

ADDENDUM 3

Providence St. Peter Hospital

Background

Providence St. Peter Hospital (PSPH) is a not-for-profit regional hospital founded by the Sisters of Providence in 1887. The current facility, licensed for 340 beds, has been located on a 173-acre naturally forested campus with preserved wetlands on the east side of the city of Olympia since January 1971. PSPH provides a large spectrum of services to the populations of Thurston and the surrounding counties, with special recognition for outstanding clinical service in the areas of heart, orthopedics, surgery, psychiatry, chemical dependency, rehabilitation, and teaching. There are 330 independent active members of the medical staff who provide services to patients at PSPH. In addition to the main hospital building, the campus includes a free-standing, 18-bed mental-health building, a 60,000 square foot medical office building, and a three-story Ambulatory Surgery and Physical Rehabilitation Building. PSPH is the Regional Disaster Control Hospital for the nine hospitals located in Washington State Region 3.

Natural hazard mitigation is defined as development and implementation of activities designed to reduce or eliminate losses resulting from natural hazards such as earthquakes, storms, and flooding. The Joint Commission on the Accreditation of Healthcare Organizations identifies hazard mitigation as an essential element in the process to manage risk, contain cost, and promote sustainable operations in hospitals in the event of an emergency event. Although it is difficult to predict when the next disaster will occur, or the extent of the event, collaborative planning between public entities, private sector organizations, and the citizens of the region will help minimize or mitigate the resulting losses.

In 2003, responding to the identified need in Thurston County for formal natural hazard mitigation planning, the County, in collaboration with other governmental jurisdictions located within its boundaries, established a multi-jurisdictional planning effort and developed the *Natural Hazards Mitigation Plan for the Thurston Region*.

The countywide regional plan includes a protocol for a new entity to become a part of it under certain conditions. The new entity must develop a plan that coordinates with the regional plan and references portions of the regional plan that meet the planning requirements of the new entity. In August 2003 the Emergency Management Council of Thurston County, which serves as the steering committee and governing body for the regional plan, invited Providence St. Peter Hospital (PSPH) to develop and integrate its Natural Hazards Mitigation Plan with that of the County's. This PSPH Natural Hazards Mitigation Plan is in response to that invitation.

Plan Purpose

The following purposes for which the County Plan was developed also apply to the Providence St. Peter Hospital Plan:

- **Provide a Methodical Approach to Mitigation Planning.** The process identifies vulnerabilities to future disasters and proposes the mitigation initiatives necessary to avoid or minimize those vulnerabilities.
- **Enhance Public Awareness and Understanding of Natural Hazards.** The County Plan contains data and information that can be used in a variety of ways to enhance public awareness about natural hazards including the identification of the four most prevalent natural hazards threatening the Thurston region.
- **Create a Decision-Making Tool for Policy and Decision Makers.** The plan is intended to provide basic information needed by managers and leaders of local government, business and industry, community associations and other key institutions and organizations to take actions to address vulnerabilities to future natural disasters. It also provides proposals for specific projects and programs that are needed to eliminate or minimize those vulnerabilities. These proposals, called “mitigation initiatives” are related to the needs of each contributing entity. They are evaluated as to their economic benefits and are prioritized for implementation. This approach is intended to provide a decision-making tool for the management of participating organizations and agencies.
- **Promote Compliance with State and Federal Program Requirements.** The Federal Disaster Mitigation Act of 2000 established a requirement that, for all disasters declared on or after November 1, 2004, applicants for grants for disaster mitigation funds must have an approved local mitigation plan. This plan is specifically intended to assist the participating agencies and organizations with complying with these requirements, and to enable them to more fully and quickly respond to state and federal funding opportunities for mitigation related projects.
- **Assure Inter-Jurisdictional Coordination of Mitigation-Relate Programming.** A key purpose of the planning process is to ensure that proposals for mitigation initiatives are reviewed and coordinated among the participating jurisdictions within the county. In this way, there is a high level of confidence that mitigation initiatives proposed by one jurisdiction or participating organization will be compatible with the interests of adjacent jurisdictions.
- **Create Jurisdiction Specific Hazard Mitigation Plans for Implementation.** A key purpose of the plan is to provide each participating entity with a specific plan of action that can be adopted and implemented pursuant to its own authorities and responsibilities. It identifies the mitigation initiatives for each participating entity, which are adopted and implemented according to the individual needs and schedule for each organization. In this way, the format of the plan and the operational concept of the planning process ensure that proposed mitigation initiatives are prioritized effectively among jurisdictions and organizations, while allowing each to adopt only the proposed mitigation initiatives that it actually has the authority or responsibility to implement when resources are available. Refer to Chapter II of the *Natural Hazards Mitigation Plan for the Thurston Region* for the complete text of the Plan Purposes.

Planning Partners and Plan Development

Providence St. Peter Hospital staff from the Facilities and Technology Services Department, the Environmental Services and Safety Department (Emergency Management), and the Risk Management Department partnered with the FM Global Insurance Company and the Thurston County Planning Department in the development of this plan. Following the opportunity for public comment, the plan was forwarded to the Providence St. Peter Hospital Operations Team for review and recommendation to the PSPH Administrator for signature. It was then sent to the Emergency Management Council of Thurston County for review to ensure conformance with the regional plan. The matrix below outlines the activities of the plan development process.

Date	Activity	Subject
March 17, 2004	Team Meeting	Review and approval of County Plan Purpose, Goals, and Objectives for conformance with PSPH.
March 17, 2004	Team Meeting	Review and approve County Plan Hazard Vulnerability and Risk Assessment for conformance with PSPH.
March 2004	Work outside meetings	Develop Mitigation Initiatives, rationale, cost estimates, priorities, potential funding source, and where possible cost benefit ratio (use Regional Plan template).
March 29, 2004	Team Meeting	Review Mitigation Initiatives and Draft Plan. Discuss Public Involvement Process
April 26, 2004	Meeting	Sponsor public meeting
May 3, 2004	Meeting	PSPH Operations Team review and approval for Administrator's signature.
May 20, 2004	Meeting	Review by the Emergency Management Council of Thurston County to ensure conformance with the regional plan.
June and July 2004	Plan Delivery and Approval	Deliver Plan to the Washington State Hazard Mitigation Program manager for review/approval. Subsequent to approval, the state forwards plan to FEMA for review and approval.
August 2004	Plan Maintenance	PSPH becomes part of the county planning workgroup and participates in future updates and maintenance cycles.

Public Participation

A variety of meetings were utilized to encourage public participation in the planning process as well as to educate the public about hazard mitigation efforts in the hospital. A public meeting was held on April 26, 2004, where attendees could obtain information and comment about the plan. The meeting was advertised to the population of Thurston County in *The Olympian* on April 15 and 22. A similar presentation was made at a meeting of the Medical Staff Executive Committee on April 12. In an effort to inform community leaders about the process of hazard mitigation planning both the work plan and a draft of the completed plan were presented to the Health Services Committee of the hospital

Community Board for review and comment. Input from these meetings was incorporated into the final draft of the plan.

Mitigation Goals

The following County Plan mitigation goals guided the development of mitigation initiatives for the Providence St. Peter Hospital Plan, which are expected to be implemented in the organization by the year 2025:

- All sectors of the community work together to create a disaster resistant community.
- Local and state entities have the capability to develop, implement, and maintain effective natural hazards mitigation programs in the Thurston region.
- Collectively the communities in the Thurston region have the capacity to initiate and sustain emergency operations during and after a disaster.
- Local government operations are not significantly disrupted by disasters from natural hazards.
- Reduce the vulnerability to natural hazards in order to protect the health, safety, and welfare of the community's residents and visitors.
- Local governments will support natural hazards mitigation planning, and implement the mitigation initiatives for their jurisdiction.
- The local infrastructure of communities in the Thurston region is not significantly affected by a disaster from a natural hazard.
- Residents understand the natural hazards of the Thurston region and are aware of ways to reduce their personal vulnerability to those hazards.

Risk Assessment

The risk assessment detailed in Chapter IV of the *Natural Hazard Mitigation Plan for the Thurston Region* also serves as the risk assessment for the Providence St. Peter Hospital Natural Hazard Mitigation Plan. The purpose of the Risk Assessment chapter is to provide the factual basis for the mitigation initiatives proposed by the hospital. It describes the type of natural hazard most likely to affect the region; it profiles hazard events, both describing the location and extent of the natural hazard, and including information on previous occurrences; and it assesses vulnerability by providing information on the impact of the hazard on the community in terms of identifying assets and estimating losses.

Based on the County and other local jurisdictional *Hazard Identification and Vulnerability Analysis* (HIVA) reports, storms, earthquakes, floods, and landslides have been identified as the most likely natural hazards to occur in the Thurston Region. They have been fully analyzed in the plan for the Thurston region because they fall into the following criteria:

1. There is a high probability of the natural hazard occurring in Thurston County within the next 25 years.

2. There is the potential for significant damage to impacted buildings and infrastructure.
3. There is the potential for loss of life.

According to the Thurston County Hazard Identification and Vulnerability Analysis, the following natural hazards meet the above criteria:

<u>Hazard</u>	<u>Thurston County HIVA Assessment</u>
Earthquake	High Probability of Occurrence High Vulnerability High Risk
Storm	High Probability of Occurrence High Vulnerability High Risk
Flood	High Probability of Occurrence High Vulnerability High Risk
Landslide	High Probability of Occurrence Low Vulnerability Moderate Risk

The Providence St. Peter Hospital natural hazard mitigation planning team concurs with the Thurston County HIVA that the hospital is at high risk to earthquakes and storms, however, both flood and landslide risks are low due to the facilities location because there is a low probability of occurrence. There have been no floods or landslides impacting hospital facilities since the hospital was opened at its current location in 1971.

For the full analysis of these natural hazards and the complete risk assessment upon which the Providence St. Peter Hospital natural hazard mitigation initiatives are based refer to Chapter IV of the Natural Hazard Mitigation Plan for the Thurston Region.

Implementation through Existing Programs

Providence St. Peter Hospital will be responsible for implementation of its mitigation initiatives based on funding availability, availability of resources, and funding priorities. All mitigation initiatives will be incorporated into existing planning and funding mechanisms. For all mitigation initiatives currently identified in the plan those mechanisms include either the 2004 or 2005 capital budget or operating budget-planning processes. Mitigation initiatives identified in the future will be incorporated into either the annual capital or annual operating budget processes for the planned implementation year.

Monitoring, Evaluating, and Updating the Plan

The Emergency Management Council of Thurston County will review this plan for conformance with the Thurston Regional Plan. Subsequent to that review and approval by the Washington State Hazard Mitigation Program Manager and by FEMA, the plan will be forwarded to the Emergency Management Council of Thurston County for incorporation into the existing *Natural Hazards Mitigation Plan for the Thurston Region*. PSPH will then become a part of the planning workgroup and will participate in future plan updates and maintenance cycles.

Refer to Chapter VI of the *Natural Hazards Mitigation Plan for the Thurston Region* for the complete process of monitoring, evaluating, and updating the plan.

Mitigation Initiatives

Mitigation initiatives are the central piece in the PSPH Natural Hazards Mitigation Plan. It is through the implementation of these initiatives that PSPH will become disaster resistant. For the purpose of this document, mitigation initiatives are defined as activities designed to reduce or eliminate losses resulting from natural hazards. The attached mitigation initiatives were prepared by the PSPH natural hazard mitigation planning work group following the template and process used for the *Natural Hazards Mitigation Plan for the Thurston Region*.

For a complete explanation, refer to Chapter V of the *Natural Hazards Mitigation Plan for the Thurston Region*.

Approved by:

C. Scott Bond,
Chief Executive/Administrator
Providence St. Peter Hospital

Date

Governmental Entity: PSPH
Hazard Type: Earthquake Hazard (EH)
Category: Critical Facilities Replacement/Retrofit
Priority: 1 of 5

PSPH-EH-1: Upgrade fire sprinkler bracing as a result of FM Global’s seismic evaluations of the main buildings on Providence St. Peter Hospital campus.

Rationale: Inadequately protected fire sprinkler pipe has a high likelihood of failing in an earthquake. A disruption in service or damage to the fire sprinkler piping could 1) Cause substantial water damage, and 2) Affect the ability to suppress fire. Either outcome could affect the ability of the hospital to care for patients during and/or after an earthquake.

Relates to Plan Goal(s): 3, 5, 7
Relates to Plan Objective(s): 3B, 5A, 7B
Implementor: Providence St. Peter Hospital Facility and Technology Services Department
Estimated Cost: \$58,000.00
Time Period: 2005
Funding Source: Hospital capital
Adopted Date and Ordinance No.:
Implementation Status: New

Governmental Entity:

PSPH

Hazard Type:

Earthquake Hazard (EH)

Category:

Critical Facilities Replacement/Retrofit

Priority:

2 of 5

PSPH-EH-2: Develop an emergency water source by 1) testing existing 30+ year old wells to determine if casings are capable of producing water for emergency use, 2) design pumping and pipe connection system to include backflow protection, 3) construct pumping and piping system, and 4) connect to hospital water network.

Rationale: Loss of water is the greatest utility vulnerability risk for PSPH's continued operations. The City of Olympia runs the local water source and reports that the water distribution system to PSPH is vulnerable to an earthquake in excess magnitude of 6.8. Water is a critical utility for PSPH in that drinking, bathing, food service, and critical utility systems (i.e. heating, cooling, and medical vacuum) rely on a continuous source. According to the Washington State Department of Ecology (DOE), three on-site wells originally used by residential housing on the PSPH campus could be used as a source of emergency water to provide 5,000 gallons-per-day. The hospital actually uses 72,500 gallons-per-day and discussions will continue with DOE regarding increasing the amount of water from the wells that can be used during emergency water losses.

Relates to Plan Goal(s):

3, 5, 7

Relates to Plan Objective(s):

3B, 5A, 7B

Implementer:

**Providence St. Peter Hospital Facility
and Technology Services Department**

Estimated Cost:

\$175,000.00

Time Period:

2005

Funding Source:

**Providence Health System – Capital ID:
CB06023015**

Adopted Date and Ordinance No.:

Implementation Status:

New

<u>Governmental Entity:</u>	PSPH
<u>Hazard Type:</u>	Earthquake Hazard (EH)
<u>Category:</u>	Critical Facilities Replacement/Retrofit
<u>Priority:</u>	3 of 5

PSPH-EH-3: Reduce the demand on existing sewer lift station for PSPH campus and modify sewer piping system within the main building so that effluent from floors 2 through 11 flows to the sewer main via gravity, rather than being pumped by the lift station. This will also have the effect of reducing dependency on the lift station.

Rationale: The sewer lift station on the PSPH campus handles all effluent collection from the main hospital and effectuates the pumping of the collected materials to the sewer main connected to LOTT. Piping failure, loss of power, or pit collapse due to a severe earthquake would cause immediate sewer backup and severely disrupt hospital operations. By changing the current configuration of the PSPH main building sewer system, all effluent from above-ground areas would be moved via gravity to the sewer main, thereby reducing the power dependency and amount of effluent backup caused by lift station failure.

<u>Relates to Plan Goal(s):</u>	3, 5, 7
<u>Relates to Plan Objective(s):</u>	3B, 5A, 7B
<u>Implementor:</u>	Providence St. Peter Hospital Facility and Technology Services Department
<u>Estimated Cost:</u>	\$35,000.00
<u>Time Period:</u>	2005
<u>Funding Source:</u>	Campus Renewal Bond Funding
<u>Adopted Date and Ordinance No.:</u>	
<u>Implementation Status:</u>	New

Governmental Entity:

PSPH

Hazard Type:

Multi Hazard (MH)

Category:

Hazard Damage Reduction

Priority:

4 of 5

PSPH-MH-1: Contract with a tree specialist to perform an assessment of the health and stability of mature trees on Providence St. Peter Hospital campus. Perform a self-assessment of forest underbrush that could provide a fuel source for fire. Implement corrective actions (trim, removal, etc.) where appropriate and/or necessary.

Rationale: The PSPH campus is wooded and, as such, has the potential for significant damage in the event of a severe windstorm. By ensuring the trees are healthy, stable, and free from diseased trunks and/or limbs the potential for disruption of hospital operations due to falling trees or branches (as a result of severe storm conditions) is reduced.

Relates to Plan Goal(s):

5

Relates to Plan Objective(s):

5A

Implementor:

**Providence St. Peter Hospital
Environmental Services Department**

Estimated Cost:

\$8,000.00

Time Period:

2005

Funding Source:

Unknown

Adopted Date and Ordinance No.:

Implementation Status:

New

Governmental Entity:

PSPH

Hazard Type:

Storm Hazard (SH)

Category:

Hazard Damage Reduction

Priority:

5 of 5

PSPH-SH-1: Complete an engineering structural assessment of telecommunications equipment on the roof of the patient tower at Providence St. Peter Hospital. Communicate any deficiencies to the owners of the equipment with a request for structural improvement.

Rationale: The telecommunications equipment (satellite dishes, repeaters, antennas, etc.) located on the tower roof of PSPH are critical to emergency service providers within Thurston County (i.e. Capcom and MetroCall), as well as other day-to-day service communication providers such as Qwest, Verizon, Sprint PCS, and NoahNet. Much of the telecommunication equipment on the PSPH roof is owned and operated by these entities. In the event of a severe windstorm, critical communication between responders and emergency service providers could be interrupted by damage to the equipment.

Relates to Plan Goal(s):

3, 7

Relates to Plan Objective(s):

3C, 7C

Implementor:

**Providence St. Peter Hospital Facility
and Technology Services Department**

Estimated Cost:

\$5,000.00

Time Period:

2004

Funding Source:

F&TS Operations

Adopted Date and Ordinance No.:

Implementation Status:

New

