteer plan on the need to ensure surge capacity in the following areas:

> o Mass care/sheltering
> o Medical care for acute casualties in non-hospital settings
> o Mass prophylaxis and other public health activities
> o Hospitals and alternate treatment sites
> o Special needs population
> o Staging areas and other emergency response activities

3.5 Public-Private Partnerships

3.51 Strengths

There is an active Local Emergency Planning Committee in place in Philadelphia.

The City is home to several large pharmaceutical companies such as Merck and GlaxoSmithKline.

The region's public health departments and hospitals have been working closely on a wide array of community health challenges including pandemic flu planning.

The DVHC is actively coordinating hospitals' involvement in citywide disaster activities and committee work on disaster management.

3.52 Gaps

Although hospitals are large employers and provide high-quality medical care, they are not listed as part of the critical infrastructure for the City of Philadelphia.

The large pharmaceutical organizations have not been consulted by the City or region regarding

medical caches. They also are not integrated into the planning process for emergency preparedness.

Neither the DVHC nor any other organization has been identified to coordinate the hospitals' response in the City's EOC.

3.53 Recommendations

• Ensure that the hospitals have a liaison relationship with the OEM and are included as critical infrastructure in the emergency management plan for the City.

• Integrate and utilize nursing homes, community health clinics, home healthcare agencies, and other private healthcare providers into emergency healthcare support zones and into the overall emergency management planning and response process.

• Integrate pharmaceutical, hospitality, warehouse, and insurance companies into emergency preparedness, response, and recovery efforts.

3.6 Logistics and Equipment

3.61 Strengths

The Philadelphia Department of Public Health has a variety of equipment and supplies, including equipment for communications and crowd control and medical and office supplies, to support up to 40 POD sites.

Between 28 and 42 municipal ambulances are on duty in the City each day, depending on demand. Approximately 100 non-municipal ambulances provide patient transportation daily. The hospitals have several methods of communications among institutions and the Pennsylvania Health Department.

Hospitals have appropriate types and levels of personnel protective equipment for hospital decontamination operations. Much of this equipment is "legacy equipment" that was purchased with hospital funds in preparation for the Republican National Conven-

tion in 2000.

All regional hospitals have signed mutual aid agreements to share supplies, equipment, and personnel.

The Philadelphia Department of Public Health conducts the following disease surveillance activities: notifiable disease surveillance, respiratory virus surveillance, daily review of medical examiner data, syndromic surveillance, and environmental monitoring.

ARC-SEPA, through a partnership with the Southeastern Pennsylvania Regional Task Force has purchased shelter supplies, including cots, blankets, and comfort kits for 11,000 people. Over 385 shelter agreements are in place in the region. ARC-SEPA owns two shelter trucks, six emergency response vehicles and has ten tractor trailers stocked with shelter supplies strategically placed throughout the region.

3.62 Gaps

The radio system between the EMS ambulances and the hospitals is one-way. There is no formalized radio communications system between non-municipal ambulances.

The ability to warehouse and enhance current ambulatory and inpatient bed surge capacity is minimal due to hospital dependency on limited available personnel, equipment, facilities, and supplies from other facilities.

The ability to move materials and equipment to various treatment locations in the City, including POD sites, is not formalized. No contracts exist for trucks or drivers. Although some of these transportation issues are Pennsylvania's responsibility, the City should have a logistical backup plan in the event the Commonwealth fails to meet its charge.

The region lacks a central victim tracking capability. Such a system would need to draw data from shelters, hospitals, the MEO, and ARC—SEPA.

Although hospitals have appropriate amounts of personal protective equipment, no uniformity exists

in the type of CBRNE personal protective equipment. As a result, hospitals have purchased various models that could prevent the interchange or loan of equipment from facility to facility should that become necessary.

Overall, logistical support for public health operational activities in emergencies, including SNS- and mass prophylaxis-related activities, is a major need.

Philadelphia Department of Public Health epidemiologists do not have direct access to the electronic Pennsylvania Bureau of Laboratories database.

There is limited interoperability for personnel protective equipment from institution to institution.

Many of the facilities identified as emergency shelters are not suited for long-term sheltering and do not have generator capacity, showers and air conditioning. Facility and shelter agreements with larger facilities, such as arenas, do not exist.

3.63 Recommendations

Equipment
• Develop a comprehensive communications plan that includes radio, telephone, Internet, and satellite communications capability. Include organizational communications between City agencies and hospitals.

• Ensure that Philadelphia Department of Public Health is included in the Pennsylvania Department of Health's (DOH) videoconferencing system, which links state district health offices with the DOH in Harrisburg.

Logistics
• Evaluate and develop citywide logistical support capacity and capability. Develop a logistical support plan for all the functions that involve the movement of medical supplies and pharmaceuticals. Secure contracts for the transportation and storage of these materials.

• Evaluate federal resources potentially available to the City for distribution and logistical support.

Data
• Develop a system of material tracking after receipt and subsequent distribution. Include a financial plan for tracking expenses associated with material procurement, distribution, and tracking.

• Automate and integrate City lab reports into a data collection tool that allows data to be managed to provide specific reports.

• Ensure that Philadelphia Department of Public Health epidemiologists have direct access to the Pennsylvania Department of Health's Bureau of Laboratories database.

• Continue implementation of E Team/CARES to increase City and regional resource and communication coordination capabilities.

Coordination
• Develop operating protocols that govern relationships between health departments and the Pennsylvania Department of Health.

4.0 Enhance Federal, Commonwealth, Regional and Local Partnerships

Disasters do not respect municipal borders. Before September 11, 2001, the traffic control evacuation plans for the District of Columbia ended at the District of Columbia borders. Today, the National Capital Region, which includes Maryland, Virginia and the District of Columbia, has developed regional plans and operational procedures for evacuations.

While the Committee's focus primarily was on the steps Philadelphia could take on its own to enhance the emergency preparedness, the EPRC review underscored the need for a seamless coordinated approach by all levels of government on a range of issues. Planning for emergency events requires a regional approach and cooperation. Open lines of communication among regional partners will speed up notification for City managers when a disaster hits a neighboring jurisdiction and will help the City prepare for an indirect impact that will affect the entire area. Finally, it is an accepted principle, and a requirement for federal Department of Homeland Security (DHS) funding, that jurisdictions pursue a regional approach to emergency management.

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

4.1 Strengths

The City of Philadelphia has led the development of regional organizations to address emergency preparedness. Most of these efforts are coordinated under three organizations: The Southeastern Pennsylvania Regional Task Force[3], the U.S. Justice Department's Anti-Terrorism Advisory Council, and the Area Maritime Security Committee. The Commonwealth set up the Southeastern Pennsylvania Regional Task Force to coordinate regional training and drills for first responders, critical components for enhancing regional capacity to respond to emergencies.

Through mutual aid agreements among its members, the Southeastern Pennsylvania Regional Task Force funded, trained, and exercised first responders at the local, state, and federal levels for the past four years. The regionalization of resources is now expanding to an eleven-county area and needs the approval of the City Council to succeed.

The Pennsylvania National Guard has enormous capabilities. Under the direction of the Governor, the Guard can provide extensive satellite and emergency communications assets, aviation, heavy equipment, detection and decontamination assets, medical response and military transportation, and facilities when an event overwhelms local resources. The Guard also has substantial electronic and human intelligence gathering capabilities. Finally, the Guard has recent real-world experience. Pennsylvania Guard Units were deployed for 40 days in Louisiana following Hurricane Katrina, where they performed security and relief operations and distributed more than 12 million bottles of water, 8 million civilian meals ready to eat (MREs), and 6 million bags of ice.

4.2 Gaps

In general, the City's highest elected officials have not met with their local, county, and state counterparts to discuss emergency preparedness efforts. Meeting to discuss emergency management would foster mutual understanding, potentially save resources, and greatly reduce the response time during a disaster.

The City needs to expand its regional cooperation by integrating the private sector and elected officials into emergency preparedness efforts. Previous disasters, including Hurricane Katrina, demonstrated that the federal government may not be able to assist jurisdictions and that regions must be fully self-sufficient for at least 72 hours to one week after an incident. This can occur only when strong relationships exist among political and business leadership,

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMullin, Philadelphia International Airport

emergency management directors, governors, mayors, city/county managers, and managing directors.

However, federal policies designed to address the nation and state policies protecting the entire Commonwealth do not always fit with the needs of a complex urban area like Philadelphia. For example, there is a need for increased staffing at the airport and ports. Passenger numbers at the airport have increased from 28.5 million in 2004 to 31.5 million in 2005, straining infrastructure and creating tension with the Transportation Security Agency (TSA) over staffing and jurisdiction. The Philadelphia International Airport (PHL) is over 100 staff short of the TSA model. Finally, despite a 50 percent increase in annual commercial vessel boarding since 2002, there has been no increase in overall United States Coast Guard (USCG) staffing in Philadelphia.

An agreement between Philadelphia and Baltimore, Maryland, for mutual aid is being negotiated, but it needs City Council approval.

4.3 Recommendations

- **Create an ongoing forum for the region's highest elected officials and private sector leaders to regularly meet to review key strategic emergency preparedness issues and develop coordinated approaches to region-wide challenges.**

- **Conduct a detailed briefing each year or on the status of Philadelphia's emergency preparedness plans and response capabilities for the City's representatives in the General Assembly and in the U.S. Congress.**

- **Initiate discussions with the Governor to establish a process by which relevant City agencies meet with their corresponding Commonwealth agency partners to identify, review, and develop recommendations to resolve key policy questions and adopt operating protocols within the context of NIMS to govern interaction and the sharing of information between these agencies.**

- **Amend Commonwealth law requiring seven day ratification by the City Council of the Mayor's**

declaration of a state of emergency.

• Work to amend Commonwealth law that directly affects the City of Philadelphia. Title 35 of the Pennsylvania Emergency Management Services Code is currently being reviewed by the Commonwealth. In addition to those proposed amendments already identified by the Commonwealth such as expanded protections regarding volunteer liability and worker's compensation, the EPRC recommends an amendment to Commonwealth Law delegating to the Mayor similar powers as provided to the Governor to exercise temporary control of any private, public or quasi-public property if necessary to respond to a disaster, subject to applicable compensation requirements. Without an amendment, there could be delays in responding to large scale evacuations, mass shelter-in-place or quarantine orders relating to disasters affecting Philadelphia. In addition, the EPRC recommends amending the Pennsylvania Juvenile Act to provide county children and youth agencies with greater flexibility to obtain emergency court orders and blanket waivers for the emergency placement of children who may have lost family following a disaster and sharing information with law enforcement agencies to assist with identifying, locating and protecting children.

• Develop communications and coordination protocols with the Pennsylvania National Guard to support emergency response needs. Agree with the Pennsylvania National Guard to:
    o Develop preplanned force allocation orders
    o Provide a list of its emergency response capabilities and assets
    o Have a seat at the City's EOC during an emergency

• Work with the City's congressional delegation and with state and regional partners to support increased Transportation Security Agency (TSA) staffing, given the significant growth in airline passenger activity at the Philadelphia International Airport and declining resources from TSA.

• Work with the City's congressional delegation and state and regional partners to achieve

increased resources for the United States Coast Guard Station at Philadelphia and for related public and private sector security resources.

• Execute the Mutual Aid Agreement that will institutionalize the eleven county tri-state regional task force/workgroup that brings together the five counties of the Southeastern Pennsylvania Regional Task Force with five counties in Southern New Jersey and New Castle County, Delaware.

• Work with the City's congressional delegation and state and regional partners to restore and increase emergency management grant funding through Emergency Management Program Grant (EMPG), which is the only grant program to support emergency management staff salaries.

• Explore further opportunities for sharing equipment and capabilities with regional, Commonwealth, and other Commonwealth partners.

5.0 Promote Transparency and Community Engagement in Emergency Management

Ensuring public participation entails a multitude of efforts to engage, educate, and train citizens. It also requires a more open City government to share information with the public. Emergency preparedness information needs to be conveyed through open transmission among citizens, City leadership and employees, businesses, and faith-based and community organizations. Posting the City's Pandemic Flu Plan is an important step in providing more transparent governmental operations. Citizens must trust that government is prepared for emergencies and it will provide them with reliable information so they can make the best decisions for themselves and their families during a crisis. Absent good information from the City, citizens may make decisions based on fear and rumors.

Citizens expect more from government in a crisis, at a time when government capabilities are stretched to or beyond their limits. An informed citizenry can be an asset, whereas an uninformed citizenry may become a liability that can overwhelm City personnel and resources.

Why train citizens? Major disasters in a community can overload the capability of first responders, especially during the first 12 to 72 hours of an incident. According to Citizen Corps, on a national average, there is only one firefighter for every 280 people, one EMT/paramedic for every 325 people, and one sworn police officer for every 385 people. These numbers clearly show that citizens must be better prepared, better trained, and more practiced on what to do in an event so they can care for themselves during those first crucial hours.

Educating citizens about sheltering-in-place, disaster supply kits, emergency alert broadcasts, and other important preparedness information prior to an emergency will increase citizens' resiliency and reduce panic during a real emergency.

Figure 3: Go Bag

Improved public participation and community engagement strategies include coordination with regional authorities to develop a comprehensive educational campaign for citizens and outreach to and participation by people with special needs. Recommendations for community engagement and promoting transparency in emergency management are organized in the following areas:

- **5.1 Citizen Education and Training Campaign**
- 5.2 Personnel
- 5.3 City Communication Plans
- 5.4 Training and Exercising for PIOs
- 5.5 Making Communications Accessible

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

5.1 Citizen Education and Training Campaign

5.11 Strengths

The City's ongoing citizen education and training initiatives include outreach to the public by the Police and Fire Departments, the Department of Public Health, and the Philadelphia More Beautiful Commit-

Phila.gov

tee. The Local Emergency Planning Committee has produced a video on sheltering-in-place. In addition, many City departments understand that they must clearly define their non-English speaking audiences and produce appropriate materials for distribution to these citizens.

Many of the City's existing initiatives and outreach efforts, such as Safer Streets, can be combined with emergency preparedness citizen education. The City's Town Watch participants, block captains, and the Philadelphia Parking Authority's Parking Enforcement Officers could disseminate emergency preparedness messages during the normal course of their other duties.

The Southeastern Pennsylvania Voluntary Organizations Active in Disaster (SEPA VOAD) currently trains citizens to be members of the Community Emergency Response Teams and to be volunteers to assist during a crisis. A primary goal of the Temple University's VOAD group is to provide training on emergency management for underrepresented or special needs populations.

The United Way has built partnerships with hundreds of non-profit service providers in the Philadelphia area. Each of these providers has a base of constituents who trust their information. Numerous organizations also have experience or have already built a foundation to implement the recommendations listed in this report. For example, the Philadelphia Corporation for Aging, which operates a Heat Crisis Hotline, would be a valuable resource for creating a non-911 emergency telephone line.

Various organizations—such as the Police Department, PECO, the Department of Motor Vehicles, Philadelphia Housing Authority, and the School District—keep registries of individuals with special needs. For example, PECO Energy maintains a self-registry for individuals with special needs so that, in the event of loss of power, they can readily identify

those who will require special assistance and can relay that information to police and fire personnel.

The 911 Call Center has a large capacity for taking calls. Its new system will allow the center to expand into multiple locations and entire rooms to take calls. The 911 Call Center has 20 to 30 personnel during each shift who are fluent in Spanish.

The website, www.phila.gov/ready, was created by the Department of Public Health to provide information on emergency preparedness, with a particular emphasis on biological hazards.

Additionally, at Temple University, the Institute on Disabilities, the Center for Preparedness Research, Education and Practice and the Temple University Regional Emergency Preparedness & Response Training Institute will collaborate to develop emergency preparedness and response training for special needs populations, the general public, first responders, emergency medical responders, public health personnel, and volunteers.

5.12 Gaps

There is currently no comprehensive, coordinated City or regional emergency preparedness citizen education and awareness campaign. The City must make a sustained commitment of financial and personnel resources to educate citizens. The campaign must be based upon research to find the most motivating methods to encourage citizens to become better prepared, including individuals with special needs.

Although SEPA VOAD conducts citizen training, the City currently does not provide extensive resources or promotion of this effort. There is no government-sponsored citizen emergency preparedness training. SEPA VOAD is not incorporated into the City's emergency response plan.

Regional Educational and Awareness Campaign

As the City of Philadelphia is undertaking a comprehensive review of the City's preparedness in the face of a man-made or natural disaster, the Public Information and Community Engagement Subcommittee of the Emergency Preparedness Review Committee has provided considerations for a regional education campaign.   It is important to emphasize that this education campaign cannot be a one-time effort. There must be a sustained commitment of financial and personnel resources by the City to educate citizens every day, every year. The campaign must be based on research to find the most motivating methods to encourage citizens to get better prepared.

All information, regardless of message, must be accessible (Section 508). It is the hope of the subcommittee that the City and all departments, agencies, boards, commissions and other entities involved with these plans would adopt an accessibility policy. A campaign must address audiences effectively with an appropriate message through as many methods as possible.

Audience
Preparedness messages must reach all citizens, especially those who are most vulnerable. The department/persons designated to coordinate this campaign must reach out to community organizations who were interviewed by the PI/CE and Vulnerable Populations Subcommittees to create a coordinated outreach campaign.

Message
The City must develop emergency preparedness messages for all citizens. Capitalizing on other successful campaign messages such as:
• Ready New York
• Be Ready Make a Plan (National Capital Region)
• Go In, Stay In, Tune In (London)
• www.72Hours.Org Are You Prepared? Make a Plan, Build a Kit, Get Involved (San Francisco)

Philadelphia should create a campaign slogan to raise awareness of the necessity to be prepared and help its citizens become prepared.   A citizen survey should be conducted at the start of the campaign to obtain a baseline of attitudes about emergency preparedness. During the campaign, the survey should be re-administered to ensure that the messages are motivating citizens and that the City has a snapshot of the percentage of citizens who are prepared.

The City must also develop a wide range of emergency preparedness materials, including a citizen training manual, in several languages other than English for its non-English speaking residents. These and other collateral materials, such as household readiness planning guides, general emergency response information such as sheltering in place and evacuation information, emergency contact information, hazard-specific information, and materials for vulnerable populations, will be needed for a citizen education campaign and can be disseminated by public and private organizations during their normal course of business and at all special events.

Method
Preparedness messages can be disseminated through a variety of mediums, including traditional media, text message and, billboards and other public relation strategies. More importantly, the City will need to focus its preparedness messages through grassroots, outreach strategies such as reaching out to civic associations, non-profit, faith-based, business, and community organizations.   A key item that the City can create is a self-registry for all citizens, similar to Code Red, the City of Orlando's self-registry. The City can then contact residents directly with preparedness messages and information.

In addition, few identification and outreach efforts currently exist to educate individuals with special needs on personal preparedness for large-scale emergencies. Disaster volunteers are not trained before an emergency to assist or identify people with disabilities and other individuals with special needs.

There is no single, central, comprehensive registry for populations with special needs. The best resource that the City has, the existing Police Department's 911 Computer Assisted Dispatch (CAD) registry, does not have high visibility or participation, nor is maintaining the registry for special needs populations a part of the mission of the Police Department. A non-911 emergency call center does not exist to handle individuals with special needs' inquiries in a disaster. Such a call center would need to be TTY compatible.

The Office of Emergency Management (OEM) does not have a website.

5.13 Recommendations

Overall Campaign Method and Involvement
- **Launch, with the assistance of partners from the public and private sectors, a sustainable, regional public education, awareness, and training program focusing on emergency preparedness. Important aspects of this program should include conducting the necessary research, developing measurable performance indicators, working with existing public and private community groups, and targeting populations with special needs.**

- **Continue to publish non-confidential emergency plans and information to the City's website for public consumption, and distribute printed copies to publicly accessible facilities such as the Free Libraries and health centers and post offices. Ensure that all technology and information that is provided to the public, whether distributed electronically or in print, is accessible according the guidelines provided by Section 508 of the Rehabilitation Act.**

- **Create a strong partnership with the media to create the most effective tools to reach the public before, during, and after disasters. The media wants to work with the City to assist ongoing citizen education efforts as well as to disseminate critical messages during emergencies. Some media outlets have offered to host phone banks and air public service announcements, among other programs, to help citizens be better prepared.**

- Develop a citywide Emergency Preparedness citizen education survey before conducting an outreach/education campaign to obtain a baseline of attitudes about emergency preparedness. Re-administer the survey during the campaign to ensure that the messages motivate citizens and that the City has a snapshot of the percentage of citizens who are prepared. This will enable City leaders to reevaluate the campaign and ensure that citizens understand the importance of preparedness.

- Reach out to businesses as part of the overall Citizen Education Campaign to help them train their staff on overall emergency preparedness, including evacuation or shelter-in-place. The various Chambers of Commerce located in the Philadelphia region can assist in identifying their business members. Representation also should include suburban and ethnic Chambers of Commerce and government leaders, especially for evacuation preparedness and planning.

- Reach out to other private, public, and non-profit sector agencies that are working to improve the quality of life for Philadelphia's citizens and coordinate messaging and outreach efforts. These agencies include hospitals, universities, civic and neighborhood associations, and public/private service provider agencies, such as the School District of Philadelphia, the U.S. Postal Service, American Association for Retired Persons, Senior Citizens and Assisted Living facilities, the Free Library of Philadelphia, Philadelphia Corporation for Aging, American Red Cross—Southeastern Pennsylvania Chapter, Philadelphia Operation Town Watch, behavioral health providers, housing agencies such as the Philadelphia Housing Authority, faith leaders, and children's advocates such as Philadelphia Citizens for Children and Youth. By forming partner-

ships across all sectors of the City, the government can ensure that as many citizens as possible are included.

- Work with PECO and other entities that have self-registries for individuals with special needs to coordinate communications and actively identify those individuals so they can be assisted during a disaster. This promotion of the self-registries can be advertised on the phila.gov website and be incorporated into all emergency preparedness materials distributed to citizens. The media can help with public service announcements and links on their websites for citizens to register.

- Work with the Police and Fire Departments and their colleagues and other government leaders from suburban counties to identify evacuation routes and build this information into a citizen education campaign. In the event that evacuation from Center City is necessary, citizens should know prior to an emergency the routes to ensure a safe, orderly procession out of the City. Work with the Southeastern Pennsylvania Transportation Authority (SEPTA) to identify public transit routes for citizens who do not have automobiles. Safe and orderly evacuations will allow Police, Fire, and other emergency management personnel access to City streets to respond to emergencies without using much-needed personnel to educate citizens during an actual emergency.

- Design, develop, and deliver a special needs awareness outreach and education plan to all emergency and city personnel.

- Augment the education and outreach campaign for the 911 Computer Assisted Dispatch (CAD) program. Include advertising for the CAD system in any emergency preparedness awareness campaign. Run public-service announcements (PSAs) in newspaper, radio, TV, and community newsletters. Integrate the CAD system into the work of community outreach programs, including Philadelphia Operation Town Watch. Include the 911 CAD program in all safety, fire, and general community education and outreach programs. Incorporate the CAD registry into the Police Depart-

ment mission and train all Police Department and City personnel in promoting the 911 CAD system throughout the community. Train call-center operators to work with special needs populations. Use professional and service organizations that work with individuals with special needs to train and staff phone centers in times of emergency, or route calls to these existing service agencies with contract agreements to staff phone lines. Create contracts and agreements with such agencies to staff this type of "virtual" call center. Make all technology used accessible to people with disabilities.

Training Campaign
- Provide additional support to ongoing SEPA VOAD efforts to train citizens. As part of the campaign, the City must strengthen ties to VOAD to facilitate citywide Emergency Preparedness training for citizens.

- Actively involve parents and caregivers of students in emergency training and exercises. Establish meetings between the School District Office of School Safety and Office of Communications to discuss how to educate parents on emergency procedures. Implement plans through the regional superintendents and principals with Philadelphia Home and School Council.

- Arrange meetings with the School District's Office of Labor Relations and the Philadelphia Federation of Teachers to discuss a memorandum of understanding or letter that will describe teachers' roles in emergency situations. Many schools have nurses, security, faculty, and staff who have been trained in basic first aid CPR/AED, and other life-saving techniques. Schools can establish School Emergency Response Teams (SERT), a program based on the Citizen Corps model of Community Emergency Response Teams (CERT).

- Work with and support Temple University's Institute on Disabilities, the Center for Preparedness Research, Education and Practice and the Temple University Regional Emergency Preparedness & Response Training Institute on developing emergency preparedness and response training for special needs populations, the general public, first

responders, emergency medical responders, public health personnel, and volunteers.

Website
• Create an interactive, accessible website for the OEM. Upload summaries of key planning documents, such as the Emergency Operations Plan (EOP) and other information that is not confidential but would provide an understanding to the public how the City is organized and prepared to respond to an event. Link to and/or support the Local Emergency Planning Committee's website. Incorporate a tracking system of the number of visitors to the phila.gov emergency preparedness pages and each department's home pages. Establish links for phila.gov with other websites, e.g., schools, hospitals, other healthcare organizations and facilities, senior citizen resources, the media, utilities, and transportation authorities. Citizens could benefit from a single source to obtain information about other sites of interest or assistance for emergency preparedness.

Tracking
• Encourage the Fire Department to develop a methodology for tracking where it installs smoke detectors so that it can determine, when responding to a fire, whether it had installed a smoke detector and why that smoke detector may have failed.

5.2 Personnel

Public Information Officers (PIOs) are essential before, during, and after a disaster. They create and disseminate pre-event messages to better prepare citizens and provide important information to citizens during an emergency.

5.21 Gaps

The OEM currently does not have a PIO or other position dedicated to educating the public on emergency preparedness.

5.22 Recommendations

• Assign a full-time, dedicated PIO for the Phila-

delphia OEM who would work with the Mayor's Office of Communications to coordinate crisis communications planning, training, and exercises, and all other aspects of public information that would be required by PIOs during an emergency. If the OEM is the lead agency during emergencies and activates the Emergency Operations Center (EOC), the department must have a PIO to facilitate emergency response information with the other departments.

• Create a formality in job descriptions, competencies, classifications, and review for PIOs. Include language and information on crisis communications in job descriptions and contact information for all City departments and Commonwealth agencies. Implement positions for backup PIOs in all departments should the primary PIO not be available during an emergency. Codify these positions and job descriptions. Through retirement and attrition, the City will lose much of its institutional memory if formal job descriptions, backup PIOs, and training of other personnel for transition purposes do not exist.

• Assign PIOs to specific departments. Codify these positions so that PIOs gain an institutional knowledge about the department's functions even if their supervisor/superior changes position.

• Make available Critical Incident Stress Management (CISM) teams for PIOs and others who have to respond to emergencies. CISM teams are made available to citizens, primarily victims or those personally affected by a disaster. PIOs and other executives who would be among the first responders to an emergency and would provide critical information to citizens would also be adversely affected and should be afforded behavioral health assistance and counseling.

• Conduct meetings with City unions, such as the Philadelphia Fraternal Order of Police and the Firefighters Local, to consider creating and using civilian volunteer programs, such as Volunteers in Police Service. If volunteers are used, police officers and firefighters will be available for public safety duties instead of administrative roles.

5.3 City Communication Plans

Communication plans detail the actions to take before an event occurs and help plan the outreach efforts to help citizens become better prepared. Citizens need to know what to do, where to turn for more information, what supplies they need to have, and how they can help their neighbors. Having comprehensive crisis communications plans during an emergency can help save lives and calm an otherwise confused and panicked public.

5.31 Strengths

Some City operating departments have clearly defined protocols and procedures for responding to an emergency whereas other departments disseminate pre-event preparedness messages. Other departments, especially the Philadelphia Police and Fire Departments, consistently conduct outreach to neighborhoods to educate citizens about personal safety and fire prevention.

The City's EOP contains Annex D, which outlines procedures for dissemination of official information, instructions to facilitate timely and appropriate public response in an emergency, and coordination of information and instructions released to the public (which would be Emergency Support Function 15, External Affairs once the EOP is revised). The Annex includes coordination with government agencies, such as the Pennsylvania Emergency Management Agency (PEMA); guidelines for emergency public information materials to ensure that materials are available for handicapped, visually impaired, hearing impaired, and non-English speaking populations in addition to the general population; guidelines for the preparation and dissemination of Emergency Information Packets for the media when appropriate; and guidelines for use of Emergency Alert System (EAS) messages to communicate with citizens.

Sunoco installed mass notification siren systems for the residents who live near the refinery in south and southwest Philadelphia.

5.32 Gaps

Some City departments do not have written crisis communication plans. The written communication plans of the remaining departments are not consistent across departments. Some City communication plans lack details and thorough command and control protocols and do not contain pre-scripted public protective action recommendations. Annex D (Emergency Public Information) of the City's EOP needs to be updated to reflect new mass notification methods, special needs requirements and more detailed information about formation of a Joint Information Center (JIC). For example, Swiftreach, an automatic call system used by the Streets Department, can reach distinct neighborhoods effectively but would not reach all citizens quickly if mass notification was necessary.

5.33 Recommendations

• **Create a Crisis Communications Plan for communicating to the public during an emergency. Create a crisis communication plan template for use by all City PIOs for departmental plans. Involve all City departments, agencies, boards, and commissions, with the assistance and oversight of the Mayor's Office of Communications, in creating this template. Create a system to ensure that the plans are reviewed and updated at least annually by the PIOs, and to ensure that contact information is accurate at all times. Establish a seamless line of communication during a time of crisis with specific protocols and step-by-step procedures. Develop a plan that can stand alone and is not dependent on a specific individual or individual's knowledge. Create and maintain a standard for how City departments respond to an emergency and how they communicate to the public. As part of this plan, the City should develop protocols with relevant private sector partners (e.g. hospitals, Red Cross etc.) to help ensure consistent communications to the public.**

Annex D/ESF 15
• Update Annex D/ESF 15 (Emergency Public Information) of the City's EOP to prioritize potential incidents that may occur within the City's borders. Sample releases are provided for Flood Warnings and Hazardous Materials, but for no other potential incidents.

• Amend the Annex D/ESF 15 to include the expanded definition of people with special needs to ensure that communication protocols are in place.

• Include Annex D as part of the crisis communications plan template so that all PIOs are familiar with, and understand, the protocols outlined by the Annex.

Templates
• Create a guidelines and procedures template for various emergencies and assign decision-making authority to a current, identified position within the government.

• Arrange for the Mayor's Office of Communications to hold monthly/bimonthly meetings for department PIOs to share information, utilize templates and help departments update and build sustainable plans. Sharing information among PIOs will create a uniform planning methodology.

Joint Information Center
• Include information in the EOP and in City communication plans about how a JIC is established and operated. The JIC is a central location within or near an Incident Command Post where the Information Officer and staff can coordinate and provide information about the incident to the public, media, and other agencies.

• Integrate the media into communications planning and JIC training. Meet with local media outlets to foster cooperation and agreements on how the media can assist in times of emergency.

Notification
• Develop protocols for notifying appropriate local elected officials such as members of City Council. Elected officials at all levels are looked to for information during a community emergency, and efforts should be made to ensure consistent messages.

• Investigate and plan for mass notification systems other than the EAS that could be used to notify citizens, particularly those with special needs.

News and Information Outlets

The broad spectrum of news and information outlets – from radio and TV over-the-air to cable, print to online/wireless - is a critical link to citizens before, during and after a disaster.   It is essential that news organizations serving Philadelphia and the surrounding area be an integral part of any ongoing public information and community engagement program regarding emergency preparedness and response. Additionally, the EPRC regards the media as a key partner in the successful operation of a Joint Information Center (JIC) in ensuring the capability of disseminating to the public timely, accurate and reliable information in time of crisis. The EPRC began the process, and looks forward to the City continuing this effort, to ensure the creation of a JIC (and a backup site) that meets the needs of the news and information outlets, the City, and most important, the citizens of the region.

It is also apparent that news organizations serving the region – in concert with government agencies –must create and maintain plans to ensure continuity of operations during a catastrophic event. During the term of the EPRC, the Pennsylvania Association of Broadcasters (PAB) formally affiliated with the Media Security and Reliability Council (MSRC), a non-profit organization devoted to continuity of broadcast and cable system operations during major natural or man-made emergencies. This action is applauded and the City pledges to work closely with the local MSRC members, as well as other members of the media community, toward the mutual benefit of the City and region.

Investigate siren warning systems, text messaging systems, and other advanced technology to reach citizens quickly.

• Expand the Roam Secure Alert Network (RSAN) text messaging "Alert Philadelphia" system to include citizens. The Police and Fire Departments, Center City District, and others currently use this system via word-of-mouth, but it is not offered to citizens. If citizens had access

to the "Alert Philadelphia" safety messages, they could avoid problematic locations, such as road closures or traffic accidents, and the Police and Fire Departments could better respond to and manage emergencies. In the event of emergencies that require shelter-in-place or evacuation, citizens would have another source from which to obtain critical information from the City, should they not have access to traditional media outlets.

- Integrate the School District into existing or future notification systems for compatibility and uniform knowledge of use, including a combination of radio, TV, Internet, and land-line, cellular, and TTY phones. Web-based notification systems should be established throughout the school systems and homes of students, faculty, and staff, and should be integrated with e-mail notification systems for the employers of parents and caregivers. The system should be compatible with the various emergency notification broadcast systems that are used by OEM, Fire, and Police departments.

Other Planning Needs
- Supplement the Department of Behavioral Health's departmental emergency preparedness programs, now run by volunteers. These volunteers provide behavioral health/mental health training to community organizations and provide contact information for community resources.

- Consider conducting quarterly or twice-yearly meetings among PIOs from the City, neighboring counties, SEPTA, PECO, and the private sector to share lessons learned and best practices and to strengthen ties and planning among agencies that would respond to a crisis. Building these relationships and planning efforts together prior to an emergency strengthens coordinated response efforts.

- Prepare after-action reports following all emergency response incidents and incorporate recommendations from those reports. Consider requiring after-action reports after all major events to create lessons learned, to identify those portions of crisis communications and the EOP that worked well, and to revise those portions that did not func-

tion as expected. Adjust plans according to the outcomes identified in the after-action reports and share results among departments.

5.4 Training and Exercising For PIOs

In the event of an emergency or disaster, it is critical that a consistent and credible message be communicated by government to its citizens. PIOs often convey that message, and the City and its citizens benefit when PIOs participate in communications training and emergency drills and exercises.

More importantly, the Department of Homeland Security (DHS) requires that all federal, state, local, tribal, private sector, and nongovernmental personnel with a direct role in emergency management and response be trained in the National Incident Management System (NIMS). This requirement for preparedness grant funds, which must occur before September 2006, includes all emergency services-related disciplines such as EMS, hospitals, public health, fire service, law enforcement, public works/utilities, skilled support personnel, and other emergency management response, support, and volunteer personnel.

5.41 Strengths

Some PIOs and media professionals, such as those working in the Water and Public Health departments, regularly participate in exercises and have received NIMS and Incident Command System (ICS) training. The Department of Behavioral Health has contracts with Temple University via the Pennsylvania Department of Public Welfare to develop risk communications training, and the Department of Behavioral Health provides behavioral health training to community organizations and contact information for community resources.

5.42 Gaps

No coordinated or consistent training exists for PIOs on their roles and responsibilities before, during, and after a disaster, or on NIMS and ICS. There is confusion among PIOs about the formation of a

Joint Information Center during a disaster and the procedures for utilizing EAS.

5.43 Recommendations

• Develop a comprehensive plan for PIO training and codify it into job descriptions, including: cultural competency; media; crisis communication; accessible electronic information and technology for special needs populations; EOC/JIC training; communication with individuals who are at risk due to behavioral health, physical impairment or lack of ability to make judgments; and coordination with private sector PIOs. Codifying the training ensures that all City PIOs have the same core competencies and operate under the same frame of reference during an emergency.

• Require PIOs from City departments to participate in City drills. Identify other local and regional opportunities for participation in drills and exercises. Providing hands-on experience for PIOs during exercises and drills will help them respond in the event of a real emergency. They will be familiar with personnel from other agencies who will respond to the emergency and with whom they must work. As appropriate, integrate PIOs from relevant private sector partner agencies (e.g., Red Cross, hospitals).

• Establish annual crisis communications training for City PIOs to provide them with a foundation for their response during a real emergency and to test the crisis communications plan, which should be up-to-date and ready to implement.

• Establish annual crisis communications and media training for department executives who will be called upon during a crisis. These executives must be ready to implement their crisis operations plans, which should be tested and altered as necessary, based upon drills prior to a real emergency. If these executives will be called upon to speak with the media and provide instructions to citizens via the media, they must be prepared to calmly and decisively relay their messages.

• Provide PIOs with the opportunity to attend an annual Emergency Management Institute (EMI) training session or NIMS training online. EMI training arms PIOs with practical experience and best practices for responding during a catastrophic event. The NIMS course provides PIOs with information and training so that they will comply with federal standards for training and exercising.

5.5 Making Communications Accessible

According to U.S. Census 2000 data, 359,409 people with disabilities reside in the City of Philadelphia. Section 508, an amendment to the Workforce Rehabilitation Act of 1973, requires accessible electronic and information technology for people with disabilities.

The standards for web accessibility should be the Web Content Accessibility Guidelines 1.0, established by Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3.org).   Section 508 of the Rehabilitation Act addresses web accessibility but not as extensively as the WAI guidelines. Accessible electronic and information technology can be used by people with a wide range of abilities and disabilities. It incorporates the principles of universal design, where each user can interact with the technology in ways that work best for him or her. Just as buildings that have ramps and elevators are accessible to wheelchair users, products that adhere to accessible design principles can be used by people with a wide range of abilities and disabilities.

5.51 Strengths

Philadelphia has a wealth of resources available to help the City comply with Section 508 guidelines, including the Temple University Institute on Disabilities.

5.52 Gaps

According to a review by the Institute on Disabilities, the Phila.gov website and ensuing document production in the City do not conform with Section 508 guidelines.

5.53 Recommendations

• Incorporate, at a minimum, Section 508 guidelines for website and document production.   Incorporate the standards for web accessibility from the Web Content Accessibility Guidelines 1.0.

• Amend the Emergency Operations Plan Annex D to include and address the public information needs of individuals with special needs.

• Provide ways to inform people who are deaf or hard of hearing of an impending disaster if emergency warning systems such as sirens or other audible alerts are used. When the electric power supply is affected, it may be necessary to use several forms of notification. These might include the use of telephone calls, auto-dialed TTY (teletypewriter) messages, text messaging, e-mails, and even direct door-to-door contact with pre-registered individuals. Also, consider using open-captioning on local TV stations in addition to incorporating other innovative uses of technology into such procedures, as well as lower-tech options such as dispatching qualified sign language interpreters to assist in broadcasting emergency information provided to the media.

6.0 Ensure Continuity of Government and Continuity of Operations Planning

Recent disasters and today's threat environment demonstrate the need for local jurisdictions to annually examine and assess COG/COOP. The gap analysis focused primarily on identifying essential functions, critical records, alternate work facilities, IT backup and recovery systems, and lines of succession to facilitate an effective recovery of the City's critical functions. The review also discovered that interdepartmental planning activities were noticeably weak. Recognizing this, the City of Philadelphia hosted a training seminar on COG planning on May 30, 2006.

The City of Philadelphia is responsible for supplying resources for disaster preparedness, response, and recovery, and for developing continuity and emergency response systems to manage various disruptions to critical services. This requires fostering resiliency in existing systems (i.e., physical, social or economic) so that they can sustain potential consequences.

Continuity of Government (COG)/Continuity of Operations (COOP) planning is the most effective means to address a range of recovery-related problems, including loss of goods, services and jobs; declining land values and property and sales tax revenues; and temporary and permanent relocation of residents and businesses. It is this interconnectedness that makes the entire community vulnerable to disasters, and it is this same interconnectedness that enables the City to develop the best practical steps to prepare its communities for disasters.

COG planning ensures that elected officials and City staff are able to continue their respective responsibilities during and after a disaster, and includes succession planning, delegation of authority, and identification of alternate locations. COOP activities serve to support the continuance of the aforementioned government functions by considering existing programs, such as critical infrastructure protection, business continuity planning, and disaster recovery.

Planning must extend beyond compliance with local, state, and federal mandates. A mechanism must be in place to ensure the viability of City plans.

Throughout the course of the Emergency Preparedness Review, the COG Subcommittee identified the following gaps in current preparedness efforts and devised a series of recommendations to close those gaps. The list below first identifies each gap and then provides the Subcommittee's recommended solution. Due to the unique nature of the COG issues, the Subcommittee broke the gaps and recommendations into five categories:

- 6.1 Policy
- 6.2 Planning
- 6.3 Personnel
- 6.4 Training and exercises
- 6.5 Equipment

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

6.1 Policy

6.11 Gaps

The City does not have strong, centralized COG or emergency preparedness policies that encourage or require continuity planning.

The current documents of succession do not identify the initiation and termination of legal authority when succession is necessary. Succession plans and the delegation of authority are key elements of COG programs. These plans should establish orders of succession for all key positions, particularly those of organizational leadership. The orders of succes-

sion must be of sufficient depth to ensure the City's ability to perform essential functions of government throughout any emergency.

There are limited memoranda of understanding (MOUs) and mutual aid agreements with internal and external partners. Such agreements could be used to enhance response and recovery operations in areas of additional personnel, alternate work sites, and alternate data storage and processing sites. No documented funding requirements exist for COOP/COG plan execution for personnel costs, alternate sites, alternate suppliers, and alternate supplies among others, and no documented procedures are in place for acquiring the resources necessary to sustain operations for up to 30 days.

6.12 Recommendations

- **Establish the responsibility and functions for continuity planning within an enhanced OEM.**

- Develop COOP standards in the City's departments, units, divisions, and agencies to assist with the following:
    - o Ensuring the continuous performance of the City's essential functions and operations during an emergency, particularly ensuring the back up of critical data and the use of mirroring technology
    - o Protecting essential facilities, equipment, records and other assets
    - o Achieving a timely and orderly recovery from an emergency and resumption of full service to all citizens
    - o Facilitating decision-making for execution of plans
    - o Identifying and designating principals and support staff to be allocated

- Maintain a centralized inventory of key vendors and partners that can be used during a disaster to assist in the allocation of appropriate resources to response and recovery efforts.

6.2 Planning

6.21 Strengths

The COG Subcommittee conducted a survey that sought to identify essential functions, critical records, and lines of succession within City departments, divisions, and operating units—the key components of a COG plan. More than 40 departments, divisions, and commissions now have formalized written documents that not only identify their respective essential functions, but also enable City officials to identify available resources and skilled personnel that could be used during a disaster. The survey also identified individuals within the reporting departments, agencies, or units who could serve as primary points of contact until the respective entities formally designate liaisons to the Office of Emergency Management.

In August 2003, the City conducted a review of the available standby power to police and fire stations, health centers, and fleet fueling and service centers. The review identified many critical service facilities that lacked backup power, and prioritized critical facilities where emergency generators would be installed. This project is ongoing.

Agencies such as the School District and the Free Library can contribute to the City's emergency preparedness efforts. For example, the School District currently has a strong collaborative network with community-based organizations and is capable of reaching a large percentage of the City's special needs populations. The Free Library also offered to supplement a variety of departments in a disaster, through the following strengths:

- The Free Library's Internet access is separate from that of the City, providing redundancy, and it has 600 computer terminals.
- The Free Library currently serves as an information distribution network and could continue that task during an emergency.
- Approximately 50 libraries are located throughout the City with a pool of 2,200 volunteers.

- The Free Library has existing staff and resources to address the blind, disabled, and citizens who speak English as a second language.
- The main branch has a meeting room, wireless network, refrigeration, and café capabilities and could be used as a backup or temporary operations center.
- Several library branches are attached to District Health Centers or to recreational centers, permitting additional space if needed in an emergency or crisis.
- The Free Library has a small fleet of approximately 40 vehicles.
- The Free Library has ties to neighborhood businesses, hospitals, schools, banks and community organizations.

6.22 Gaps

A limited number of formalized comprehensive written plans exist, and, of the plans that do exist, there appeared to be no consistent structure. Standards allow for analysis and comparison of the activities of similar municipalities and serve as useful tools for municipal leaders who are faced with difficult decisions about the future direction of emergency management efforts within their community. Although there is a plan for the use of emergency generators, there is not a plan to supply fuel to generators for up to thirty days.

No formalized departmental list exists of interagency partners or external vendors who routinely provide critical resources or support to each department. No current efforts or plans exist to encourage the business community to create continuity of operations plans.

Quasi-governmental agencies are not integrated into the City's overall planning process, and no documented plans exist for an alternate finance or payroll operations site. Prisons have not identified an alternate site if they have to evacuate nor have they developed the necessary transportation resources. Finally, the City currently has designated no central authority that is responsible for reviewing IT operations and developing standard processes for the integration of interagency activities.

6.23 Recommendations

- **Require each department to create, finalize, and update their COOP and COG plans annually; review essential functions, succession plans, and equipment needs; and develop specific budgetary line items to support annual COG exercises.**

- **Work with the private sector, especially with critical infrastructure and businesses that provide goods and services to the City, to encourage the development of business continuity plans through training and other resources.**

Backup power/fuel
- Assess which facilities would need fuel for emergency generation for up to thirty days and plan accordingly. Demands for power and fuel supplies by both the public and private sectors will place a strain on the City's ability to provide adequate power to key facilities as it attempts to maintain distribution of essential functions and services to the Philadelphia community. Fuel supplies could become an issue in the event of prolonged outages or evacuation of citizens.

Critical Contingency Plans
- Develop appropriate contingency plans for the Finance Department's payroll function. Establish and incorporate budgetary line items to support execution of the plans. The inability to process payroll would cause the City's workforce and citizens to lose confidence in the government and become disgruntled; this also could affect union contracts and perhaps result in litigation.

- Develop a plan that establishes alternate locations for the City's 8,000 prisoners in event of an evacuation. Include in the plan Memoranda of Understanding with local bus companies, the Sheriff Departments in the surrounding areas, and the School District to address the lack of transportation vehicles, and with prisons from other areas for use as alternate facilities.

Data/IT
- Designate an authority or governing body to review IT operations, develop processes relative to the integration of interagency activities and de-

velop IT standards for all departments within the City. Assess vulnerabilities of each department, especially those that provide critical functions to the community. Include alternative locations in the City's recovery strategies, for use as processing and network termination sites.

• Move to a mobile framework of business operations, where business processes can be conducted or accessed from any location. Ensure that inventories of necessary equipment are maintained.

• Ensure that mission-critical servers have redundancy and backup procedures. Ensure that all historical or unique documents are inventoried and archived. Determine the critical records and data necessary for City agencies to continue performing essential functions. Determine how much of this information is backed up and how readily available it would be in the course of a COG event.

Other Resources
• Encourage departments or agencies such as the Free Library and the School District to assume critical roles in the City's response and recovery efforts. These agencies and departments offer personnel who are skilled in areas that can enhance the City's capacity to reach individuals with special needs. Include quasi-governmental agencies into overall planning committees and structure.

6.3 Personnel

6.31 Strengths

The Subcommittee found that individual City personnel have extensive working knowledge of their respective essential functions. This allows for coordination of response and recovery efforts by using individuals who are experienced in performing essential functions daily.

The disaster recovery planner in the Mayor's Office of Information Services currently is working to address IT continuity issues. This will allow for identification of vulnerabilities and implementation of miti-

gation strategies as the City improves the sustainability of its information technology infrastructure.

6.32 Gaps

The COG Subcommittee found that no designated contingency planning coordinator is in place in each department nor have departments identified essential personnel.

The City has not designated shelters for family members of essential employees during disaster events.

6.33 Recommendations

• Determine emergency essential personnel and alternate mission essential personnel to ensure that critical operations continue, even if primary or scheduled mission essential personnel are unable to report. City agencies must not arbitrarily designate all personnel within an office or activity as mission essential.

• Address the unique aspects of personnel policy that exist only during emergencies. Conduct a thorough review of personnel policies to ensure that reimbursement issues, particularly with the payment of overtime for exempt and non-exempt employees, are clearly defined. The City should have a pre-established policy for compensation of employees who are normally exempt from overtime but who would have to respond during a disaster if they want to be eligible for reimbursement from the Federal Emergency Management Agency.

• Designate an accessible family shelter or evacuation location for essential personnel. Essential staff members need to feel confident that their family members will be safe during a disaster.

6.4 Training and Exercises

6.41 Strengths

Emergency management exercises occur within and

EPEX 2005: Emergency Preparedness Exercise at Philadelphia International Airport, Credit: Rick McMullin, Philadelphia International Airport

among several key agencies, including the Police, OEM, Public Health and Fire Departments.

6.42 Gaps

No plans currently exist to include external vendors, individuals with special needs, and community partners in exercises of operational plans, alternate facilities, continuity plans, and interoperable communications. The City does not currently conduct disaster recovery information technology plan testing.
6.43 Recommendation

- Conduct interagency disaster response and recovery audits and test all mission critical systems to support continuity of government plans. Include external vendors in exercises. Report the results to the Managing Director and the Deputy Managing Director for Emergency Management in after-action reports and improvement plans. Follow the guidelines established by the Department of Homeland Security (DHS) Exercise and Evaluation Program (HSEEP). Exercises are an excellent way to demonstrate community resolve to prepare for disastrous events. The benefits of the HSEEP are:

    o Testing and validating policies, plans, procedures, training, equipment, and interagency agreements
    o Clarifying and training personnel in roles and responsibilities
    o Improving interagency coordination and com-

munications
o Identifying gaps in resources
o Improving individual performance
o Identifying opportunities for improvement

6.5 Equipment

6.51 Strengths

A system currently is in place that can be used to contact City employees while at work.

6.52 Gaps

The current Human Resource Information System (HRIS) is not updated regularly and has limited capabilities.

6.53 Recommendation

- **Support an integrated enterprise information system, which is software for human resource departments to manage thousands of employee records including skills, benefits, and payroll. Such software can be used for all employees of the City government to facilitate business impact analysis, departmental emergency management planning, notification and incident management before, during and after times of emergency.**

Progress Chart

Individual City departments have not been formally required to have the following items in place. Early in the EPRC process, it was determined that each department should work to implement these functions as a matter of good emergency preparedness practice. Through the process, most have implemented many of the functions.

The Continuity of Operations/Continuity of Government Chart on the following page represents information reported as received from departments, divisions, units and agencies as of June 23, 2006. City agencies, departments and organizations are listed vertically. Horizontally, the Xs represent the completed tasks by that agency/department/organization. Below are definitions of the tasks listed horizontally in the chart.

Alternate Site: An alternate operating location to be used when the primary facilities are inaccessible. It is another location, computer center or work area designated for recovery.

Critical Records: Records that must be preserved and available for retrieval if needed. These records are usually accessed in day-to-day operations or are found to be vitally important to the mission of an agency or department. Records or documents that, if damaged or destroyed, would cause considerable inconvenience and/or require replacement or re-creation at considerable expense.

Backup (Data): A strategic process by which data, electronic- or paper-based, is copied in some form so that the data is available and can be used if the original copy is lost, destroyed or corrupted.

Alert: A formal notification system in place that lets personnel know that an incident has occurred, which may develop into a disaster.

Essential Function: A critical service provided to the community, or an important process utilized by an agency in ensuring that the critical service is provided. Often applied to the utilities (water, gas, electricity, etc.) it may also include standby power systems, environmental control systems or communication networks.

Executive/Management Succession: A predetermined plan for ensuring the continuity of authority, decision-making, and communication in the event that key members of senior management suddenly become incapacitated, or in the event that a crisis occurs while key members of senior management are unavailable.

Interoperable Communications: The ability to communicate internally within and between departments and externally with response and recovery partners.

Decision Process: Command and control strategic activity that refers to the management of a disaster and concerns the coordination and logistics of the people and assets needed in an emergency. It provides both tactical and strategic capabilities for first responders and emergency response officials.

Response: The reaction to an incident or emergency to assess the damage or impact and to ascertain the level of containment and control activity required. In addition to addressing matters of life safety and evacuation, Response also addresses the policies, procedures and actions to be followed in the event of an emergency.

Recovery: Implementing the prioritized actions required to return the processes and support functions to operational stability following an interruption or disaster.

Reconstitution: In the Reconstitution Phase, recovery activities are terminated, and normal operations are transferred back to the organization's facility.

Designated Liaison: An individual or group designated to coordinate or control designated response, recovery processes, testing, training or continuity of operations activities for a respective department or agency. The designated individual may also be responsible for plan documentation, maintenance, and distribution.

City of Philadelphia Continuity of Operations/Continuity of Government Progress Chart

(Chart represents information reported as received from departments, divisions, units and agencies as of June 23, 2006.)

DEPARTMENT	ALTERNATE SITE FORMALLY IDENTIFIED	CRITICAL RECORDS MGT/ BACKUP SOLUTIONS	ALERT, NOTIFI-CATION	ESSENTIAL FUNCTIONS IDENTIFIED	INTEROPERABLE COMMUNICATIONS	SUCCESSION PLANNING/ DECISION PROCESS	RESPONSE/ RECOVERY/ RECON-STITUTION	DESIGNATED LIAISON
1. PUBLIC HEALTH		X	X	X		X		X
2. POLICE		X	X	X	X	X		X
3. FIRE		X	X	X	X	X		X
4. FREE LIBRARY		X	X	X	X	X		X
5. PUBLIC SCHOOLS		X	X	X	X	X		X
6. JUVENILE JUSTICE SERVICES		X	X	X	X	X		X
7. Mayor's Office of Information Services		X		X		X		X
8. OEM	X		X		X			X
9. FINANCE		X		X		X		X
10. RISK MGT.		X	X	X		X		X
11. OAS / OESS		X	X	X		X		X
12. PERSONNEL		X		X		X		X
13. WATER	X	X	X	X		X		X
14. HEALTH		X		X		X		X
15. FLEET AND PROPERTY	X	X	X	X		X		X
16. STREETS	X	X	X	X		X		X
17. HUMAN SERVICES		X		X		X		X
18. PRISONS		X	X	X		X		X
19. PROCURMENT		X		X		X		X
20. PROPERTY		X		X		X		X
21. RECORDS		X		X		X		X
22. TREASURER		X		X		X		X
23. LAW		X		X		X		X
24. OFFICE OF THE MANAGING DIRECTOR				X		X		X

City of Philadelphia Continuity of Operations/Continuity of Government Progress Chart
(Chart represents information reported as received from departments, divisions, units and agencies as of June 23, 2006.)

DEPARTMENT	ALTERNATE SITE FORMALLY IDENTIFIED	CRITICAL RECORDS MGT/ BACKUP SOLUTIONS	ALERT, NOTIFI-CATION	ESSENTIAL FUNCTIONS IDENTIFIED	INTEROPERABLE COMMUNICATIONS	SUCCESSION PLANNING/ DECISION PROCESS	RESPONSE/ RECOVERY/ RECON-STITUTION	DESIGNATED LIAISON
25. REVENUE		X		X		X		X
26. MAYORS OFFICE				X		X		X
27. MAYORS OFFICE OF COMMUNITY SERVICES		X		X		X		X
28. CAPITAL PROGRAM								
29. REAL ESTATE		X		X	X	X		X
30. OFFICE OF HOUSING AND COMMUNITY DEVELOPMENT								
31. MUNICIPAL ENERGY OFFICE		X		X		X		X
32. PARKING AUTHORITY								
33. AIRPORT		X	X	X	X	X		X
34. PENSIONS								
35. PGW-GAS	X	X	X	X	X	X	X	X
36. MUSEUM OF ART		X		X		X		X
37. CONTROLLER								
38. CITY COUNCIL								
39. DEFENDER ASSOCIATION OF PHILADELPHIA								
40. DISTRICT ATTORNEY								
41. COMMERCE		X		X		X		X
42. HS-CHILDREN AND YOUTH DIVISION		X		X		X		X
43. PHILADELPHIA HOUSING AUTHORITY		X		X		X		X
44. HISTORICAL COMMISSION		X		X		X		X

City of Philadelphia Continuity of Operations / Continuity of Government Progress Chart

(Chart represents information reported as received from departments, divisions, units and agencies as of June 23, 2006.)

DEPARTMENT	ALTERNATE SITE FORMALLY IDENTIFIED	CRITICAL RECORDS MGT/ BACKUP SOLUTIONS	ALERT, NOTIFICATION	ESSENTIAL FUNCTIONS IDENTIFIED	INTEROPERABLE COMMUNICATIONS	SUCCESSION PLANNING/ DECISION PROCESS	RESPONSE/ RECOVERY/ RECON- STITUTION	DESIGNATED LIAISON
45. WATER REVENUE		X		X		X		X
46. RECREATION		X		X		X		X
47. FAIRMONT PARK		X		X		X		X
48. PHILADELPHIA INDUSTRIAL DEVELOPMENT CORPORATION								
49. REGISTER OF WILLS								
50. SHERIFF								
51. MAYOR'S ACTION CENTER		X	X	X		X		X
52. REDEVELOPMENT AUTHORITY		X	X	X		X		X
53. INSPECTOR GENERAL								
54. PHILADELPHIA HOUSING DEVELOPMENT CORPORATION		X	X	X		X		X
55. HUMAN RELATIONS COMMISSION		X	X	X		X		X
56. MINORITY ENTERPRISE BUSINESS COUNCIL		X	X	X		X		X
57. OFFICE OF BUDGET PROGRAM EVALUATION		X	X	X		X		X
58. LABOR STANDARDS		X	X	X		X		X
59. BOARD OF REVISION OF TAXES		X	X	X		X		X
60. LICENSE AND INSPECTIONS		X	X	X		X		X
61. MAYOR'S OFFICE ON AGING	X	X	X	X		X	X	X

7.0 Protect Critical Infrastructure and Promote Public-Private Partnerships

The protection of critical infrastructure within the City of Philadelphia was a major focus of the Emergency Preparedness Review Committee (EPRC) process, through the Critical Infrastructure Subcommittee.

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.

Defining Critical Infrastructure

One of the Subcommittee's first observations was that the term "critical infrastructure" did not appear in the Emergency Operations Plan (EOP) (last updated in 2002) or in the Hazard and Vulnerability Assessment (last updated in 1998).

Nationally[4], the focus on critical infrastructure is relatively new in emergency management. Before the mid-1990s, federal government references to infrastructure primarily related to concerns about the adequacy of infrastructure to keep pace with growth of population. As domestic and international terrorism were recognized as a larger threat, the national emphasis shifted from ensuring the adequacy of infrastructure to identification and protection of critical infrastructure, through a Presidential Executive Order that created a Commission on Critical Infrastructure[5]. The Commission's report resulted in Presidential Decision Directive 63 in 1998, which defined the categories of critical infrastructure as including:

- Information and communications
- Banking and finance
- Water supply

- Transportation (aviation, highways, transit, pipelines, rail, waterborne commerce)
- Emergency law enforcement services
- Continuity of government
- Public health
- Electric power
- Oil and gas production and storage

Immediately following September 11, 2001, the definition of critical infrastructure was formally clarified in another Presidential Executive Order[6]. Interestingly, public health was dropped as a category. Added categories were:

- Energy production and distribution
- Other utilities
- Telecommunications
- Nuclear material
- Information systems
- Events of national significance
- Transportation
- Airports
- Livestock, agriculture, and provision of water and food for human use

The initial Patriot Act (2001) included the first congressional definition of critical infrastructure: *"Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters."*

In subsequent documents issued by the federal government, including the National Strategy for Homeland Security (July 2002) and the National Strategy for Physical Infrastructure Protection (February 2003), this definition continued to evolve. The

---

[4]The recent history of the evolution of the definition of Critical Infrastructure relies heavily on "Critical Infrastructures: What Makes an Infrastructure Critical?" by John Moteff, Claudia Copeland and John Fischer of the Congressional Research Service, Library of Congress, updated January 29, 2003.
[5]Presidential Executive Order 13010 – Critical Infrastructure Protection, Federal Register 61, no. 138 (July 17, 1996), 37347.
[6]Presidential Executive Order 13228-Establishing the Office of Homeland Security and the Homeland Security Council. Federal Register 66, no. 196 (Oct 8, 2001), 51812-51817.
[7]USA Patriot Act, Section 1016(e).

current definition was issued in Homeland Security Presidential Directive 7 (December 2003). Note that Public Health was once again added to the definition.

- Information technology
- Telecommunications
- Chemicals
- Transportation (including pipelines)
- Emergency services
- Postal and shipping
- Agriculture and food
- Public health
- Water and sewer
- Production, refining, storage, and distribution of oil and gas, and electric power
- Banking and finance
- National monuments and icons
- Defense industrial base

Current national efforts to categorize and protect critical infrastructure fall under the auspices of the Interim National Infrastructure Protection Plan. In addition, the Critical Infrastructure Partnership Council and its respective Sector Coordinating Councils are working to promote best practices nationally. The 17 Critical Infrastructure and Key Resource Sectors are:

- Banking and Finance
- Chemical
- Commercial Facilities
- Commercial Nuclear Reactors, Materials, and Waste
- Dams
- Defense Industrial Base
- Drinking Water and Wastewater Treatment Systems
- Emergency Services
- Energy
- Food and Agriculture
- Government Facilities
- Information Technology
- National Monuments and Icons
- Postal and Shipping
- Public Health and Healthcare
- Telecommunications
- Transportation Systems

Approach

Given the significant scope, time, and resource constraints, the Critical Infrastructure Subcommittee focused its efforts primarily on the utility, transportation, financial, and federal sectors (including the Independence Mall District), and private sector assets such as the petrochemical industry. The Subcommittee also focused on the emergency management and communications functions, which are addressed elsewhere in this report.

Identification of Critical Infrastructure

Within the City of Philadelphia, efforts have been made to identify and classify individual facilities. For example, the City identified specific buildings and facilities as "high profile locations;" identification and selection were made by individual police district captains.

A subset of high profile locations has been identified as critical infrastructure, which requires perimeter protection plans, especially in the event of a terrorist attack. Based on Department of Homeland Security (DHS) scoring criteria, this critical infrastructure list was further broken down to include Buffer Zone Protection Plans to be developed by the City in conjunction with DHS.

Public-Private Partnerships

Nationally, nearly 85 percent of critical infrastructure is owned by private interests. Thus, any efforts to protect critical infrastructure must address public-private partnerships.

Through the EPRC interviews, there have been repeated concerns about the need for more integrated approaches to emergency preparedness by the public and private sectors. Public sector employees expressed concern that private sector leaders in Philadelphia are not as involved in government issues as in other major metropolitan areas. Private sector representatives were excited that the City had launched the EPRC effort, and expressed hope that the recommendations and efforts forthcoming from

the EPRC report would be implemented.

Through the EPRC process, existing public-private partnerships have been identified and steps have been taken to further develop new institutions. James Lee Witt and Managing Director Pedro Ramos spoke to the corporate leaders of the American Red Cross—Southeastern Pennsylvania Chapter executive board in April about ways the private and public sector can work together. In May, EPRC members met in Chicago with public and private sector leaders and organizations recognized nationally as models of effective public-private partnerships in emergency preparedness. Participants included ChicagoFirst, which links the financial community in that city with first responders, as well as the Great Lakes Partnership. Recently, representatives of the major financial institutions in Philadelphia have met and formed tentative plans to develop critical functions such as credentialing (one of the first accomplishments of ChicagoFirst) within the existing operations of the Center City District.

The Center City District of Philadelphia represents a model of public-private partnerships for crime prevention and emergency preparedness services. Working with the Philadelphia Police and Fire Departments, the Office of Emergency Management (OEM), and state and federal law enforcement representatives, the District provides crime prevention seminars and on-site security surveys, assists with crime-mapping and analysis, and distributes crime prevention guides. They have partnered with the Police Department on an emergency notification program called Alert Philadelphia which sends text messages to computers, PDAs, and cell phones to over 900 business, civic, and government leaders. This includes many who are not physically located within the Center City district. Finally, the District sponsors a regular forum for more than 250 retail, office, banking, hospital, hotel, and university security professionals as well as local, state, and federal law enforcement officials to discuss emergency preparedness and other subjects.

ChicagoFIRST – Securing the Financial Industry

Chicago's premier financial services institutions formed ChicagoFIRST in July 2003. The organization seeks to enhance the resiliency of the Chicago financial community by:
- Addressing homeland security issues requiring a common or coordinated response on the part of financial institutions;
- Working with government agencies to better understand their approaches to various crises, including evacuations, sheltering in place, and credentialing; and
- Ensuring that the public sector understands the importance of Chicago's financial community - regionally, nationally, and globally.

ChicagoFIRST achieves its goals by building and maintaining relationships with government at all levels. In a short period of time, ChicagoFIRST has obtained support from such agencies as the City of Chicago's Office of Emergency Management and Communications, the Illinois Terrorism Task Force, and the U.S. Department of Treasury.

Discussions of the utility and transportation sectors (excluding evacuation planning) and other private sector entities appear below. [8]

7.1 Utilities

The EPRC process assessed the primary water, natural gas, and electricity utilities. Because the water and natural gas utilities are publicly owned, the EPRC consultants were given access to much more information than that given by the investor-owned electricity company, PECO. Although confidentiality concerns restricted access to the amount and types of information, the staff and management of PECO significantly contributed to the process through in-depth interviews. The key Utilities recommendations, which reflect recommendations for natural gas, water and electricity, are the following:

• Utilities: **Coordinate with the primary electricity and telecommunications providers and with the publicly-owned water and natural gas utilities to jointly develop a list of restoration priorities and a plan of action to ensure COG and effective emergency management capabilities. Conduct joint table top exercises with the utilities to test the efficacy of such plans.**

7.11 Natural Gas

The Philadelphia Gas Works (PGW) is unique nationally as a publicly-owned and controlled natural gas distribution utility. Although most water utilities and many electric utilities are municipally owned, few natural gas companies are. If Philadelphia were served by an investor-owned natural gas company, it likely would expect a high level of emergency preparedness. The City should expect the same from a publicly controlled utility.

7.111 Strengths

PGW has focused on emergency preparedness and business continuity since January 2005. In that time, it hired an emergency management coordinator and a business continuity specialist and has developed plans. It has adopted an incident command structure. It also implemented an impressive automatic emergency contact system that requires active response from each recipient of an emergency message; without an acknowledgement, the system automatically attempts to contact the responsible individual through other numbers, and, if unsuccessful, contacts the next person in the hierarchy. PGW conducted its first table top exercises on September 22 and December 19, 2005, to test their plans. It also developed and conducted a tactical exercise involving the Philadelphia OEM, police, and fire, in June; an after-action report will be completed.

Following a major disaster event, the ability of a utility to restore service in a timely fashion is imperative. This often requires assistance from similar utilities. PGW received mutual assistance from PECO in the

recent past.

PGW's primary facilities are identified and assessed for vulnerabilities, and some mitigation actions have been implemented. PGW's natural gas supply is served by two major pipelines from the Louisiana Gulf Region, each roughly equal in capacity. Per PGW, there is extensive gas storage capacity in two Liquefied Natural Gas (LNG) tanks on site.

7.112 Gaps

Although significant progress to improve emergency preparedness has been made since January 2005, such efforts remain in their infancy. PGW emergency management staff have expressed concerned about long-term financial support for these initiatives.

When first questioned as part of the EPRC interviews, PGW had not yet conducted a tactical exercise. It communicated that one was planned for April 2006. However, senior OEM and Fire Department officials were not aware of such an exercise when the EPRC inquired in mid-March. As noted above, the exercise was conducted in June.

7.113 Recommendations

• Expect the same level of emergency preparedness from City-controlled utilities as from private sector utilities. City resource and policy decisions should support this expectation.

• Continue to organize tactical exercises between PGW and the OEM, police, fire, and public health involving the interruption of supply. The first exercise was conducted in June.

• Share successful implementation of the emergency notification software, as well as other lessons learned since January 2005 between PGW and other City departments. This recommendation is being implemented as PGW participated in a day-long training program on business continuity for all City departments in June.

7.12 Water

The Philadelphia Water Department (PWD) has provided a safe and reliable water supply for more than 100 years, drawing from the Delaware and Schuylkill rivers. PWD is a department of the City government, but sets its own rates for service. As a department, it is subject to hiring restrictions and other policies that apply to all departments.

Water supply and pressure are important factors given the threat of fires due to the age and density of buildings throughout the City. Wastewater infrastructure is critical due to the proximity to the rivers and the tendency of some lower areas to flood. According to the PWD, four of the worst floods in recent history have occurred during the past fifteen years.

7.121 Strengths

PWD has extensive, detailed emergency management plans, which evaluate reasonable scenarios and provide detailed action steps for each. The documents address both potential threats to the operations of the pumping and cleaning systems, and threats to the quality and safety of the water supply. PWD participated in exercises concerning the water system, including an extensive exercise involving a terrorist threat to the safety of the water system. It also takes several samples daily to detect contamination.

PWD appears to be in better financial condition than other departments, although it maintains infrastructure built for 2 million people and used today by only about 1.5 million people. It sets its own rates, which are not approved by the Public Utility Commission or City Council. To ensure continuity of operations, it reportedly maintains a healthy supply of replacement parts, especially for hard-to-replace items. Furthermore, PWD is PECO's second largest customer, which should give it priority status during an emergency event.

The PWD water filtration system consists of three

processing plants and pools. As required by the Bioterrorism Act of 2001, PWD hired a third party to conduct a detailed vulnerability assessment, which was completed in March 2003; steps are under way to implement some of the mitigation recommendations.

7.122 Gaps

Although PWD maintains extensive emergency operations plans, several elements of the plans require updating, such as the information on the emergency contact list. Also, PWD has not yet participated in any joint exercises involving the loss of a primary pumping station.

The need for approval for new bonding authority for capital improvement forced capital spending to slow, thereby limiting PWD's financial flexibility.

The water industry does not have a mutual assistance system analogous to the electricity system. Note that this is not just a gap for PWD; it is an issue for the entire water industry. PWD relies heavily on the primary electricity source provided by PECO, since only limited backup generation is available. This is mitigated somewhat by the gravity-fed water distribution systems, but in higher elevations, water service could be interrupted if the pumping station cannot operate.

7.123 Recommendations

• Identify and appoint an emergency management coordinator for the PWD department to address resource constraints and the loss of personnel to early retirement programs. Among other roles, this position would be responsible for updating, dating, and requiring signatures for annual revisions of the plan; installing and maintaining an automatic emergency notification system; and interacting with City, state, and national emergency preparedness officials.

• Conduct a joint tactical exercise between PWD and OEM, police, fire, and public health that involves the loss of a primary pumping station.

• Work with the Office of the Managing Director and the City Budget Office to address the continual need to cease capital projects due to problems with timing of the approval process.

• Consider participating in industry efforts (through the American Water Works Association and others) to develop a more effective national mutual assistance system for water utilities.

• As suggested by the EPRC, PWD prepared a map of areas that have been recently subjected to an unusual amount of flooding to recognize parts of the City that have a high risk to flood damage. PWD and OEM should work together to ensure that critical infrastructure such as hospitals are protected or have mitigated against the possibility of floods.

7.13 Electricity

PECO is the primary provider of electricity delivery services for the City of Philadelphia and the surrounding suburban counties. Although it is an investor-owned public utility, PECO's representatives discussed its emergency preparedness plans and experiences with the EPRC consultant, but confidentiality provisions restricted access to the level of detailed documentation provided by PGW and PWD. The resulting assessment was not as in-depth as the previous sections. Nevertheless, some conclusions can be made.

7.131 Strengths

PECO is part of Exelon Corporation, which also delivers electricity in the Chicago region through Commonwealth Edison (ComEd). PECO has drawn upon ComEd resources in the past to accelerate the restoration of electricity transmission and distribution systems and power lines following major wind-caused outage events such as Hurricane/Tropical Storm Isabel in 2003. Since January 2005, Exelon Delivery Services (which includes PECO operations) has implemented extensive emergency preparedness programs based on best practices developed under the highly regulated nuclear power industry.

PECO has an impressive transmission operations center with an industry-model simulation training center. It is also a founding member of the PJM Interconnection, which protects the region's power grid from outages, such as occurred in August 2003. Like most utilities, PECO has established a multi-level emergency operations system and has developed internal damage predictability model capability, based on detailed weather forecasts.

PECO experienced a medium-sized outage in September 2003 from Tropical Storm Isabel; approximately 90 percent of the 500,000 customers (in the City and suburbs) without power were restored within 24 hours, and 95 percent were restored within 48 hours. PECO has installed automated meter reading technology that effectively managed major restoration efforts. In addition, PECO has identified and worked to strengthen vulnerable critical infrastructure areas upon which the City depends.

Some utilities have been criticized for not providing Spanish-speaking assistance during major outage events; PECO began doing so in March 2006.

7.132 Gaps

Utilities from Texas to Nova Scotia have experienced significant wind- or ice-related outages during the past four years; in each of these cases, the utility had to restore power for more than half of its customers. In recent years, the Philadelphia region has been fortunate relative to other regions; only about one-third of PECO's total customers lost power following Isabel. This is listed as a gap because utilities in other areas discovered the extent to which they were not fully prepared for the scope of such a restoration effort.

7.133 Recommendations

• Engage PECO in a joint emergency planning process to determine restoration priorities and emergency preparedness roles within the City, conduct a joint exercise, and explore potential joint operations.

• Include Trigen as a utility partner. Trigen provides steam- and oil-powered electricity to several facilities in the City, including such large entities as the University of Pennsylvania. Trigen management states that it has not been involved in the City's emergency management community but would welcome doing so.

7.2 Transportation Infrastructure

Overall, the EPRC found that one of the most important recommendations would enhance all the recommendations listed below in the different transportation sections.

• **Create a high-level position at the Deputy Managing Director level to coordinate transportation planning and functions within the City, including coordination of the City's interaction with SEPTA and other transit agencies, the Pennsylvania Department of Transportation and regional partners. Continue efforts to improve the cooperation and sharing of information between the rail freight industry and the City.**

7.21 Mass Transit

The EPRC interviewed officials from the Port Authority Transit Corporation (PATCO) and Amtrak. However, the most extensive review and discussions were with Southeastern Pennsylvania Transportation Authority (SEPTA) officials.

7.211 Strengths

SEPTA recently relocated control systems for all operations (subways, railroad, trolleys, buses, electricity, para-transit, and police) into a centralized operations center with extensive technology, including communications via speakers, digital message boards, and video surveillance. Extensive emergency operations plans are in place. SEPTA participates in exercises.

There is an impressive connection between SEPTA and PECO operation centers. If the Control Center alone loses power, trains can continue to operate.

7.212 Gaps

SEPTA has worked to bring together its disparate operations under one operations center. A next step would be to address operational gaps between SEPTA and the City (police, operations, and communications,). These groups tend not to actively participate in each other's exercises; an exception was the recent exercise at the Philadelphia International Airport, organized by the U.S. Department of Justice.

Trains require electricity to operate, and some depend upon Amtrak's electricity control system. This gap became evident on May 24, 2006, when several SEPTA railroad lines ceased operations due to an Amtrak power outage.

SEPTA suffered a power outage at its new operations center in June and a subsequent failure of its backup power supply. SEPTA attempted to move operations to its backup operations center across Market Street but found only limited capabilities, as computer and communication systems in the backup facility also failed. Although no services were interrupted during this brief outage, SEPTA was forced to operate without centralized system visibility.

Although SEPTA is aware of its capabilities to assist through gearing up additional trains and redeploying the extensive bus network, no formal plans are in place.

There are very few installed surveillance cameras in stations and tunnels and on vehicles, although SEPTA is actively enhancing surveillance capability this year. In addition, there is a lack of visual communications systems for passengers. Only a very few stations have digital screens for train status, which could be used for emergency communications.

7.213 Recommendations

• Build on the cooperative work between the City of Philadelphia and SEPTA to improve day-to-day operational interaction.

Philadelphia International Airport

• Appoint a high-level official as liaison to SEPTA, PATCO, New Jersey Transit and Amtrak to improve interactions on day-to-day basis.

• Work with SEPTA to jointly strengthen backup systems.

7.22 Rail Freight

7.221 Strengths and Gaps

Philadelphia businesses rely on the daily delivery of materials by train. Interruption of rail freight traffic would severely affect the City and regional economies. On the other hand, the proximity of rail freight traffic to critical facilities within the City combined with the transport of hazardous materials, which the railroads are required to transport as registered common carriers and is necessary for critical daily products and services, are potential threats to health and safety.

7.222 Recommendation

• Work more closely with the railroads. Through this process, initial steps are underway to achieve that objective, including innovative methods to communicate the transport of potentially hazardous materials.

7.23 Airports

The City of Philadelphia's Division of Aviation operates Philadelphia International Airport (PHL) and the Northeast Airport. The primary focus of the EPRC

review was on PHL. Due primarily to the arrival of a new carrier in 2004 and the corporate restructuring of the traditional primary carrier in 2005, passenger volumes have been increasing substantially. PHL has reported that more than 3 million additional passengers boarded through PHL in 2005 than in 2004.

7.231 Strengths

PHL's Emergency Operations Plan is in place (last updated in May 2005), as required for continuous FAA certification. PHL is staffed by City police and fire, rather than a separate police agency.

During the two-week period of the EPRC review, PHL management's performance was tested during recent events, such as an all-day severe fog. Another incident involved a fire on a UPS plane on February 7. It made an emergency landing, which required the airport to shut down. Less than a week later, PHL maintained operations through a severe snowstorm. Although the review of the UPS fire is still under investigation by the NTSB, the EPRC consultants were impressed with the PHL performance during this two-week period. They clearly were tested under tough conditions.

PHL has a strong electricity backup system. It has not lost operations due to a power outage in several years. It has an extensive security and surveillance system.

7.232 Gaps

Passenger numbers have increased from 28.5 million in 2004 to 31.5 million in 2005, straining infrastruc-

ture and creating tension with Transportation Security Agency (TSA) over staffing and jurisdiction. PHL currently is short over 100 TSA staff.

Currently, a bomb squad is not located on site at PHL. The City police squad is on the northeast side of the City, which requires an extended drive time to PHL.

PHL authorities had not considered whether the area would be able to serve as evacuation site if it is requested by the Office of the Managing Director.

7.233 Recommendations

• **Work with the City's congressional delegation and with state and regional partners to support increased Transportation Security Agency (TSA) staffing, given the significant growth in airline passenger activity at the Philadelphia International Airport and declining resources from TSA.**

• **Consider creating airport-based bomb squad or establishing a site in closer proximity to PHL.**

• **Continue to work with the Federal Aviation Authority on Air Traffic Control backup scenarios.**

7.24 Maritime Ports

The Philadelphia ports, and the Delaware Riverfront in general, have experienced substantial growth during the past few years that is predicted to continue for the foreseeable future.

7.241 Strengths

The U.S. Coast Guard (USCG) chairs the Area Maritime Security Committee, which coordinates with the Southeastern Pennsylvania Regional Task Force and the Justice Department's Anti-Terrorism Task Force and works closely with Philadelphia Regional Port Authority's (PRPA) Director of Security. The USCG works with OEM to receive DHS Maritime Domain Awareness grants for underwater vessel monitoring and tracking.

The PRPA formed a security committee before

September 11, hired a retired Army Colonel as security consultant immediately following September 11, and completed a formal security plan required by the Maritime Transportation Security Act of 2002 one year before it was due. In addition, the PRPA received approximately $3 million in grants for vessel tracking, video surveillance systems, and emerging security technologies.

7.242 Gaps

Despite a 50 percent increase in annual commercial vessel boarding since 2002, there has been no increase in overall USCG staffing in Philadelphia. Furthermore, the nearest USCG rescue helicopters are at Atlantic City. The USCG works with the Philadelphia OEM but is concerned about depth of resources generally in Philadelphia

The Delaware River is challenging to navigate; a single major ship could block navigation for a significant period of time. This occurred in 2004, when the Athos I collided and ruptured, leaking crude oil. The port was closed for 11 days during the clean-up effort.

Philadelphia has not fared as well on port security grants as would be expected, given the size and importance of the ports.

The PRPA is not a member of the Southeastern Pennsylvania Regional Task Force, although the ports are an important component of local infrastructure. The PRPA is not familiar with Philadelphia's OEM, but would welcome the opportunity to become more closely connected.

7.243 Recommendations

• **Strengthen City policy and operational linkages with the PRPA in traffic engineering, security, and other operational areas, given the current and likely continued growth of activity along the Delaware riverfront, including residential and commercial development, potential gaming sites, and planned expansion of commercial and military port activity.**

7.3 Other Critical Infrastructure

Broadly speaking, the recommendations for National Critical Infrastructure and Public Private Partnership apply throughout the theme. It includes the following recommendations:

• National Critical Infrastructure: **Continue to build upon current efforts, including Federal Homeland Security-funded safety and security enhancements to refinery facilities to protect the nation's critical infrastructure located within the City of Philadelphia, as well as protecting the residents of Philadelphia.**

• Public-Private Partnerships: **Continue to work with the specific industries noted above and other sectors, including the substantial federal employee sector represented by the Federal Executive Board, to identify critical facilities and work to address vulnerabilities. Build on the work of the national Critical Infrastructure Partnership Council and the respective Sector Coordinating Councils.**

7.31 Federal Sector, Including the Independence Mall District

7.311 Strengths

Substantial local and federal security has focused on Independence National Historic Park, home of Independence Hall and the Liberty Bell; it is maintained by the U.S. Department of the Interior National Park Service (NPS).

On September 11, the City immediately rushed to protect the park by blocking and closing Chestnut Street, which remained closed until April 2003. NPS has a good relationship with the City, specifically the Director of Emergency Management, who is contacted when NPS needs assistance. In the meantime, NPS has a police force of approximately 45 officers.

7.312 Gaps

There is a difference of opinion between NPS and the City concerning Chestnut Street: NPS would prefer to close Chestnut Street again, whereas the City would not. Vehicular traffic currently is allowed, regardless of the size or content of the vehicles.

The City and NPS had a memorandum of understanding in the 1990s that allowed NPS police limited jurisdiction on the streets that intersect the park. This MOU expired in the 1990s. NPS has expressed an interest in renewing this agreement, citing the reduction in city police staffing.

7.313 Recommendations

No recommendations were issued. Although the City and NPS continue to have discussions regarding the possibility of an MOU, no resolution has been attained.

7.32 Petrochemical Industry

Philadelphia remains a major petrochemical and chemical producing center in the Northeast, which makes the region a potential target for terrorist attacks and chemical accidents.

7.321 Strengths

Substantial focus has been placed on the major refinery located in South Philadelphia, due to its critical role in the supply of gasoline to the northeastern United States and to the use of potentially hazardous chemicals in the refining process.

The refinery has received three rounds of DHS Port Security grants that have been applied to limit and control pedestrian and vehicle access, reinforce perimeters and access points, improve lighting and video surveillance, and strengthen the hydrofluoric acid storage facility and tank farms. It also has extensive and automatic communications with the Fire Department.

7.322 Gaps

The refinery property covers a large area, which may be difficult to control: the primary site is 1,000 acres; there are 1,500 acres in total. One thousand employees work on the site, and the contractual workforce varies from one hundred to one thousand.

Vulnerabilities that have been previously identified still exist, although there is a ten-year plan to address them. Fires have been occasional issues, disrupting traffic on I-95 and I-76 and on the PHL landing strip.

7.323 Recommendations

The City should continue to work with its government and private sector partners to protect both national critical infrastructure as well as the people in neighboring areas.

7.33 Financial Industry

The City's financial sector includes the Federal Reserve Bank of Philadelphia, the Philadelphia Mint, a U.S. Treasury facility and major banks and financial institutions. Efforts to protect key federal facilities are evident.

7.331 Strengths

The leader of the Delaware Valley Financial Security Officers Group, the Security Manager, calls Philadelphia Alert a model for other cities served by his financial institution.

7.332 Gaps

The financial sector has not yet developed a program as sophisticated as ChicagoFirst, which offers a formal credentialing program for critical, financial employees and allows access to disaster sites to ensure continuity of banks and other financial institutions.

7.333 Recommendation

• **Work with the financial sector to develop a program of emergency preparedness and credentialing based on national best practices. The leaders of the financial sector have expressed their interest in doing this through the existing Center City District infrastructure.**

7.34 Hospitals

7.341 Strengths

The hospitals have participated in the development and implementation of specific incident plans for special events such as the 2000 Republican National Convention. Hospitals are required to maintain comprehensive disaster plans under the Joint Commission for the Accreditation of Healthcare Organizations and are compliant with this requirement. Hospitals are a critical component during any major disaster or catastrophic event.

7.342 Gaps

The hospitals are not designated as critical infrastructure for the City and they do not have a seat at the Emergency Operations Center, and currently not fully integrated into planning activities.

7.343 Recommendation

• **Designate hospitals as part of the critical infrastructure of the City.**

8.0 Develop Comprehensive Evacuation Plans

Hurricane Katrina demonstrated the need not only for cities to have evacuation plans but also to have plans to accept, shelter, feed and protect those who are evacuating from other areas. Comprehensive evacuation plans include planning for the care of special needs populations; evacuation of hospitals and long-term care facilities; the care of animals; the use of school facilities and transportation assets; and shelter provisioning, traffic planning, and crisis communications.

Although the City has an Emergency Traffic Management Plan and can use a reverse 911 calling system to notify residents during an event, these are not equivalent to a comprehensive evacuation plan and represent only two of the critical components of an overall effort.

During the course of this preparedness review, and at least in part due to questions raised during the review, the Delaware Valley Regional Planning Commission hosted an initial meeting of regional transportation, law enforcement, and emergency management officials from Pennsylvania, Delaware, and New Jersey to consider development of an in-depth regional traffic control evacuation plan. This type of comprehensive plan will enable the City to better plan not only for a catastrophic event, but further enhance its capacity for large-scale planned events.

In addition to planning for the possible evacuation of the City and region, Philadelphia should also consider itself a likely evacuation destination, especially from the New Jersey and Delaware coasts in the event of a hurricane, and plan appropriately. Evacuation planning strengths, gaps, and recommendation are organized into the following components:

- 8.1 Policy
- 8.2 Planning
- 8.3 Training and Exercises
- 8.4 Critical Infrastructure/Facilities
- 8.5 Citizen Education and Special Needs Populations

The recommendations in bold are the most important recommendations identified by the EPRC and are the ones reflected in the Executive Summary.
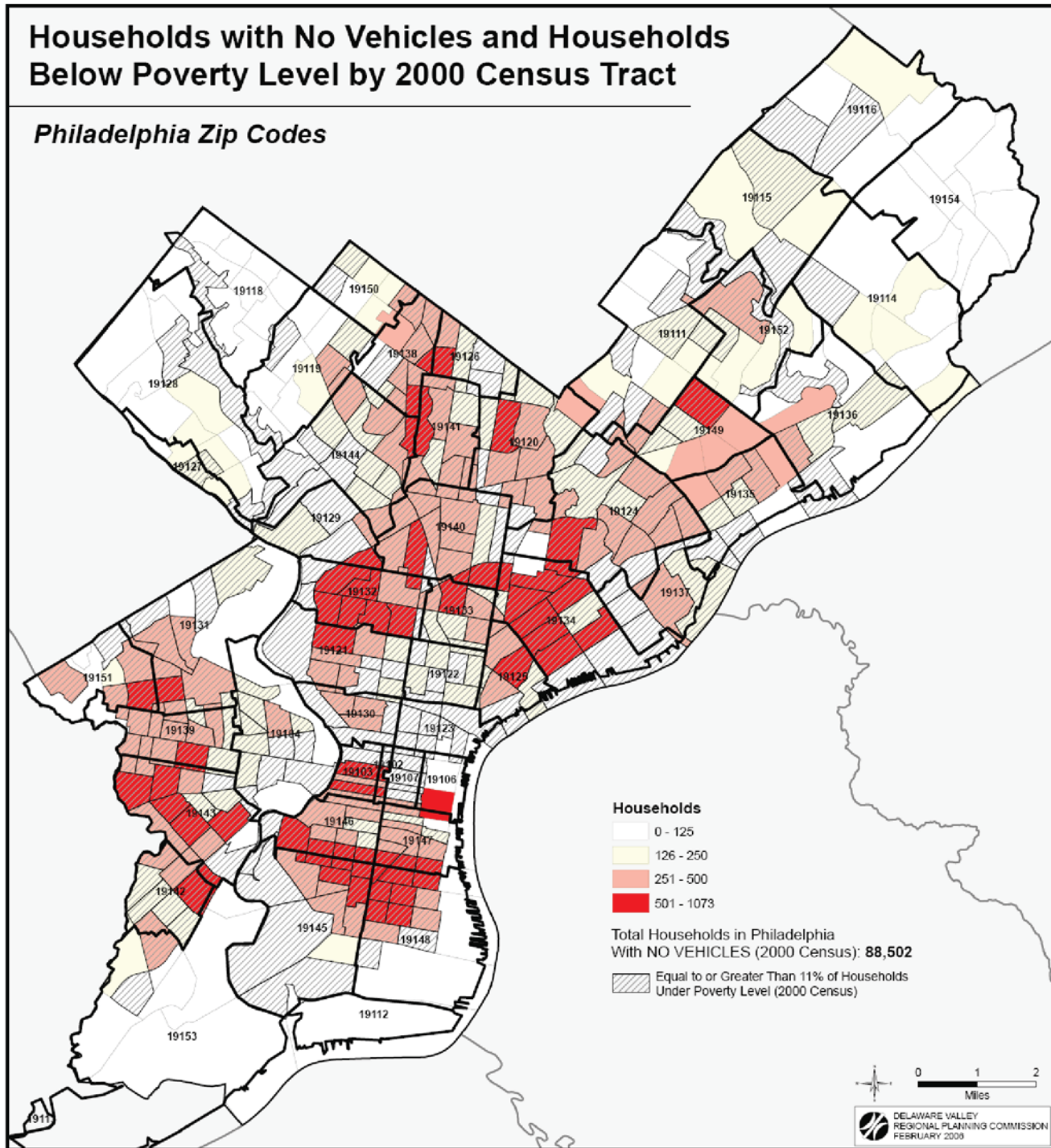
Households with No Vehicles and Households Below Poverty Level by 2000 Census Tract

Philadelphia Zip Codes

Households
- 0 - 125
- 126 - 250
- 251 - 500
- 501 - 1073

Total Households in Philadelphia
With NO VEHICLES (2000 Census): **88,502**

Equal to or Greater Than 11% of Households
Under Poverty Level (2000 Census)

DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
FEBRUARY 2006

Table 2: Courtesy of the Delaware Valley Regional Planning Commission.

8.1 Policy

8.11 Strengths

An extensive legal analysis of the laws pertaining to emergency preparedness has been conducted and new legislation that addresses current gaps in the Philadelphia Code will be drafted for consideration by the Mayor and City Council.

8.12 Gaps

Although Commonwealth law requires that public schools and universities be used as mass-care facilities in the event of a disaster, this provision applies only if the Governor orders an evacuation. In the event that any disaster impacts Philadelphia and the Governor has not yet ordered an evacuation, the

Mayor should have the authority to use the schools as shelters. Philadelphia Code § 10-819 does not list as an enumerated power the Mayor's authority to order, but not compel, an evacuation.

Although certain areas of the City that are located near particular hazards have established shelter-in-place efforts, there currently is no citywide policy that establishes guidelines or criteria for when to shelter-in-place and when to evacuate.

8.13 Recommendations

• **Draft language either as an enumerated power under § 10-819 or in a separate Code provision that gives the Mayor the explicit power to order, but not compel, an evacuation. The Code provision gives the Mayor the authority to halt access or egress upon public highways to or from the City and any part thereof and halt the movement of trains, boats, or other vehicles into, within, or from the City. The Philadelphia Code, Home Rule Charter, and Police Department Directives provide the commissioners of Fire, Police, and Licenses and Inspection the authority to order evacuations of dangerous structures in the event of a fire or imminent building collapse, evacuations of a building or neighborhood in the event of a hazardous materials spill, or evacuations in the interest of public safety and security if there is a threat of imminent danger. The EOP has extended this authority to the Mayor to order evacuations without any legal basis, so it is recommended that the EOP be reviewed and revised for legal sufficiency.**

• Enter into negotiations with the Philadelphia School District to provide for the mass shelter of displaced citizens. An agreement with the School District would provide the Mayor the option of using the schools as shelters regardless of state action and thus would facilitate the response to a disaster.

• Develop formal policy criteria for when to shelter-in-place and when to evacuate.

8.2 Planning

8.21 Strengths

The City's 2002 EOP includes an Annex L (or Emergency Support Function #1, Transportation) on evacuation planning that details the general responsibilities of City departments and organizations such as the American Red Cross—Southeastern Pennsylvania Chapter. The Philadelphia Police Department developed (and is currently revising) detailed traffic evacuation plans from various locations, including Center City. The Police plan also designates staging areas.

As mentioned previously, the Delaware Valley Regional Planning Commission hosted an initial meeting of regional transportation, law enforcement, and emergency management officials from Pennsylvania, Delaware, and New Jersey to consider development of an in-depth regional traffic control evacuation plan. Subsequently, this group became the Transportation Subcommittee of the Southeastern Pennsylvania Regional Task Force (formerly the Southeastern Pennsylvania Regional Counter Terrorism Task Force).

The Pennsylvania Department of Transportation (PennDOT) is in the process of implementing an Intelligent Transportation System (ITS) that enables traffic control systems to respond to data from cameras and other monitors.

Through in-depth interviews, the Southeastern Pennsylvania Transportation Authority (SEPTA), the Port Authority Transit Corporation and Amtrak officials have expressed interest in a coordinated effort for evacuation.

The Commonwealth of Pennsylvania has established evacuation plans for nuclear power plants. The City is not within the 10-mile radius zone, but is within a 50-mile radius of three nuclear power plants.

8.22 Gaps

The current evacuation plan is general in nature, listing which departments are responsible for respective functions, although the degree to which each

department noted their respective roles during an evacuation varied. This was particularly noticeable when comparing the current EOP plan with the City's plan for an evacuation in the event of nuclear war or a "peacetime disaster" (dated June 1980), which was abandoned about ten years ago. For example, it identifies an "Emergency Transportation Coordinator", includes provisions for the evacuation of special needs population, such as the ill, mentally ill, and imprisoned, and details how many of the people fleeing Philadelphia should evacuate to specific Pennsylvania counties.

When interviewed as part of the EPRC process, the regional PennDOT office did not have access to the City's traffic evacuation plans, which impairs the potential effectiveness of PennDOT's ITS to manage a comprehensive evacuation.

Current plans do not fully integrate mass transit (SEPTA, PATCO, and Amtrak) and staging information is limited. Schuylkill River bridge conditions are not considered in the police traffic plan.

Existing traffic evacuation plans are limited to traffic control and maintaining order. Although these are critical components, they are not to be confused with a comprehensive evacuation plan. In fact, the traffic evacuation plan is not known to other involved departments and agencies that would have critical roles during a large-scale evacuation.

Evacuation routes are not marked nor widely known, even among some City officials. There has been no formal communication with communities who might be the destination for evacuees from Philadelphia nor has there been planning for Philadelphia to be likely evacuation destination, especially from the New Jersey and Delaware Coasts in the event of a hurricane.

8.23 Recommendations

• **Develop a comprehensive emergency traffic management evacuation plan with the Regional Task Force that would include identification of evacuation scenarios, traffic control points, potential shelters, location of hospitals and other critical** care facilities, staging areas, and required traffic management resources. Incorporate appropriate use of the Incident Command System (ICS), pre-event contracts with towing services, and traffic signal coordination.

• **Prepare and coordinate plans for Philadelphia as a destination site for evacuations from nearby urban and coastal regions.**

• **Initiate and actively participate in the development of a regional evacuation plan that incorporates federal, state and local government partners, including EMS, transit agencies with rail and bus assets, SEPTA, the Port Authority Transit Corporation (PATCO), New Jersey Transit, and Amtrak. Explore agreements with agencies such as Maryland's MARC system, which are powered by diesel fuel, in the event of a severe loss of electricity. (This strategy was used by Amtrak on May 25 following the Northeast Power Outage). Include the private sector, including the Center City District and the Chamber of Commerce, in the development of such plans. Include the following components in any evacuations plan in the future:**
  - **Special needs population planning, to include planning for pets and service animals**
  - **Hospital, nursing home, and other large medical care facility planning**
  - **Traffic management planning**
  - **Criteria for shelter-in-place vs. evacuation**
  - **Public information**

• **Create a high-level position at the Deputy Managing Director level to coordinate transportation functions within the City, including responsibility for the transportation aspects of evacuation planning and coordination of the City's interaction with SEPTA and other transit agencies.**

8.3 Training And Exercises

8.31 Gaps

The region has not conducted an emergency evacuation exercise recently. Although the School District

has developed an evacuation plan for Center City Schools, the plan has not been exercised. Teachers, school children and parents are not trained in their emergency roles.

8.32 Recommendations

• Train and thoroughly exercise (table top) evacuation scenarios in conjunction with regional and Commonwealth responsibility centers.

• Ensure that elected and high-level appointed officials who will have a prominent role in a real event are actively engaged in an evacuation planning exercise.

• Conduct large-scale drills with School District and communicate clear expectations of emergency roles to City employees, faculty, staff, students, parents, and neighboring residents.

• Encourage the School District's Emergency Planning Committee to conduct practice drills for building and area evacuation in the event of an emergency. The exercises could be part of the School District's monthly fire and shelter-in-place drills. The Office of the Managing Director and School District Office of School Safety should meet to review School Safety Plans.

8.4 Critical Infrastructure/Facilities

8.41 Gaps

Evacuation routes are not marked and are not communicated to the public.

8.42 Recommendation

• Adopt a policy that calls for strategic and tactical plans for communicating helpful information to the public, as well as to regional and private sector partners, when a decision is made to call for a partial or total evacuation of the City. Include use of various media including radio, television, and an internet site. Clearly mark evacuation routes.

8.5 Citizen Education/Special Needs Population

Evacuation plans assume the population will evacuate as planned. However, if there is no education of evacuation routes and planning efforts, citizens will not know what to do. Additionally, accessible comprehensive evacuation planning is federal law. Title I of the Americans with Disabilities Act (ADA) prohibits discrimination against people with disabilities in the private sector and state and local governments. Any evacuation planning efforts must provide for assistance to populations with special needs.

8.51 Strengths

The School District has made progress in evacuation planning by forming an emergency preparedness task force to discuss and set policy on issues related to emergency management. Each school in the District conducts monthly evacuation and shelter-in-place drills. The Commonwealth is training the School District Office of Climate and Safety on emergency management. The School District has a list of ADA-compliant and accessible schools (last updated in 2005). In addition, it has shared its Center City School evacuation plan with the City's Police Department.

City agencies, such as the Mayor's Commission on People with Disabilities, and community organizations, such as the Temple University Institute on Disabilities, have information on the type of accessible technology and stockpile of durable equipment needed for people with disabilities within emergency shelters.

The Office of Adult Services (OAS) has pre-event contracts with local area hotels. When people with special needs arrive at a shelter, they are identified and transported to an individual hotel room to accommodate their situation.

The Municipal Services Building has identified people with disabilities within the building and has paired those individuals with co-workers for assistance in an evacuation.

The County Animal Response Team (CART) currently is working with the Philadelphia Animal Care and Control Association (PACCA) and the Society for the Prevention of Cruelty to Animals (SPCA) to investigate local partnerships and resources for emergency animal cremation. CART has asked the Mayor's Commission on People with Disabilities to send a representative at CART meetings to provide expertise on evacuations with service animals.

8.52 Gaps

There are no current efforts to educate or make citizens aware of evacuation routes or planning, including where to go to find out what streets or highways to use or when to evacuate or shelter-in-place.

The City and the School District have not conducted a recent assessment of school district plans and resources to ensure that the School District can meet the City's expectations in an emergency. For example, not all school shelter locations have fire sprinklers or backup power for heating and air conditioning. Similarly, few locations have systems in place to run ventilators, breathing devices, and refrigeration for medications during a power outage. Backup generators are for emergency lighting purposes only.

The City, SEPTA, and the School District have not formally discussed using para-transit buses and/or school buses to evacuate people in a disaster.

In addition, the School District's list of accessible schools is not cross-referenced with a list of schools that have separate ventilation or HVAC systems to evaluate which potential shelter locations could be used to accommodate people with disabilities and their service animals in an emergency.

There is not an evacuation plan that considers the needs of all special needs populations listed in the Subcommittee's definition. More specifically, the prison system has not designated a separate evacuation plan or location for people with disabilities or other special needs. The City has not worked with CART and State Animal Response Team (SART) to develop a countywide or citywide plan that includes

procedures for dealing with service animals and pets in a disaster.

8.53 Recommendations

- Identify primary evacuation routes and build these into an overall citizen emergency preparedness education campaign. As part of the overall citizen education campaign, reach out to businesses, the Center City District, the Chamber of Commerce, the Building Owners and Managers Association, the Financial Sector, the Federal Sector, and non-profit organizations such as the American Red Cross—Southeastern Pennsylvania Chapter, the Archdiocese of Philadelphia, and the United Way to help them train staff on overall emergency preparedness, including evacuation or shelter-in-place. Consider using trained Community Emergency Response Teams (CERT) as part of the public education efforts.

- Develop an evacuation plan that specifically addresses the needs of people with disabilities and other special needs populations. Include a Geographic Information Systems (GIS) list of accessible emergency shelters in the evacuation plan. Communicate to the public the locations of accessible shelters, so community members can prepare accordingly. Follow existing Department of Justice guidelines and ADA requirements when drafting emergency evacuation plans.

- Work with local organizations to determine the resources and agreements necessary for an emergency stockpile of durable medical equipment (DME). When people with special needs are evacuated from a disaster area, they must be mobile and able to function at the new location. Often because of the time-sensitive nature of evacuations, citizens with special needs may be evacuated without their assistive technology, mobility, or augmentative communication devices. The stockpile of DME would provide the people with necessary equipment to be able to function once they arrive to the emergency shelter location.

- Review specifications for sprinklers and backup generation for sustainable lighting and heating, among others, by the School District's Office of

Design and Construction. Considering the scope of requirements, costs per building will need to be identified. Plot all shelters through GIS technology, with overlays to show various levels of accessibility and/or related utilities and accommodations (e.g., available backup power for medication refrigeration and powered ventilating equipment). Have the School District Office of Design and Construction review school plans to determine if any schools have independent HVAC systems. Review specifications to determine the cost to convert a school with an independent HVAC.

• Arrange meetings between the Office of the Managing Director, the Director of Transportation for the School District, and SEPTA to develop agreements for use of vehicles in an emergency. Develop agreements for the use of vehicles for School District General Counsel, City Solicitors, and SEPTA legal offices. Work with Risk Management offices to assist in crafting liability language. Include language in any emergency transportation plan that allows for animals (pets and service animals) to be transported.

• Request the Office of Facilities and School Operations to forward to the Office of the Managing

Director the list of ADA-compliant schools within the School District.

• Create, with the prison system, a written plan for evacuation of prisoners that includes separate evacuation locations and procedures for people with special needs. Develop mutual aid agreements with surrounding counties to help move and shelter prisoners.

• Include procedures for sheltering pets and service animals, either with their owners or in nearby, separate, animal sheltering facilities. Designate alternate shelters for animals within close proximity of designated human shelters. Designate areas within normal shelter systems for service animals as well as areas that are compatible with ADA requirements and guidelines offered by the Department of Justice. Develop an animal evacuation plan, and train and exercise the plan. Include members of CART into emergency training or exercise programs.

9.0 Next Steps

While many activities to implement these recommendations have already begun, many recommendations may languish if the effort to advance Philadelphia's emergency management capabilities is not institutionalized within the City's agencies, operations, budgeting, and politics. Institutionalization means that the processes needed for implementation become integrated into daily operations; the people who are involved see these implementation steps as the normal and right way to proceed with their day-to-day activities while also advancing the emergency management agenda. Institutionalizing and implementing emergency preparedness recommendations serve dual functions: they help the City become better prepared and foster standardization and efficiencies within daily operations. For example, comprehensive evacuation/emergency traffic management plans can help daily vehicle flow and can assist in managing the traffic from major planned events.

In addition, the integration of emergency management into daily operations is the means by which communities truly become resilient in their preparedness and response capabilities. This new culture will benefit individuals, departments, and agencies within the City government and throughout the community.

Achieving rapid implementation requires the formation of an Emergency Preparedness and Response Coordination & Implementation Team, consisting of no more than 15 members, with no more than one half the members being City staff. Similar to the EPRC structure, it would be directed by two co-chairs, one from the City and one from outside City government. At least one representative would be from the business community, hospital sector, non-profit sector, and an organization that works with special needs populations.

Within 90 days, the team should present to Mayor Street a progress report detailing, at minimum:
• Timeline of accountability
• Prioritized list of recommendations
• Project management scope and need
• Plan to develop partnerships with the private and non-profit sectors
• Financial and personnel resource development plan
• Examination of the City's HVRA after it has been externally reviewed, vetted and validated

After the initial report, progress reports should be given to the Mayor quarterly. Included within those reports should be observations regarding departmental participation, and the need for, or conduct of, table top and major exercises.

10.0 Appendices

APPENDIX A: Legal and Intergovernmental Analysis and Recommendations

APPENDIX B: City of Philadelphia, Health and Human Services Preparedness Review.
Critical Capacity Definitions/Goals

APPENDIX C: Community Engagement Resources Recommendations Information

APPENDIX D: Emergency Preparedness Review Committee: Subcommittees' Charges and Goals

APPENDIX E: Documents Reviewed

APPENDIX F: In-Depth Interviews

APPENDIX G: Field Visits

APPENDIX H: The Emergency Management Cycle

APPENDIX I: Acronyms

Appendix A

The Legal/Intergovernmental Subcommittee's goals were to identify the existing laws concerning emergency situations and identify gaps; understand the Commonwealth's command structure for local versus state declared disasters; define the scope of existing mutual aid agreements to determine which areas need to be enhanced; and ensure protections for vulnerable populations are fully included in emergency plans.

These goals have been achieved through exhaustive examination of the statutory framework regarding emergency preparedness, input from subject matter experts, including presentations on best practices during Subcommittee meetings, thorough Subcommittee discussion of emergency preparedness issues and a complete legal analysis conducted by the City of Philadelphia Law Department.

The Legal/Intergovernmental Subcommittee has prioritized these legal and policy issues and has developed recommendations for the Mayor that may be implemented in three ways.

• Recommendations that may be accomplished in the short-term through Executive Order or other Mayoral orders, directives or initiatives.

• Recommendations that may be accomplished in the medium-term through changes to local legislation with the support of Philadelphia City Council. In many cases, these changes to Philadelphia Code provisions will provide the Mayor with enhanced powers to declare emergencies and issue the required orders and directives to ensure public safety.

• Recommendations that anticipate a long-term strategy of emergency preparedness that may require amendments to state legislation with the support of the Pennsylvania General Assembly.

Short-Term Recommendations

The recommendations that may be accomplished in the short-term, over the course of the next six

months to one year include: an initiative to create standing public-private partnerships to ensure the seamless implementation of emergency preparedness plans City-wide; the identification and training of personnel that will be necessary to ensure continuity of government and operations during and following a disaster; an agreement with the Philadelphia School District to provide for the mass shelter of displaced citizens in the event of a disaster; the creation of an Interagency Procurement Committee to identify the resources that should be obtained through pre-event contracts; and the integration of the Law Department in the planning and response to disasters.

1. The Mayor should seek support from Quasi-Governmental Agencies and the Private Sector to ensure the seamless implementation of Emergency Preparedness Plans City-wide.

   The Mayor should consider establishing a standing committee of City agencies, quasi-governmental agencies and the private sector to continue development of the emergency preparedness plans recommended by the EPRC. A committee consisting of stakeholders in emergency preparedness issues would continue the work of the EPRC and facilitate City-wide implementation effort in a seamless manner. These efforts will require continued coordination among stakeholders to address future issues.

2. Identification and Training of Personnel to ensure Continuity of Government and Operations

   City agencies such as the Managing Director's Office, the Mayor's Office of Labor Relations, the Health Department and the Law Department have already begun this effort. Personnel that would be necessary to ensure continuity of government and operations are being identified and enlisted through Department heads and the City's union representatives. The Mayor should consider requiring by Executive Order that all Department heads address City employees' concerns regarding their family's safety during a disaster, and their own

personal safety in responding to disasters. Training in the Incident Command System (ICS) and in accordance with the National Incident Management System (NIMS), as required by the Department of Homeland Security, is being completed. Further interdepartmental and interagency training and exercises should be planned and conducted to guarantee that employees know their roles and responsibilities during a disaster.

3. Agreement with the Philadelphia School District to provide for the Mass Shelter of Displaced Citizens

State Law requires that public schools and univer-

sities be utilized as mass-care facilities in the event of a disaster, but only if the Governor orders an evacuation. In the event that a disaster impacts Philadelphia and the Governor has not yet ordered an evacuation, the Mayor should have the authority to use schools as shelters. This could be accomplished through an Agreement with the School District. Therefore, the City should consider entering into negotiations with the School District for an agreement to use schools as mass-care facilities in the event of a disaster.

4. Creation of Interagency Procurement Committee

The Mayor should consider creating by Executive Order an Interagency Procurement Committee to evaluate the need to contract for various goods and services prior to a disaster. Federal Emergency Management Agency regulations require competitively bid contracts for goods and services such as debris removal in order for federal reimbursement to be available. Therefore, the Mayor should create an Interagency Procurement Committee to identify the goods and services that may be required to respond and recover from a disaster. For example, the Office of Emergency Shelter and Services (OESS) has the resources to provide relief (food, water and shelter) for 1,000 to 2,000 citizens, and the American Red Cross can provide for up to 10,000 or more citizens. However, any event that would affect 100,000 or more citizens will require significant resources that may be difficult to acquire during or immediately after any event. Pre-event contracts for these goods and services would enhance the City's ability to respond effectively to a disaster, and would enable the City to self-sustain for 72 hours or more following a major disaster.

5. The Law Department should be fully integrated into Emergency Preparedness Planning and Response Functions.

The City Solicitor has already committed significant staff and resources to the emergency preparedness efforts of the City and the EPRC process. An extensive legal analysis of the laws pertaining to emergency preparedness has been conducted by the Philadelphia Law Department, which has also identified current gaps in the Philadelphia Code. A legal resource guide that outlines the legal framework relating to emergency preparedness is being produced to support the City's first responders. The City's revised Emergency Operations Plan should be reviewed to ensure compliance with local, state and federal laws. Since September 11, 2001, a City attorney has been dedicated full-time to issues of Homeland Security and emergency management and will provide legal guidance to the Administration in the event of a disaster. The Law Department will assist in the review and implementation of train-

ing and response standards for first responders in accordance with federal and state requirements.

Medium-Term Recommendations

The recommendations that may be accomplished in the medium-term (over the course of the next year) relate almost exclusively to changes in local legislation that would require the support of City Council. Once amendments to the Philadelphia Code have been adopted by City Council, the Mayor will have clearer authority to address public safety and security in the event of a disaster.

While the Mayor currently enjoys fairly broad authority to protect the safety and security of the citizens of Philadelphia, certain Code provisions related to emergency response do not address today's threats, and do not provide the Mayor with the explicit authority to act. For example, the Mayor currently does not have the explicit authority to order an evacuation of the City, or to order a large scale shelter-in-place of citizens in the event of a flu pandemic. The Law Department is working closely with other City agencies, such as the Office of Emergency Management and Health Department, to prepare legislation that would ensure that the authority exists to order the quarantine and isolation of the sick in the event of a flu pandemic, to order the shelter-in-place and curfew of uninfected citizens to prevent the spread of any disease, to destroy infected property that poses a clear threat to public health and to evacuate the City or accept evacuees in the event of a major disaster. In drafting such legislation, the City should be careful to ensure that the privacy and civil rights of its citizens, particularly those of the most vulnerable populations, are protected.

In addition, the City has been negotiating various mutual aid agreements with surrounding jurisdictions, such as counties in southern New Jersey and Delaware, and Baltimore, Maryland, which will require City Council approval. These mutual aid agreements would provide for the sharing of resources and personnel on a regional basis in the event of a disaster and encourage cooperation in funding, training and communication among the region's first responders.

Finally, City Council should consider a resolution to define a quorum of City Council members as the number of filled City Council seats and not available seats, and should consider a Home Rule Charter amendment that would permit less than a majority of all Council seats to adopt legislation, following a declaration of disaster by the Mayor, when less than a majority may be available to participate in a meeting of Council.

1. Update the Mayor's authority to declare a State of Emergency

   Section 10-819 of The Philadelphia Code provides the Mayor with the authority to declare a state of emergency, and provides broad powers to control or halt the movement of people and transportation in and out of the City, restrict the sale of gasoline and firearms, establish a curfew, and other measures. It does not however, explicitly authorize the Mayor to evacuate the City, to order a large scale shelter-in place of citizens or address today's threats, such as terrorism and natural or manmade disasters. An updated Code provision would more effectively address today's threats of natural or manmade disasters and terrorist attacks and enhance the Mayor's authority to respond to those threats.

2. Update the Philadelphia Health Code provisions regarding Quarantine and Isolation

   After an extensive review of the Mayor and Health Commissioner's power to order a quarantine or isolation of individuals, it has been determined that the Health Code sufficiently protects the citizens of Philadelphia in the event of a flu pandemic or biological attack, but there remain issues that should be addressed. Particularly, the mass quarantine or shelter-in-place of citizens who may not yet have been infected or suspected of being infected with a disease should be addressed. The ability of the Health Department to order the destruction of property that poses a clear threat to public health also should be addressed. The addition of these powers would provide the City with the flexibility to initiate necessary preventative efforts in the event of an outbreak. The Law Department is working with the Health

Department to draft an amendment to the Health Code to address these issues. Additionally, procedures to protect the civil rights of citizens in the event of a flu pandemic or biological attack are being examined in accordance with federal model language. The Law Department plans to work closely with the Health Department and the Courts to educate judges regarding the role Courts would play in the event of a pandemic or biological attack, including facilitating immediate action and preventative efforts through court orders and hearings while protecting rights of the citizens of Philadelphia.

3. Prepare Legislation Package for City Council regarding an Eleven (11) County Regional Mutual Aid Agreement and a Mutual Aid Agreement between Philadelphia and Baltimore

   The Law Department and Office of Emergency Management have been negotiating with five (5) counties in Southern New Jersey and New Castle County, Delaware through the Southeastern PA Regional Counter-Terrorism Task Force (SEPARCTTF), which includes the five (5) counties in Southeastern PA, Philadelphia, Bucks, Montgomery, Chester and Delaware. Through its own mutual aid agreement, the SEPARCTTF has been cooperating in the funding, training and exercising of first responders at the local, state and federal levels over the past four years. The regionalization of resources is now expanding to an 11 county area, and must have the approval of City Council to proceed. An agreement between Philadelphia and Baltimore, Maryland, for mutual aid is being negotiated which also requires City Council approval to be realized. Although there is state legislation that ensures mutual aid among the states in the event of a disaster, the Mayor should be able to call on surrounding counties and cities for aid barring any state action, or in the event that state resources are allocated elsewhere during a major disaster. The Governor's approval of the mutual aid agreements would institutionalize regional county to county response regardless of state action.

4. As part of a comprehensive emergency preparedness legislative initiative, City Council should consider a resolution redefining a quorum as the

number of filled City Council seats and not the total statutory seats, and should consider a Home Rule Charter amendment to provide for emergency legislation, if necessary.

As a result of a major disaster, Council could be left in a situation in which it is unable to select a President (who would replace the Mayor if the Mayor is left incapacitated) or to adopt legislation because Council's rules specifically provide that a quorum consists of a majority of "all the members of the Council" (Resolution No. 040001 (adopted January 5, 2004)). In Solicitor's Opinion No. 87-20, 1986-87 City Solicitor's Opinions at 190, the Solicitor interpreted this same phrase, as it is used in the Charter, to mean a majority of the total number of seats on Council (i.e., nine of the 17 seats), whether the seats are filled or vacant. The opinion also concluded that the Council rules regarding a quorum had an identical meaning. Moreover, a group of Council members convened in an emergency constituting less than a majority of seventeen (i.e., less than 9 members) lack the power to waive this rule. See Rule XIV.1. (allowing any rule of Council to be suspended by a majority of "all the members of Council."). In order to respond to an emergency situation where less than a quorum of members may be available to participate in Council, a rule change should be considered that would define a quorum as consisting of all members of Council known to be available. Changes to the Home Rule Charter should be considered that would permit a majority of available Council members to adopt legislation, following a declaration of emergency by the Mayor, when less than a majority are available to participate in a meeting of Council.

Long-Term Recommendations

The recommendations that may require a long-term strategy over the course of the next year or longer relate to proposed amendments to state enabling legislation, which would pave the way for implementing legislation by City Council. These proposals which cannot be implemented through local legislation only, have been developed as a result

of gaps that have been identified in the Mayor's or other official's authority to act during an emergency. While state law clearly defines the authority of the Governor to act to ensure public safety and security, certain of the delegated authorities to the Mayor or City Council could be enhanced to provide for immediate action during an emergency.

For example, state law requires that City Council ratify the Mayor's declaration of a state of emergency within one week. While City Council has authorized the Mayor to extend the declaration to two weeks if necessary, a state law amendment explicitly enlarging the seven day ratification requirement would provide the Mayor with greater flexibility to implement emergency plans. The Mayor's declaration of emergency provides authority to perform public works, enter into contracts, incur obligations, employ temporary workers, rent equipment, purchase supplies and materials, levy taxes and appropriate and expend public funds without the usual time consuming formalities.

In an effort to protect the most vulnerable populations in Philadelphia, it is also recommended that consideration be given to amending the PA Juvenile Act to provide county children and youth agencies with greater flexibility to obtain emergency court orders and blanket waivers for the emergency placement of children who may have lost family following a disaster. In addition, state law should provide greater flexibility to allow county children and youth agencies to share information from case files with law enforcement agencies to assist with identifying, locating and protecting children while ensuring that privacy rights are protected.

Finally, the Legal/Intergovernmental Committee recommends the amendment of state law regarding volunteer participation during an emergency, including increased workman's compensation and liability protections.

1. An amendment to the state law requiring seven day ratification by City Council of the Mayor's declaration of a state of emergency.

   PA law requires that City Council ratify the May-

or's declaration of a state of emergency within seven days. The Philadelphia Code can be interpreted to provide that City Council has "pre-ratified" an emergency declaration for up to two weeks. In order to provide greater flexibility, the Philadelphia Code should be amended to extend the pre-ratification of a Mayor's declaration of emergency from two weeks to 30 days. Moreover, in order to clarify the law in this area, and to avoid potential challenges following a declaration of emergency, the Subcommittee recommends that consideration be given to proposing an amendment of state law to increase the ratification requirement from seven to 30 days.

2. The Governor is granted the power under state law to exercise temporary control of any private, public or quasi-public property if necessary to respond to a disaster, subject to applicable compensation requirements. The Mayor should be provided with similar delegated powers in order to effectuate a large scale evacuation or mass shelter-in-place or quarantine order affecting Philadelphia.

   The Governor is granted the power under state law to exercise temporary control of any private, public or quasi-public property if necessary to respond to a disaster, subject to applicable compensation requirements. Without an amendment to state law delegating similar authority to the Mayor, there could be delays in responding to large scale evacuations, mass shelter-in-place or quarantine orders relating to disasters affecting Philadelphia. These expanded powers would be essential to provide for required transportation in the event of a large scale evacuation or to facilitate a mass shelter-in place or quarantine effort in the event of a flu pandemic, for example.

3. The PA Juvenile Act should be amended to address issues of child placement in emergency situations and to allow children and youth agencies to share otherwise confidential information with law enforcement.

   It is recommended that the PA Juvenile Act be amended to provide county children and youth agencies with greater flexibility to obtain emergency court orders and blanket waivers for the emergency placement of children who may have lost family following a disaster. In addition, it is recommended that the state law be amended to allow county children and youth agencies to share information with law enforcement to assist with identifying, locating and protecting children while ensuring that privacy rights are protected.

4. The state law regarding volunteer protections of workman's compensation and immunity from liability should be expanded.

   An amendment to the state law has already been proposed in the General Assembly for volunteer's workman's compensation protection and immunity from liability. The Subcommittee recommends that increased workman's compensation payments be provided to volunteers to encourage volunteerism after a disaster. The City must rely on volunteers to supplement its workforce in the event of a disaster, especially skilled workers such as doctors and nurses. If these skilled professionals are not guaranteed sufficient protections under state and local law, then they may be hesitant to jeopardize their careers on the chance that they may get injured or sued should they volunteer. The City should not be required to accept such liability without increased state funded liability and workman's compensation protections.

Appendix B

This summary was created by the Health and Human Services Subcommittee to help establish a baseline for the City's current critical health capacities to manage and respond to a catastrophic event. The explanation below explains the required elements of the chart found on page 93.

A. CLINICAL PROTOCOLS

Definition
Clinical protocols are plans or standard operating procedures used to guide clinical personnel actions in the medical management of persons and infectious diseases during a major disaster, public health emergency, or high consequence event. The design and implementation of clinical protocols serves to effectively manage the:
a) medical treatment of persons affected; b) isolation and quarantine of patients to prevent transmission of any communicable disease; c) decontamination of persons and areas affected; and d) protection of healthcare workers.

Desired Goal
In order to assure consistent diagnosis, treatment, and clinical response, it is important for all healthcare providers to agree on the clinical protocols to be implemented in a major disaster, public health emergency or high consequence event. This includes consensus on the protocols for the rapid detection and treatment of exposure to biological, chemical, incendiary, radiological, and/or explosive agents.

B. DECONTAMINATION

Definition
Decontamination is the rapid physical removal of a contaminant from a victim. Physical removal includes scraping or blotting off visible agent from the skin, disrobing, using absorbents to soak up the agent, and flushing or showering with large quantities of water.

Desired Goal
The desired goal is to have the ability to decontaminate large numbers of victims (and potential victims) both at the scene of a mass casualty incident and/or prior to entry into an acute care facility.

C. DRILLS AND EXERCISES

Definition
Drills and exercises are practical training tools for emergency preparedness. They provide the most direct means of assessing emergency plans and procedures, and demonstrate the preparedness of responders. Drills and exercises can be table top, functional, or full-scale, applying techniques or knowledge obtained through training or education in a controlled pre-planned manner. A drill is an event designed to develop, test, and maintain skills in a particular operation or component of an emergency response plan. An exercise is an event that tests the integrated capability and basic elements of an emergency response plan. Participation provides clarification of roles and responsibilities, and the evaluation of organizational assets and limitations.

Desired Goal
Develop an exercise program that routinely practices the procedures necessary to mount an organized response to a citywide or region-wide emergency.

D. EDUCATION AND TRAINING

Definition
The City of Philadelphia's healthcare agencies, which include both first responders and first receivers, must have enhanced capacity to investigate and respond to a major disaster, public health emergency, or high consequence event. Fundamental to these efforts is comprehensive, integrated education and training designed to ensure core competency in healthcare delivery and public health preparedness and the highest levels of professional expertise among local, state, and federal partners. For this to occur, first responders and first receivers need to receive training in how to recognize, treat, prevent, and respond to a major disaster, public health emergency or high consequence event.

Goal
Develop education and training programs for clinical and public health first responders and first receiv-

ers that provide consistent training and education as part of an overall citywide and regional strategy/approach, and that incorporate lessons learned for both organizational and individual emergency response competence through drills, simulations, and events.

E. EMERGENCY CREDENTIALING

Definition
Emergency credentialing is a process to pre-identify a competent and trained clinical, first responder, first receiver, and public health workforce that is accessible during a major disaster, public health emergency, or high consequence event. The process includes the creation and maintenance of a repository of listings of trained, credentialed personnel and volunteers who could be called upon by hospitals and public health departments in an emergency, 24 hours a day and seven days a week. Personnel include credentialed clinical first receivers (physicians, dentists, and other licensed independent practitioners-PA, NP, NA, radiographers, RNs, respiratory therapists, pharmacists, behavioral health personnel, laboratory professionals), first responders (paramedics, emergency medical technicians), and public health workforce (sanitarians, epidemiologists, and volunteers).

Desired Goal
To develop a citywide and region-wide emergency credentialing process that includes the recruitment, assignment, notification, and identification of adequately credentialed public health and healthcare workers.

F. EMERGENCY COMMUNICATION AND INFORMATION SHARING

Definition
The emergency communications plan is based on the belief that a spirit of interagency cooperation, coordination, and communications among and between city agencies, healthcare partners, the Commonwealth of Pennsylvania, relevant federal agencies, and the public must exist to ensure a coordinated and efficient response to a major disaster, public health emergency or high consequence event. In addition, emergency communications involve informa-

tion data transmission, emergency notification, and telecommunications. The plan requires interoperability and redundancy at the command and operational levels. Information sharing depends on the quality and capacity of the communications technology supporting it.

Desired Goal
To develop an emergency communication process that is consistent and offers alternative communication systems in the event that normal systems become overloaded or fail during a major disaster, public health emergency or high consequence event. To deliver the appropriate information to the appropriate first responder, first receiver and first preparer at the appropriate time. Information in emergency response must be relevant, accurate, complete, comprehensive, timely, and up-to-date. Systems need to be identified and put in place to be able to handle voice and data communications at the command and control, operational, and tactical levels. The systems need to include hardware, software, communications protocols, and procedures.

G. EVACUATION

Definition
Evacuation consists of the movement of persons (patients, residents, visitors, and public health and healthcare personnel) from a defined area threatened or affected by a major disaster, public health emergency or high consequence event.

Desired Goal
To develop policies and procedures for the rapid, safe, and coordinated evacuation of the city or region's residents and workforce, including movement to alternate work and shelter locations. The plan will not direct local efforts but will utilize existing evacuation plans adopted by the City and response agencies to coordinate a citywide and regional approach.

H. FACILITY PREPAREDNESS

Definition
Facility preparedness provides strategic resources to prepare for, and recover from, any emergency or disaster. The steps that facilities can take to protect

against and minimize the effects of a terrorist attack will improve organization-wide emergency management and ensure all procedures are in place and all equipment and personnel needs are addressed to support a response to major disaster, public health emergency, or high consequence event.

Desired Goal
Provide general information on facility protection that includes summaries of asset analysis, threat analysis, vulnerability analysis, and risk analysis, and provides preventive measures that can be implemented to protect building air environments from a terrorist release or pandemic event that involves chemical, biological, or radiological contaminants.

I. FATALITY MANAGEMENT

Definition
Facility management is the identification, removal, storage, and appropriate disposition for large numbers of deceased persons during and after a major disaster, public health emergency, or high consequence event.

Desired Goal
To provide for the appropriate identification, storage, and disposition for mass fatalities in a major disaster, public health emergency, or high consequence event that takes into account safety, timeliness, and cultural and religious values. Temporary morgue facilities will be established to store the bodies of non-survivors for extended periods of time prior to final disposition.

J. HAZARD VULNERABILITY ANALYSIS (HVA)

Definition
HVA is the prediction and estimation of risk through the process of determining the total risk that a hazard poses to a system. This is also known as risk analysis, hazard analysis, hazard-vulnerability analysis, threat assessment, or vulnerability assessment. It includes an inventory and appraisal of the hazards, risks, and vulnerabilities in the region that, if improperly managed or targeted in a terrorist attack, would

pose a serious and credible threat to public health. Qualitative risk assessments are generally descriptive and indicate that disease or injury is likely or unlikely under specified conditions of exposure. Quantitative risk assessments provide a numerical estimation of risk based on mathematical modeling. For example, under given specific exposure conditions, it is expected that one person per 1,000 would develop a disease or injury.

Desired Goal
To accurately estimate real risk in order to provide rational evidence to develop risk reduction strategies. To identify the City and region's vulnerabilities in terms of human health outcomes related to a variety of biological, chemical, and mass casualty terrorist scenarios.

K. INCIDENT COMMAND AND UNIFIED COMMAND SYSTEMS

Definition
Incident Command System (ICS): A standardized organizational structure used to command, control, and coordinate the use of resources and personnel that have responded to the scene of an emergency. ICS concepts and principles include common terminology, modular organization, integrated communication, unified command structure, consolidated action plan, manageable span of control, designated incident facilities, and comprehensive resource management.

Unified Command System (UCS): A standardized organizational structure used to command, control, and coordinate multi-agency, multi-jurisdictional resources and personnel that have responded to the scene of an emergency. A Unified Command System allows operational goals and response strategies to be jointly determined by the various responding organizations.

Desired Goal
All employees in emergency preparedness and response agencies will have a basic understanding of the ICS system. Intermediate or advanced training will be provided to designated persons according to their roles and responsibilities in the ICS system.

Routine refresher training must be provided and practical applications established.

L. LABORATORY CAPACITY

Definition
Laboratory capacity is the maximum laboratory service that can be provided during a major disaster, public health emergency, or high consequence event. Laboratory capacity focuses on the identification and appropriate utilization of diagnostic capabilities of City, commercial, and hospital laboratories with regard to biological agents, as well as providing support for the clinical management of victims of biological, chemical, and radiological agents and protocols in place for dealing with a major disaster, public health emergency, or high consequence event, including a terrorist incident.

Desired Goal
Create and maintain adequate laboratory capacity within the City and region to provide required laboratory services in public health emergencies, including CBRNE events. City department of health, hospital, and commercial laboratories should have the capability for consistent language and reporting systems, such as Logical Observation Identifier Names and Codes (LOINC). This will support a Laboratory Response Network (LRN) through bi-directional communication between the network labs.

M. MASS CARE

Definition
Mass care is the provision of services and support systems to ensure disaster victims receive the appropriate services. Local government is responsible for the development of capabilities to provide mass care services for its citizens in the event of a major disaster, public health emergency, or high consequence event and should be prepared, if necessary, to receive and care for people evacuated from an area that has been directly impacted by a disaster.

Desired Goal
Develop a mass care plan that includes staff composition and management structure, provisions for registering and tracking the location of each victim or evacuee, specific services provided to victims and or evacuees (shelter, feeding, medical care, etc.),

communications procedures, reporting requirements, and termination of services and closure of any mass care facilities.

N. MASS IMMUNIZATION AND PROPHYLAXIS

Definition
Mass Immunization: An immunization is the introduction of antigens into the body in order to stimulate the development of antibodies against a particular disease. Mass immunization is the prophylaxis of large numbers of individuals (certain populations) against a specific disease agent, usually within a prescribed period of time.

Mass Prophylaxis: Particular action(s) that lead to the prevention of disease or of the processes that can lead to disease. For the purposes of this plan, mass prophylaxis will refer to the distribution of materiel to large numbers of individuals (certain populations) to prevent them from contracting a particular disease. A mass vaccination or prophylaxis plan or clinic can be implemented for a variety of public health emergencies. The City's Health Department can provide vaccination or prophylaxis services for the general public in the jurisdiction, whereas hospitals can provide these services for their staff and families.

Desired Goal
To ensure the rapid provision of immunization or mass prophylaxis for a population to prevent the acquisition and transmission of a contagious disease and/or reduce the effect of an adverse public health event (e.g., pandemic influenza, smallpox, or anthrax).

O. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Definition
PPE consists of equipment or supplies that create a physical barrier between persons and environmental or explosive hazards, including CBRNE agents.

Desired Goal
To protect persons (i.e., patients, first responders, first receivers and first preparers, other public health workers, healthcare personnel, and the general public) from the risk of injury or illness by creating a bar-

rier between persons and hazards, including CBRNE agents. Personal protective equipment should be used with administrative and safety controls to ensure the safety and health of employees. PPE must meet consistent standards promulgated by federal and state authorities.

P. QUARANTINE AND ISOLATION

Definition

Quarantine: The physical separation and confinement in a geographic area of an individual, or group of individuals, who are exposed to a communicable disease or are contaminated, or whom the Commissioner of the Department of Public Health, or a designee, reasonably believes have been exposed to a communicable disease or have been contaminated or have been exposed to others who have been exposed to a communicable disease or contamination, in order to prevent transmission of the disease to the general public. The decision of whether or not to quarantine or isolate individuals will be based primarily on the type of event and the nature of the disease agent.

Isolation: The physical separation and confinement within a geographic area of an individual, or group of individuals, who are infected or believed to be infected with a communicable disease or those who are contaminated, or believed to be contaminated, in order to prevent or limit the transmission of the disease to the general public.

Desired Goal

Establish policies and procedures for emergent access and implementation of legal authority to implement large scale quarantine to achieve simultaneous goals of protection of public health and individual rights. Establish the resources for mass quarantine or isolation in the event that homes or institutions are unable to adequately protect the public from exposure to a communicable disease or contamination.

Q. RISK AND CRISIS COMMUNICATION

Definition

Risk communication is the information about the expected type (good or bad), magnitude (weak or strong), and response (evacuation, quarantine, or immunization) of a public health emergency. Crisis communication is the communication of facts concerning a public health emergency from involved organizations to its stakeholders and the public.

Desired Goal

Consistent, clear, timely and coordinated risk, crisis, and public communication messages to be disseminated citywide and region-wide. The risk communication plan should focus on a consistent message intended for the City's residents with specific directions on where to go for medical attention, quarantine facilities, and other information specific to the City as well as the region.

R. SECURITY /LOCKDOWN

Definition

Security/lockdown is the state of being protected from injury inflicted by others or natural events. In the context of a public health emergency, security refers to the establishment of a secure site – either the site of exposure, distribution of prophylaxis, or treatment facility. A secure site prohibits entry and exit to and from the area, except for designated personnel under prescribed conditions, and provides for an accounting of all personnel and occupants. Security also extends to the protection of the evidence determined to be a contributing factor to the major disaster, public health emergency or high consequence event.

Desired Goal

To assure an adequate security workforce, equipment, facilities, and supplies during a public health emergency through collaboration among local and state public safety forces, public health, and the healthcare community.

S. STOCKPILING

Definition

In the event of a major disaster, public health emergency, or high consequence event, supplies of critical medical supplies, equipment, or pharmaceuticals in the city will be rapidly depleted. In anticipation, the Federal Government established the Strategic

National Stockpile (SNS) to augment local supplies of critical medical items.

Desired Goal
Establish local, regional, and statewide systems for stockpiling of equipment, supplies, and pharmaceuticals required to support communities and public health and healthcare systems prior to the arrival of the Strategic National Stockpile (SNS) or Vendor Managed Inventory (VMI). The other goal of this stockpiling capacity is to describe how the City's public health and medical delivery system will request, receive, manage, repackage, and distribute the SNS to those who need it. In addition, healthcare facilities will be identifying what types of par levels of critical medical supplies and pharmaceuticals needed to ensure continuity of care until the SNS or VMI is on-site.

T. SURGE CAPACITY (HEALTHCARE)

Definition
Surge capacity is the maximum healthcare-related service that the healthcare system can provide during a public health emergency. Surge capacity depends on the provision of an adequate quantity and quality of healthcare facilities, equipment, supplies, pharmaceuticals, and personnel.

Desired Goal
To ensure the provision of an adequate quantity and quality of healthcare facilities, equipment, supplies, pharmaceuticals, and personnel during major disaster, public health emergency, or high consequence event in order to minimize any adverse health effects of these events. To ensure the City and region's healthcare delivery system has the capacity to handle a sudden surge of patients requiring care, as determined by the adequacy of:
• Initial staffing and other pre-credentialed clinical specialists who can provide care for patients
• Appropriate treatment beds, equipment and re-supply capability for treating the patients' needs
• Adequate supplies and pharmaceutical caches for treating patient needs
• Adequate medical facilities and organizational support, including acute care hospitals, community health centers (CHCs), urgent care centers (UCCs), skilled nursing facilities (SNFs), home healthcare agencies (HHCs) that are accessible to

treat patients; Isolation capabilities
• Systems that can handle critical and non-critical patient transport and care en route

U. SURVEILLANCE

Definition
Surveillance is the continuous observation, measurement, and evaluation of health phenomenon through which public health and healthcare providers (e.g., infection control practitioners) determine appropriate response and corrective measures.

Desired Goal
Identify health phenomenon that require corrective action in a timely manner. Health surveillance requires close collaboration with physicians, hospitals, the health department, and other key surveillance partners to ensure the rapid reporting of suspected diseases, conditions, or syndromes.

V. WORKER SAFETY

Definition
Worker safety and health training save lives. The principle behind worker safety is to provide the needed framework for protecting first responders and first receivers who respond to a major disaster, public health emergency, or high consequence event.

Desired Goal
Provide guidance for organizations that provide hazardous waste workers and emergency response and that include acts involving chemical, biological, radiological, and nuclear weapons.

Health and Human Services Preparedness Review
Critical Capacity Evaluation Summary

AGENCY / REQUIRED ELEMENTS	CLINICAL PROTOCOL	DECONTAMINATION	DRILLS / EXERCISES	EDUCATION/ TRAINING	EMERG. COMM. / INFO. SHARING	EMERGENCY CREDENTIALING	EVACUATION	FACILITY PREPAREDNESS	FATILITY MANAGEMENT	HVA	ICS/UNIFIED COMMAND	LAB CAPACITY	MASS CARE	MASS IMMUNIZATION	PPE	QUARANTINE / ISOLATION	RISK/CRISIS COMMUNICATION	SECURITY / LOCKDOWN	STOCKPILING (SUPPLY / EQUIPMENT)	SURGE CAPACITY	SURVEILLANCE	WORKER SAFETY
ACUTE CARE HOSPITALS	1	1	1	1	2	2	2	1	2	1	2	1	-	2	2	2	2	2	3	2	1	2
PHILA. DEPT. OF PUBLIC HEALTH	1	-	1	1	1	2	-	2	2	1	2	1	2	2	2	2	1	3	2	2	1	2
HOME CARE AGENCIES	3	-	3	-	3	3	-	-	-	1	3	-	-	3	2	3	3	-	3	3	2	2
EMERGENCY MEDICAL SERVICES	1	1	-	1	2	2	2	-	-	1	1	-	-	2	2	2	2	-	2	1	-	2
COMMUNITY HEALTH CENTERS	3	-	3	-	3	3	2	3	-	1	3	-	-	3	2	-	3	3	3	3	3	2
OFFICE OF EMERGENCY SHELTER SERVICES	-	-	-	1	-	-	2	2	-	2	-	-	1	-	-	2	-	2	-	2	-	2
DEPT. OF BEHAV. HEALTH/ MENTAL RETARDATION	3-	3-	3-	2	-	-	2	2	-	2	-	-	-	-	-	-	-	2	-	-	-	2
AMERICAN RED CROSS - SEPT	-	-	1	1	1	1	-	-	-	-	1	-	1	-	-	-	1	-	2	2	-	1

1: Prepared — Prepared indicates >90% compliance in each category

2: Somewhat Prepared — Somewhat Prepared indicates >50% and <90% compliance in each category

3: Less Prepared — Less Prepared indicates <50% compliance in each category

- N/A

141

Appendix C
Community Engagement Resources Recommendation Information

The following organizations have been identified via in-depth interviews (IDIs), Public Information and Community Engagement Subcommittee meetings, IDIs conducted by the Vulnerable Populations Subcommittee, and/or review of City departments' crisis communications plans as resources for a citywide Emergency Preparedness Community Engagement Campaign. These organizations are eager to assist the City as part of a public education campaign.

1. Philadelphia Operation Town Watch Integrated Services
    a. Has approximately 10,000 volunteers who can be mobilized to distribute information.

2. Philadelphia More Beautiful Committee Block Captains
    a. Has approximately 6,500 people for canvassing, phone calls, and presentations at schools and community centers.

3. American Red Cross—SEPA VOAD
    a. Offers CERT Training and Citizens Corps volunteers.

4. Philadelphia Parking Authority (PPA)
    a. Can relocate vehicles using PPA vehicles (45 tow trucks, 2 flatbeds, 2 heavy-duty wreckers).
    b. PPA personnel have two-way radios on most City streets. The two-way radios tie into PPA's central command center.
    c. Can utilize PPA parking facilities for vehicle storage (7 Center City garages; 3 open air lots).
    d. Can utilize taxicabs for transportation.
    e. Can utilize Parking Enforcement Officers to disseminate emergency preparedness literature and vans for transportation.
    f. Can utilize facilities at the Airport for evacuations.

5. Center City District
    a. Will serve as eyes and ears in Center City.
    b. Implemented RSAN network to disseminate preparedness messages.

c. Customer Service Representatives on the street have training on police radio; serve as eyes and ears.

6. Philadelphia Stock Exchange
    a. Can provide lessons learned and best practices implemented in the financial sector post 9-11.

7. Delaware Investments
    a. Can share lessons learned and best practices from its crisis planning exercises and technology backup systems.

8. Global Philadelphia
    a. Provides interpretation and translation services to City departments. Can assist with emergency interpretation, translation, and outreach to non-English speaking populations.

9. PECO Energy
    a. Can assist the City by sharing its registry for vulnerable populations and helping the City create its own registry.

10. Philadelphia Corporation for Aging
    a. Conducts outreach to its senior citizen population clients and provides preparedness information through its publications.
    b. Has experience with its own non-911 emergency hotline, the PCA Heat Crisis Hotline.
    c. Member of Philly Partnership for Long-term Care; can contact its 20 members agencies and organizations.
    d. Can provide outreach materials, counseling, and other services at senior centers.

11. Free Library of Philadelphia
    a. Can provide libraries as shelter spaces and disseminate literature at all branches.

12. School District of Philadelphia
    a. Can inventory and utilize ADA-accessible schools as shelters.
    b. Can disseminate messages to parents and

guardians of all students and to teachers and administrators via Home and School Council and Philadelphia Federation of Teachers/CASA.
c. Can train district staff and include emergency response roles in teachers' job descriptions.
d. Can coordinate on a regional level for emergency alert notification.

13. Transperfect Translations (Contract with Health Department)
a. Provide language translation and desktop publishing for flyers and other materials.

14. Language Services Associates (Contract with Health Department)
a. Telephonic Interpretation services.

15. Temple University Institute on Disabilities
a. Can assist with accessible electronic and information technology for vulnerable populations. Can ensure that the City's communications methods are ADA approved.
b. Can assist with organization of and communication for durable stockpile of emergency medical equipment for special needs populations.
c. Can help disseminate information to populations with special needs and the organizations that provide services to these populations.

16. Philadelphia Local Emergency Planning Committee
a. Emergency Preparedness education is its core mission. Can assist with training and public education outreach.

17. Jewish Federation of Greater Philadelphia
a. Can disseminate messages to the Jewish community via its synagogues and member agencies in Greater Philadelphia.
b. Outreach includes senior citizen facilities.

18. Black Clergy of Philadelphia and Vicinity
a. Can disseminate messages to its members via churches and pastors.

19. The Consortium, Inc.
a. Can provide behavioral healthcare assistance

and services for children, adults, and senior citizens.

20. Archdiocese of Philadelphia
a. Can disseminate messages to its churches and their members.

21. The Salvation Army of Greater Philadelphia
a. Can disseminate preparedness messages and assist in times of disaster.

22. Philadelphia Citizens for Children and Youth
a. Can reach out to children's advocates and families.

23. Philadelphia Housing Authority
a. Can disseminate preparedness messages to residents of its facilities. Where available, can shelter in its community centers.

24. Deaf Hearing Communications Center
a. Can assist with preparedness messages that are ADA compliant.
b. Can provide sign language interpretation services.

25. United Spinal Association (formerly Eastern Paralyzed Veterans Association)
a. Can assist with preparedness messages that are ADA compliant.

26. The Center for Advocacy for the Rights and Interests of the Elderly (CARIE)
a. Can communicate preparedness messages to seniors.

27. The United Way
a. Can disseminate information to their network of thousands of non-profit organizations throughout Philadelphia.

28. Salvation Army of Greater Philadelphia
a. Can disseminate preparedness information to the people it serves, including those individuals at the Rehabilitation Center.

29. University of Pennsylvania School of Veterinary Medicine – Charles Newton

a. Can assist the City with animal issues during an emergency.

30. Philadelphia Workforce Development Corporation
    a. Can disseminate preparedness messages to organizations for their employees.

31. Philadelphia Unemployment Project – John Dodds
    a. Can disseminate preparedness messages to citizens who cannot be reached in the workplace.

32. University of Pennsylvania School of Nursing Office of Practice & Community Affairs
    a. Can assist with community health education on emergency preparedness.
    b. Can provide special advice for vulnerable/at risk groups in emergency situations.

33. Philadelphia Office of Behavioral Health
    a. Medical Reserve Corp (Behavioral Component) can assist victims of disaster and responders.

34. United States Postal Service
    a. Can assist with door-to-door communications with all Philadelphia residents and businesses.

35. Philadelphia Zoning Board
    a. Has pledged to pre-condition billboard/electric message board approvals on providing a certain dollar amount of emergency preparedness messaging.

36. Business Community – Greater Philadelphia Chamber of Commerce and other Philadelphia business leaders have committed to assisting the City by serving on a task force, disseminating information to businesses and their employees, and hosting emergency preparedness seminars.

37. The Media – Philadelphia's broadcast media outlets have committed to air PSAs, feature stories about emergency preparedness on news broadcasts, disseminate information at station-sponsored community events, and staff phone banks for citizens. Print outlets have pledged to write a series of articles on emergency preparedness.

City Agencies

1. Philadelphia Police Department, including the 911 CAD Registry

2. Philadelphia Fire Department

3. Philadelphia Department of Public Health

4. Philadelphia Housing Authority

5. Mayor's Commission on People with Disabilities

6. Mayor's Commission on Services to the Aging

7. Philadelphia Office of Adult Services, especially the Office of Emergency Shelter and Services

8. Department of Behavioral Health

Appendix D

Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response Subcommittee

The Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response (CBRNE) Subcommittee reviewed the City's emergency preparations for these threats, with emphasis placed on the ability of the City to detect an event and appropriately respond. Subcommittee members reviewed thirty-one documents and conducted nineteen in-depth interviews with government and private sector organizations.

Charge
The charge of the Subcommittee was as follows:

- Identify hazardous materials and natural threats that may endanger the City, its population, and structures.
- Ascertain whether there are adequate measures and mechanisms in place in order to properly prepare for incidents as well as effectively respond, so that the City can return to safe and normal operations.
- Identify any gaps that need to be addressed in achieving the Committee's goals.

Goals
These charges were further broken down into goals and are listed below:

- When identifying hazardous materials and natural phenomena, ensure that CBRNE threats are considered in addition to natural disasters (such as floods, snow, etc).
- Identify and review mechanisms and resources, such as plans, personnel, and equipment, needed to properly prepare and prevent emergencies.
- In analyzing past assessments and determining gaps, ensure that plans and resources include the ability to effectively identify, respond, mitigate, de-contaminate, clean up, and recover from incidents.
- Examine existing intelligence-based threat assessments and the systems used, including those that are promulgated by local, state, federal, and international agencies. During this evaluation, determine how the information utilized is gathered, analyzed, and disseminated.
- Identify and assess the threat vulnerability for high optic targets, particularly populations, structures, sites, and transportation systems that may be at risk.
- Identify the mechanisms and resources necessary to gather, preserve, and analyze evidence in order to prevent emergencies, mitigate damages, and facilitate the arrest of suspects.
- Evaluate the City's ability to effectively and properly triage and treat casualties at an incident scene as well as transport and track casualties to a definitive care facility.

Continuity of Government Subcommittee

The Continuity of Government Subcommittee evaluated the City's readiness to continue essential government functions during any hazard emergency, and initiated actions to have all departments and agencies address their critical functions, personnel, orders of succession and needs. Subcommittee members reviewed thirty documents and conducted seventeen in-depth interviews with government and private sector organizations.

Charge
The COG Subcommittee shall evaluate the City's readiness to continue essential government functions during any hazard emergency. Essential functions are those that enable the City to provide critical services; exercise civil authority; maintain public safety; and sustain the industrial/economic base. The Subcommittee is charged with:

- Evaluating the current state of the City's planning
- Describing the gap between the current state and what can legitimately be considered a viable and testable COG plan
- Specifying in some detail the process, policies, and procedures the City should follow in order to put

such a plan in place

Goals

The 10 goals of the COG Subcommittee are as follows:

- Develop a working knowledge of the requirements and essentials of continuity planning.
- Examine the COG planning practices of other medium to large municipalities.
- Determine which City agencies, if any, have existing plans and assess their adequacy.
- Determine the essential functions of City agencies.
- Determine the orders of succession established by City agencies to all key positions within their organizations, to be implemented in event an incumbent is unable to serve.
- Determine the critical records and data required by City agencies to continue performing essential functions and the extent to which those items are both backed up and made available for use during a COG event.
- Investigate and recommend means (leases, contracts, memos of understanding, telecommuting mutual aid agreements, etc.) of providing alternate operating facilities together with all their associated material needs, for use during a COG event.
- Determine which special finance related measures may be required during a COG event and recommend approaches to managing them.
- Identify the "human capital" needs of a viable COG plan and recommend strategies for supporting human resources.
- Investigate and recommend means for the City to encourage other entities to create business continuity plans.

Critical Infrastructure Subcommittee

The Critical Infrastructure Subcommittee focused on several key areas, and established five categories of focus:
- Utilities
- Communications (including a special focus on interoperability issues)
- Transportation (including evacuation planning)

- Protecting Critical Infrastructure, and
- All Other (including a focus on the office of Emergency Management and the role of the private sector)

The Subcommittee organized a series of meetings by specific subject matters, including evacuation planning, interoperable communications issues and initiatives, and transportation issues. Subcommittee members reviewed sixty-four documents and conducted seventy-eight in-depth interviews with government and private sector organizations.

Charge

The Subcommittee undertakes to analyze current efforts to protect the City's critical infrastructure including mass transit, roads, bridges, waterways, airports, utilities, and communication systems and ensure this infrastructure has the capacity (including staff and materials) to meet needs during an emergency.

Goals

- Define critical infrastructure, including transportation, and understand infrastructure vulnerabilities.
- Define the needed surge capacity in various emergency scenarios (e.g. evacuation or mass prophylaxis) and determine how to meet those needs.
- Assess the flexibility of the City's evacuation plan and recommend redundant strategies in the event of loss of major bridges and other infrastructure. Understand legal authority in the event of a voluntary/mandated evacuation.
- In the event of loss of power, assess the ability of public transportation (e.g. SEPTA, subways) to continue operations.
- Define the key local, state, and federal government agencies and other organizations (e.g. hospitals) that need to communicate and determine their current tactical communication systems.
- Identify which agency systems must be interoperable and determine whether the systems currently are interoperable.
- Evaluate redundant communications capacities during an emergency (e.g. in scenarios without electricity or with overloaded landlines), including the possible use of satellite phones and other technology.

Health and Human Services Subcommittee

The Health and Human Services Subcommittee conducted a series of meetings, in-depth interviews and document review which created the basis of information contained in this report, and provides an overview of the present situation as it relates to preparedness throughout the City. Subcommittee members reviewed twelve documents and conducted more than twenty in-depth interviews with government and private sector organizations.

Charge
The Subcommittee was charged with analyzing the current capacity in the City's public and private healthcare delivery system to respond to a major mass-casualty incident, including deliberate acts of terrorism or natural disaster. The Subcommittee, among other relevant factors, will examine the response capability of the City's healthcare system to provide (1) emergency care, (2) prophylactic care, (3) mental healthcare, (4) mortuary services, (5) shelter (i.e. food, water), and (6) human services. The major operating assumption is that the City's public and private health delivery system will be the only medical response capability for the first 72 hours following an incident.

Goals
The Subcommittee will evaluate current surge capacity in hospitals and healthcare delivery system in the following areas:

- Pharmaceuticals
  Local and regional systems for stockpiling of pharmaceutical supplies are needed to support communities, health departments and healthcare systems prior to the arrival of the Strategic National Stockpile (SNS) or Vendor Managed Inventory (VMI) from the federal government.
- Decontamination
  Local and regional systems should be set up to have the ability to decontaminate large number of victims both at the scene of a mass casualty incident and/or prior to entry into an acute care

hospital.
- Volunteer Assistance
  An effective emergency response plan must be able to quickly identify and contact volunteer healthcare professionals who can care for people who have been injured as a result of a disaster or public health emergency.
- Training
  There must be a uniform, broad based, consistent all-hazard training program for health departments, hospitals, and healthcare delivery organizations.
- Inter-Agency Coordination
  The success of healthcare delivery during a crisis is dependent upon the coordination of resources and agencies.

Legal and Intergovernmental Subcommittee

The Legal and Intergovernmental Subcommittee focused on identifying gaps in the existing laws and legal framework, intergovernmental coordination, and pre-event contracting for supplies and services. Subcommittee members reviewed six documents and conducted eight in-depth interviews with government and private sector organizations.

Charge
The Subcommittee was charged to review and analyze the existing laws regarding emergencies. The Subcommittee has reviewed the legal framework to address issues of liability, workers' compensation, City and volunteer staffing needs in an emergency, procurement contracts, template agreements, issues of quarantine and isolation, and evacuation or shelter-in-place mandates.

Goals
The goals of the Subcommittee have been to:

- Define the existing laws concerning emergency situations and identify gaps.
- Clarify the role and authorities of local, state and federal government in the event of emergency.
- Understand the Commonwealth of Pennsylvania's command structure during local, state, and federally declared disasters (i.e. When is the Mayor vs.

the Governor in charge?).

• Address issues facing vulnerable populations, as defined by the Vulnerable Populations Subcommittee.
• Ensure that vulnerable populations are fully included in emergency plans.
• Define the scope of existing mutual aid agreements and determine which areas need to be enhanced.
• Determine best practices regarding legal agreements that should be in place and those that should be ready as templates in the event of emergency.
• Ensure the mechanisms are in place, including necessary agreements, to provide shelter, food and water to the community.
• Address any legal issues that arise from the other Subcommittee meetings or plenary sessions.

Public Information and Community Engagement Subcommittee

The Public Information and Community Engagement Subcommittee reviewed the City's overall emergency operations plan, as well as several operating departments' crisis communications, emergency preparedness, and strategic communication plans. Subcommittee members reviewed fifteen documents and conducted twenty-two in-depth interviews with government and private sector organizations.

Charge

The Public Information and Community Engagement Subcommittee was charged with evaluating and helping develop community engagement strategies for disseminating information in advance of and during emergencies. Focusing on four key areas—audience, message, method, and training— the Subcommittee reviewed and evaluated twelve City departments' crisis communications plans and conducted in-depth interviews to determine existing City emergency preparedness and response planning, current communications protocols and practices, what the City does well and what areas could be improved.

Goals

Audience
Developing an understanding of each department's

audience can help the City government create appropriate messages that will inform, educate, and protect. Effective messages are able to resonate with all citizens, regardless of ethnic and cultural differences. If the City better understands the characteristics of the citywide, neighborhood, and niche audiences (including those classified as "at-risk" or members of "vulnerable populations"), it can create inclusive Emergency Preparedness and Communications plans.

Message
In evaluating key preparedness messages and how they are communicated to citizens, interviews were conducted with opinion leaders from the City government, faith, and business communities, non-profit emergency response and volunteer organizations, and other civic leaders to establish the baseline of public information and community engagement for emergency management preparedness and response. The Subcommittee synthesized the data to determine who among government personnel has responsibility for developing, implementing, measuring, and maintaining these emergency preparedness messages. In keeping with the goal of reaching all critical audiences, the gap analysis evaluated the messages for cultural competence and whether they met the needs of vulnerable populations, including those with physical disabilities and non-English speaking citizens.

Method
Methods used for communicating preparedness messages were also analyzed. Again, by reviewing crisis communications and strategic communications plans and conducting in-depth interviews, the Subcommittee evaluated the existing lines of communications command at all stages of an event in and around the City. This evaluation was based upon the type of delivery platform and medium deployed, the degree of utilization, the ability to serve the needs of diverse and vulnerable populations, and relevant best practices.

Training
The fourth criterion used to evaluate the emergency preparedness crisis communications plans was training. The Subcommittee evaluated current training for the City's PIOs, their level of understanding of

the City's Emergency Operations Plan, and their involvement in exercises, drills and Joint Information Centers.

Through these four areas, and in conjunction with other subcommittees, the Subcommittee will make recommendations to improve the City's strategies for community engagement and public message development and dissemination prior to, during, and following an emergency.

Vulnerable Populations Subcommittee

The Vulnerable Populations Subcommittee explored areas in which the City is not currently maximizing its resources. This document includes a comprehensive review of gaps in the City's emergency preparedness efforts for Vulnerable Populations (VPs). Subcommittee members reviewed thirty documents and completed twenty-nine in-depth interviews with government and private sector organizations.

To better identify the groups with special needs in the community, EPRC adopted the term VPs and the Subcommittee for Vulnerable Populations defined its scope to include:

> ...the segment of the community with increased risk in a disaster. The term encompasses groups that may not be able to access (or have reduced access to) the information, resources or services offered by the community in disaster preparedness, response and recovery. Traditionally, the Vulnerable Populations include subgroups such as persons with physical, mental or cognitive disabilities (e.g., who rely on augmented hearing or mobility devices); illiterate or non-English speaking; homeless; people that depend on continuous care from a hospital, nursing home, drug rehabilitation facility, prison facility, or home healthcare; individuals or families living in poverty; unemployed; elderly and frail; pets and service animals and the people who depend on them; and, children.

Charge/Goals

The charge of the VP Subcommittee is to ensure that VPs are included in all aspects of the City's emergency preparedness efforts. To fulfill this mission, the VP Subcommittee must certify that the other Emergency Preparedness Review Subcommittees include VPs in their review of the City's emergency management efforts. In addition, the VP Subcommittee is developing a set of general objectives for the City and a list of more specific objectives for each of the other Subcommittees. These objectives will focus on identifying and including VPs in all emergency plans.

Appendix E

CBRNE Subcommittee Documents Reviewed

City Of Philadelphia
- City of Philadelphia Emergency Operation Plan (EOP) and annexes
- City and County of Philadelphia Hazard Vulnerability Analysis, 1998
- Annex F Hazardous Materials
- Annex N Radiological Defense
- Annex W Disaster Assistance
- Annex X Terrorism Response CBRNE

Fire Department
- Fire Department Mission Statement
- Hazardous Material Operation Procedures
- Incidents Involving Nuclear, Chemical and Biological Procedures
- Chemical Spill Response Procedures
- Special Hazards Considerations Procedures
- Radiological Incident Procedures
- Dosimetry and Radiation Protection Procedures
- Emergency Response Plan to Large Scale Events
- Army-Navy Football game Operation Plan 2001

Police Department
- Police Department Mission Statement and Counter Terrorism Abstract
- Major Incident Response Team (MIRT) Procedures
- Safety Guidelines to Bomb Incidents
- Personal Protective CBRNE Procedures
- CBRNE Detection Equipment Procedures
- Counter Terrorism and Homeland Security Unit Abstract

Department of Public Health
- Department of Public Health Mission Statement
- Public Health Emergency Preparedness and Response Guide
- Bioterrorism and Emergency Response Abstract

American Red Cross—Southeastern Pennsylvania Chapter
- Red Cross Mission Statement
- Disaster Action Team Location in Southeast Pennsylvania Region

- Southeast Pennsylvania (SEPA) Disaster Relief Guide

Additional Documents
- Southeastern Pennsylvania Regional Counter Terrorism Task Force Capability
- State of Connecticut Mass Decontamination Mobilization Plan
- Emergency Management Principles and Practices for Local Government, International City Management Association
- FEMA, Emergency Response to Terrorism

Continuity of Government Documents Reviewed

- FEMA Continuity of Operations (COOP) Plan Template and Instructions
- Federal Preparedness Circular 65, Federal Emergency Management Agency
- IT Continuity for the Small and Medium Sized Organization, Continuity Central Planning for Continuity of Operations, U.S. Senate Sergeant at Arms Legislative Branch Emergency Preparedness Program
- Continuity of Operations (COOP), Chapter No. 2002-43, Florida Law (Relating to disaster Preparedness), Florida Division of Emergency Management
- The Critical Importance of COOP, CIO/Strategy Center, Editors
- Continuity of Operations (COOP) and Continuity of Government (COG), Davis Logic Inc.
- Principal Emergency Response and Preparedness Requirements and Guidance, Occupational Safety and Health Administration
- Information Technology Security Standards, Washington State Department of Information Services
- Disaster Recovery Planning for Courts: A Guide to Business Continuity Planning, National Association for Court Management
- White Paper, The Clinton Administration's Policy on Critical Infrastructure Protection: Presidential Decision Directive 63- May 22, 1998
- Continuity of Operations Strategies in the Federal Government: Part Two—The Role of Privacy and

Regulatory Compliance, Rhonda Raider, Larston Business Reports

- Continuity of Operations Planning System, Post Implementation Report, Janell Quinlan, COG Continuum
- Disaster Assistance Employees (DAE) Program: When Disaster Strikes How Will You Be Assisting Our Residents?, Miami Dade County Emergency Management
- City of Houston Emergency Management Announces Evacuation Registry for Citizens With Special Needs, February 3, 2006, Houston Office of Emergency Management
- District of Columbia Technical Assistance to Business for Development of Continuity Plans, Dated 2002, Office of Emergency Management
- Emergency Preparedness Guidelines: Child Care Licensing, Texas Department of Family and Protective Services
- Comprehensive Emergency Management for Local Governments: Demystifying Emergency Planning, James A. Gordon, Rothstein Catalog on Disaster Recovery
- Mutual Aid and Inter-local Agreement Handbook, State of Washington, Washington State Military Department, Emergency Management Division, Camp Murray, Washington
- Template for Continuity of Operations Plan-2000, General Services Administration, Andrews and Associates, LLC
- IT Disaster Recovery and Business Resumption Planning Standards, Washington State Department of Information Services
- Contingency Planning Guide for Information Technology Systems, National Institute of Standards and Technology
- COOP Planning Template, PEMA
- Issue Brief: Planning for Government Continuity, National Governors Association Center for Best Practices
- Business Continuity: It's Not Just an IT Recovery Plan, International and Enterprise Approaches, International Advisory Board American Council for Technology
- City and County of San Francisco Emergency Operations Plan, City and County of San Francisco Charter Provisions
- Critical Infrastructure and Key Assets: Definition and Identification, CRS Report to Congress, October 1, 2004, John Moteff and Paul Parfomak—Resources, Science and Industry Division
- Hurricane Katrina: Lessons Learned
- Emergency Management Preparedness Standards: Overview and Options for Congress, Updated February 4, 2005, CRS Report for Congress, Keith Bea, Specialist in American National Government and Finance Division
- Continuity of Operations Assessment Tool, FEMA

Critical Infrastructure Subcommittee Documents Reviewed

- City of Philadelphia 2002 Basic Emergency Operations Plan (including Annex A-X)
- Preliminary Crisis Relocation Plan (1980)
- Southeastern Pennsylvania Regional Counter Terrorism Task Force Program and Capability Review (Draft 3.1), December 2005
- Nationwide Plan Reviews – Philadelphia Urban Area and Commonwealth of Pennsylvania
- Police Department Terrorist Attack Mobilization Plan and related documents
- Hazards/Vulnerability Analysis, City and County of Philadelphia, Spring 1998
- Vulnerability Assessments
- Mitigation Plans
- Presentations and Budget Requests
- Army-Navy Football Game 2005 Emergency Response Plan (Fire Dept.)
- Live 8 Concert, July 2, 2005
- Managing Director's Project Binder
- Tactical and Domestic Preparedness Division Operations Orders
- Detective Bureau Operations Order
- Emergency Operations Center Upgrade Plans (SEPCTTF-UASI 2005 Regional Project Draft)
- Backup Generator Status by School, The School District of Philadelphia 2003/4
- Condition Assessment Component Notes, January 24, 2006
- "Business Continuity: A Plan", Unisys Corporation, January 18, 2006
- Verizon, Description of After-Action Reports on Major Philadelphia Events

Exercises:

- Measured Response Philadelphia: Response to a Weapons of Mass Destruction Incident, Sept. 4, 1997
- Exercise Keystone 2-98 August 19, 1998
- Biological Terrorism Table top Exercise, Philadelphia, PA, June 8, 1999.
- Philadelphia Fire Dept. 2001 Division 2 Platoon D Hazardous Material Exercise, October 27,2001
- Philadelphia Fire Dept. Platoon "C" Division 2 Haz-Mat Exercise, May 29, 2002
- Haz-Mat Exercise, Ammonia Leak, December 3, 2004
- After Action Report, Philadelphia Biowatch Table top Exercise, June 4, 2003

Interoperable Communications:
- Southeastern Pennsylvania Regional Task Force (SEPRTF) Radio Interoperability Projects
- SEPRCTTF Tier II Project Status
- SEPRCTTF Tier III Project Status -- E TEAM
- U.S. Department of Justice Federal Interoperability Radio Channel
- U.S. Department of Justice High-Risk Metropolitan Area Interoperability Assistance Project, Philadelphia, PA, July 2005
- U.S. Department of Justice High-Risk Metropolitan Area Interoperability Assistance Project – Completion Report, Philadelphia, PA, July 2005
- SEPTA Transit Police Dept. Philadelphia Police Dept. Interoperability Issues presentation.
- Philadelphia Metropolitan Area Standard Operations Procedures for the Federal VHF Interoperability Channel, January 2005
- Philadelphia Metropolitan Area Standard Operations Procedures for the Philadelphia Area Mobile Switches, December 2004
- Managing Director's Directive No. 43 – Emergency Notification Procedures, Rev. November 25, 2000
- Internal Memo, RE: Standardization of 800 Mhz Radio Communications during Emergency Events, October 5, 2005
- Police Communications Emergency Plan, Rev. January 5, 2006
- City of Philadelphia Public Safety and Regional Rail Radio Interoperability Appropriations Project Request (draft), February 1, 2006

Philadelphia Airport Authority
- 2004 Annual Report

- PHL Airport Emergency Plan (part of FAA recertification document), February 8, 2005

Southeastern Pennsylvania Transportation Authority (SEPTA)
- Emergency Operations Plan
- Employee Manual, June 2005
- Public Safety and Security Awareness brochure, 2005
- SEPTA Railroad, Emergency Simulation Drill, October 23, 2005
- Ridership Report 2005
- SEPTA Operating Facts, January 10, 2006
- Staffing levels
- Various systems maps

Philadelphia Water Department
- PWD Emergency Response Plan Volume I, September 30, 2003
- PWD Emergency Response Plan Volume II
- Water Quality Response Procedure, November 20, 2003
- Storm Water Preparedness, Prevention and Contingency Plan (Undated)

Delaware River Port Authority
- General Description and detailed information on bridges (DRPA and Wikipedia websites)
- Southern New Jersey to Philadelphia Transit Study (STV Inc.) October 2005

Delaware Valley Regional Planning Commission
- Numerous detailed GIS overlaps based on ad hoc inquiries from the Critical Infrastructure Subcommittee
- Detailed information regarding Philadelphia and surrounding counties (website)

PennDOT
- Intelligent Transportation System Technology (website)
- Various maps indicating ITS implementation status
- Disaster Recovery Manual (February 2006)

Philadelphia Gas Works
- General Customer Information
- General Financial Information
- Business Continuity Plans and Progress Reports
- Demonstration of Notifine System

U.S. Department of Homeland Security
- Homeland Security Presidential Directive/Hspd-7, The White House, Washington, D.C., December 17, 2003
- Homeland Security Presidential Directive/Hspd-8: National Preparedness, The White House, Washington, D.C., December 17, 2003
- FY 2006 Homeland Security Grant Program, U.S. Department of Homeland Security, December 2005
- Department of Homeland Security Daily Open Source Infrastructure Report, various dates

Health and Human Services Subcommittee Documents Reviewed

- Philadelphia All Hazard Emergency Management Plan
- Health and Medical EMP Annex to City of Philadelphia Plan
- Hazard/Vulnerability Analysis
- PDPH Strategic National Stockpile (SNS) Plan
- PDPH Smallpox Response and Mass Vaccination/Dispensing Plan
- PDPH Bioterrorism (BT) Plan
- PDPH office of Medical Examiners Mass Fatalities Plan
- PDPH Quarantine Laws
- PDPH Exercise AAR
- State or local capability and capacity assessment conducted for Philadelphia hospitals
- Hospital drills and exercises with AAR
- MOA's between Philadelphia hospitals

The Delaware Valley Healthcare Council (DVHC) provided a significant volume of documents and information, including:
- Copies of the Regional Hospital Plan
- A collection of Hazard Vulnerability Assessments from individual hospitals and Zone-based summaries
- Communications and Media Protocols
- DVHC Regional Hospital Disaster Committee Minutes and copies of presentations associated with the formation and ongoing activities
- Hospital Disaster Contact Lists
- Regional Subject Matter Experts Lists

- Government Contact Lists
- Zone Committee Summaries
- E Team Training Program
- Overview of the CARES Program
- Demonstrations of E Team and CARES
- The DVHC organized sponsored training programs of 2002 – 2003, including binders, videos and CDs
- A copy of the Mass Casualty Incident Preparedness Guidebook generated in 2002 updated in 2003

Legal and Intergovernmental Subcommittee Documents Reviewed

- The Philadelphia Code
- Southeastern Pennsylvania Mutual Aid and Intergovernmental Cooperation Agreement executed May 3, 2005
- Pennsylvania Emergency Management Services Code
- The Robert T. Stafford Act
- City of Philadelphia Basic Emergency Management Plan 2002
- ABA Checklist for State and Local Government Attorneys

Public Information Community Engagement Subcommittee Documents Reviewed

- Philadelphia Airport Systems Communications Plan
- City of Philadelphia Emergency Operations Plan
- Department of Licenses & Inspections Emergency Response and Notification Procedures
- Department of Licenses & Inspections Code Administration Unit Emergency Response and Notification Procedure
- Department of Human Services Communications Plan
- Department of Human Services Juvenile Justice Emergency Response Plan
- Department of Human Services Overview
- Department of Human Services Strike Plan 2004
- Department of Public Health Communications Plan

- Philadelphia Fire Department Communications Plan
- Philadelphia Police Department Communications Plan
- Housing Agencies Communications Plan
- Local Emergency Planning Committee (LEPC) Outreach Efforts
- Streets Department Communications Plan
- Office of Emergency Services Emergency Response Operations Plan

Vulnerable Population Subcommittee Documents Reviewed

- Pennsylvania State Animal Response Team Brochure
- Proposal to the Southeastern Pennsylvania Regional Counter Terrorism Task Force by the School District of Philadelphia
- School District of Philadelphia Preparedness, Multi-Incident Management and Response Plan
- Center City School Emergency Evacuation Plan
- Directory of Healthcare Facilities, compiled by the Philadelphia Department of Health
- List of Daycares and Preschools in Philadelphia
- Statistics on Philadelphia Residents and Housing (including personal property, mortgages, salaries, etc.)
- Directory of Philadelphia Nursing Homes
- Directory of Philadelphia Charter Schools
- Directory of Philadelphia Schools
- West Virginia University Handbook on Disability and Special Needs
- State of the Agency 2005: Philadelphia Corporation for Aging
- Looking Ahead: Philadelphia's Aging Population in 2015
- Various brochures from Philadelphia Corporation for Aging, including "Senior Community Centers," and "PCA Helpline."
- Various brochures from the Temple University Institute on Disabilities, including "Programs of the Institute on Disabilities," "Recycled Equipment Exchange Project," and "Mid-Atlantic Consortium on Accessible Information Technology in Education"
- Police Communications Emergency Plan
- Memo to the Managing Director from Roger Marguiles, RE: Response for Gas Line Fire Taskforce

- Philadelphia Police Department Computer Assisted Dispatch (CAD) Information Form
- US Department of Justice ADA Guide for Local Governments
- Monroe County, Florida Special Needs Registry
- Individuals with Disabilities in Emergency Preparedness, Executive Order 13347 (Department of Homeland Security)
- Materials from the National Organization on Disabilities Emergency Preparedness Initiative website
- Information on the US Administration on Aging (Department of Health and Human Services) website
- Information from the website of the Disability Statistics Center at the University of California at San Francisco
- Information from Cornell University's Disability Statistics website
- US Census Bureau, Information on various special needs populations
- General Services Administration's Section 508 website
- Humane Society of the US, Disaster Center website
- FEMA Materials on Special Needs Populations and Disasters, including "Pets in Disasters," "Special Needs Shelter Guidance," etc.
- Numerous other websites related to special needs/vulnerable populations and emergency management, including the sites for each organization and agency interviewed.

Appendix F

Project Management

- Joe Martz, former Managing Director, City of Philadelphia
- Phil Goldsmith, former Managing Director, City of Philadelphia
- Walt D'Alessio, NorthMarq Capital

CBRNE Subcommittee

Philadelphia Fire Department
- Lloyd Ayers, Fire Commissioner
- Andrew Rosini, Deputy Fire Chief
- Joseph McGraw, Battalion Chief, Hazardous Material Administrative Unit
- Larry Foster, EMS Operations Chief
- Ralph Halper, Regional Director of EMS

Philadelphia Police Department
- Sylvester Johnson, Police Commissioner
- Joseph O'Connor, Chief Inspector
- Walter Smith, Captain
- Robert Tucker, Inspector
- Thomas Fitzpatrick, Lieutenant

Private Sector
- Stephen Cunnion, M.D., Ph.D., M.P.H., Partner of Diogenec Group, Captain MC USN (ret.)

Philadelphia Department of Public Health
- Esther Chernak, M.D., Medical Specialist

American Red Cross—Southeastern Pennsylvania Chapter
- Maureen Tomoschuk, Senior Director, Emergency Services
- Armand Alessi, Director of Disaster Services

University of Pennsylvania (Division of Public Safety)
- Maureen Rush, Vice President, Public Safety
- Ted Bateman, Director, Fire and Emergency Services
- Stephen Roth, Fire and Safety Specialist

Delaware River Port Authority
- William Shanahan, Director of Security
- Brian Kelly, Lieutenant, Police Department
- Charles Kain, Security Administrator

Office of the Managing Director
- Pedro A. Ramos, Managing Director

Continuity of Government Subcommittee

Philadelphia Prisons
- Michael Resnick, Deputy Commissioner

Philadelphia Office of Risk Management
- Barry Scott, Risk Manager

Free Library
- Kevin Vaughan, Associate Director
- Joseph McPeak, Operations Director
- James Pecora, Chief Technology Officer
- William J. Fleming, Administrative Services Director

Philadelphia School District
- Vernard Trent, Director, Safety Programs and Incident Management, Office of School Climate and Safety

Mayor's Office of Information Services
- Dianah Neff, Chief Information Officer
- Terry Phillis, First Deputy

Philadelphia City Courts
- Joseph A. Cairone, Court Administrator

Subcommittee Departmental Briefings on Planning Efforts at Continuity of Government Meetings
- MOIS
- Water
- Streets
- Human Services
- Public Health
- Finance
- Treasurer

- OESS

Critical Infrastructure Subcommittee

Office of the Managing Director
- Pedro A. Ramos, Managing Director
- Michael Nucci, Director, Office of Emergency Management
- John MacLean, Deputy Director, Office of Emergency Management

Police Department
- Sylvester Johnson, Police Commissioner
- John Gaittens, Deputy Police Commissioner
- Joseph O'Connor, Captain
- Robert Tucker, Inspector, Commanding Officer, Counter Terrorism Division
- Walt Smith, Captain, Commanding Officer, Homeland Security Unit
- Michael Feeney, Chief Inspector, Science and Communications Bureau
- Thomas Lippo, Inspector, Commanding Officer, Communications Division
- Greg Masi, Sergeant, Communications Division

Public Property Department
- Joseph James, Deputy Commissioner
- Sandra Carter, Project Manager

Department of Streets
- Darin L. Gatti, P.E., Engineer of Design

Mayors Office of Information Services
- Crafton Timmerman, Program Administrator, Director Public Safety Technologies, GIS Director

U.S. Department of Homeland Security
- William Ryan, Senior Protective Security Advisor, Philadelphia
- John Guest, Protective Security Advisor, Philadelphia
- Joe Ricks, Protective Security Advisor, Richmond (formerly Philadelphia)

Pennsylvania Emergency Management Agency
- Anthony Camillocci, Eastern Area Director
- William Mengel, Operations Officer, Eastern Region

- David Williams, Emergency Management Specialist

Philadelphia Water Department
- Michael Hogan, Operations Director
- Stephen Furtek, PE, General Manager, Planning & Engineering
- Debra McCarty, Deputy Water Commissioner, Director of Operations
- Joselph Clare III, Deputy Water Commissioner, Finance and Administration
- William Wankoff, PE, Manager, Water Treatment and Plants

Philadelphia Gas Works
- Tom Kenney, Field Operations Director
- James Spaddto, Director, Policies and Compliance
- Robert Weindorfer, Safety Director
- Mark Lee, Business Continuity Planning Administator
- Angilique O'Donnell, Business Continuity Planning Analyst
- John Ferrer, Manager, Security and Loss Division
- John Staub, Manager, Human Resources Division
- Ray Sune, Pipeline Division
- Steve Jordon, Customer Affairs Director
- Ken Dowdaski, Gas Planning
- Nick Lapargola, Gas Planning

PECO
- J. Kaufman, Director of Philadelphia Operations
- Rick Kinard, Emergency Management
- Edward McBride, County Affairs Manager
- Paul F. McGlynn, PE, Manager Transmission Control
- Ernest McManus, Customer Services Supervisor

Trigen Philadelphia
- Kevin Brown, General Manager

SEPTA
- James Jordan, Assistant General Manager, Public and Operational Safety
- Ron Hopkins, Operations Center Director

Amtrak
- Larry Beard, Senior Director, Police and Security, Washington DC
- Jeff Weigle, Philadelphia, Baltimore, Washington Region Security

PennDOT
- Emmanuel A. Anastasiadis, Traffic Operations Manager, Engineering District 6-0
- Nicholas Martino, Assistant District Executive, Maintenance
- Leonard Pundt, Quality Improvement Coordinator

Delaware Valley Regional Planning Commission
- Donald Shanis, Director, Transportation Planning
- Stanley Platt, Manager, Office of Congestion Management

Philadelphia Division of Aviation
- Mark Gale, Deputy Director of Aviation
- Keith Brune, Operations Manager
- Renee Tufts, Acting Security Manager
- Paul Flanagan, Battalion Chief, Philadelphia Fire Department—Aviation Division
- Dominic Mingacci, Captain, Philadelphia Police Department, Aviation Division
- Thomas Varughese, P.E., Airport Projects Manager, Design and Construction
- Allan F. Moore, Jr., P.E., Airport Maintenance Manager

Delaware River Port Authority
- William Shanahan, Director of Security
- Brian Kelly, Lieutenant, Police Department
- Charles Kain, Security Administrator
- Mark Lopez, Manager, Government Relations

Philadelphia Regional Port Authority
- James T. McDermott, Jr., Executive Director
- Miles Lehmann, Security Consultant
- Andre Stephano, Managing Director, Cincinnatus Consulting, LLC

United States Coast Guard
- Lt. Commander Soo Klein, Director, Port Security Planning

Verizon
- Ki Wilson, Director, MidAtlantic Network Operations
- James Filosa, Engineering Manager, Philadelphia
- Jack Flynn, Area Manager Eastern Pennsylvania/ Delaware
- William Shea, Philadelphia Region Manager

National Park Service
- Dennis Reidenbach, Superintendent
- Ian Crane, Chief Ranger

Sunoco
- John P. McCann, Jr., Manager, Public Affairs
- John Ryan, Plant Security Director

Private Sector
- Skip Elliott, Vice President, Public Safety and Environment, CSX Transportation, Jacksonville, Florida
- Stacy Irving, Senior Director of Crime Prevention Services, Center City Crime Control
- James McMullen, Director of Business Continuity, Unisys Corporation
- Michael Mingie, Director of Security, Citizens' Bank, and Philadelphia Region Financial Security Officers Group
- Jack Radcliff, Director, Federal Executive Board, Philadelphia

Health and Human Services Subcommittee

Division of Disease Control
- Carol Johnson, M.D., Director

Philadelphia Department of Public Health
- Esther Chernak, M.D., Medical Specialist
- Joan Beckwith, M.D., Acting Health Commissioner
- Joe Cronauer, Chief of Staff

Delaware Valley Healthcare Council
- Andrew Wigglesworth, President
- Tom Grace, Vice President

Health Federation of Philadelphia, Inc.
- Natalie Levkovich, Executive Director

University of Pennsylvania Health System
- PJ Brennan, M.D., Chief Medical Officer
- Garry Scheib, Chief Operating Officer

Skilled Nursing, Inc.
- Martha Minniti, CEO and Founder

Thomas Jefferson University Hospital
• Thomas Lewis, President and CEO

The Children's Hospital of Philadelphia
• Richard Scarfone, M.D., Medical Director, Emergency Preparedness, Division of Emergency Management

Zone Chairs
• Hospital Disaster Preparedness Committee

American Red Cross—Southeastern Pennsylvania Chapter
• Tom Foley, CEO
• Maureen Tomoschuk, Senior Director Emergency Services

Philadelphia Fire Department
• Ralph Halper, Regional Director of EMS

Center for Bioterrorism and Disaster Preparedness, Thomas Jefferson University Hospital
• Ed Jasper, M.D., Program Director and Primary Investigator

Pennsylvania Emergency Management Agency
• Scott Forster, Emergency Management Specialist

Pennsylvania Department of Public Health
• Michelle Davis, Ph.D., Deputy Secretary for Health Planning and Assessment

Philadelphia Department of Public Health
• Haresh Mirchandani, M.D., Chief Medical Examiner

Philadelphia Office of Emergency Shelter and Services
• Robert Hess, Deputy Managing Director

Philadelphia Department of Behavioral Health and Mental Retardation Services
• Phil DeMara, Emergency Preparedness Coordinator

Legal and Intergovernmental Subcommittee

Philadelphia Prisons
• Michael Resnick, Deputy Commissioner

Mayor's Office of Labor Relations
• Bill Grab, Esq., Director of Labor Relations

Administrative Office of Pennsylvania Courts
• Zygmont Pines, Esq., Court Administrator of Pennsylvania

Philadelphia Police Department
• Zohreh Nabavi, Esq., Special Advisor

Philadelphia Law Department
• Romulo Diaz, Jr., Esq., City Solicitor

Philadelphia Office of Risk Management
• Barry Scott, Risk Manager

Philadelphia City Courts
• Joseph A. Cairone, Court Administrator
• David C. Lawrence, Deputy Court Administrator

Public Information and Community Engagement Subcommittee

American Red Cross—Southeastern Pennsylvania Chapter
• Maureen Tomoschuk, Senior Director, Emergency Services
• Tom Foley, CEO

Mayor's Office of Communications
• Joe Grace, Acting Director

MayoSeitz Media
• Jonathan Seitz, Managing Director

Center City District
• Stacy Irving, Senior Director of Crime Prevention Services

Pennsylania Cable Network
• Bill Bova, VP of Programming

Fox 29
• Holly Gauntt, General Manager

Leadership Philadelphia
• Liz Dow, Executive Director

CBS TV 3
• Michael Colleran, Vice President

Philadelphia Department of Behavioral Health and Mental Retardation Services
• Phil DeMara, Emergency Preparedness Coordinator
• Howard Kelley, Communications Director

Philadelphia Fire Department
• Daniel Williams, Executive Chief
• Thomas Donavan, Chief
• Michelle French, Firefighter

Philadelphia Department of Public Health
• Jeff Moran, Director of Communications

Philadelphia Office of Emergency Shelter and Services
• Roberta Sharpe, Public Information

Philadelphia Parking Authority
• Linda Miller, Director of Operations

Philadelphia Federation of Teachers
• Barbara Goodman, Director of Communications

Temple University Institute on Disabilities
• Amy Goldman, Associate Director

The Consortium, Inc.
• John White, Jr., President and CEO

Philadelphia Operation Town Watch
• Anthony Murphy, Executive Director

Voluntary Organizations Active in Disaster of Southeastern Pennsylvania
• Kristin Beck, VOAD Manager

Black Clergy
• Bishop Ernest Morris, Mt. Airy Church of God in Christ

Philadelphia Police Department

• Patricia Giorgio-Fox, First Deputy Police Commissioner
• Benjamin Naish, Captain
• William Colarulo, Inspector

Mayor's Office of Information Services
• Crafton Timmerman, Director Public Safety Technologies, GIS Director

Philadelphia International Airport
• Mark Pesce, Public Information

Philadelphia Department of Streets/Clean Block
• Rovetta Everett, Executive Director, Philadelphia More Beautiful Committee

Delaware Investments, a Division of Lincoln Financial Group
• Doug Anderson, Senior Vice President of Operations

Philadelphia Stock Exchange
• Francis Reidy, First Vice President, Information Technology
• Gary Rounbehler, Senior Manager, Emergency Management Office

University of Pennsylvania
• Lori Doyle, Vice President for Communications

Vulnerable Population Subcommittee

Archdiocese of Philadelphia
• Matthew Gambino, Assistant Director of Communications

Voluntary Organizations Active in Disaster of Southeastern Pennsylvania
• Kristin Beck, VOAD Manager

City of Philadelphia
• Jacqueline Barnett, Secretary of Education
• Roger Margulies, Assistant Deputy Mayor, Mayor's Commission on People with Disabilities
• Celeste Zappala, Executive Director, Mayor's Commission on Services to the Aging
• Leti Hinton, Director, Office of Emergency Shelter and Services

- John MacLean, Deputy Director, Office of Emergency Management
- Robert Hess, Deputy Managing Director, Office of Emergency Shelter and Services
- Phil DeMara, Emergency Preparedness Coordinator, Department of Behavioral Health and Mental Retardation Services

Philadelphia School District
- Fred Farlino, Office of the CEO
- Brendan Lee, Special Assistant to the Chief Safety Executive
- Vernard Trent, Director, Safety Programs and Incident Management, Office of
School Climate and Safety
- Anastasia Karloutsos, Public Relations
- Jim Golden, Chief Safety Executive

The Salvation Army of Greater Philadelphia, Adult Rehabilitation Center
- Major David C. Wilson, Administrator

Philadelphia Citizens for Children and Youth
- Shelly Yanoff, Executive Director

Philadelphia Housing Authority
- Vincent Morris, Special Assistant to the Executive Director

Temple University Institute on Disabilities
- Amy Goldman, Associate Director and Emergency Management Coordinator, Pennsylvania Initiative for Assistive Technology
- George Heake, Information and Technology Accessibility Coordinator and Emergency Management Coordinator, Pennsylvania Initiative for Assistive Technology

Deaf/Hearing Communications Centre, Inc.
- Iris Boshes, Executive Director

United Spinal Association (formerly Eastern Paralyzed Veterans Association)
- Jennifer Perry, Compliance Specialist, Accessibility Services

The Center for Advocacy for the Rights and Interests of the Elderly (CARIE)
- Diane Menio, Executive Director

University of Pennsylvania School of Veterinary Medicine
- Charles Newton, D.V.M., M.S., Department of Clinical Studies

Philabundance
- Melanie Jumonville, Vice President, Programs

Philadelphia Workforce Development Corporation
- Ernest Jones, President and CEO

Philadelphia Unemployment Project
- John Dodd, Director

Philadelphia Corporation for Aging
- Marsha Braverman, Director, Communications & Legislative Affairs
- Patricia Funaro, Assistant Director, Program Management
- David Nevison, Associate Executive Director, Planning & Development
- Pearl Graub, Director, Professional Services

United Way
- David Fair, President of Community Impact

Appendix G

Field Visits

New York City, NY—Friday, April 7, 2006

On April 7, 2006, members of the Emergency Preparedness Review Committee (EPRC) and James Lee Witt Associates (JLWA) visited the New York City Office of Emergency Management (OEM) to review its facilities and gather information from its emergency managers. Within the OEM, New York officials presented an overview of the City's emergency management, preparedness, response, technologies, and facilities. Discussions included which City officials had a seat at the OEM table during a crisis, which events were most relevant to emergency managers, budgetary and personnel requirements, and the response process after a disaster has hit the City. The Philadelphia team has incorporated many of their neighbor's ideas in this report.

Washington, D.C.—Wednesday, May 10, 2006

Philadelphia city officials met with their Congressional delegation on May 10, 2006 to discuss implementation of the EPRC recommendations going forward. They reaffirmed the importance of this process to the elected officials and requested assistance in putting the goals in place. Over the course of the day, the Philadelphia team met with Senator Arlen Specter (R-Pennsylvania), Congressman Robert A. Brady (D-Pennsylvania, 1st District), Congressman Chaka Fattah (D-Pennsylvania, 2nd District), Congressman Curt Weldon (R-Pennsylvania, 7th District), and Congresswoman Allyson Y. Schwartz (D-Pennsylvania, 13th District). Philadelphia City officials also met with Barbara Childs-Pair, Director, Washington, D.C. Emergency Management Agency and toured the Emergency Operations and Communications Center.

Chicago, IL—Monday, May 15, 2006

Members of the EPRC and JLWA also reviewed the emergency facilities of Chicago, IL, on May 15, 2006. During their visit, the team visited the Chicago Manufacturing Center, where they met with representatives of ChicagoFirst, a public private partnership between the City and the financial community, as well as with leaders of the Great Lakes Partnership, which provides assistance with business continuity planning. Additionally, Philadelphia officials toured the Emergency Operations Center (EOC) for the City of Chicago, where they reviewed the City's facilities, operation planning, technology, and physical space to respond to an emergency. As with New York City's emergency response facilities, Philadelphia officials incorporated what they learned in Chicago, in part, to frame the recommendations presented in this report.

Appendix H

Effective emergency management encompasses four distinct phases: mitigation, preparedness, response, and recovery. Each fulfills a unique but essential role in the emergency management cycle.

Mitigation

Mitigation is the effort to reduce the potential damage or impact of a disaster. A comprehensive and effective mitigation campaign proactively strengthens organizational response before a disaster occurs. Mitigation activities can include identifying hazard vulnerabilities and risks, retrofitting buildings, and enforcing building and zoning codes. Often, mitigation actions are based on lessons learned from previous incidents.

Preparedness

Preparedness incorporates the pre-event planning necessary to respond successfully to an emergency. It serves to develop both the City's and private citizens' response capabilities in the event of a disaster. Preparedness activities include planning and training, as well as exercises to practice and assess the response plan.

Response

Response refers to activities addressing the short-term, immediate effects of an incident. These include a thorough and prompt assessment of the situation, including damage to the community and injury to its citizens, and evaluating the City's short-term needs. Response also entails providing basic assistance to victims as quickly as possible, minimizing loss of life and property and preserving the fundamental social and economic framework of the City.

Recovery

Recovery is the long-term process of returning the community to normal as the response phase concludes. It involves the formation and implementation of long-range reconstruction plans including the rebuilding of schools, residences, and businesses. The goals of recovery are to restore both citizens' daily lives and the government to pre-event condition, and allow normal City functions to operate smoothly and without interruption

Appendix I

Biographies of Subcommittee Chairs

Pedro A. Ramos, Esq. is Managing Director for the City of Philadelphia and a member of the Mayor's Cabinet who serves as chief operating officer for the City and is responsible for overseeing, supporting and assisting the City's thirteen operating departments. Among the departments and agencies for which Mr. Ramos has direct responsibility are the City's lead emergency management agencies, the Office of Emergency Management, the Police Department, the Department of Public Health, and the Fire Department.

Prior to his appointment as Managing Director, Mr. Ramos was the City Solicitor for Philadelphia serving as the City's chief legal officer, head of the City's Law Department, and also a member of the Mayor's Cabinet. Mr. Ramos was Vice President and Chief of Staff to University of Pennsylvania President, Dr. Judith Rodin. Mr. Ramos' legal career started at Ballard Spahr Andrews & Ingersoll, LLP, where he worked since graduation from law school through December 2001, and where his primary area of practice was employee benefits. Mr. Ramos is also a former president of the Board of Education of the School District of Philadelphia. He was appointed to the Board of Education in December 1995 by Mayor Rendell and reappointed by Mayor Street in May 2000.

Harvey Rubin, M.D., Ph.D. is the Director of the Institute for Strategic Threat Analysis and Response (ISTAR) at the University of Pennsylvania. He has a Ph.D. in Molecular Biology from the University of Pennsylvania and an M.D. from Columbia University. He was a House Officer in Medicine at the Peter Bent Brigham Hospital in Boston and did his fellowship in infectious diseases at Harvard and Brigham.

Dr. Rubin joined the faculty at the University of Pennsylvania in 1983 and became Professor of Medicine in 1998. Dr. Rubin holds secondary appointments as Professor in the Department of Microbiology, School of Medicine and as Professor of Computer and Information Sciences at the University of Pennsylvania School of Engineering and Applied Sciences.

Romulo L. Diaz, Jr., Esq., City Solicitor, joined the City of Philadelphia Law Department in March 2002, and previously served as Chair of the Commercial and Regulatory Law Group. As Group Chair, he reported to the City Solicitor and supervised the Commercial Law, Regulatory Affairs and Appeals and Legislation Units. Since November 2004, he has served as a Member of the Pennsylvania Energy Development Authority by appointment of Governor Edward G. Rendell and confirmation by the Pennsylvania Senate.

For most of his career, Mr. Diaz lived in Washington, DC, where he held numerous legal, management and policy positions at increasing levels of trust and responsibility in the federal government. Following unanimous confirmation by the United States Senate, he was appointed by President Clinton to serve as assistant administrator for management at the U.S. Environmental Protection Agency. Prior to the EPA, he served as Deputy Chief of Staff and Counselor to the Secretary of Energy. During his career, he chaired several international groups, including NATO's Petroleum Planning Committee from 1992-1995 during a major realignment of the North Atlantic Alliance.

David Binder is the Director of Quality, Safety & Regulatory Affairs, Lead Trainer in Ammonia Safety & Emergency Response, and Responsible Distribution Process Code-Coordinator with Tanner Industries, Inc. in Southampton, PA. Mr. Binder also serves as Chairperson of the Philadelphia Local Emergency Planning Committee and previously chaired the Education sub-committee. He is associated with the National Association of Chemical Distributors (NACD) and served as past Chairperson of the Operations Seminar (OPSEM) Committee.

Mr. Binder is an Associate Faculty Member of the University of Missouri Summer and Winter Fire Schools. He also serves as Faculty Member for The Refrigeration Research And Educational Foundation Institute at the University of Oklahoma under the World Food Logistics Organization (WFLO). Mr. Binder previously served as Chairperson of the Community & Industry Education Task Groups under the Chemical Educational Foundation (CEF).

John Carrow joined Unisys as Chief Information Officer and Vice President, Worldwide Information Technology, in December 1996. As the CIO, he has worldwide responsibility for Unisys information technology across the 37,000 Unisys employees operating in more than 100 countries. In this capacity he directs the 700 person IT organization and manages the Unisys IT budget of about $200M annually. He is responsible for setting the strategic direction for information technology and providing automated capabilities in support of the Unisys global business operations and its customers.

Before joining Unisys, Mr. Carrow served, from 1993, as the first Chief Information Officer in the history of Philadelphia. His work was covered extensively in the October 1996 issue of CIO magazine and in the December 1996 issue of Governing magazine, in which he was selected as Public Official of the Year for 1996.

Joseph C. Certaine is the Director of the Governor's Office for the Southeast Region of Pennsylvania. He serves as the Governor's representative for seven counties in Pennsylvania, as executive liaison to county and local government officials and legislative representatives, and as the active constituent services director for citizen complaints and problems involving Commonwealth operating departments. Mr. Certaine has over 28 years of experience in public and private sector emergency preparedness, response, and recovery.

Previously, Mr. Certaine held the position of Vice President, Strategic Relations - (2000 - 2003) at Vision-Quest National LTD. In that position he was responsible for company relations with national community/social service organizations, he directed government liaison responsibilities in PA, NJ, DE, FL, OK, CA, AZ, and he developed government relations strategies for company expansion.

James J. Eisenhower is a partner in the Schnader law firm. Mr. Eisenhower was the 2004 Democratic candidate for attorney general of Pennsylvania. He chairs the firm's Government and Regulatory Affairs Practice Group and serves on its political action committee. His practice emphasis is on government relations, criminal law, investigative services, ethics and election law, and complex civil litigation. His clients have included the housing authorities of several large cities, a number of current and former public officials, and national corporations.

Mr. Eisenhower served as Gov. Rendell's chief criminal justice advisor during the 2002 governor's race, was a member of Gov. Rendell's transition team, and also acted as counsel to the Inaugural Committee. As a White House fellow, Mr. Eisenhower drafted the executive order that President Clinton signed allowing the

United States to seize assets of the Colombian Cali drug cartel, which served as the foundation to seize the assets of Al-Qaeda after the attacks of September 11, 2001. Mr. Eisenhower also helped to draft the International Crime Control Act, which President Clinton introduced in 1996.

Richard Negrin is Vice President, Associate General Counsel, and a member of the Executive Leadership Council of ARAMARK. Mr. Negrin serves as Chief Counsel to ARAMARK's Healthcare Division. ARAMARK is a world leader in providing award-winning food and facilities management services to health care institutions, universities and school districts, stadiums and arenas, international and domestic corporations, as well as providing uniform and career apparel.

Prior to joining ARAMARK, Mr. Negrin was a litigator with the global law firm of Morgan Lewis, where he concentrated his practice in the representation of corporations in various facets of civil, criminal and administrative proceedings, including internal investigations, agency investigations, grand jury proceedings, Health Care and False Claims Act actions, and other civil enforcement actions. He also worked extensively in complex corporate litigation.

Stephan M. Rosenfeld, president of Identity Advisors, LLC, provides strategic/risk communications counsel and public information training to a national client base of highly visible businesses and non-profit organizations. A print and broadcast journalist early in his communications career, Mr. Rosenfeld has covered and/or directed coverage of numerous emergencies including the outbreak of Legionnaires Disease in Philadelphia, the introduction and spread of HIV in the United States, and West Coast earthquakes.

Mr. Rosenfeld, a Pennsylvanian, has twice served as a senior official in the public sector – as Press Secretary and Special Assistant to the Pennsylvania Attorney General and as Assistant General Manager for Marketing, Communications and Customer Satisfaction at SEPTA (Southeastern Pennsylvania Transportation Authority). In both instances, he was responsible for directing risk communications. His other civic roles include service as Co-Chair of the Governor's Transportation Issues Advisory Group and as a senior communications consultant to Philadelphia 2000, Inc.

Dorothy Sumners Rush is a retired educator and active public servant. She has been recognized by the former Mayor of Philadelphia, Edward G. Rendell, the former Governor of Pennsylvania, Robert P. Casey, and current Mayor of Philadelphia, John F. Street, for her dedicated service to the field of education and the community. She is noted for her role as a policy and decision-maker in her commitment and devotion to activities shaping the lives of children and youth.

Ms. Sumners Rush served a six year term as a Member of the Board of Education for the School District of Philadelphia beginning in 1993. She subsequently served a second term and was elected Vice President of the Philadelphia Board of Education. In November of 1999, Mayor-elect John F. Street appointed Ms. Sumners Rush as a Co-Chair of the transition team to restructure city government. In 2002, she was appointed to the Board of Trustees at Philadelphia Community College.

Andrew Wigglesworth is President of the Delaware Valley Healthcare Council, or DVHC. DVHC represents and advocates for more than 150 hospitals, health systems and other health-related organizations in Southeastern Pennsylvania. Mr. Wigglesworth also is President and CEO of Philadelphia International Medicine, or PIM. PIM brings together eight regional hospitals ranked among the best in the nation to establish Philadelphia as an international health care destination.

Prior to coming to DVHC, Mr. Wigglesworth was Senior Vice President of the Maryland Hospital Association, where he was responsible for coordinating the response of Maryland hospitals to health policy issues before the United States Congress and the Maryland General Assembly. Mr. Wigglesworth also worked in the executive branch of the Maryland State Government as the Governor's Executive Assistant for health, aging, and insurance matters in Annapolis.

Appendix J

AAR After-Action Report

ADA Americans with Disabilities Act

ARC-SEPA American Red Cross—Southeastern Pennsylvania Chapter

BSL Biosafety Level

CAD Computer Assisted Dispatch

CARES Collaborative Active Response Emergency System

CART County Animal Response Team

CBRNE Chemical, Biological, Radiological, Nuclear and Explosive Detection and Response

CERT Community Emergency Response Team

CI Critical Infrastructure

CISM Critical Incident Stress Management

COG Continuity of Government

ComEd Commonwealth Edison

COOP Continuity of Operations

DBH/MRS Department of Behavioral Health and Mental Retardation Services

DHS Department of Homeland Security

DMAT Disaster Medical Assistance Team

DMORT Disaster Mortuary Operational Response Team

DOJ Department of Justice

DVHC Delaware Valley Healthcare Council

EAS Emergency Alert System

EMI Emergency Management Institute

EOC Emergency Operations Center

EOP Emergency Operations Plan

EPA Environmental Protection Agency

EPRC Emergency Preparedness Review Committee

ESAR-VHP Emergency System for Advance Registration of Health Professionals

ESF Emergency Support Function

E-Team Incident Management Software

FEMA Federal Emergency Management Agency

FQHC Federally Qualified Health Centers

FRED Facilities Resource Emergency Database

FRP Federal Response Plan

GIS Geographical Information System

HERT Hospital Emergency Response Team

HRIS Human Resource Information System

HRSA Health Resources Services Administration

HSEEP Department of Homeland Security Exercise and Evaluation Program

HVA Hazard/Vulnerability Analysis

HVRA Hazard/Vulnerability/Risk Analysis

IC Incident Command

ICP Incident Command Post

ICS Incident Command System

ISAO Information-Sharing and Analysis Organization

ITS Intelligent Transportation System

JIC Joint Information Center

JIS Joint Information System

JLWA James Lee Witt Associates

JOC Joint Operations Center

LEPC Local Emergency Planning Committee

LMS Learning Management System

LTC Long Term Care facilities

MDO Managing Director's Office

MEO Medical Examiner's Office

MIRT Major Incident Response Team

MOA Memorandum of Agreement

MOIS Mayor's Office of Information Services

MOU Memorandum of Understanding

MRC Medical Reserve Corps

NCR National Capital Region

NCS National Communications System

NDMS National Disaster Medical System

NIMS National Incident Management System

NIPP National Infrastructure Protection Program

NMRT National Medical Response Team

NPS National Park Service

NRC Nuclear Regulatory Commission

NRCC National Response Coordination Center

NRCS Natural Resources Conservation Service

NRP National Response Plan

NRT National Response Team

OAS Office of Adult Services

OEM Office of Emergency Management

OESS Office of Emergency Shelter and Services

PA DOH Pennsylvania Department of Health

PA-NEDSS Pennsylvania National Electronic Disease Surveillance System

PACCA Philadelphia Animal Care & Control Association

PATCO Port Authority Transit Corporation

PCA Philadelphia Corporation for Aging

PEMA Pennsylvania Emergency Management Agency

PennDOT Pennsylvania Department of Transportation

PGW Philadelphia Gas Works

PHA Philadelphia Housing Authority

PHL Philadelphia International Airport

PIO Public Information Officer

POD Point of Dispensing

PPE Personal Protective Equipment

PRPA Philadelphia Regional Port Authority

PSA Public Service Announcement

PWD Philadelphia Water Department

RODS Real-time Outbreak and Disease Surveillance

RSAN Roam Secure Alert Network

SART State Animal Response Team

SERT School Emergency Response Team

SCO State Coordinating Officer

SEPARTF Southeastern Pennsylvania Regional Task Force

SEPA VOAD Southeastern Pennsylvania Voluntary Organizations Active in Disaster

SEPTA Southeastern Pennsylvania Transportation Authority

SNS Strategic National Stockpile

SOG Standard Operating Guideline

SOP Standard Operating Procedure

SPCA Society for the Prevention of Cruelty to Animals

TSA Transportation Security Agency

UASI Urban Area Security Initiative

USCG United States Coast Guard

VOAD Voluntary Organizations Active in Disaster

VOIP Voice Over Internet Protocol

WAI Web Accessibility Initiative

WMD Weapons of Mass Destruction