

## CHAPTER ONE

### Section 1 - Promulgations

Resolution Number 02-05

#### **Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, areas of Mason County are vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the Mason County governing body realizes the importance of reducing or eliminating those vulnerabilities for the overall good and welfare of the community, and

**Whereas**, Mason County has been an active participant in the Mason County Hazard Mitigation Task Force, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities, and

**Whereas**, Mason County representatives and staff have identified, justified, and prioritized a number of proposed projects and programs needed to mitigate the vulnerabilities of unincorporated areas of Mason County to the impacts of future disasters, and

**Whereas**, these proposed projects and programs have been incorporated into the initial edition of the Mason County Hazard Mitigation Plan that has been prepared and issued for consideration and implementation by the communities and jurisdictions of Mason County,

**Now therefore, be it resolved on this 11th day of January, 2005 that,**

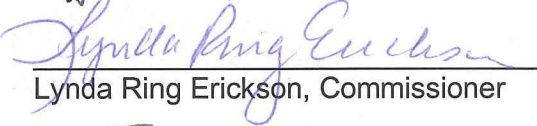
1. Mason County hereby accepts and approves its designated portion of the Mason County Hazard Mitigation Plan,
2. The agency personnel of Mason County are requested and instructed to pursue available funding opportunities for implementation of the proposals designated therein,
3. The agencies and organizations within Mason County will, upon receipt of such funding or other necessary resources, seek to implement the proposals contained in its section of the strategy, and
4. Mason County will continue to participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead, and
5. Mason County will further seek to encourage the businesses, industries and community groups operating with Mason County to also participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead.



**So resolved,**



Jayhi L. Kamin, Commissioner Chair



Lynda Ring Erickson, Commissioner



Tim Sheldon, Commissioner

Dated 1/11/05



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**Resolution Number \_\_\_\_\_**

**Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, the City of Shelton is vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the City of Shelton's governing body recognizes the importance of reducing or eliminating those vulnerabilities for the overall good and welfare of the community, and

**Whereas**, the City of Shelton has been an active participant in the Mason County Hazard Mitigation Task Force, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities, and

**Whereas**, the City of Shelton's representatives and staff have identified, justified, and prioritized a number of proposed projects and programs needed to mitigate the vulnerabilities of the City of Shelton to the impacts of future disasters, and

**Whereas**, these proposed projects and programs have been incorporated into the initial edition of the Mason County Hazard Mitigation Plan that has been prepared and issued for consideration and implementation by the communities of Mason County,

**Now therefore, be it resolved on this \_\_\_\_\_ day of \_\_\_\_\_, 2004, that**

1. The City of Shelton's governing body hereby accepts and approves its designated portion of the Mason County Hazard Mitigation Plan,
2. The agency personnel of the City of Shelton are requested and instructed to pursue available funding opportunities for implementation of the proposals designated therein,
3. The City of Shelton will, upon receipt of such funding or other necessary resources, seek to implement the proposals in its section of the strategy, and
4. The City of Shelton will further seek to encourage the businesses, industries and community groups operating within and/or for the benefit of the City of Shelton to also participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead.

**Mason County Hazard Mitigation Plan  
October 2004**

**So resolved,**

\_\_\_\_\_  
John Tarrant, Mayor

\_\_\_\_\_  
Dawn Pannell, Commissioner of Public Works

\_\_\_\_\_  
Dick Taylor, Commissioner of Finance



**Resolution Number \_\_\_\_\_ of the Squaxin Island Tribal Council**

**Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, the facilities, operations and personnel of the Squaxin Island Tribe are vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the Squaxin Island Tribal Council recognizes the importance of reducing or eliminating these vulnerabilities for the overall good and welfare of the Tribal members and the surrounding community, and

**Whereas**, the Squaxin Island Tribe has been an active participant in the Mason County Hazard Mitigation Task Force, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities, and

**Whereas**, the Squaxin Island Tribe's representatives and staff have identified and justified one proposed project needed to mitigate the vulnerabilities of the Tribe to the impacts of future disasters, and

**Whereas**, this proposed project has been incorporated into the initial edition of the Mason County Hazard Mitigation Plan that has been prepared and issued for consideration and implementation by the communities of Mason County and the Squaxin Island Tribe,

**Now therefore, be it resolved on this \_\_\_\_\_ day of \_\_\_\_\_, 2004, that**

1. The Squaxin Island Tribal Council hereby accepts and approves of its designated portion of the Mason County Hazard Mitigation Plan,
2. The directors and staff of the Squaxin Island Tribe are requested and instructed to pursue available funding opportunities for implementation of the proposal designated therein,
3. The Squaxin Island Tribe will, upon securing such funding or other necessary resources, seek to implement the proposal contained in its section of the strategy, and
4. The Squaxin Island Tribe will continue to participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead, and
5. The Squaxin Island Tribe will further encourage other businesses, industries, and community groups within Mason County to also participate in supporting the Mason County Hazard Mitigation Plan in the years ahead.

**Mason County Hazard Mitigation Plan  
October 2004**

**So resolved,**

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David Lopeman, Council Chair

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Andy Whitener, Council Vice-Chair

**Resolution Number \_\_\_\_\_ of Mason County Public Hospital District 1**

**Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, the facilities, operations and personnel of Mason General Hospital are vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the Board of Commissioners of Mason County Public Hospital District 1 recognizes the importance of reducing or eliminating these vulnerabilities for the overall good and welfare of the staff and operations of the Hospital and the surrounding community, and

**Whereas**, representatives of Mason County Public Hospital District 1 have been active participants in the Mason County Hazard Mitigation task Force, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities.

**Now therefore, be it resolved this \_\_\_\_\_ day of \_\_\_\_\_, 2004, that**

1. The Board of Commissioners of Mason County Public Hospital District 1 hereby accepts and approves its designated portion of the Mason County Hazard Mitigation Plan,
2. Representatives of Mason General Hospital will continue to participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead, and
3. The Board of Commissioners of Mason County Public Hospital District 1 will encourage other businesses, industries, and community groups within Mason County to also participate in supporting the Mason County Hazard Mitigation Plan in the years ahead.

**So resolved,**

\_\_\_\_\_  
Nancy Trucksess, President

\_\_\_\_\_  
Bill McComb, Commissioner

\_\_\_\_\_  
Donald Wilson, Commissioner



**Resolution Number \_\_\_\_\_ of Mason County Fire Protection District #2**

**Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, the facilities, operations and personnel of Mason County Fire Protection District #2 are vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the commissioners of Fire Protection District 2 recognize the importance of reducing or eliminating these vulnerabilities for the overall good and welfare of the District and surrounding community, and

**Whereas**, representatives of Fire Protection District #2 have been active participants in the Mason County Hazard Mitigation Task Force, for the overall good and welfare of the District and the surrounding community, and

**Whereas**, the District's representatives have identified and justified one proposed project needed to mitigate the vulnerabilities of the District to the impacts of future disasters, and

**Whereas**, this proposed project has been incorporated into the initial edition of the Mason County Hazard Mitigation Plan that has been prepared and issued for consideration and implementation by the communities of Mason County and Mason County Fire Protection District #2,

**Now therefore, be it resolved on this \_\_\_\_\_ day of \_\_\_\_\_, 2004, that**

1. The commissioners of Mason County Fire Protection District #2 hereby accept and approve of the District's designated portion of the Mason County Hazard Mitigation Plan,
2. The commissioners and staff of Fire Protection District #2 are requested and instructed to pursue available funding opportunities for implementation of the proposal designated therein,
3. The Fire District Protection #2 commissioners will, upon securing funding or other necessary resources, seek to implement the proposal contained in its section of the strategy, and
4. Representatives of Fire District #2 will continue to participate in the updating and expansion of the Mason County Hazard Mitigation plan in the years ahead, and
5. Representatives of Fire Protection District #2 will further encourage other businesses, industries, and community groups within Mason County to also participate in supporting the Mason County Hazard Mitigation Plan in the years ahead.

**So resolved,**

\_\_\_\_\_  
Jim LeBlanc, Commissioner Chair

\_\_\_\_\_  
Gene McTee, Commissioner

\_\_\_\_\_  
Peter Merrill, Commissioner

\_\_\_\_\_  
Kelley McIntosh, Commissioner

\_\_\_\_\_  
William Hunt, Commissioner

**Resolution Number \_\_\_\_\_ of Mason County Fire Protection District #5**

**Concerning the Mason County Hazard Mitigation Plan**

**Whereas**, the facilities, operations and personnel of Mason County Fire Protection District #5 are vulnerable to the human and economic costs of natural disasters, and

**Whereas**, the commissioners of Fire protection District #5 recognize the importance of reducing or eliminating these vulnerabilities for the overall good and welfare of the District and surrounding community, and

**Whereas**, representatives of Fire Protection District #5 have been active participants in the Mason county Hazard Mitigation Task Force, for the overall good and welfare of the District and the surrounding community, and

**Whereas**, the District's representatives have identified and justified one proposed project needed to mitigate the vulnerabilities of the District to the impacts of future disasters, and

**Whereas**, this proposed project has been incorporated into the initial edition of the Mason County Hazard Mitigation Plan that has been prepared and issued for consideration and implementation by the communities of Mason County and Mason County Fire Protection District #5,

**Now therefore, be it resolved on this \_\_\_\_\_ day of \_\_\_\_\_, 2004, that**

1. The commissioners of Mason County Fire Protection District #5 hereby accept and approve of the District's designated portion of the Mason County Hazard Mitigation Plan,
2. The commissioners and staff of Fire Protection District #5 are requested and instructed to pursue available funding opportunities for implementation of the proposal designated therein,
3. The Fire Protection District #5 commissioners will, upon securing funding or other necessary resources, seek to implement the proposal contained in its section of the strategy, and
4. Representatives of Fire District #5 will continue to participate in the updating and expansion of the Mason County Hazard Mitigation Plan in the years ahead, and
5. Representatives of Fire Protection district 35 will further encourage other businesses, industries, and community groups within Mason County to also participate in supporting the Mason County Hazard Mitigation Plan in the years ahead.

**So resolved,**

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**Del Griffey, Commissioner Chair**

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**Tommy O. Taylor, Commissioner**

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**Lorne C. Hauser, Commissioner**



## **Section 2 - Introduction**

### **Background**

Mason County is 967 square miles in size surrounded by the majestic Olympic Mountains to the west, and situated along the shores of southern Puget Sound on the Kitsap Peninsula. Mason County has blue skies above and forest greenery almost everywhere you look. The banks of Hood Canal are a popular draw for all types of water recreation – shellfish gathering, fishing, boating, scuba diving and swimming.

The county was created from Thurston County on March 13, 1854 under the Indian name, Sawamish. It was renamed January 3, 1864 to honor Charles H. Mason, the first secretary of the Washington Territory and acting governor during the Indian Wars.

There are a number of small communities in the county with one incorporated city, Shelton, called Sheltonville until 1888, when the county seat was moved there from Oakland. Shelton is 6.1 square miles and a population within the city limits of 8,500.

The total population of the County is approximately 52,000 but that number swells to 100,000 or more during the summer months. Nearly every form of recreation from mountain climbing to skydiving is available, making it truly a four-season recreation and vacation destination. It is within two hours of the Seattle-King County metropolitan area which makes it a popular location for summer homes as well as tent-camping and RV'ing.

Temperatures average 77.6° F. during the summer months with infrequent highs into the 90's, and 31.7° F. in January; winter lows occasionally reach 10° F., usually for very short periods. Annual rainfall averages 65 inches with 120 inches not unusual near the foothills of the Olympic Mountains.

Within Mason County there are two sovereign and federally recognized Native American Tribes. The Skokomish Reservation is located along Hood Canal while the Squaxin Island Reservation is on the south border of the county and extends into Thurston County.

### **Government**

The county is governed by a Board of Commissioners while Shelton is led by a City Commission. Each of the tribes is governed by its Tribal Councils as sovereign nations.

### **Section 3 – Purpose of the Plan and Organizational Structure**

#### **Definition of Hazard Mitigation**

“Hazard” is defined as a source of danger; “mitigation” is to cause to become less harsh or hostile. Taken together hazard mitigation is any action taken to eliminate or reduce the risk to human life, property, and the environment as posed by a hazard.

Strategies as identified in this plan are viewed as appropriate and effective methods to deal with long-term mitigation objectives. Once accepted by the county’s governing bodies, proposed mitigation initiatives will be further reviewed for funding and implementation by the appropriate lead agency.

#### **Purpose of the Plan**

The purpose of the Mason County Hazard Mitigation Plan is to protect the citizens and critical infrastructure from natural hazards. Methods to achieve the purpose included raising public awareness, locating resources for reducing loss, and moving toward building a safer community.

The Plan is based on the Mason County and City of Shelton’s Hazard Identification Vulnerability Analysis (HIVA) that considers risks to which the county is vulnerable. Mitigation strategies as presented in this Plan are recommendations only; they must be approved and funded prior to implementation.

#### **Task Force**

The Mason County Emergency Management Council was formed as the Task Force under the name “Mason County Hazard Mitigation Plan Committee” in December 2002. The Task Force has met semi-monthly or monthly, as needed, throughout the planning process and will continue to meet on a regular basis to update the Hazard Mitigation Plan on a regular basis.

The Task Force was formed and continues to be led by members of city and county government, representatives of the Tribes, members of various organizations, and interested citizens. Standing Committees were formed for specialized projects. They are the public Information and the Planning Committees. (See Appendix A.)

#### **Task Force Responsibilities**

- Oversee the entire planning process
- Prioritize facilities identified as critical, essential, and hazards
- Select mitigation recommendations
- Review recommendations and updates to mitigation strategies
- Develop short and long term goals
- Integrate mitigation strategies with all phases of the Comprehensive Emergency Management Plan
- Oversee implementation of committee decisions
- Coordinate methodology for implementation of input from the public and elected officials

## **Section 4 – Bylaws**

### **Article I. Purpose of the Task Force**

The purpose of the Mason County Mitigation Task Force is to decrease the vulnerability of the citizens, government, businesses and institutions of Mason County to future human, economic, and environmental costs of natural disasters. The Task Force will develop, monitor, implement, and maintain a comprehensive plan for hazard mitigation intended to accomplish this purpose.

### **Article II. Membership**

Participation in the Task Force is voluntary by all entities. Membership in the Task Force is open to all jurisdictions, organizations, and individuals supporting its purposes.

### **Article III. Organizational Structure**

The organizational structure of the Task Force shall consist of a Steering Committee, two permanent subcommittees, and other temporary subcommittees as deemed necessary by the Task Force.

#### ***A. The Steering Committee***

The Task Force shall be guided by a Steering Committee consisting of designated representatives of the following:

- One representative from the government of Mason County, the City of Shelton, and one each from the Skokomish and Squaxin Island Tribes
- One representative from organizations and associations representing key business, industry, and community interest groups of Mason County, and
- Other such individuals appointed by a majority vote of the Steering Committee

Members of the Steering committee will be designated by formal resolution, appointment, or other action to serve as the official representative and spokesperson for the jurisdiction or organization regarding the activities and decisions of the Task Force. To maintain good standing, members of the Steering Committee must not have more than two unexcused absences from meetings during the period of a year.

#### ***B. Subcommittees***

The Task Force shall have two permanent subcommittees: Planning and Public Information. Membership of the permanent subcommittees is unlimited and is open to all interested jurisdictions, organizations, and individuals.

Temporary subcommittees may be established at any time for special purposes by the chair of the Task Force, and their membership designated at that time.

Membership in the subcommittees is not restricted. There are no requirements for individuals to maintain good standing as members of a permanent or temporary subcommittee.

- **Establish committees**
  - Investigate implementation ability and limitations for proposed mitigation strategies
  - Provide a vehicle for bringing forward community concerns
  - Investigate possible mitigation funding sources

*C. Program Staff*

Mason County, and other agencies as so designated by the Steering Committee, will serve as the program staff for the Task Force, and assist in the coordination and support of the Task Force functions.

Article IV. Officers

Any member of the Task Force in good standing is eligible for election as an officer. The Task Force will have a chair elected by majority vote of a quorum of the members. The Task Force will also elect by majority vote a vice-chair. Representatives of both local governments, the Tribes, and any participating private sector organizations will be eligible for election as an officer. Each will serve a term of one year and be eligible for re-election for an unlimited number of terms.

The chair will preside at each meeting of the Task Force, as well as establish temporary subcommittees and assign personnel to them. The vice-chair will fulfill the duties and responsibilities of the chair in his or her absence.

The chair of each permanent or temporary subcommittee will be designated from the members in good standing or the Task Force by its chair, and will serve at the pleasure of the chair.

Article V. Responsibilities

*A. Steering Committee*

The Steering Committee will be responsible for oversight and coordination of all actions and decisions of the Task Force, and is solely responsible for formal actions in the name of the Task Force, including the release of reports, development of resolutions, issuance of position papers, and similar activities. The Steering Committee makes assignments to the subcommittees, coordinates their work, and takes action on their recommendations.

*B. Subcommittees*

The permanent subcommittees have the following responsibilities:

Planning – to identify, analyze, and monitor the hazards threatening Mason County and the vulnerabilities of the community to those hazards, as well as to assist in the definition of actions to mitigate the impacts of the hazards; to define structural and non-structural actions needed to decrease the human, economic, and environmental impacts of disasters, and to prepare for consideration and action by the Task Force a strategy for implementation of those initiatives in both the pre- and post-disaster time frame; to define the general financial vulnerability of the community to the impacts of disasters; to assist with identification of initiatives to minimize vulnerabilities; and to seek funding sources for all priority mitigation initiatives identified in the mitigation strategy developed by the Task Force.

Public information – to secure public input and comment on the efforts of the Task Force; to inform the public about the activities of the Task Force; to conduct public information and education programs regarding hazard mitigation; to assist with conducting public hearings; and, to promote public acceptance of the strategy developed by the Task Force.

***C. Program Staff***

Technical, clerical and other types of support activities to the Task Force and subcommittees will be provided through Mason County or other agency or organizational staff as designated by the Task Force. The Task Force will also designate an agency of Mason County to serve as the legal representative and agent of the Task Force, and to be empowered under County statutes to accept and disburse funds, enter into contracts, hire staff, and take such other actions as necessary in support of, or for the benefit of, the Task Force. Other jurisdictions and organizations may also provide such service on a voluntary basis upon request of the chair.

**Article VI. Actions by the Task Force**

***A. Authority for Actions***

Only the Task Force has the authority to take final actions in the name of the Task Force. Actions by subcommittees or program staff are not considered as final until affirmed by vote of the Task Force.

***B. Meetings, Voting and Quorum***

Meetings of the Task Force and its subcommittees will be conducted in accordance with Robert's Rules of Order. Regular meetings of the Task Force will be scheduled the second and fourth Wednesdays of each month. Subcommittees will meet as deemed necessary, at the discretion of their chairperson.

All final actions and decision made in the name of the Task Force will be by affirmative vote of a quorum of members. A quorum shall be 50 percent of the members of the Task Force in good standing at the time of the vote. Each member of the Task Force will have one vote. Voting by proxy, written or otherwise, is not permitted.

***C. Special Vote***

Special votes may be taken under emergency situations or when there are other extenuating circumstances that are judged by both the chair and the vice-chair of the Task Force to not be delayed until the next regularly scheduled meeting. Special votes may be taken by telephone, email and/or first class mail, and shall be in accord with all applicable statutes for such actions.

***D. Public Hearings***

When required by statute or the policies of Mason County, or when deemed necessary by the Task Force, a public hearing regarding actions under consideration for implementation by the Task Force will be held.

***E. Documentation of Actions***

All meetings and other forms of action by the Task Force and permanent and temporary subcommittees will be documented and made available for inspection by the public.

**Article VII. Adoption and Amendments to the Bylaws**

The Bylaws of the Task Force may be adopted and/or amended by a two-thirds majority vote of the members in good standing of the Task Force. All proposed changes of the bylaws would be provided to each member of the Task Force not less than ten (10) working days prior to such a vote.

**Article VIII. Dissolution of the Task Force**

The Task Force may be dissolved by affirmative vote of two-thirds of the members of the Task Force in good standing at the time of the vote following thirty (30) days' written notice to all participating members of the Task Force, by order of a court of competent jurisdiction, and/or by instruction of the Mason County governing bodies. At the time of dissolution, all remaining documents, records, equipment and supplies belonging to the Task Force will be transferred to Mason County for disposition.

**Section 5 – Evaluation, Update, and Maintenance of the Plan**

The Mason County Hazard Mitigation Plan will be evaluated on an annual basis, after every major emergency disaster that impacts any area of the county to determine effectiveness of the strategies in place and pending. Every five years the Plan will be updated and forwarded to the Washington State Emergency Management Division, Hazard Mitigation Officer, for review and then forwarded to the Federal Emergency Management Agency, Region X Officer per the requirements of the Disaster Mitigation Act 2000. This procedure will be followed unless directed otherwise by Washington State EMD or FEMA.

During the review process, the Task Force will facilitate the review with the Planning Committee. The committee or the Task Force as a group will review current strategies to determine their relevance to changing situations within Mason County as well as State and Federal policy changes. The committee will also review the recommended implementation process of each mitigation strategy identified.

After the annual review process the Task Force, through the Division of Emergency Management, will develop a written report describing its findings. This annual report will be sent to the governing bodies of participating organizations that developed the plan.

<b>DATE</b>	<b>ACTIVITY TO BE COMPLETED</b>
June 2005	Annual review; develop and submit findings
June 2006	Annual review; develop and submit findings
June 2007	Annual review; develop and submit findings
June 2008	Annual review; develop and submit findings
July 2008-December 2008	5-year update review
March 2009	Review completed; revised plan promulgated by governing bodies
May 2009	Plan sent to State Mitigation Officer for review.



## **Section 6 – Review of Facilities**

In reviewing the facilities in unincorporated Mason County (to be identified throughout the Plan as “County”), the City of Shelton (to be identified throughout the Plan as “City”), Squaxin Island and Skokomish Tribes (to be identified throughout the Plan as “Tribes”) and the Special Taxing Districts (to be identified throughout the Plan as “SPD’s”), the Task Force first looked at the types of facilities that could be considered “critical” to the citizens. These included a broad spectrum including:

- Assisted living facilities, rehabilitation centers, group homes and special population living centers
- Communication centers including towers
- Large employers
- Critical community suppliers; i.e., grocery stores (including “Mom and Pop” stores serving a relatively small population of the county), and pharmacies
- Emergency Operations Centers or pre-designated command centers
- Fire, rescue, and police stations
- Energy facilities including power station, switchyards, transmission lines, gas lines, and fuel storage areas
- Government offices
- Facilities identified as having hazardous materials present
- Major roads and waterways designated as transportation routes, evacuation routes, and primary access/egress routes
- Physicians’ offices, clinics, mental health and counseling centers
- Museums, cultural centers, and historical sites
- Public works facilities including equipment storage yards
- Religious facilities
- Schools and libraries
- Airports, marine ports, and bus and train stations
- Waste water facilities including sewer lines, lift stations, and treatment plants, as well as intakes and pipelines

It was determined the best approach was to divide these facilities into those considered “critical” to day-to-day living, those “essential” but not absolutely necessary, and “hazards”. State and federal highways as well as the Washington Correction Center were removed from the list since they are overseen by outside agencies. Some facilities are sensitive in nature and so are designated “confidential”.

Essential facilities included those where certain activities are housed, i.e., fire and law enforcement sub-stations where emergency vehicles may be housed but those vehicles could continue to function from any location. For example Mason County is protected in rural areas by unmanned fire stations containing one or more response apparatus, but the station itself is not critical to the response.

Following are the facilities as identified. They are listed by jurisdiction and for simplicity they are listed in alphabetical order, not to be misconstrued as order of importance.

## CRITICAL FACILITIES

### Mason County

- Alderbrook Water System
- Belfair Water District
- Harstene Retreat Water System
- Hood Canal Water System
- Hoodsport Water System
- Lake Arrowhead Water System
- Mason County Fire District 1 – one station
- Mason County Fire District 2 – three stations
- Mason County Fire District 3 – one station
- Mason County Fire District 4 – one station
- Mason County Fire District 5 – two stations
- Mason County Fire District 6 – one station
- Mason County Fire District 12 – one station
- Mason County Fire District 13 – one station
- Mason County Fire District 18 – one station
- Mason County Shop
- North Mason Medical Center
- Pirates Cove Water System
- PUD #1 Operations Center
- PUD #3 Operations Center
- Tiger Lake Terrace Tracts Water System
- Union Water System
- View Ridge Heights Water System

### City of Shelton

- City of Shelton Civic Center
- City of Shelton Fire Department
- City of Shelton Police Department
- Mason County Courthouse
- Mason General Hospital

### Squaxin Island Tribe

- Little Creek hotel
- New Kamilche Sewage Collection/Treatment System
- Squaxin Administration Building
- Squaxin Island Tribal Water Distribution/Storage System

## CONFIDENTIAL CRITICAL FACILITIES

### Mason County

- Benson Radio Tower
- Bloomfield Tower
- Division of Emergency Management Emergency Operations Center
- FireComm
- Kamilche Peak Transmitter
- PUD #3 Warehouse – Belfair
- Union Heights Tower
- Union Heights Tower/Transmission Site

### City of Shelton

- Angleside Radio Tower
- Angleside Water Tank
- Birch Street Water Tank
- Capital Hill Water Tank
- City of Shelton Emergency Operations Center
- City of Shelton Sewage Pump Station/Force Main
- City of Shelton Sewage Treatment Plant
- City of Shelton Shop
- City of Shelton Water Pump Station
- Deep Wells 1, 2, and 3
- Mountain View Water Tank
- Public Safety Answering Point
- PUD #3 Main Building
- PUD #3 Operations Center/EOC
- PUD #3 Warehouse – Shelton

### Squaxin Island Tribe

- Kamilche Water Distribution System

## ESSENTIAL FACILITIES

### Mason County

- AT&T Cellular Towers
- Belfair Assembly of God Church
- Belfair Baptist Church
- Cingular Wireless Cellular Phone Tower
- Fair Harbor Marina
- Gospel Lighthouse
- Grapeview School District
- Hood Canal Community Church
- Hood Canal School District
- Hoodsport Timberland Library
- LDS Church
- Mary M. Knight School District
- Mason County Christian School
- Mason county Fire District 2, Station 2-6

Mason County Fire District 8  
Mason County Fire District 11  
Mason County Fire District 16  
Mason County Fire District 17  
Mason County Garbage  
North Mason School District  
North Mason Timberland Library  
Pioneer School District  
Port of Allyn Administration Building  
Port of Allyn Dock  
Port of Allyn Dock North Shore Dock  
Prince of Peace Catholic Church  
Qwest Telecommunications  
Seventh Day Adventist School  
Southside School District  
Sprint Cellular Phone Tower  
St. Hugh Episcopal Church  
Taylor Shellfish  
United Methodist Church

**City of Shelton**

City of Shelton Sewage Lift Station – Cascade  
City of Shelton Sewage Treatment Lift Station  
Diversion Dam  
Olympic College Shelton  
Olympic Highway north  
PUD #3 Substation – Grove Street  
Railroad Avenue  
Shelton Springs  
Shelton School District  
Wallace Kneeland Blvd

**Squaxin Island Tribe**

Sally Selvidge Health Clinic  
Squaxin Island Maintenance Center  
Squaxin Island Tribal Center

**HAZARDS**

**Mason County**

Anderson Dam  
Bennettsen Lake Dam  
Buck Lake Dam  
Christine Lake Dam  
Cranberry Lake Stormwater Detention Dam  
Cushman Dam #1  
Cushman Dam #1 – Spillway Headworks  
Cushman Dam #2

**Mason County Hazard Mitigation Plan  
October 2004**

Fawn Lake Dam  
Haven Lake Dam  
Lake Limerick Dam  
Lakeland Village Pond #1  
Leprechaun Lake Dam  
Little Twin Lakes Dam  
Melbourne Lake Dam  
Natural Gas Line  
Rosand Dam  
Timberlake Dam  
Trask Lake Dam  
Uddenberg Lake Dam  
West Lake Dam

**City of Shelton**

City of Shelton Flood Control Structure – 7<sup>th</sup> and Laurel

## **Section 7 – Proposed Mitigation Initiatives**

The Task Force elected to break down the proposed mitigation initiatives as high, medium, and low costs, and high, medium, and low benefits to the citizens and guests of the communities of Mason County. High cost is over \$1,000,000.00, moderate is \$200,000.00 to \$1,000,000.00, and low is under \$100,000.00. Approximate costs have been included here when known. Specific costs will be available as funding sources are sought.

The facilities are listed in the order of priority.

### **Mason County**

#### **1. ACTION:**

**FireComm** – This operation will soon be consolidated with ShelComm, and the existing physical location will serve as a backup communications facility to provide redundancy in these capabilities for the County. For the short term upgrade of this facility the cost will be moderate, estimated at between \$700,000.00 and \$1,000,000.00; long term the costs also fall in the moderate range at approximately \$800,000.00, which includes improvements to all repeaters. The benefits are high in all situations.

**HAZARD:**

Earthquake, windstorm, ice storm

**LEAD AGENCY:**

Mason County Fire Protection District 5 Commissioners, City of Shelton  
Commissioners, Mason County Commissioners

**TIMELINE:**

1 – 2 years

**FUNDING SOURCE:**

Federal and State grants, operating budgets, E-911 taxes

#### **2. ACTION:**

**Division of Emergency Management** – The existing facility is leased and most of the facility is of World War II vintage. The buildings have not been seismically retrofitted. The best mitigation choice is to build a new facility. Cost and benefit would be high.

**HAZARD:**

Earthquake, windstorm

**LEAD AGENCY:**

Mason County Sheriff

**TIMELINE:**

5 – 10 years

**FUNDING SOURCE:**

Federal and state grants, operating budget, local taxing authority

#### **3. ACTION:**

**Mason County Fire District 2, Station 2-1** – The facility provides communications, a community shelter, and houses paramedic teams that provide advance life support to citizens in the North Mason area. Seismic retrofitting is needed. Cost will be moderate, but benefit high.

HAZARD:

Earthquake, windstorm

LEAD AGENCY:

Mason County Fire Protection District 2 Commissioners

TIMELINE:

2 – 5 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority

ACTION:

**Mason County Fire District 5, Station 5-3** – This facility is comprised of a number of small structures including what were originally an A-frame cabin and an old mobile home. The facility needs to be relocated. Cost will be high; benefit to the communities served will also be high.

HAZARD:

Earthquake, windstorm

LEAD AGENCY:

Mason County Fire Protection District 5 Commissioners

TIMELINE:

2 – 5 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority

4. ACTION:

**Mason County Shop** – Plans are already in place to relocate this facility. Cost will be high at approximately two million dollars, but the benefit is also high. Equipment maintained by the employees in this facility is important to the work done by county employees on a daily basis, but vital during times of emergencies.

HAZARD:

Earthquake

LEAD AGENCY:

Mason County Commissioners

TIMELINE:

2 – 5 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority

## City of Shelton

ACTION:

**Mason General Hospital** – Poor drainage presents risk of damage or loss to the electrical vault; if this were to occur, the hospital would have to be closed. This is the only hospital in the county. The ventilation system cannot be adjusted so treatment of some patients puts others at serious risk. Plans are in place to renovate and retrofit for earthquake safety. Cost and benefit are both high.

HAZARD:

Earthquake, flood

LEAD AGENCY:

Mason County Public Hospital District 1 Commissioners

TIMELINE:

2 – 5 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority

1. ACTION:

**Sewage Pump Station/Force Main** – The force main currently runs under Goldsborough Creek, a salmon-enhancement creek. The force main needs to either be elevated or buried deeper. Cost is high at approximately two million dollars; benefit is high.

HAZARD:

Earthquake, flood, riverbed erosion

LEAD AGENCY:

City of Shelton Commissioners

TIMELINE:

1 – 2 years

FUNDING SOURCE:

Federal and State grants, operating budget, regional planning authority, local taxing authority

3. ACTION:

**Shelton Fire Department** – The staff offices and resident quarters are currently housed in modular buildings adjacent to the building where the response apparatus is housed. That building is not to be occupied due to health and safety concerns. Cost, estimated at two to six million dollars, is high. The benefit is also high.

HAZARD:

Earthquake, flood, environmental encroachment

LEAD AGENCY:

City of Shelton Commissioners

TIMELINE:

2 – 5 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority

4. ACTION:

**Mason County Courthouse** – The computer system containing all county records is located in this old building. A redundant system is needed. Cost will be low and benefits high.

HAZARD:

Earthquake

LEAD AGENCY:

Mason County Commissioners

TIMELINE:

5 – 10 years

FUNDING SOURCE:

Federal and State grants, operating budget, local taxing authority



## **Squaxin Island Tribe**

### **1. ACTION:**

**Kamilche Water System** – The existing water system is inadequate to provide effective water flow to the hotel and casino; this could have serious consequences in the event of a fire. Land for a new system has been acquired west of the Little Creek Casino; another possible site is on the east side of that facility, across the freeway. Cost and benefit are high.

#### **HAZARD:**

Earthquake, fire

#### **LEAD AGENCY:**

Squaxin Island Tribal Council

#### **TIMELINE:**

2 – 5 years

#### **FUNDING SOURCE:**

Federal and State grants, operating budget

Based on funding limitations of Mason County and the jurisdictions therein, the Task Force feels that incorporating maintenance and mitigation strategies is the most efficient and effective use of funds as they become available.



## CHAPTER TWO

### Mitigation Planning Process

Mitigation is any sustained action taken to reduce or eliminate long-term risk to people and property from the affects of both natural and man-made hazards. An efficiently planned and managed hazard mitigation program can be a powerful resource in the combined effort by the County, State, and Federal governments to end the cycle of repetitive disaster damage. The purpose of this Mitigation Plan is to ensure that the opportunity to take mitigation measures to protect lives and property from future disasters is enhanced by providing the County/City/Tribes/SPDs with a long-term structured process for identifying mitigation goals and opportunities, for implementing the most effective mitigation measures, and for involving and educating the public regarding mitigation.

### **The Planning Process**

Mason County has developed a local Hazard Mitigation Plan through a collaborative process, involving County and City personnel, Tribal representatives, local business owners and county residents. The planning process took place over the course of several months beginning in September 2002, with a meeting between County and City personnel and interested jurisdictions, to initiate this planning process, which was conducted at the PUD Auditorium in the City of Shelton (please see Appendix A for all meeting agendas, minutes, and attendance lists). Information on the series of meetings held with Planning Team was published in the local newspaper. The first of these meetings was held on December 22, 2002, at the Mason County Division of Emergency Management building in Shelton, Washington. In attendance at the first planning meeting were law enforcement and fire district representatives, planning, building and public works representatives, members of the Mason General Hospital Safety Committee, American Red Cross coordinator, and City of Shelton and County emergency management professionals, as well as representatives from the business community. From these meetings, the Hazard Mitigation Plan Task Force was formed to review, comment, and direct the planning process (please see Appendix A for list of the Steering Committee Members). Additional meeting, ongoing from December 2002 to the present, were conducted to develop a draft plan. Additionally, draft-planning progress was published in the *Shelton/Mason County Journal* (see Appendix F). The draft Plan was available to the entire planning committee in April, 2004. Minor changes were made to the draft Plan as a result of that meeting, and the Plan was adopted. A final Hazard Mitigation Plan was then prepared for presentation to Washington State Emergency Management Division.



## CHAPTER THREE

### Risk Assessment

The purpose of this Risk Assessment is to provide information on various large-scale hazards, both natural and technological, that could affect the Mason County as a whole. The Risk Assessment serves as a basis for emergency management planning, as a justification for necessary preparedness-related budgeting and expenditures, and as a foundation for mitigation and recovery policy decisions.

The Risk Assessment will allow Mason County, the City of Shelton, Squaxin and Skokomish Tribes, and special protection districts to establish program goals and priorities proportional with the need for protection. Decisions for creating new preparedness and mitigation initiatives, for modifying existing programs, and for evaluating progress toward achieving mitigation goals should be based upon the Risk Assessment and reflected in the City/County/Tribes/SPDs' development plans. Finally, the Risk Assessment can identify areas needing further research on hazards or on the application of technical solutions to mitigate their effects.

This analysis covers hazards most threatening to the County/City/Tribes/SPDs as determined by history, geologic projections, and social and technological trends. There are no unique hazards identified for the entities represented in Mason County.

Risk Assessment builds on three concepts:

- A hazard is a possible source of danger or harm to people, property, or the environment. Hazard identification is the process of recognizing the various dangers present that could threaten a jurisdiction and its residents;
- Vulnerability is the degree of susceptibility to injury or harm. Vulnerability analysis assesses the relative degree of risk presented by hazards threatening a community;
- The Risk Assessment identifies potential dangers within or near a community and estimates the community's susceptibility to harm from those hazards.

#### Identifying Hazards

Mason County is subject to a number of hazards that are addressed in the Hazard Mitigation Plan as supported by the Hazard Identification Vulnerability Analysis for both the County and City (Appendix D and E). Those hazards identified in the HIVAs were reviewed by the Planning Committee members, in addition to research in historical documents, analysis of National Weather Service records, and a review of risk assessments prepared by Washington State Emergency Management Division. In addition, initial data from these documents was also used to determine those hazards that present the greatest risk to this the County.

Hazards are identified in the Mason County HIVA and City of Shelton HIVA (Appendix D and E).

Mason County Hazard Mitigation Plan  
 October 2004

The following are federal disaster declarations for Mason County.

**FEDERAL DISASTER DECLARATIONS  
 Mason County**

DATE	DECLARATION NO.	EVENT
Oct 1962	137	Columbus Day Storm
		Heavy Rains/Flooding
Apr 1965	196	Earthquake
Jan 1971		Heavy Rains/Flooding
Jan 1972	322	Severe Storms/Flooding
	328	Heavy Rains/Flooding
	414	Severe Storms/Flooding
		Severe Storms/Flooding
Dec 1977	545	Severe Storms/Slides/Floods
		Severe Storms/Slides/Floods
		Mt. St. Helens Eruption
		Severe Storms/Flooding
	852	Severe Storms/Flooding
	883	Severe Storms/Flooding
	896	Severe Storms/Flooding
Jan 1993	981	Inaugural Day Storm
Nov 1995	1079	Flooding/Windstorm
Feb 1996	1100	Flooding
Jan 1997	1159	Ice Storm/Flooding
Mar 1997	1182	Heavy Rains/Flooding
Feb 2001	1361	Earthquake
Nov 2003	1499	Severe Storms/Flooding

**Profiling Hazard Events**

The Mitigation Plan has identified a number of natural and man-made hazards that could affect Mason County. These hazards are discussed in both the County and City HIVAs, with details of the past history, susceptibility of County hazard effects, scope and extent of severity, and particular circumstances of the County that contribute to the severity of hazard effects.

**Earthquakes**

Mason County, located in the Puget Sound region of Washington State, is vulnerable to damage from earthquakes throughout the County. As part of the Puget Sound area, Mason County is vulnerable to three different types of earthquakes. Damage and loss are variable with each type of earthquake.

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The Mason County and City of Shelton Hazard Identification and Vulnerability Assessments (HIVAs) define an earthquake as a naturally induced shaking of the ground, caused by the fracture and sliding of rock within the earth's crust; the movement of the tectonic plates is one of the principle causes of earthquakes. In Western Washington, the primary plates of concern are the North American Plate and the subducting Juan de Fuca Plate. The first type of earthquake occurs along the Cascadia Subduction Fault, resulting from the convergence of the two faults. An earthquake resulting from movement along this zone would be considered a great quake. There have been no recorded "great" earthquakes along this fault since historic records began for this area, but there is evidence that one occurred in 1700; other subduction zones around the world similar to the zone off Washington State have had earthquakes with magnitudes of 8 or greater. Estimates suggest that this type of earthquake occurs approximately, every 500 years. This type of quake could cause catastrophic damage from Vancouver B.C. to Northern California and trigger tsunamis off the coast. This type of earthquake event would be followed by strong aftershocks. The entire state is vulnerable to damage from this type of earthquake. Occurrence intervals range from every 550 years to every one hundred years.

The second type of earthquake occurs deep within the Juan de Fuca Plate, between 25 – 100 kilometers beneath the Earth's surface. This type of earthquake occurs approximately every 35 years in the Puget Sound region, the most recent being the Nisqually Quake that occurred on February 28, 2001 and measured 6.8 on the Richter scale. Prior to that, an earthquake of this type occurred in 1965 with a magnitude 6.5, and in 1949 with a magnitude 7.1. This type of deep earthquake is not typically followed by aftershocks. Mason County and the City of Shelton suffered some damage due to the recent Nisqually Quake

Shallow earthquakes are the third type of earthquake common to the region. These earthquakes occur within the North American plate to depths up to 30 kilometers. Shallow earthquakes are the most common type of earthquake to occur within the region. Most shallow earthquakes are relatively small, but there is potential in the region for a major shallow quake, capable of causing major damage throughout the Puget Sound region.

Damage and vulnerability to earthquakes largely depends on the magnitude, depth, and location of the epicenter. Damage from earthquakes is largely caused by strong ground shaking; secondary effects such as landslides, subsidence, liquefaction and seiches can also cause considerable damage. Ground and soil conditions can amplify or minimize the effects of ground-shaking on a particular site. Soft soils are particularly at risk. Soft soil areas include floodplains, wetlands and valley areas.

Based upon information in the Hazard Risk Analysis prepared by the Washington Emergency Management Division, the likelihood of a major earthquake is "high" and the potential for significant damage is also "high." Numerous small earthquakes, causing no damage, occur on an almost daily basis.

### **Flooding**

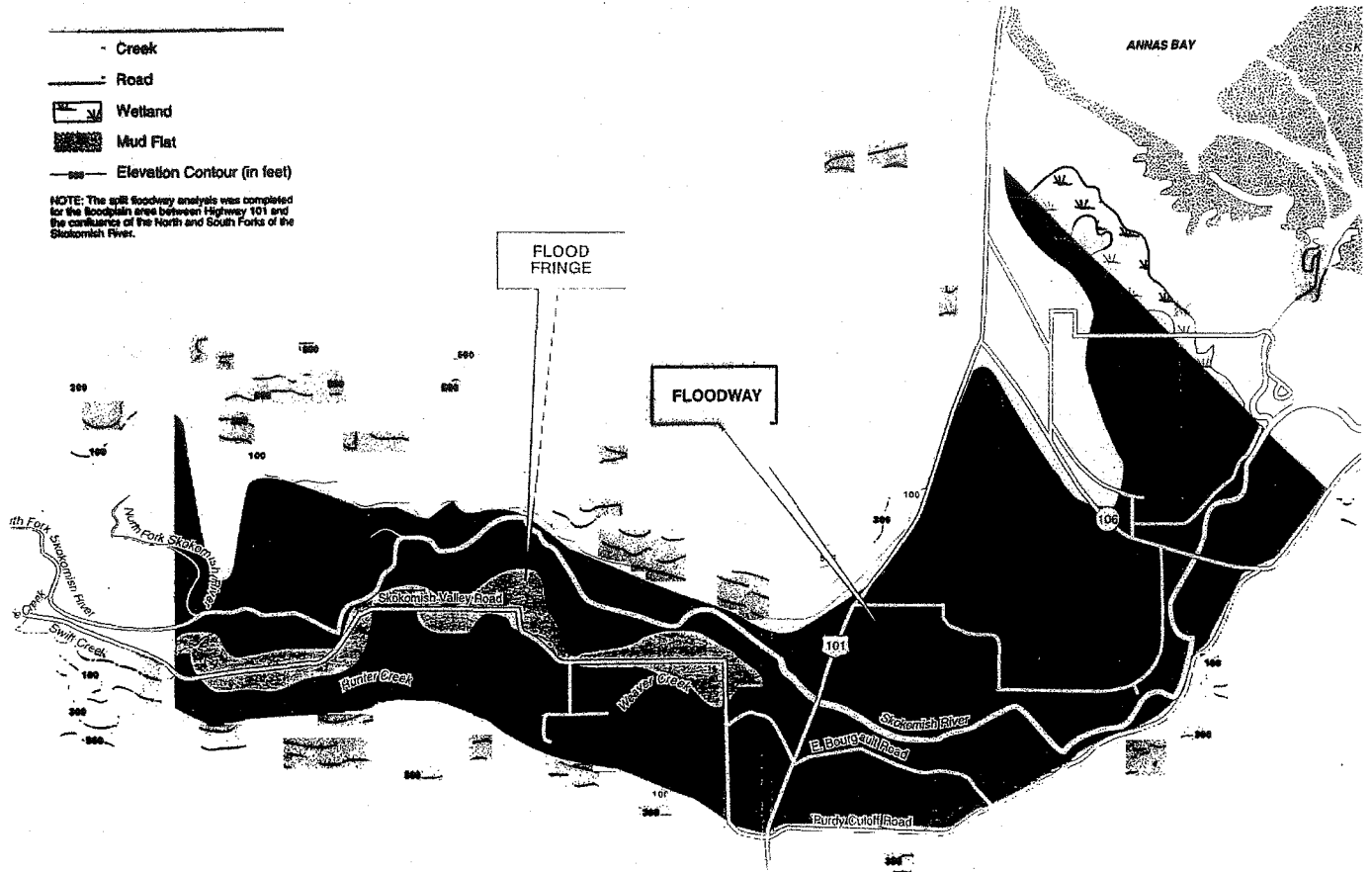
A flood is an inundation of normally dry land resulting from the rising and overflowing of a body of water. It is a natural, geologic process that shapes the landscape, but can be exacerbated by development and other human activities. Floodplain locations are most at risk to riverine or stream flooding.

Creeks running through Shelton can cause storm water run-off drains to back up, flooding low-lying areas.

Mason County is subject to flooding by several of its rivers. Those include the Satsop, the Tahuya, the Union, and the Skokomish Rivers. Flooding in the first three rivers can effectively cut off pockets of residents due to mudslides and water over the roadways. The Skokomish River is referred to by the National Weather Service as the "flashiest river in Washington, where a teaspoon of rain can result in flooding". The Skokomish causes closure of U S Highway 101, the main north-south route through the County, at least once annually. Threat to citizens and damage to homes located in the Skokomish Valley has been mitigated in the past by elevation of homes and acquisition of property in seriously affected areas.

**See following page for Skokomish River  
Comprehensive Flood Hazard  
Management Plan Map**





**CM**  
 First Avenue  
 16, Washington 26101

Mason County  
 SKOKOMISH RIVER COMPREHENSIVE FLOOD HAZARD  
 MANAGEMENT PLAN

Figure 4.  
 SPLIT FLOODWAY

Close monitoring of the rivers in addition to emergency notification systems keep citizens aware when heavy rain is forecast.

An example of the problems encountered occurred in October 2004 when eight inches of rain fell in a twenty-four hour period. U S Highway 101 was closed at Skokomish Valley Road and children were photographed swimming in the grassy play area of a park in downtown Shelton.

Effects associated with flooding can include loss of life, damage to structures, and loss or damage to roads and utilities. Flood damages in Mason County have exceeded damages by all other natural hazards occurring in the state (County HIVA). Secondary hazards associated with flooding include electrocution, structural collapse, hazardous materials incidents, and fire.

### **Landslides**

A landslide is the downslope movement of land, rock and soils. Landslides can be caused by a number of factors including change in slope gradient, increasing land load, shocks or vibrations from events such as an earthquake, changes in ground water content or movement, changes in vegetation (this includes changes in type of vegetation or removal of vegetation from the slope), and urban development in the rural areas of the County.

Mason County's young geologic history makes much of the areas hill slopes vulnerable to landslide hazards. The soil covering much of the area was left behind by Ice Age glaciers. There are several layers to the soil: the top layer is a mix of rock, clay, dirt and sand, underneath is a layer of very permeable sand on top of an impermeable layer of clay. When conditions are right and water permeates the sand and reaches the impermeable clay and builds up, sliding occurs. Many of the local slopes follow this pattern and hence are vulnerable to landslide hazards.

Homes and property on, above, and below slopes are vulnerable to damage from landslides. Landslide records do not indicate significant historic slides in Mason County, but there are many areas with a grade above 15%, the minimum grade that defines a landslide hazard area. Many of the slopes in Mason County have a high vulnerability to slides. The area is most vulnerable to landslides in the winter months following periods of heavy precipitation. While landslides can occur independently, they are generally a secondary, or related, hazard to other events including heavy rainstorms, snow or winter storms, and earthquakes.

The most recent landslide to occur in Mason County occurred on February 28, 2001 as a result of the Nisqually Earthquake. A section of Hwy 101 collapsed, impeding vehicle movement from Thurston County into Mason County which is a secondary route for commercial traffic to the state capital in the City of Olympia. A re-route was established through the small community of McCleary, which created traffic congestion in McCleary and Grays Harbor County. For additional landslide impacts refer to Appendix D, Mason County HIVA.

Some of the typical effects of landslides include damage or destruction of portions of roads and railroads, sewer and water lines, homes and public buildings. Landslides, even small-scale

slides, are expensive due to cleanup costs including removal of debris from roadways, drains, or reservoirs. Costs associated with landslides also include: support for road embankments, vehicle and building damage, personal injury and damage to utility systems, among many others. Improvements, including but not limited to placement of culverts have alleviated some of the problems on the road near Tahuya on the north shore of Hood Canal and Highway 101 north of Hoodspout. Due to impact of heavy rain, snow and windstorms the County's vulnerability remains is high.

### **Winter Storms**

Winter storms will affect the entire County and wind, snow, ice and hail are not uncommon occurrences for the region, impacting a broad area depending on the severity of the storm.

The most recent severe storm to impact the area occurred following Christmas 1996 and continued through January 1997 where large amounts of snow fell across the region, followed by a rapid drop in temperatures that caused a severe ice storm. Trees fell and branches snapped under the weight of the snow and ice. Power lines snapped, and many residents were without power for several days. PUD 1 and 3 had a large number of customers without power, and called in power company employees from other regions to assist with getting service restored.

Throughout January 1997, heavy rain fell on top of more than one foot of snow resulting in major flooding.

Winter storms are the most common widespread occurrence for the region. General effects include interruptions to power and other utilities. Isolation is a hazard during winter storms, especially to the at-risk and vulnerable older population. High snow accumulations are a common occurrence in the Olympic Mountains where even a small amount of snow can cause interruption and immobility.

For additional historical data refer to the county and city HIVA's (Appendix D).

### **Wildland Fires**

Fires are most likely to occur during the dry season, normally mid-May through October. Wildland fires are most often started by humans; ignition is usually cigarettes, fireworks, and outdoor burning. Such fires may also be started by lightning strikes. Mason County has a moderate to high risk for such fires.

### **Hazardous Materials Release**

Mason County has one of the highest probabilities in Washington State for being the scene of a significant hazardous materials release. Hazardous materials are transported over or near numerous bodies of waters, wetlands, environmentally-sensitive areas, and through numerous population centers. This is directly related to the high level of diverse industrial facilities and transportation routes in the County (Mason County HIVA).

A hazardous materials release may occur at a fixed site or during transport of a product. Mason County has a high volume of hazardous materials traveling through the County limits. The Washington State Department of Transportation reported that several transportation incidents

resulting in the accidental release of hazardous materials occurred between 1987 and 1989 (Mason County HIVA). Mason County has not had any significant railroad incidents in recent years.

Additionally, a natural disaster such as an earthquake or a flood may cause hazardous materials releases, and during a natural disaster the numbers of hazardous materials releases can be expected to increase in number.

In addition to known hazardous materials, there are also unknowns that may have an impact on County/City/Tribal/SPDs operations. Illegal drug labs and dumping create another item of concern for the County/City/Tribes/SPDs.

A hazardous materials incident may occur slowly or without warning, but require immediate response from County/City/Tribal/SPDs first responders. While most spills are minor and can be handled by County personnel, there is potential within the County for a more significant event requiring assistance from outside jurisdictions, especially in evacuation of downwind residents or the creation of a sheltering place.

### **Terrorism/Civil Disturbance**

Terrorism has been defined by the Federal Bureau of Investigation as "The unlawful use of force or violence against persons or property to intimidate or coerce a government; the civilian population; or any segment of it, in furtherance of political or social objectives." The devastation which occurred at the World Trade Center in New York and the Alfred P. Murrah building in Oklahoma City points to the need to plan for potential threats within our own communities (Mason County HIVA).

Washington State, and therefore Mason County, is vulnerable to terrorist activity. Terrorism can be state-sponsored or the outgrowth of a frustrated, extremist fringe of polarized and/or minority groups of people, for example:

- Ethnic, separatists, and political refugees
- Left wing radical organizations
- Right wing racists, anti-authority survivalist groups
- Extremist issue-oriented groups such as animal rights, environmental, religious, antiabortionists (Washington State Emergency Management Division).

Communities are vulnerable to terrorist incidents and many have highly visible and vulnerable targets. These critical facilities, sites, systems, and special events in the community are usually located near routes with easy transportation access. Potential vulnerable sites in Mason County include: government institutions, water supply sources, power distribution systems, communications terminals, and financial institutions. Sanderson Field is the location of the local airport and lies just north of the Shelton city limits off U S Highway 101, a major north-south route through the county.

The Washington State Emergency Management Division suggests that while the likelihood of an attack against United States interests is high, Washington State is at a relatively moderate risk to terrorism. Recent reports, corroborated through multiple intelligence sources, suggest an increased likelihood that the Al-Qaeda terrorist network may attempt to attack Americans in the United States or abroad. After major combat activity is concluded in Iraq, a terrorist attack is

likely to demonstrate that they are still a capable force and their struggle continues. Additionally, press reports indicate Al-Qaeda may be close to producing a biological weapon (Washington State Emergency Management Division)

<http://emd.wa.gov/3-map/a-p/hiva/update-analysis/update-analysis.htm>

### **Assessing Vulnerability: Identifying Assets**

County/City/Tribal/SPDs infrastructures and capital facilities may be vulnerable to a variety of hazards. The following table presents a list of critical facilities and infrastructure as identified in the County's Comprehensive Plan.

Mason County Infrastructure and Capital Facilities (Refer to Chapter One, Section 7.)



## CHAPTER FOUR

### Mitigation Strategy

Through a series of planning meetings, the County/City/Tribes/SPD's Hazard Mitigation Plan Task Force identified goals that will guide the implementation of the Hazard Mitigation Plan. The goals listed were those that were determined to best minimize impacts of disasters. It is important to note that budget and fiscal constraints may have significant impact on the County/City/Tribes/SPDs' ability to initiate new mitigation activities and even to continue current actions over the long term.

#### Proposed Mitigation Goals, Objectives and Actions

**Goal 1** – to protect aquifers used by the County/City/Tribes/SPD's water supply systems from contamination by hazardous materials and other hazard effects.

##### Objectives:

- a. Protect the groundwater resources of the County/City/Tribes/SPD's
- b. Provide a means of regulating specific land uses within aquifer protection areas
- c. Provide a means of establishing safe construction practices for projects built within an aquifer protection area
- d. Protect the County/City/Tribes/SPD's drinking water supply systems from impacts by facilities that store, handle, treat, use, transport, or produce substances that possess a hazard to water quality
- e. Reduce the effects of actual contamination of potable water sources.

##### Actions:

- a. Continue to implement aquifer protection practices
- b. Complete risk assessments for water systems and implement specific measures as appropriate.

**Goal 2** – minimize public and private losses due to flood conditions in specific areas.

##### Objectives:

- a. Protect human life and health
- b. Minimize expenditure of public money and costly flood control projects
- c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public
- d. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard
- e. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas
- f. Ensure that those who occupy flood hazard areas assume responsibility for their actions.

##### Actions:

- a. Continue to enforce, maintain and update area usage regulations
- b. Develop criteria for and conduct hazard-susceptibility assessments of business and public facilities (baseline and changed conditions)

- c. Enhance drainage system maintenance
- d. Avoid/reduce instances of non-underground extensions of utility lines which may create debris dams during floods
- e. Evaluate goals and practices regarding habitat protection and flood mitigation
- f. Maintain and enhance County/City flood hazard reduction planning
- g. Continue to offer the County warning system.

**Goal 3 – minimize damage due to natural hazards.**

**Objectives:**

- a. Protect the public against avoidable losses due to maintenance and replacement of public facilities, property damage, subsidy cost of public mitigation of avoidable impacts, and costs for public emergency rescue and relief operations
- b. Reduce hazards created by failure of the structural environment (i.e., buildings, bridges, highways, and utility lines)
- c. Reduce impacts of disaster on fragile environments/facilities:
  - Hospitals, nursing homes, etc
  - Day care centers
  - Assistance clinics
  - Halfway houses
  - Special populations requiring public assistance
- d. Reduce the risks to the County/City/Tribes/SPDs from development occurring on unstable slopes
- e. Reduce the risk to the County/City/Tribes/SPDs from damage caused to existing resources in known unstable areas
- f. Control erosion and sediment run-off from development.

**Actions:**

- a. Conduct hazard-susceptibility assessments of business and public facilities
- b. Identify, assess, and maintain critical transportation routes within the County/City/Tribes/SPDs
- c. Develop objective criteria and conduct seismic preparedness and retrofit of critical public and private facilities
- d. Re-enforce utility infrastructure and connections
- e. Implement slope stabilization measures in steep/unstable areas
- f. Develop HAZUS Loss Estimation tool kit to identify and assess vulnerabilities to earthquake damage.

**Goal 4 – minimize impacts on critical habitats and wetlands from natural or man-made disasters.**

**Objectives:**

- a. Maintain and promote diversity of species and habitat within the County/City/Tribes/SPDs
- b. Help maintain air and water quality and control erosion
- c. Enhance and maintain the capacity for critical habitat and wetland areas to serve as mitigation buffers for floods



- d. Reduce the impact of preventable maintenance and replacement of public facilities needed when wetland function is impaired through disaster impact
- e. Reduce costs associated with repair of downstream properties resulting from erosion and flooding due to the loss of water storage capacity provided by wetlands.

**Actions:**

- a. Assess vulnerability of critical habitat and wetland areas to disaster damage
- b. Determine capacity for critical habitat and wetland areas to serve as mitigation buffers for floods.
- c. Incorporate habitat and wetland mitigation enhancements into drainage maintenance programs
- d. Evaluate goals and practices regarding habitat protection and flood mitigation.

**Goal 5** – minimize the impact of technological or man-made disasters on the County/City/Tribes/SPDs (i.e., hazardous materials incidents, terrorist attack, civil disturbances, etc.).

**Objectives:**

- a. Reduce the City/County/Tribes/SPDs risk of exposure to hazardous materials release/incidents
- b. Ensure that the County/City/Tribes/SPDs government has reliable communications and information management systems
- c. Reduce risk to critical public and private facilities.

**Actions:**

- a. Robust systems
  - Retrofit critical facilities for blast resistance and resistance to forced entry
  - Protect utility lifelines (water, power, communications, etc.) by concealing, burying, or encasing
  - Develop backup control center capabilities
- b. Security/safety:
  - Develop Buffer Zone Protection Plans, and incorporate those protective measures most effective to mitigate identified threats
  - Ensure adequate site lighting
  - Locate critical assets (people, activities, systems) away from entrances, vehicle circulation and parking, and loading and maintenance areas
  - Separate high-risk and low-risk activities; separate high-risk activities from public areas
- c. System redundancy
  - Implement separate emergency and normal power systems; ensure that backup power systems are periodically tested under load
  - Ensure provision of primary and backup fuel supplies; provide secure storage
  - Install exterior connections for emergency power
  - Enhance communication and information management capabilities by updating telecommunications capabilities of County/City government offices, creating redundant/backup capability for landline telephone systems, and developing off-site backup of information technology systems

- d. Enhanced emergency response
  - Maintain access (ingress and egress) for emergency responders including large fire apparatus, and for resident evacuation
  - Develop and maintain comprehensive emergency response and recovery plans
  - Conduct regular evacuation and security drills
  - Regularly evaluate emergency equipment readiness and adequacy
  - Develop backup control center capabilities.

**Goal 6** – enhance the County/City/Tribes/SPDs capabilities for gathering, organizing, and displaying spatial data regarding hazards, vulnerabilities, critical facilities, and vital statistics.

**Objectives:**

- a. Enhance the capability to access and synthesize City, County and State geo-spatial hazard data
- b. Increase the ease with which County/City/Tribes/SPDs geo-spatial hazard data can be accessed and used.

**Actions:**

- a. Maintain comprehensive hazard maps
- b. Create critical facilities data base information for use in future mitigation strategies
- c. Obtain and integrate HAZUS Loss Estimation tool and ArcView GIS with existing County/City/Tribes/SPDs GIS geo-spatial programs.

### **Identification and Analysis of Mitigation Measures**

The Mason County Task Force has identified several hazard mitigation projects that would benefit the County/City/Tribes/SPDs, and they have been formalized in the Mason County Hazard Mitigation Plan. These were identified in the meetings of the Hazard Mitigation Plan Task Force, which included input from multiple venues. The Task Force chose to focus on mitigation measures in the areas of

- Aquifer protection – protection of the County/City/Tribes/SPDs water sources from impacts of construction, development, hazardous materials releases or infiltration
- Flooding – protection of residents, structures, and the tax base from the effects of flood damage
- Earthquakes/landslides – reduction of losses from seismic events and landslides to life and property, fragile environments and facilities, and the County/City/Tribes/SPDs tax base
- Technological hazards (including terrorism) – reduction in the County/City/Tribes/SPDs vulnerabilities to technological hazards and enhancement of security of critical facilities.

In addition, the Task Force agreed to enhance the County/City/Tribes/SPDs capabilities to access, manipulate, and display geo-spatial data in order to foster and maintain mitigation planning and implementation over the long term.

### **Implementation of Mitigation Measures**

The Hazard Mitigation Plan Task Force examined the various mitigation measures identified and decided – for reasons of budgetary constraints and efficiency – to place the highest priority on mitigation actions that were already underway through normal County/City/Tribes/SPDs operations or prior development initiatives. These include continued implementation and articulation of aquifer protection planning, continued enforcement of existing guidelines and other applicable portions of the County/City/Tribes/SPDs codes to enhance drainage system maintenance, and increased attention to the effectiveness of existing emergency response capability.

The Task Force determined that concentrating on these activities would afford the County/City/Tribes/SPDs time to investigate funding sources, to identify specific high-value actions in the other priority categories, and to establish a reasonable implementation framework for later actions. It would also afford an opportunity for the County/City/Tribes/SPDs to conduct preliminary actions (i.e., development of criteria and protocols for conducting hazard-susceptibility assessments, developing objective criteria for seismic retrofit) to support later mitigation programs.

#### **Hazard Mitigation Measures – Priority Ranking**

The Task Force identified the critical facilities of the County/City/Tribes/SPDs. These critical facilities are listed in Chapter 1, Section 6 and were developed using the Mitigation 20/20 software. The mitigation projects are identified in Chapter 1, Section 7 and were prioritized using the vulnerability and risk assessment and population affected methodology of the Mitigation 20/20 software.

The prioritization of the mitigation projects identified in Chapter 1, Section 7 demonstrates an understanding by the Task Force, that in order to mitigate the effects of identified hazards

on these critical facilities and the impact to our communities, funding for these mitigation initiatives will be achieved through a combination of Federal and State grants, local operating budgets, and state and local taxing authority. The Task Force – balancing considerations of life safety, number of people affected, and cost-effectiveness – determined that actions in the “high” category would bring the most immediate benefit to the County/City/Tribes/SPDs in mitigating disaster effects. Actions in the “medium” and “low” categories will bring long-term benefits as the County/City/Tribes/SPDs are able to afford to commit resources for their implementation and to integrate these actions into the County/City/Tribes/SPDs operations as presented in Chapter 1, Section 7. Actions in these categories will be re-examined and re-evaluated as part of the Plan review cycle described in Chapter 1, Section 5.

A new cost-benefit analysis was not conducted for those projects and activities already underway. Specific cost-benefit analysis will be conducted on a case-by-case basis as future actions are evaluated for inclusion into the County/City/Tribes/SPDs’ budget processes. All projects considered for implementation will have a benefit-to-cost ratio of at least 1.0 before being considered for additional prioritization using the established criteria. Funding sources for new projects are unknown at present.

Hazard mitigation measures identified in the Plan and already in progress will continue to be funded through the current County/City/Tribes/SPDs’ budget processes. The County/City/Tribes/SPDs will investigate and seek grant support for hazard mitigation measures

from FEMA, other federal agencies, Washington State Emergency Management Division, and other funding sources.

## CHAPTER FIVE

### Mitigation Plan Maintenance Procedures

#### Monitoring, Evaluating, and Updating the Plan

The Mason County Task Force has developed a process for regularly reviewing and updating the Hazard Mitigation Plan. The Hazard Mitigation Plan Task Force will hold a meeting in May, and Task Force members will be responsible for overseeing the progress of the mitigation actions in the Plan.

The Hazard Mitigation Task Force will periodically conduct a formal assessment of the Hazard Mitigation Plan following a schedule described below. The Task Force will report:

- The goals and objectives addressing current and expected conditions.
- How the nature or magnitude of risks has changed.
- Current resources that are appropriate for implementing the plan.
- When there are implementation problems, such as technical, political, legal or coordination issues with other agencies.
- The outcomes have occurred as expected.
- The agencies and other partners have participated as proposed.

The Task Force will review the results of the Plan assessment, identify corrective actions, and recommend to the County/City/Tribes/SPDs what actions are necessary to bring the Mitigation Plan back into conformance with the stated goals and objectives.

The County/City/Tribal/SPDs emergency management personnel will then update and make changes to the plan before submitting it to the Task Force members and the State Hazard Mitigation Program Manager. If no changes are necessary, the State Hazard Mitigation Officer will be given a justification for this determination.

The initial Hazard Mitigation Plan assessment and review will be conducted 2 years after the Plan has been formally adopted by the County/City/Tribal/SPDs governing authorities. Thereafter, the Hazard Mitigation Plan will be conducted every 5 years to coincide with the review of the City/County/Tribes/SPDs' Comprehensive Plans. The Hazard Mitigation Task Force has chosen this cycle and process in order to provide a sufficient time horizon for mitigation actions to take effect and show results.

#### Implementation through Existing Programs

The City/County/Tribes/SPDs rely on comprehensive land use planning, capital improvements planning, and building codes to guide and control development. After the City/County/Tribes/SPDs officially adopt the Hazard Mitigation Plan, these existing mechanisms will, as appropriate, include and integrate mitigation strategies identified in the Plan.

After adoption of the Mitigation Plan, the City/County/Tribes/SPDs will address hazards in their comprehensive plans and land use regulations. Specifically, one of the goals in the Mitigation Plan is to protect life and property from natural disasters and man-caused hazards. The

County/City/Tribes/SPDs will review their comprehensive plans and land use policies, analyze

any plan amendments, and provide technical assistance in implementing these requirements.

The capital improvement planning that occurs in the future will also contribute to the goals in the Hazard Mitigation Plan. The capital improvement planners will strive to secure high-hazard areas for low risk uses. Within six months of the formal adoption of the Mitigation Plan, the mitigation activities listed in chapter 3 will be incorporated into the process of existing planning mechanisms.

### **Ensuring Public Involvement**

The City/County/Tribes/SPDs are committed to invite involvement of the public directly in the continual reshaping and updating of the Hazard Mitigation Plan. The Hazard Mitigation Plan Task Force members are responsible for oversight of the plan. Although the members of this Task Force represent the public to some extent, the public will be able to directly comment on and provide feedback about the plan.

Copies of the plan will be catalogued and kept on hand at the Timberland Regional Library branches within the City/County. The existence and location of these copies will be publicized in the *Shelton-Mason County Journal* and the local radio station. Contained in the plan will be the addresses and phone numbers of Emergency Management staff responsible for keeping track of public comments on the plan.

In addition, copies of the plan and any proposed changes will be posted on the City/County/Tribes/SPDs' websites. These sites will also contain an email address and phone number to which people can direct their comments or concerns. Information will also be disseminated through information provided to the local media.

A public meeting may be held after each review of the plan by the Hazard Mitigation Plan Task Force. This meeting will provide the public a forum for which they can express concerns, opinions, or ideas about the plan. The County/City/Tribes/SPDs emergency management will publicize and host this meeting, and any up-dates will be posted on the City/County/Tribes/SPDs' websites allowing for additional public input.

**Appendix A**

**MEMBERS OF THE TASK FORCE**

**Standing Committees:**

**Steering Committee**

Wesley Johnson, Mason County Commissioner Chair  
Herb Baze, Mason County Commissioner  
Jayni Kamin, Mason County Commissioner  
John Tarrant, City of Shelton Mayor and Commissioner of Public Safety  
Richard Taylor, City of Shelton Commissioner of Finance  
Dawn Pannell, City of Shelton Commissioner of Public Works  
Steve Whybark, Mason County Sheriff and Emergency Management Director  
Jim Ghiglione, City of Shelton Fire Chief and Emergency Management Director

**Public Information**

Debbie Riley, Mason County Public Health Services Environmental Health  
Manager  
Bonnie Knight, Port of Allyn Executive Director  
Tim McKern, Mason County Fire District 5 Assistant Chief  
Bob Burbridge, Mason County Fire District 4 Assistant Chief

**Planning**

Steve Swarthout, Mason County Fire Marshal  
William Tabor, Mason County Public Works Interim Director  
Larry Waters, Mason County Community Development Building Department  
Inspector  
Steve Kutz, Mason County Public Health Director  
Sandi Loertscher, Mason County Division of Emergency Management  
Administrative Coordinator  
Jim Ghiglione, City of Shelton Fire Chief and Emergency Management  
Director  
Vance Aeschleman, American Red Cross Coordinator  
James Spurgeon, Skokomish Indian Tribe Department of Public Safety  
Chief  
Michael Evans, Squaxin Isl. Indian Tribe Police Department Lieutenant  
Jim Peters, Squaxin Isl. Tribe Natural Resources Director  
Michael Poier, Squaxin Isl. Indian Tribe Community Development Director

**Task Force**

**Mason County:**

Wesley Johnson, Mason County Commissioner Chair  
Herb Baze, Mason County Commissioner  
Jayni Kamin, Mason County Commissioner  
Steve Whybark, Mason County Sheriff and County Emergency Management Director  
Howard Armfield, Mason County Sheriff's Office Chief Deputy  
Bob Fink, Mason County Community Development Planning Department Manager  
Larry Waters, Mason County Community Development Building Department Inspector  
Steve Kutz, Mason County Public Health Services Director  
Debbie Riley, Mason County Public Health Services Environmental Health Manager  
Steve Swarthout, Mason County Fire Marshal  
Gary Yando, Mason County Utilities and Waste Management Director (retired)

Sandi Loertscher, Mason County Division of Emergency Management Administrative Coordinator

Sandi Kvarnstrom, Mason County Division of Emergency Management Planning/Training Coordinator

William Tabor, Mason County Public Works Interim Director

Bonnie Knight, Port of Allyn Executive Director

John Williams, Port of Allyn Maintenance Supervisor

Ken Boad, Mason County Fire District #2 Assistant Chief

Bob Burbridge, Mason County Fire District #4 Assistant Chief

Richard Knight, Mason County Fire District #5 chief

Tim McKern, Mason County Fire District #5 Assistant chief

Aaron Espey, Mason County Medic One Director

Gregory Metzcus, Washington Corrections Center Safety Manager

Terry Mihailov, Mason Transit Liaison/Citizen

Vance Aeschleman, American Red Cross Coordinator

#### City of Shelton

John Tarrant, City of Shelton Mayor and Commissioner of Public Safety

Dawn Pannell, City of Shelton Commissioner of Public Works

Dick Taylor, City of Shelton Commissioner of Finance

Jim Ghiglione, Shelton Fire Dept Chief and City Emergency Management Director

Dave Salzer, Shelton Fire Department Assistant Chief

Terry Davenport, Shelton Police Department Chief

Dave Ecklund, Shelton Police Department Lieutenant

David Pearch, Mason General Hospital Safety Officer

Diane Stillman, Mason General Hospital Chief Operating Officer

Mike Akin, Public Safety Answering Point Director

#### Skokomish Indian Tribe\*

James Spurgeon, Department of Public Safety Chief

Everett Tyrell, Department of Public Safety

#### Squaxin Island Tribe

Brian Thompson, Planning Department Director

Michael Poier, Community Development Director

Michael Evans, Squaxin Island Police Lieutenant

Jim Peters, Natural Resources Director

\*Skokomish Tribe is represented on the Emergency Management Council; however, they developed their hazard mitigation plan independently.



## **Appendix B**

### **EMERGENCY MANAGEMENT COUNCIL MINUTES**

**September 27, 2002**

*(This document is not intended to be a verbatim transcript)*

Introduction:

Marty Best will be introduced and he will tell us what we're up to, what we're going to be doing, what we need to be doing. We may have an extension coming for the deadline on this. They originally said that we were looking at November 1, 2003 for a final, in-place mitigation plan. The feds may be extending that but we haven't got an official word on that. This process does take a long time; it takes a lot of involvement from all of the different departments and agencies throughout the county and input from the public and so we want to get started on this and be able to complete it and be ready to ask for money when we need it.

Marty Best: I want to thank you for taking time out on such a wonderful Friday. My name is Marty Best and I am the Deputy State Coordinating Officer for Mitigation. I'm also the Governor's authorized representative for mitigation for the Nisqually earthquake. In October of 2000, President Clinton signed a law known as the Disaster Mitigation Act of 2000. In that Act it requires some new planning on both the state and local level and on February 26 of this year, FEMA issued their interim final regulation, which outlines all the particular requirements of both the state and local. When I say local, that's fire districts, special purpose districts, cities, towns and counties and there is a required planning to be eligible to apply for mitigation funds.

I'd like to introduce Lori Purget. She's a Program Coordinator with our Mitigation Program. She's been working with me for five years.

For all disasters after November 1, local tribal governments, applicants, subgrantees, anyone who wants to apply for funds must have a plan. I was at the NEMA conference, which is the National Emergency Management Association conference, when FEMA announced their intent to extend this November 1, 2003 deadline to November 1, 2004 for both the state and local plans. We're very grateful for that; we haven't seen it in writing yet but we anticipate that to be a fact because quite frankly, in the amount of time that we have left and what we need to get done, we are hearing from county commissioners and city commissioners around the state that this can't be done. One thing we want to stress is that this is an all hazard comprehensive plan.

When we sent out the notice about the planning requirements, we sent it to the Mason County EOC because it's at the county, city manager level, and because it encompasses not only emergency management but encompasses land use planning, building department, road department, the entire aspect of all local government. It also requires a lot of public involvement in the development of the planning.

What is mitigation? Mitigation are those actions taken by government to reduce the impacts of the next future disaster; whether it's flooding, an earthquake, a wind storm. Our program has helped Mason County acquire quite a few homes out in the Skokomish Valley. I'm very grateful for that because I don't have certain individuals calling me anymore every time the water gets slightly up to the road. I'm very grateful for that because they had me on speed dial and they even found me when I was in Eastern Washington on my cell phone. So without this plan you would not be eligible for future hazard mitigation grant program funds. The state has always had a requirement to plan in order to receive federal disaster assistance, but FEMA only held the state hostage to the mitigation plan. Effective with this law, if we do not have an adopted plan then the state, including all of you, would not be eligible for public assistance, which is the repair and restoration of all your damaged facilities and also for mitigation. That's a change for us. Right now I see hazard mitigation for locals and subgrantees but it's my personal opinion having met with FEMA and listened to discussion that eventually I believe that it is their intent to apply this to local governments. This is if you don't have this plan, it may be five years or it may be ten years down the road, you may not be eligible for other disaster assistance in the future.

Let's talk about mitigation; avoiding development in vulnerable areas. If you have a known floodway or floodplain, don't build there; land use planning. If you have a known liquefaction zone slightly off of Railroad and Cota, you shouldn't be building there. We are susceptible to earthquakes here but we need to be looking at land use planning. This should be identified as part of your overall approach to minimizing the effects. If you're doing a county wide regional plan what should be looked at is what you can give your decision makers; information, tools, at the county level to help them make wise decisions about what to fund and where to build. It brings together your growth management planning activities along with your critical areas ordinance. It brings together the flood plan we already have for the Skokomish Valley. It brings together the things you already have so you're not starting from scratch.

We tell everybody to sit down with your county, sit down with your department heads and look at this and see what you already have. A lot of this material that's listed in this law is already here. The local plans are a representation of your commitment to reduce the hazards in Mason County and has a fairly strong history of doing so. This serves as a guide for the decision makers and it also serves as a basis for us at the state to make recommendations for funding. One of the things that we have to do at the state now is to take all of the local plans and roll up your priorities into the state plan. That's one of the reasons we were able to lobby hard for an extension on the deadline because within the State of Washington there are no communities that have an approved plan that meets this criteria and from what understand there's no one in the country that has one that meets this criteria. This is even talking about North Carolina who has a very aggressive planning program.

What are the benefits? It helps you pre-identify projects and activities that will save lives and property and help reduce your vulnerability. It facilitates post-disaster funding and it demonstrates your public involvement. Isn't it better to have a county plan so that when funding becomes available to buy that home out versus risking first responders to go in there and try to rescue someone that shouldn't be in there in the first place? It also reduces your cost.

Where do you start? Mason County has a fairly good history of open public involvement with the flood plan and GMA process and this is an essential element of the mitigation plan as the federal requirement. There's an opportunity for the community to participate and make comments on the development of your plan. It provides an opportunity for Shelton, Allyn, Belfair and other communities to participate and make comments. Disasters do not pay any attention to geographical boundaries. The disaster does not stop within the city boundaries of Shelton and it does not care if you live in Allyn or Belfair or the North Mason County. A disaster is going to hit the whole community.

Marty Best: Begin by reviewing what you already have. You've already thought a lot about these things but you just haven't put it in writing. If it floods down on First and Railroad what are you going to do about it? Let's put in bigger culverts. One of the things it stresses is that you have to document the entire planning process. One of the things we're doing at the state level is that we're acquiring a software program called Mitigation 2020. We've already purchased it and we're getting it out to all 39 counties and what it does it's an interactive Microsoft Office Suite program that allows you to incorporate things. It allows you to put all your data in and walk you through the process.

Especially the documentation of your meetings. We should have that to the counties in the next few months.

A risk assessment. That's kind of obvious but to some communities there are various understandings of the term. A risk assessment that provides a factual basis for the proposed strategies to reduce the risks. You must provide sufficient information to enable you to justify how you prioritize. The Skokomish Valley: you know you have repetitive flood damage, you have the history of the damage and you know where they are in relationship to the river or up in the avulsion zone. That data would be the basis for your information. You have to have a description of the type, location and extent of natural hazards. This is flooding, earthquake, ice storm. You shall include information on all your previous occurrence of natural hazards, whether the president declared them or not. Slides on Highway 3: that's an on-going challenge to us each winter. Describe your vulnerability to the hazard. Then you will have an overall summary of each hazard and its impact to the community. Whether it's flooding, wind storm, ice storm. This is one of the shoulds: "The types and numbers of existing and future buildings, infrastructures, and critical facilities located in identified hazard areas." Another thing we're doing at the state working with DNR is that we're funding a project to do a National Earthquake Hazards Reduction Program; a soils liquefaction map of the entire state. We hope to have that done by next September to show each community what your particular earthquake hazards are. You already have your flood maps. You should have an estimate of the dollar losses. A lot of folks here have been around and they know what kind of damage they've had. We also have a program called Hazards Identification US; it's for earthquakes and the model should be out later this year. It will help you estimate what your particular losses are in a particular area. A general description of your land use. Your GMA feeds right into this. Your critical areas ordinance. Your capital improvement plans. Do you need a storm water treatment plan? Do you need a new sewer plan? Where will you locate these?

The mitigation strategy. This is where you take all the bits and pieces, all the public involvement, risk assessment, vulnerability assessment and you bring it together and decide what to do about it. You'll find folks that want to be bought out, or elevated, some may want new roads and the Mitigation 2020 software will help you prioritize based upon the risk and the vulnerability and it will actually give you a score so as you bring your pieces together you can rank your projects and it will print it out for you.

Description of your goals to reduce long term vulnerabilities. At a state level the goal might be are we going to reduce flood damages? The way we're going to do that is stress acquisition of repetitive flood damaged homes. We have homes in the state that have had flood insurance claims that are equal or greater than the value of the house. It doesn't make sense to continue pouring tax dollars and funds into those homes.

Marty Best: The cost of disasters. Why do we want a mitigation plan? The projects that we have funded over the last ten or eleven years just in the State of Washington, for every dollar we spend we can document a reduction in future damages of about \$3.00. Since Mt. St. Helens, the State of Washington, including the Nisqually earthquake, we've had almost \$500,000,000.00 in direct damages just for the programs that emergency management administers. That's just repair and restoration and mitigation and individual assistance. You marry that up with the federal highways and the Corps of Engineers, that's a billion dollars in direct damages. That doesn't count insurance costs, that doesn't count loss of revenue, it doesn't count those other intangibles that effect a disaster. What can Mason County do with this portion of a one billion dollars that could have been spent somewhere else? What could we do with the roads or the school systems, or replacing fire stations? That's a lot of money to put somewhere else other than just repairing things. We need to identify the comprehensive range of what you want to do.

Seismic retrofits. What do you do? We're doing a lot of projects involving fire stations that are seismically vulnerable so that in the event of the next earthquake they don't fall down and they can respond to the community. An action plan describing how you prioritize. It's not because the commissioner lives there and that's why you want to do it.

Where do we want to put our money? In a time of diminishing resources and increasing need you have to have a prioritization process to decide the benefits. The benefit of planning is reducing the impacts to your first responders, reducing the cost of the disaster and helping you recover faster after the disaster. Normally after a disaster those small businesses that close their doors that are impacted, about 80% of them don't come back. That's tax revenue to your community.

What is the method of how you're going to monitor it? How are you going to evaluate and update the plan? Locals and subgrantees only need to update their plan every five years. The state has to do it every three years. This should be an ongoing process. We don't want to see a document that's produced and stuck on a shelf because it doesn't do the commissioners any good. We need something that is evolving. Maybe the road department through a public works trust fund loan redid some roads and you've dug better culverts, well, that's now lower on your

list of priorities. That's how it remains ongoing.

How do you incorporate the requirements of your mitigation planning into other plans? This is something that we have been talking about at the state level for the last eleven years. It's been hard to sell mitigation because too often it sounds like litigation and people don't want to deal with lawyers. When you're doing your road plan and you have culverts to blow out every winter it should be in your capital improvement plan to put in bigger culverts. That's mitigation. That's reducing the impacts of the next flood. Highway 3 is a good example. Maybe we need to do the Bypass; maybe we need to just get rid of that road because why are we continuing to spend money on that? If you could take the mitigation concept and put it into your building design plans, your residential development codes, other things that would help you prepare. If your building code requires that when you remodel you have to strap your hot water heater to the wall. Just those little things that are cost effective. It not only reduces damage during an earthquake but it also provides a useful source of water after the earthquake if the water lines are broke.

How will you continue to involve the public? Some communities that have done a flood control assistance plan have already established a community advisory council. Use that as your format and add on someone with expertise to expand that out. Emergency management folks don't have to do all the work. They may be facilitating but using other groups into it and help prioritize. The state is looking at adopting the International Building Codes. Communities can adopt stricter building codes.

How are you going to incorporate that into your planning process? We have been a proponent of mitigation planning for some time, but when this came out and we took a look at it my boss asked what would it take to do this? I said to give me ten years and twenty million dollars. Washington DC has no understanding of what it's like to be out in the community after a flood or after an earthquake. One of the things that we looked at is the way the law is written every single potential applicant right now is legally required to have their own plan if they want to apply for funds. I sat down with FEMA and committed that I had to have 4,000 plans on your desk by next June. They said to do regional plans; this is a home rule state. Some counties don't talk to each other. They're not going to force them to do the plan together. So we have multiple plans. We recommend, however, that you facilitate a regional plan. It cuts the cost, it keeps my work load down and it's a better product for you. If you do a multi-jurisdictional plan, with the county and the city and fire districts and school districts, each one must assess your own particular risks where they are different from the lead agency. So if you have the same risks as the county, then you really don't have anything different. You have to identify actions that your particular district or community wants to do. The reason why that works is that while you're part of the county process, you're also eligible to apply independently for the funding. So you want to make sure that that particular priority of your district or community is in that particular part of the plan so that when the funding opportunities become available you can say that you adopted Mason County's plan and in a certain section you have talked about your

priorities and then you're covered. Utah is doing six plans for the entire state. New Jersey is

looking at thousands of plans.

**Marty Best:** On the back of this flyer we have a list of resources. FEMA is producing several documents and how-to guides. I want to point out that the law addresses natural hazards. This does not preclude you from looking at other hazards, such as man-made hazards. If you had the resources and time I would encourage you to do so. What we're looking at is terrorism which is a man-made hazard or another hazard and they should be looked at under your mitigation umbrella along with earthquakes, floods and fires. I mention this because there's also a lot of money out there for homeland defense and homeland security. You have to identify your critical facilities.

Why do two plans? If you could find a way to marry up the activities to reduce your planning efforts - you could just reference it in your plans. Chapter 7 of the how-to guides deals with man-made hazards.

A lot of these documents you can register off of our web page at FEMA.Gov or the Washington State Emergency Page which is WSEM.com. Once again, using your best available data; use your GMA documents, land use planning and this will set you up quite well.

We now have some time for some questions.

**Audience:** In this process, say we have a plan and have it all put together, if we have a disaster is FEMA going to come in and say that you've identified the problems with your fire department but you didn't identify the problem you might have with this beam and consequently we're going to throw this out. Who is going to determine what the plan actually is?

**Marty Best:** At the first iterations we're not looking for a Cadillac plan. We're looking at something that you as a local decision maker can use. If you come to me with a plan that has been adopted and you've got all the elements there, I'm not going to come back and challenge you and say that you missed something.

**Audience:** We were told that with our GMA plan; that it was our plan and as it turns out it's not our plan at all but we wish it could be.

**Marty Best:** All I can say is based upon my work with FEMA I believe that if you come to us with a project that you have identified it and here is what it is, we're going to press on with that.

**Audience:** Doesn't the plan that you're talking about go to you as a part of the state plan that would then have to be approved back in Washington DC?

**Marty Best:** They're all approved at the region; they don't go back to DC. There are actually two things; when your plan comes to us, we'll take a look at it and make sure it's complete and then send it off to the region for their approval. Not having the local plans does not cause the state plan to be ineligible; we just have to address how we're going to incorporate local plans as they

become available.

*Audience: Couldn't hear question from audience.*

**Marty Best:** The way I look at it is given a particular hazard we have an ice storm and you may or may not have some ice related mitigation opportunities but the money becomes available. The way we've run the program is that the disaster funding mechanism does not limit you to what you have applied for. With flood disasters, we have funded earthquake projects and with the earthquake we have funded flood related projects. You may find a new event and you just do an addendum to your plan and write it up as a cover memo by saying 'as the result of an ice storm we have identified this as a risk and here's our vulnerability' and you put it in the application. But by the same token, you may not find something but our priority is seismically retrofitting fire stations or moving people out of the flood plain. I believe there is a lot of flexibility to it. I don't see them coming back and saying "thou shalt do 1,2,3."

*Audience:* I'm trying to understand the implications of this on land use. The city and the county have comp plans that identify areas where different things could occur and if we have a development scope that would allow the kind of development to occur in an identified hazard area, is that going to be contrary as to how the federal government may view the impact of the disaster?

**Marty Best:** In this process, though, it actually brings it together that the decision makers have taken a look at it not only from a development prospective but they're also now thinking about it from a disaster mitigation aspect. A lot of times you look at stormwater development and you're in a floodplain; what are you going to do about it? They're going to bring in fill and bring in one foot above base flood elevation and do a hydraulic study and determine that this amount of fill is going to do limited impact downstream. It's a logical process. FEMA isn't going to come in and say that you built it poorly but you can give them the analysis of why you did it that way. They don't want people building in areas without taking some mitigation efforts.

*Audience:* Vulnerability assessment. We're Mary M. Knight School District and I have no idea if the building could sustain a quake. Am I obligated to have engineering studies or do I just say we're vulnerable?

**Marty Best:** It's back to the best available data. Perhaps the county engineer or structural engineer could come by and say yes or no. I know that your susceptible to wind storms and hazards; that's why we helped pay for the generators so you could be a place of refuge. But once again, we don't know of any fault lines out there but we do know that we're susceptible to zone quakes. Take a look at it; how much damage did you have from the Nisqually? I would use that as a benchmark. But they're not requiring you to go out and do a detailed Seismic Analysis of your facilities.

**Lori Purget:** You're going to be doing some remodeling a section of the 3 building. Have an

engineer look at the structural of it and you could put that in your action plan. If you're going to be remodeling or adding on and that you will be having an engineer look at how sound it is.

Audience: FEMA will only provide you funds to return something to the way it was prior to what the disaster did.

Marty Best: I have to strongly agree with you and I have brought this up in a polite and tactful way. In past disasters we have always said that FEMA will repair to pre-disaster condition or to adopted current codes and standards. However, in this earthquake someone has changed the rules and it isn't us. We have been in intense dialogue with the feds in this issue because what they're doing now isn't what they did before. It is to the detriment to the recovery of the State of Washington. I can't ask you to lobby but if you happen to address that to other elected officials that would be good. Part of the rationale is that some of the earthquakes that happened in other parts of the country, FEMA was paying for stuff that was not even related. For us the pendulum went back. It used to be that if you had a damaged wall they could take a look at the whole building. In this earthquake they're saying they can only look at that wall. Even though the structural integrity of the other three walls might be impacted. We'll mitigate the crack in the one wall. It's coming back to haunt us.

Here's another reason why I think mitigation planning is so critical and it's something we've been watching over the last several years and we're seeing even more of it now. Congress has been on FEMA big time about reducing the costs of disasters. That means let's shift the costs. The 1990's were the decade of natural reduction. Mother nature said phooey and we had more of the costliness disasters in the history of the nation. We got clobbered. Earthquake projects take longer to do and FEMA wants to condense that. The costs of disasters do not go away; the impacts are there and it's just a matter of who is going to pay for them. If you have a good mitigation plan and if you don't build in hazardous areas or if you do build there you've done it right, or if you've identified things to help you recover after an event faster then you've already prioritized and everybody wins. The best way to avoid a hazard is to not build there. Land use planning helps us reduce the impacts of future mistakes. Understanding that we don't know everything that we're susceptible to and something may come up but we just do it with the best available data.

Audience: FEMA is playing with a double-edged sword because they're telling you in the maps that they're providing you that you can build within certain areas along rivers as long as you build to a standard that raises the house above a 100-year flood.

Marty Best: First of all, the flood maps were designed initially for insurance purposes; they weren't really designed for land use planning. However, they have grown into that use. Their initial concept was that the communities would take the data and update them as they went. But that hasn't happened because it costs too much money. There is a

FEMA Initiative for \$300,000,000.00 to update maps. We desperately need them. You're right; in one hand they insure people to stay in harms way.

Audience: So where do we go from here?



**Marty Best:** The first thing I suggest is to sit down with this flyer and get a task force and analyze what you already have. Identify what you have and get an initial strategy of where you go from there. Identify where the shortfalls are and identify where the strengths are and build from there. We are available as much as we can. You're fortunate because I only live about two miles from here. We'll come to your public meetings and answer any questions you may have. It behooves us to put as much time in to help you to get a good plan because it's going to help us in the long run.

*Audience: Couldn't hear question from audience.*

**Marty Best:** Right now if they truly extend the deadline you pre-identify some projects. You will not be hindered or hampered by the lack of not having an adopted plan. Let's say they did not extend the deadline, November 1, 2003 comes, and a disaster hits on November 2, 2003 and you don't have a plan and you want to put forth a project, you still can but you agree to do a plan concurrently with the project. That's actually written into law. I don't believe that FEMA is going to stop good mitigation steps from going forward unless there's some kind of really egregious problem. From the Nisqually earthquake, we've had approximately \$22,000,000.00 in funds and during the two rounds we've received probably \$600,000,000.00 in potential projects. So the need is out there.

*Audience: Do you prioritize by jurisdiction or do you prioritize by the needs?*

**Marty Best:** By jurisdiction. The reason you do that is that the county may not want to apply for mitigation funds but you want to because you've already got yours prioritized. Thank you very much and we hope we've answered your questions.

**Final Closing:**

**Mike Frank:** We do have a vulnerability assessment already updated for this year. So we will get a copy of that out to everybody based on our sign-in sheet. I'm Mike Frank and I am the Deputy Director for the Division of Emergency Management under the Sheriff's office and the Sheriff is our Director. We will be facilitating this process for the commissioners and we will want volunteers to be part of this planning process as we continue on. I think it would behoove all of us from the different jurisdictions that are involved to have somebody volunteer. We'll get this vulnerability assessment out to you and you can review that and we'll start getting back to you to develop a plan of attack. We developed the vulnerability assessment based on previous assessments in the past but this is a broader involvement and we want any updated information from each of the jurisdictions. I will be your point of contact or Sandi at DEM. Even though they are talking about an extension we are going to shoot for this November 1, 2003 deadline. Thank you all for being here. Meeting adjourned.

**December 11, 2002**

Meeting called to order by Mike Frank of DEM. He opened with the statement, "Let's back up a little." The reason for this is based on the recent addition of a software program that will assist the county in the process of the plan.

Following the opening remarks Mike reviewed the bylaws of the proposed 20/20 Task Force. These bylaws were out of the software. Mike asked the questions about the direction of this work group. It was decided that the committee does not need a formal piece but consensus with all was important. The consensus was that Mike was doing a great job as chair. Along with the consensus would be in the form of a thumb up / down / middle.

Discussion about the committee make-up and question about "Do we have all the players here?" Sandi L referred us back to Article III, Section A – committee make-up. In these proposed bylaws it talks about two subcommittees. In that subcommittee was a public

information group which would be tasked with going out to other Ports, fire districts, and other city and county agencies to seek input and invite them to future meetings.

Each entity that receives monies from federal sources must complete a plan.

It was noted that the overall responsibility of this group falls back on the County Commissioners.

- City group members to encourage other City officials to attend and give input
- Mike Frank to talk to County officials about the same

Question from the group about potential funding of this project? Mike stated that we were late and nothing is available at this time. We will look into future funding sources for the project.

Question about potential for a part-time staff person to help with the project. In the beginning of this project that was in the plan. As we move forward in this, monies are gone for that position. It is noted that the software company stated that it would take an 8-hour-per-day person to do all the data entry.

A need for a laptop was brought up. We need one to put software on as we only can have one license. In addition we can use it for PowerPoint presentations around the county. A member of the group was going to look into a laptop, and it was mentioned that we have a number of projectors in the county for these presentations.

Mike reviewed the jurisdiction profile; these must be completed by at least 1) City of Shelton, and 2) unincorporated Mason County.

**Committee assignments:**

*Public Information Committee:*

Bob Burbridge, Chair

Tim McKern, Debbie Riley, Bonnie Knight (plus other members of County and City.

*Planning Committee:*

Dave Salzer/Steve Swarhout, Chairs

Larry Waters, Bob Fink, Steve Kutz, Mike Frank, representative from Red Cross,

Roxie Hildreth from Mason General Hospital, and representative from Public

## Works.

Meetings to stay to one hour.

Public Information Committee to send out future meeting notices.

Email meeting notices a few days before meetings.

Meeting adjourned 0903.

Next meeting: January 15<sup>th</sup> at 0830.

### Attendees:

*Bob Fink, Dawn Pannell, Debbera Coker, Larry Waters, Steve Swarhout, Bob Burbridge, Terry Mihailov, Steve Kutz, Debbie Riley, Jerry Hauth, Bonnie Knight, Tim McKern, John Williams, Dave Salzer, Vance Aeschleman, Mike Frank, Sandi Loertscher.*

## March 12, 2003

Meeting called to order by Chair Mike Frank of DEM.

Introductions were done as we had several new team members.

County Commissioner Herb Baze and City of Shelton Mayor John Tarrant were present and addressed the group. The focus of this discussion was a need for a LEPC Committee. This committee advises the City and County Commissioners on matters that are before DEM. The Hazard mitigation Committee is currently doing just that. In addition this is a regular meeting and is a natural fit to combine this meeting into the LEPC. Law requires a LEPC Committee. Commissioner Baze handed out the application for everyone to complete and turn in.

Chair Frank then reviewed the purpose of the LEPC and the DAC Committees. He also explained that this should not require more meetings. After a long discussion it was decided to continue with the review of the Goals and Objectives.

A subcommittee is to work on the resolution that the City and County Commissions will adopt. In this will include the role of the LEPC and merger of bylaws of this committee and the LEPC. The committee will meet and send out a draft resolution to committee members prior to the next meeting.

The meeting plan for this committee is every two weeks from 0830-1130. Next two meetings are March 26<sup>th</sup> and April 9<sup>th</sup>.

Bylaws of this group were tabled until the next meeting or until resolution with Commission is complete.

Boundaries of the Hazard Mitigation Plan will be the Fire Districts. Some of the Hazard Mitigation Committee members met with the County Fire Chiefs. They informed them of the

progress and how items were going to be divided up. They were also invited to attend. We will continue with communication with all fire and EMS entities.

The group then started at Goals and Objectives #6-10. Only questions was that of a need for a definition page? That will be looked at later. A draft copy of these goals and objectives will be sent out.

Meeting adjourned at 1130.

**Attendees:**

*Bob Fink, Larry Waters, Steve Swarhout, Bob Burbridge, Terry Mihailov, Herb Baze, Debbie Riley, Jerry Hauth, Bonnie Knight, Tim McKern, John Williams, Dave Salzer, Vance Aeschleman, John Tarrant, Dave Eklund, Bill Tabor, Sandi Loertscher, Mike Frank, and Aaron Espy.*

**March 26, 2003**

Meeting called to order of Chair Mike Frank of DEM.

The following were items on the AGENDA for this meeting:

- Finish Goals and Objectives
- Press release
- Bylaws of the Committee
- Jurisdiction profile
- Homeowners survey
- Meeting time change for April 9<sup>th</sup> meeting

The bylaws committee handed out Chapter 2.19 of the Mason County Plan. In addition to a flow sheet of projection for the committee structures as they relate to DEM and Mason County. It was decided to send this back to committee for review and find tune more. In addition they will get with the City of Shelton and try to reach common terminology.

After a long discussion it was decided to have an EMC Council followed by the rest of the committee below in a circle. This keeps everything in the middle and equal. This breakdown will be reviewed again next meeting.

Discussion about the City and County Plan. How do they work together? Can we have just one plan? The City and County created their plans based on Federal funding. Each plan has they place in the county. The bottom line is both the City and County will work as one in the event of a major event.

Red Cross had some questions about the current DAC and its role. They have some insight as to what is done in Thurston County. It was pointed out that the DAC has a different mix of team members. This was the main thought for a circle approach tot the committee structure.

Review of the proposed press release. Copies were distributed and input given. This is the final draft and it goes in the paper next week. In addition Mike Frank showed a few more press

releases that are in the 20/20 plan. Reviewed the proposed Goals and Objectives for the Hazard Mitigation Plan. This product will be emailed to all members, and we need to send it back with comments. The final draft will be approved at the April 9 meeting.

Chair Mike Frank handed out the following items for review and discussion at future meetings:

- Jurisdiction profile
- Neighborhood characterization form
- Survey of homeowners
- Critical facility types

Discussion on how to get some of these out to citizens and get them back. Possible suggestions of a tri-fold handout with tear-off survey. More discussion at next meeting.

Meeting adjourned 11:27

Attendees:

*Bob Fink, Larry Waters, Bob Burbridge, Terry Mihailov, Bonnie Knight, Tim McKern, John Williams, Dave Salzer, Vance Aeschleman, Dave Eklund, Sandi Loertscher, Mike Frank, Jayni Kamin, Wes Johnson, Aaron Espy.*

Next meeting: April 9<sup>th</sup>. **NOTE TIME CHANGE: Meeting is from 1pm until 3pm.**

### **April 9, 2003**

Meeting called to order by Chair Mike Frank of DEM.

The following were items on the AGENDA for this meeting:

- Review of Goals and Objectives for "final Draft"
- Bylaws of the Committee
- Jurisdiction profile
- Critical facility types

Review of the draft goals and objectives: after long discussion it was decided to send them back out by email and adopt at next meeting.

Bob Fink handed out a draft committee plan; this will go to the County and City Commissions for their comments. In addition some minor changes were made. This is to be sent out by email and a final draft at next meeting. In addition Bob and Mike will work with the county and city to adjust policy on these programs.

Jurisdiction profiles were discussed and areas that need to complete these are the fire districts. This is based on the fact it was decided to use fire district as boundaries. A committee was formed to review the jurisdiction profiles questions. Steve Swarthout would like to see more

questions. The committee is Steve Swarthout, Bob Burbridge, and Tim McKern. This will also be presented at the County Fire Chief's meeting Monday 4/14.

Question to committee members: if you do not have a binder with committee handouts, let Mike know and they will make one up.

Meeting adjourned 1500.

**Attendees:**

*Bob Fink, Larry Waters, Terry Mihailov, Tim McKern, John Williams, Vance Aeschleman, Les Watson, Mike Frank, Aaron Espy, Bill Tabor, Steve Swarthout*

Next meeting April 23<sup>rd</sup> – 0830-1130.

**April 23, 2003**

Mike Frank reviewed the process the group had gone through over the past six months in developing a recommendation for a revised committee structure. Bob Fink explained the function/definition of a Disaster Assistance Committee "DAC". It is basically whatever the local organizations decide it will be.

It was recommended that a committee, to be known as the Mason County Emergency Management Council (MCEMC), be established which would incorporate the duties, roles & responsibilities of the Local Emergency Planning Council (LEPC), Disaster Assistance Council (DAC), and the Hazardous Material Management Committee (?), as well as other emergent needs and requirements. County and City of Shelton Commissioners and the Emergency Management Directors from both agencies would direct it.

The revised structure as proposed by the committee was reviewed and accepted and will be recommended to Mason County Commissioners and the City of Shelton.

The proposed final version of the Goals & Objectives was reviewed and minor changes were made. MOTION made by Jerry Hauth, SECONDED by Bonnie Knight to accept the Goals & Objectives as modified. MOTION CARRIED. Copies will be distributed at the next meeting.

Bob Fink will contact the City of Shelton for approval of the new structure and if they concur he will work with them to develop the necessary documentation, rules & regulations.

A grant application for \$50 thousand has been submitted to purchase equipment, provide staff to visit communities, and gather data required for the jurisdictional profile.

A land use map is available from the county to assist with the profile.

It was noted that the Comprehensive Plan for the Tribes may be different from the county and should be considered separately. Schools also are mandated to provide a plan directly to the state but it was agreed that both, while maintaining their autonomy, should be involved in the MCEMC since they are an integral part of the whole. Simpson Timber and other large entities will also be contacted to take part in the overall plan.

Mike will contact the schools, will contact Simpson, Bonnie will contact the other port districts, and Brian? Will contact the Tribes.

After much discussion it was agreed that for organizational purposes the jurisdictional profile would use fire districts as "neighborhoods" since they cover the entire county, there are clear boundaries and most are already aware of the hazards in their area.

Steve Swarhout is working with the districts to get their support and concurrence. Steve and Dave Salzer are evaluating the home survey forms.

MOTION was made by Steve Kutz to have the four legal jurisdictions represented in the plan: Mason County, City of Shelton, and both Tribes if they want to participate. MOTION was SECONDED and PASSED.

All members were given the assignment to read the critical factors and be ready to discuss them at the next meeting. The committee agreed that it would be necessary to meet twice a month on the 2<sup>nd</sup> & 4<sup>th</sup> Wednesdays until the committee structure and foundation work is complete. Meetings will be from 8:30 to 11:30 am or until the work scheduled for that meeting is accomplished.

The next meeting is May 14<sup>th</sup>, 8:30 – 11:30 am.

Present:

*Mike Frank, DEM, Sandy Loertscher, DEM; Jerry Hauth, MC Public Works; Bonnie Knight & John Williams, Port of Allyn; Steve Kutz, MC Public Health, Vance Aeschleman, Red Cross; Aaron Espy, Mason County Medic One;*

Meeting was adjourned.

**May 14, 2003**

DEM – 0830

Meeting called to order by Chair Mike Frank of DEM

The following were items on the AGENDA for this meeting

- ◆ Review of minutes of previous meeting with (1) change.
- ◆ History of the Committee
- ◆ Role of the US Forrest Service and Simpson Timber
- ◆ Handout Goals and Objectives for mitigation 20/20 Task Force
- ◆ Review Committee Structure
- ◆ Review and suggest changes to following forms :
- ◆ Jurisdiction Profile
- ◆ Homeowner Survey
- ◆ Neighborhood Characterization

Introduction – New Team Members

Chair Frank reviewed the Hazard Mitigation 20/20 plan and the four areas this plan is divided into. City of Shelton, Mason County unincorporated, and two Indian Tribes.

Johnny Stephens from the US Forest Service and Larry Gill from Simpson Timber were in attendance. Both of these entities had a hazard plan in place. These entities are important to the county plan. Keeping them involved will help them with future funding from FEMA.

Chair Frank reviewed the LEPC / DAC Board that formed in 1985. County Commissioners reviewed and made a change in restructure to form the Emergency Management Council.

Bob Fink reviewed the Council structure. He is waiting for the City of Shelton to give input to the proposed change. A report will follow at the next meeting.

Steve Swarhout reviewed the survey of homeowners, Jurisdiction Profiles, recommended changes. Also established that the boundaries would be the Fire Districts, US Forest Service, etc.

The Homeowners survey to be mass mailed due to lack of staffing, Possible Homeowners Association.

The neighborhood characterization form needs to be in commercial and residential form.

(A recommendation for the following)

Homeowner survey, not to be sent out and information in form to be included in the jurisdiction profiles.

We reviewed jurisdiction profiles of the Fire Districts. We are looking for the following in that profile.

- Neighborhood Characterization
- Critical Facilities

These are reports that each Fire District must be completed. Steve S to go out to each Fire District to help with these forms. The FMO is also getting more info for the database.

A review of "What is a critical facility" / Location.

A question to the US Forest service about creating a separate plan? Johnny Stephens to go back to leaders with an answer.

Simpson Role – They will fit into critical facilities and other plan.

Meeting adjourned 1030

Attendees:

*Bob Fink, Larry Waters, Tim McKern, John Williams, Mike Frank, Dave Eklund, Shelley Hutchinson, Steve Kutz, Bill Tabor, Steve Swarhout, Larry Gill, Johnny Stephens, David Shephard, Phil Carpenter.*

Next Meeting May, 28th 0830-1030

**May 28, 2003**

DEM – 0830

Meeting called to order by Chair Mike Frank of DES



The following were items on the AGENDA for this meeting

- ◆ Jurisdiction Profile – Related Forms (Steve S)
- ◆ Review Committee Structure (Bylaws Committee)
- ◆ Outside Entity roles
- ◆ Update on Pre-Disaster Mitigation Grant (PDM)

Chair Frank reviewed the PDM grant and Tim McKern read the letter from Washington State EMD. Our grant was reviewed and was sent on to FEMA for a recommendation to fund. In addition a discussion followed on the use of these funds. The equipment role and management of this grant process.

The bylaws committee has met and is moving forward the proposed draft plan for the EMC. Chair Frank has met with City and County officials and all are in agreement with the plan. The next phase is a proposed draft resolution to go the County and City for adoption. A draft resolution will be reviewed at the next meeting. The question came up about the role of the chair and it was decided to leave it as it is.

The Homeowners survey was brought up and what role it had on the plan. The only question that came up was the need for data as it relates to Insurance and the number of homeowners in Mason County that have insurance. This would help with the plan, as it would have the greatest effect on the community. A suggestion that we contact the Washington State Insurance Commissioner and see what data they have. Sandi L called and is waiting for a call back from that office.

Jurisdiction Profile – Related Forms (Steve S)- A report from this committee explained that the related forms are not complete. The committee to review and take to the next Mason County Fire Chief's Meeting. A report at the next meeting.

Agenda for next meeting

- \*Update on the committee structure
- \*Jurisdiction Committee report
- \*City of Shelton report with the neighborhoods identified
- \*Insurance Commissioners report

Meeting adjourned 1030

Attendees:

*Bob Fink, Larry Waters, Tim McKern, John Williams, Mike Frank, Dave Eklund, Shelley Hutchinson, Steve Kutz, Steve Swarthout, Larry Gill, Phil Carpenter. Sandi Loertscher*

Next Meeting June 11, 2003 0830-1030

## **June 11, 2003 Minutes**

Meeting called to order by Chair Mike Frank of DEM

The following were items on the AGENDA for this meeting:

- Update on the committee structure
- Jurisdiction Committee report
- City of Shelton report with the neighborhoods identified
- Insurance Commissioner's report

#### Committee Reports

By-laws Committee handed out a draft Emergency Management Amendments Code Chapter 2.19. This was reviewed with recommendation to take back and make suggestions. This will be Old Business at next meeting for approval. We will also e-mail this to those not here today. Bob Fink will send to Tim for e-mailing. Question about the response from City of Shelton. Bob and Dave Salzer will work on the City plan to this. In addition remember that this will have to go through the public approval process as all others have gone.

Jurisdiction Profile Committee advised the group that at a most recent Fire Chiefs' meeting that all Fire Districts are very supportive of this concept. Steve Swarhout will be going out to the Fire District to assist with data requested.

#### Old Business

City of Shelton reported that they have a map that defines the neighborhood breakdown. They are willing to bring a copy to share and put in the Mitigation 20/20 plan.

Sandi L reported that in her research of the Insurance Commissioners Office, they have limited-to-no data as it relates to insurance coverage. Sandi is working with local insurance agents to find other data. A question about earthquake insurance data. Sandi to review and report at next meeting.

Update on the Grant that we are receiving. DEM has received a draft contract and will go into effect in July. Sandi K has been added to another day. Along with the possibility of getting an AmeriCorp person. What is needed now from all members is the hours and mileage to attend these meetings. This is be turned into a dollar amount. The reason for this is for our in-kind match, which is \$12,700. We can use volunteer hours and mileage to attend the meetings as in-kind match. This will start on July 1, 2003.

#### New Business

Committee make-up was discussed. The question about PUD attending, and do we have all the players here. As we have topics that may have an interest or need a reference than other community groups/entities may be invited.

Chair brought up the Summit GIS Company will develop a map of Mason County if needed. There will be a fee for this. Possible grant monies can be used for this.

We will need a press release as soon as the resolution is complete. That committee will be working on a draft soon after next meeting.

Meeting adjourned at 0930.

**AGENDA for next meeting**

- Bylaws Committee final review of Code Chapter 2.19
- Earthquake insurance data
- Jurisdictional profiles

Next meeting June 25, 2003, 0830-1030 at DEM.

**Attendees:**

*Bob Fink, Larry Waters, Tim McKern, John Williams, Mike Frank, Dave Eklund, Shelley Hutchinson, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Debbie Riley, Bill Tabor, Bonnie Knight*

**June 25, 2003**

DEM – 0830

Meeting called to order by Sandi Loertscher of DEM.

It was announced that Mike Frank has resigned and Sandi Loertscher has been appointed to direct the Division of Emergency Management. Sandi suggested that Jim Ghiglione take over as chair of the committee since he is City of Shelton emergency manager.

The following were items on the AGENDA for this meeting:

- By-laws Committee Report
- Terrorism Assessment Training – July 16, 2003
- Press Release
- Future Meeting Timelines

**Committee Reports**

**By-laws Committee:** Bob Fink presented the final draft of the proposed membership and organizational form for the new Emergency Management Committee to consolidate the various emergency committees within the county. Final changes should be referred to Bob. The information has been sent to all committee members for comments.

Jim Ghiglione announced the Terrorism Assessment training that will occur in Thurston County in July 16. He proposed that he and Sandi L and Sandi K would represent the various entities in the county at the training.

Since there was no one present from the information committee, Jim G. will put together a press release on activities of the committee.

It was agreed that future meetings would be held to an hour to accommodate different schedules and work demands.

Next meeting July 9<sup>th</sup> –0830-0930 at DEM

Meeting adjourned 0930.

**July 9, 2003**  
DEM – 0830

Meeting called to order by Sandi Loertscher of DEM

The following were items on the AGENDA for this meeting:

- o Committee Reports
- o Grant Update
- o Terrorism Assessment Training
- o Plan Timeline

**Committee Reports**

Bylaws Committee: Bob Fink advised the group that the hearing for the proposed changes in July 22.

Jurisdiction Profile Committee: No report

Public Information Committee: No report

(Note: When hearing is complete a status press release will be put in the paper.)

**Old Business**

City of Shelton handed in their Jurisdictional Profiles.

Sandi L reported that in her further research of the insurance companies, it was found if they are mortgaged, the must have insurance. There are 25-30% that have insurance. Most do not have flood insurance.

Sandi L also mentioned that all Grants would go through DEM and the Region 3 Homeland Security programs. Also a long discussion about the 9 regions and how they fit with the other EMS and Fire Regions.

Update on the grant we are getting. Along with a possible Ready\*Corps person to assist with the project. DEM has a draft contract but they want to wait until a signed contract is in hand.

**New Business**

Sandi handed out Pre-Disaster Mitigation Competitive projects. These are just ideas for projects to take on. We were asked to review and bring back ideas to next meeting. A Time line for the All Hazard Mitigation Plan was completed.

<u>WORK PLAN ITEMS</u>	<u>MILESTONE DATE</u>
o Starting date for planning cycle	9/27/2002

Mason County Hazard Mitigation Plan  
October 2004

- o Complete Jurisdiction Profile 9/1/2003
- o Complete facility/neighborhood vulnerability assessments 11/1/2003
- o Submit Mitigation Initiatives 1/1/2004
- o Final Steering Committee review/approval of proposed Initiatives 2/1/2004
- o Submit Final Plan to jurisdictions/organizations for approval 3/1/2004
- o Scheduled ending date for planning cycle 4/30/2004
- o Plan submitted to State for review 6/1/2004

Meeting adjourned 0930

Next meeting July 23<sup>rd</sup> –0830-0930

Attendees:

*Bob Fink, Larry Waters, Tim McKern, Dave Eklund, Shelly Hutchinson, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Debbie Riley, Bill Tabor, Bonnie Knight, Jim Ghiglione, Sandi Kvarnstrom, Terry Mihailov.*

**July 23, 2003**

DEM – 0830

Meeting called to order by Jim Ghiglione

Approval of minutes: Corrections mentioned and approved

The following were items on the AGENDA for this meeting

- Committee Reports
- Grant Update
- Terrorism Assessment Training
- Plan Timeline
- City of Shelton Jurisdictional Profiles
- EOP Plans review and update

Committee Reports

Bylaws Committee: Bob Fink stated the hearing for the proposed changes to resolution was last night (July 22, 2003.) Input would be forwarded to the Sheriff.

Jurisdiction Profile Committee: Steve Swarhout reported that the Fire Districts would be receiving additional copies for them to complete and return.

Public Information Committee: No Report

(Note) Need a press release for the Equipment Grant we are going to receive. Needs to be complete

Old Business:

City of Shelton has submitted their Jurisdictional Profiles; however, there are questions yet to be answered.

Ready Corps program: Sandi L reported that they have interviewed a person that worked in Thurston County. She will be a great asset to the team.

Long Discussion about regional DEM plan / equipment. Concern over who will take the lead for the equipment. Sandi L mentioned that the entities that are earmarked for these items must let her know if they are not wanted.

**New Business:**

Terrorism Assessment meeting in Thurston County; Jim Ghiglione, Sandi Loertscher, and Sandi Kvarnstrom attended. Some committee members have homework prior to the next meeting.

Sandi L handed out a 2001 Vulnerability Assessment. This has not changed much and any changes will be addressed at the next meeting.

**Attendees:**

*Bob Fink, Larry Waters, Tim McKern, Shelly Hutchinson, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Bill Tabor, Jim Ghiglione, Sandi Kvarnstrom, Terry Mihailov, Jayni Kamin, Steve Swarthout*

**August 13, 2003**

DEM – 0830

Meeting called to order by Sandi Loertscher

Approval of minutes: approved after one change (City of Shelton has submitted)

The following were items on the AGENDA for this meeting

- Committee Reports
- Grant Update
- Plan Timeline
- Region 3 Meeting Agenda review

**Committee Reports**

Bylaws Committee: Bob Fink stated the hearing for the proposed changes to resolution extended to August 19, 2003

Jurisdiction Profile Committee: Steve Swarthout reported that the Fire Districts would be receiving additional copies. Sandi K reported she has a few back but it against a short timeline to put them into the plan. Steve S suggested a fill out your profiles night at DEM. This might get the Fire Districts to bring them in.

Public Information Committee: Welcome back Bob Burbridge!!!!

(Note) Need a press release for the Equipment Grant we have received. Needs to be complete.

**Old Business:**

Terrorism Assessment information was discussed and those entities that had homework on this, i.e., EMS, Fire, Law Enforcement, turned them in.

**New Business:**

Region 3 Meeting Agenda was discussed a length. Jim G, Sandi L, and Sandi K will be attending at noon today. There is concern as to the mission and movement of this committee. The attendees asked for input and direction. It was decided to have this on the Agenda for each of our meetings. After long discussion it was decided to ask for continued input into the committee and not to add more members to the Region 3 committee.

**Attendees:**

*Bob Fink, Tim McKern, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Jim Ghiglione, Sandi Kvarnstrom, John Tarrant, Steve Swarhout, Bob Burbridge, Dave Eklund, Bonnie Knight, Todd Barr, Debbie Riley*

Next Meeting August 27<sup>th</sup>, 2003 0830 DEM.

**August 27, 2003**

Meeting called to order by Sandi Loertscher

Approval of minutes; approved after change that Sandi chaired the meeting of August 13.

The following were items on the AGENDA for this meeting

- Region 3 meeting review
- Committee reports

Sandi opened with a review of the Region 3 meeting. The following were topics that were discussed

- Council membership – it was decided to leave the current membership as is and to have a representative from each county to make up a subcommittee. In addition two work committees have been formed
  1. training/exercise
  2. equipment
- Interlocal agreements – a draft agreement was handed out with a recommendation back to this committee at the next meeting
- Administrative cost reimbursement – Sandi handed out a contract face sheet
- If anyone wants to present something to Region 3 committee they must submit it through the local DEM office
- Sandi went over the sub-grants that were approved
- Bylaws were handed out in draft form with input and recommendation back to next meeting
- We need one representative from each County jurisdiction to serve on the following committees
  1. Training/Exercise
    - Bob Burbridge
    - Tim McKern

2. Equipment  
Mike Akin

Public Information Committee – we need a press release on the grant we received and we need updates to go to the County and City officials

Attendees:

*Tim McKern, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Sandi Kvarnstrom, John Tarrant, Steve Swarhout, Bob Burbridge, Dave Eklund, Bonnie Knight, Debbie Riley, Larry Waters*

Next Meeting September 10<sup>th</sup>, 2003 0830 DEM

**September 10, 2003**

DEM – 0830

Meeting was called to order by Jim Ghiglione

Introductions: Aaron Espy, Larry Waters, Amber Bachus, Richard Night, Steve Whybark, Terry Davenport, Mike Akin, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Jim Ghiglione, Sandi Kvarnstrom, Bob Burbridge, Dave Eklund, Bonnie Knight and Debbie Riley.

Minutes were approved

Reports:

Public Information Committee – copies of the proposed press release were handed out. Request was made for corrections, additions or deletions.

Status of neighborhood profiles – Sandi K reported that it was going well. The city is done; the county is almost done.

Jurisdictional profiles from the Tribes – Sandi K reported that profiles are still needed from both Tribes

Critical facilities profiles – clinics have been added, electronic copies will be available as an addendum to the plan.

August 27<sup>th</sup> Region 3 meeting – all-day workshop at Griffin Fire Station

- The outcomes and bylaws were handed out
- The minutes from the August 13<sup>th</sup> meeting were handed out
- Sandi L went over the makeup and purpose of the council and reminded the committee that all interlocal agreement changes are due by October 31 for December final approval
- Subcommittee assignments were made
  1. Planning/policy – Bonnie Knight and Aaron Espy
  2. Training/exercise – Bob Burbridge and Tim McKern
  3. Equipment – Richard Knight, Mike Akin and possibly Jim Robinson



- In a discussion about John Taylor's position with the Region, the committee agreed that his position should be similar to other contract positions rather than a Thurston County employee. The original belief was that Thurston County would be a conduit for the money and the person would be allowed to do what we (all of the jurisdictions) needed him to do. This has not been the case. The committee wants the person in this position to be accountable to the Council for his work product, not to a peer in Thurston County, and if Thurston County's structure cannot allow this to happen, they should look to housing him in another location. Bonnie Knight made a motion that the four jurisdictions from Mason County should pursue getting John's position renegotiated in the next contract to be accountable to the Region 3 Council and be moved to a location that allows him to meet the needs of all of the members of the Council. Steve Kutz seconded the motion. Motion carried unanimously.

Citizen Corps – Amber Bachus was introduced. Amber will be working with schools and other established groups and large events.

Discussion about pending federal changes including new licensing requirements by the FCC were discussed. It was pointed out that all new licenses and renewals must be for narrow band after 2004.

Next meeting September 24, 2003

### **September 24, 2003**

Meeting called to order by Sandi Loertscher

Approval of minutes: approved after change  
(Richard Knight is on the equipment sub committee)

The following were items on the AGENDA for this meeting

- Committee Reports
- Status of Neighborhood Profiles
- Status of Jurisdictional Profiles from Tribes
- Status of Critical Facilities Profiles
- Review of Goals and Objectives for 20/20 Mitigation Plan
- Review of September 10<sup>th</sup> Region III meeting
- WA State Homeland Security Institute

Committee Reports:

Public Information Committee: A press release went out and was printed. There were some concerns about the direction the article went. It was decided that all press releases will go through the Sheriff first and he will send them to the press in the future.

Sandi K reported that the Neighborhood Profiles are just about complete.

All Jurisdictional profiles are complete with the exceptions of the Tribes.

Critical Facilities profiles still pending we have a number of them in and still have a few more to get.

It was noted that the EOP plan has been updated and DEM is sending them out in disk form. Anyone wanting one and they have not been delivered in about two weeks contact DEM.

#### Old Business

Sandi L handed out the Goals and Objectives for the Mitigation 20/20 plan. She would like the committee to review this and compare it to past copies. This will be discussed at next meeting.

#### New Business

Region 3 Meeting of September 10 was discussed at length. Some key items that were discussed:

- ◆ John Taylor will remain in place as the RERC until March 2004. This is a positive move for Mason County. John has provided a number of reports for the County along with reviewing EOP plans.
- ◆ John will be contacting the Sub-Committee members for a meeting. Those committees will be Training / Exercise, Equipment, Plans / Policy.
- ◆ The other big item is the creation of the WA State Homeland Security Institute. This will be a program of creating classes for the region on various homeland security issues.
- ◆ Our attendance and input in these Region meeting have been very helpful.

On Friday September 26<sup>th</sup> Sandi L and USGC will meet with the County Commissioners to discuss the Earthquake Fault in Mason County. The outcome of this meeting will be discussed at next meeting

#### Attendees:

*Bob Fink, Tim McKern, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Jim Ghiglione, Sandi Kvarnstrom, Steve Swarhout, Bob Burbridge, Dave Eklund, Bonnie Knight, Debbie Riley, Mike Akin, Terry Davenport, Bill Tabor, Mike Evans, Steve Whybark*

Next Meeting: October 8th, 2003 0830 DEM

#### October 8, 2003

Meeting called to order by Jim Ghiglione.

Approval of minutes: approved.

The following were items on the AGENDA for this meeting

- Committee Reports
- Status of Neighborhood Profiles
- Status of Jurisdictional Profiles from Tribes
- Status of Critical Facilities Profiles
- Goals and Objectives for 20/20 Mitigation Plan
- Review and Recommendation for potential hazards

- Review of October 8<sup>th</sup> Region III meeting
- Mason County qualifies for Citizen Corps funding
- Sub-Committee reports
- Jurisdictional Request for Reimbursement
- Interlocal Agreement and Bylaws revision

#### Committee Reports

Public Information Committee: No info at this time. A plan for future press releases was discussed. Along with this was the inclusion of the Sheriff into the approval process.

Sandi K reported that the Neighborhood Profiles are just about complete. Jim G asked to send the info in electronic form to him and he will bring it to the Chief's meeting.

The Tribes have not turned anything in yet, Sandi to continue to work with them on a finished product.

All Jurisdictional profiles are complete with the exceptions of the Tribes.

Critical Facilities profiles still pending we have a number of them in and still have a few more to get.

#### Old Business

The mitigation 20/20 goals and objectives were discussed along with a review of Potential Hazards list. The following were a list of potential hazards in no order of importance: Earthquake, Dam Failure, Epidemic / Bio-Terrorism, Forest Fire / Wildfire, Landslide/Erosion, and Storm.

Several members attended a meeting where it was discovered that several earthquake faults were found. There were several other faults that are being looked into. This information will be an asset to the committee planning.

#### New Business

##### October 8<sup>th</sup> Region III meeting

- Mason County qualifies for Citizen Corps funding
- Sub-Committee Reports: All Committees have meetings planned for next few weeks. Report at next meeting.
- Jurisdictional Request for Reimbursement - \$5571 to Mason County
- Interlocal Agreement and Bylaws Revisions

#### Attendees:

*Bob Fink, Tim McKern, Steve Kutz, Sandi Loertscher, Vance Aeschleman, Jim Ghiglione, Sandi Kvarnstrom, Steve Swarthout, Bonnie Knight, Debbie Riley, Mike Akin, Bill Tabor, Steve Whybark, Roxie Hildreth, Larry Waters*

Next Meeting October 22nd, 2003 0830 DEM

**October 22, 2003**

(No minutes on file for October 22)

**November 12, 2003**

Meeting called to order by Jim Ghiglione.

Introductions.

We had a presentation from Applied Digital Mapping. This was a program that was previously presented at the County Chief's last month. This type of program has great merit. There were many facets of this program. The entire county can use the program. Pre-Fire, Critical Facilities, Emergency Management etc.

Some of the tools for this type of system are already complete. DEM has the critical Facilities along with a regulatory reform of GSAB 34.

This is a new technology for the future.

Cost is \$4900 plus a cost of \$100 payable to DNR that has the aerial photos that are 7x7-sq. mile.

Jim G reviews and brought the presentation together. He mentioned homeland security monies that are available for such a project.

Jim G reconvened the meeting with Sandi K handing out the critical facilities list. She asked that we review this and comment back on them. Those agencies that have not submitted them were asked to do so as quickly as possible.

Jim G reviewed the Region 3 items that were going to be discussed. Only comment back to Region 3 is the fact that they need to give more notice for sub-committee meetings along with cancellations.

**Attendees:**

*Tim McKern, Steve Kutz, Sandi Loertscher, Jim Ghiglione, Sandi Kvarnstrom, Steve Swarhout, Bonnie Knight, Debbie Riley, Mike Akin, Bill Tabor, Steve Whybark, Steve Swarhout, Mark Weston, Linda Arnold, Ed Pierson, Terry Davenport, Fred Cook, Dick Taylor, John Tarrant*

Next Meeting November 26, 2003 0830 DEM

**November 26, 2003**

Meeting called to order by Sandi L

Approval of Previous Minutes

Sandi K reported we are still moving forward with the critical facilities from the Fire Districts. We need this info ASAP. The end of this process is near. If your critical facility is not listed it may not be eligible for funding in the future.

We have lost our Mason General representatives to this committee. This is an important group to this committee. We will continue to ask the hospital for a representative.

We are getting \$500 more for Citizen's Groups

Region III – The sub-committee are meetings and the future looks like they are going to hire (2) coordinators , Coastal – Pacific / Grays Harbor Inland – Mason, Thurston, Lewis. In addition to hire a Training and Exercise Coordinator along with a Admin Asst. This is in the planning process based on funding that appears to be coming down to the State.

Report from the Equipment and Training Sub-Committee: They are moving forward with a grant application for training and equipment funds. In addition they are putting a primary goal for the first year of bringing everyone up to WMD awareness level. The next goal after that this year will be a needs assessment for counties that have equipment with no one trained to use it. The committee's will meet in January to finalize the forms and assessment that is going out.

Question and answers about this mitigation 20/20 plan and it's status.

No December meetings unless needed. Next meeting in January 14, 0830

**Attendees:**

*Vance Aeschleman, Bob Burbridge, Dave Eklund Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarthout, Debbie Riley, Bill Tabor, Steve Whybark, Steve Swarthout, Terry Davenport,*

Next Meeting January 14, 2004 0830 DEM

**January 14, 2004**

Meeting called to order by Jim Ghiglione.

Jim introduced Martin Best from Washington State EMD; he is responsible for hazard mitigation grants, planning and much more. Introductions were complete.

**Region 3 reports**

- ❑ Training and exercise – the committee met in December and the focus of that meeting was a recommendation to bring all fire responders up to the WMD awareness level. In addition a long discussion was held about the current equipment that all counties have and the need for training on that equipment.
- ❑ Equipment – met in December as well. The focus of this committee was a grant request that was handed out.
- ❑ Policy and procedure – they have met regularly and are assisting with the focus of the group.

Overall comments by committee members were that communication from Region on meetings was limited at best. It was asked for DEM to forward any notices of meetings that appear on the website.

Region 3 is moving on with hiring two geographical coordinators (inland and coastal), a training coordinator and an administrative assistant.

Sandi K handed out the next phase of the Mitigation Plan; we have three forms that need to be reviewed and started. We will discuss these at the next meeting. They are to be completed by February 11<sup>th</sup>. The forms go along with the critical facilities list that we provided. They are:

- Hazard Identification and Risk Estimation
- Facility Vulnerability Assessment
- Neighborhood Vulnerability Assessment

Comments from the group were the need for the P/R committee to continue with news releases about the committee's plan and performance issues.

**Attendees:**

*Vance Aeschleman, Bob Burbridge, Dave Eklund, Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarthout, Bill Tabor, Terry Davenport, Larry Waters, Martin Best, Diane Stillman, Bonnie Knight, Tammi Clark, Mike Akin, Steve Kutz, Aaron Espy, Bob Fink*

Next meeting January 28, 2004 – 0830 at DEM

**January 28, 2004**

Meeting called to order by Jim Ghiglione.

Introductions were completed. Guests were Martin Best and John Taylor, Region 3 Program Manager.

Sandi K reviewed the handouts from the last meeting. She asked for any questions and reminded all entities that they are due back completed at the next meeting.

There was some concern from the committee about involvement with others that are not involved. We must keep things moving and hope that others can see what accomplishments are being made and they will get on-board as well.

John Taylor reviewed the Region 3 plan and where it is going. John recommended that we compile a list of needed data from those entities not involved. Region 3 may help with this process. He also mentioned that schools are now in the plan for committee involvement, and it is important to get participation from all districts.

John handed out the Region 3 Grant and Survey application. This is due back to the Region by February 15<sup>th</sup>.

John stated that Region would have a total of five people on board by February 16. John is to be the program manager. They are using CEMP's as guides to help develop annexes and work with all hazards in addition to working with law enforcement and fire on grants. Marty brought up that the Mitigation Plan is not in the CEMP.

All plans up to and including mitigation, CEMP, and assessments are all managed by DEM and the Region.

Region 3 Training and Exercise – will be meeting around February 25 to discuss the grants.

Region 3 Equipment – this committee will be meeting jointly with the training and exercise committee.

Region 3 Policy and Procedures – they have met regularly and are assisting with the focus of the group.

Committee members are encouraged to review updates on the website.

John Taylor stated Region 3 would be provided a storage unit for the equipment that is being stored at DEM for the fire service. This storage is until training has occurred and the equipment can be used.

It was recommended to start the next meeting at 0800 due to long meetings. Everyone agreed.

**Attendees:**

*Vance Aeschleman, Dave Eklund, Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarthout, Bill Tabor, Terry Davenport, Larry Waters, Marty Best, Diane Stillman, Bonnie Knight, Mike Evans, John Taylor.*

Next meeting February 11, 2004.

**February 11, 2004**

Meeting called to order by Jim Ghiglione.

A/C Ken Boad from Mason District 2 put on a PowerPoint presentation about their CRT program. District 2 is requesting money through the Region 3 CERT funds. He will also be putting this presentation on at the Region 3 meeting today.

Region 3 – The training and Exercise and Equipment Committees will meeting on Feb 25 to review the grant applications that are being turned in to Region 3.

After a brief discussion it was decided to go back to 0830 start times for the meetings.

We had a work session to review the critical facilities and make adjustments to this list. This would take some of the proposed critical facilities and make them essential or hazard facilities. This work session took some time and will be ongoing.

Marty best gave a brief overview of the Mitigation 20/20 program. He stated this has some good points but needs some work. He reviewed what is needed for the new plan.

At future meetings we will be having work sessions like this to bring closure to our plan needs.

**Attendees:**

*Dave Eklund, Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarouth, Bill Tabor, Larry Waters, Martin Best, Diane Stillman, Mike Akin, Bob Fink, Jim Ghiglione, Steve Kutz.*

Next meeting will be February 25, 2004 – 0830 at DEM.

**February 25, 2004**

Call to Order: by Sandi L at 0830

Sandi opened by reviewing how Region 3 functions and requests for all hazards equipment and training to go through DEM for this equipment.

Sandi L handed out a project 20/20 timeline. And the fact that we are behind.

Region 3 Sub Committees: Sandi K asked that all committees need to bring back Mason County specifics from those committees back to this committee.

Concern from committee that we have equipment stored in a leaky building and why can we not get it fixed.

Equipment: Joint meeting on Feb 25 for all committees to review grant request.

Training and Exercise: Joint meeting on Feb 25 for all committees to review grant request.

Polices and Procedures: Joint meeting on Feb 25 for all committees to review grant request.

**Old Business**

Critical Facilities Sandi K handed out the revised Critical Facilities List. Then Sandi went down a reviewed the critical facilities. Note that cell towers are essentials not critical. This based on the fact that we have limited control over them,

Mitigation 20/20 Plan: Sandi L handed out timeline and this will continue to be a high Priority at future meetings.

**Attendees:**

*Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Richard Knight Larry Waters, Mike Akin, Ken Boad, Steve Kutz, Debbie Riley, Jim Ghiglione, Greg Metzcus, Everett Tyrell, Howard Armfield, Steve Whybark, Vance Aeschleman, Bob Burbridge,*

**March 10, 2004**

**Call to Order**

Sandi K opened the meeting (work session) she reviewed the past few meetings and the critical facilities realignment to essential / hazards.

Larry Waters have reviewed some of the critical facilities and will forward information back to Sandi K for input. In addition Larry will give input to the risk level reviews.



A letter is being drafted to all the critical facilities letting them know that they are listed with county as this. This letter will advise them if they have a concern and want to be considered critical from essential they will need to attend future meetings.

The remainder of the meeting was a discussion about risk levels for facilities and neighborhoods.

This process is an important part of the planning tool. Sandi K will enter this data and get back to us with the remainder of information that is required in the program.

**Attendees:**

*Dave Eklund Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarthout, Bonnie Knight, Larry Waters, Martin Best, Mike Akin, Mike Evans, Jim Ghiglione, Steve Whybark, Ken Boad, Vance Aeschleman, Diane Stillman Marty Best*

Next Meeting March 24, 2004 0830 DEM

**March 24, 2004**

Call to Order by Sandi K

**Announcements:**

June 22 there is a Region 3 tabletop from 9-4 starting from local level to the region. More info at later meetings.

No Vulnerability assessments for PUD 1 or 3

US / state highways - should coordinate with other agencies.

Sandi K handed out the guideline that State DEM uses for review of local hazard mitigation plan.

Sandi K handed out updated Critical Facilities by jurisdictions.

Sandi K opened today work project with Hazard Identification and Risk Estimation this is only for the County and the City ,two tribes.

**Region 3 Sub Committees:**

Equipment: Next meeting is the 19 April.

Training and Exercise: No report

Polices and Procedures: No report

**Attendees:**

*Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Steve Swarthout, Bonnie Knight, Larry Waters, Martin Best, Mike Akin, Dave Salzer, Dick Taylor, Ken Boad, Bob Fink, Steve Kutz, Debbie Riley.*

No meeting on April 14. Next meetings for April are 4/21 and 4/28 at 0830.

**Sandi K needs to Hazard Identification and Risk Estimation back to her by email by April 9.**

#### **April 21, 2004**

Call to Order by Sandi K

#### Announcements:

- Region 3 Homeland Security has received a proposal from Lewis / Thurston County for a new plan for distribution of grant funds. This is a more local control plan. This plan will be reviewed and voted on today at the 1200 Region 3 meeting.
- Region 3 Table top is June 22
- There is a decontamination equipment class to be held in May. Agencies need to get names to Sandi L ASAP.

Region 3 Sub Committees: All Committee meetings were postponed until action on the funds distribution plan is voted on.

#### New Business

Mike Akin asked for an Interoperability Communication Committee to be formed. He is going to send out letters to all parties interested in serving on this committee.

Sandi K distributed and reviewed Hazard Identification and risk estimation for City of Shelton and Squaxin. The Counties is pending and will be reviewed at the April 28<sup>th</sup> meeting.

Sandi K distributed the Characterization of Proposed Mitigation Initiatives for the Mitigation 20/20 plan. After discussion it was decided to review this and work on at the April 28 meeting.

Sandi K distributed scores by jurisdiction and all facilities vulnerability scores.

It was decided by the committee due to short timeline for completion of the plan that the meeting of April 28<sup>th</sup> will start at 0830 and will be a work session to last until complete. Lunch will be provided. ( Sandi K needs to have confirmation by Monday August 26 noon so she can order you lunch.)

*MEETING Reminder: April 28, 2004 0830 – Complete (lunch Included). Note: Please call Sandi K by 1200 Monday 4/26. Every agency must be there. This is a very important meeting please plan to attend or send a decision maker.*

#### Attendees:

**Tim McKern, Sandi Loertscher, Sandi Kvarnstrom, Richard Knight, Larry Waters, Mike Akin, Ken Boad, Steve Kutz, Debbie Riley, Jim Ghiglione, Greg Metzcus, Everett Tyrell, Howard Armfield, Steve Whybark, Vance Aeschleman, Bob Burbridge.** May 12, 2004

Call to Order .by Jim Ghiglione @0837

**Announcements:**

Sandi L mentioned that any agencies that have a request for Region 3 must go through DEM. Nothing goes direct .to Region 3. Sandi L is concerned that all requests go through DEM and this council. There are a number of cities that want on the Region 3 council. The group has concerns with this proposal. Sandi L brought up a concern about proposed CERT programs. The Red Cross has a training plan for the CERT program. In the future the Red Cross can assist in this training.

The tabletop exercise will be on June 22 at DEM. Orientation Meeting is May 18 @ DEM.

Region 3 Sub Committees: No Meetings for any Committee

**Old Business**

Critical Facilities - Completed

Mitigation 20/20 Plan: Sandi K had little to say (WOW); plan is being completed. We are no longer using the 20/20 plan and are moving forward with a complete plan.

Public Education (News Release): Bob Burbridge will be getting one together for us and will forward on to the committee.

New Business: The month of May will continue on the regular every other week meeting. In June we may go to once a month. It appears our timelines have slowed down.

**Attendees:**

*Tim McKern, Vance Aeschleman, Mike Akin, Bob Burbridge, Rob Fink, Diane Stillman, Sandi Kvarnstrom, Sandi Loertscher, Steve Swarhout, David Peach, Greg Metzcus.*

Next Meeting May 26, 2004

**May 26, 2004**

Call to Order by Jim Ghiglione @ 0830

**Announcements:**

The Draft Agenda of the Mitigation plan was discussed. This plan is due to State DEM by Friday of next week. The mitigation plan should be complete for now. We will review this annually and every 5 years for complete review. Mayor Tarrant thanked all for the hard work. All entities feel very conformable with the process.

Sandi L discussed the Region 3 web sites, which includes the WMD awareness on-line training. This training will be about 4 hours on-line. We are also looking into a class for the larger departments so we can mass instruct WMD awareness.

Region 3 Sub Committee reports::

**Equipment– None**

**Training and Exercise – Meeting June 2 at Mason County DEM time – 1000** At this meeting they will be discussing the table top set for June 22 and the Big event planned for March 2005.

**Mason County Hazard Mitigation Plan**  
**October 2004**

Sandi reviewed the training requested by Mason County a total of 2256 will be trained in WMD. Question about timeline for completion of this project is March 31, 2005.

*Policies and Procedures - None*

Old Business - None

New Business - None

**Attendees:**

*Vance Aeschleman, Mike Akin, Joel Mentor, Ken Boad, Dave Eklund, Jim Ghiglione, Sandi Kvarnstrom, Sandi Loertscher, Tim McKern, Debbie Riley, Steve Swarouth, John Tarrant, Larry Waters, Gary Metzcus, Dave Pearch.*

Next Meeting June 9, 2004

**Appendix C**

**PLANS ON FILE**

**Mason County**

Comprehensive Emergency Management Plan with Terrorism Annex  
Washington State Comprehensive Emergency Management Plan  
Robert T. Stafford Emergency Assistance and Disaster Relief Act

**City of Shelton**

Comprehensive Emergency Management Plan with Terrorism Annex

**Squaxin Indian Tribe**

Emergency Action Plan

**Skokomish Indian Tribe**

Emergency Action Plan



## VULNERABILITY

Mason County is not in close proximity to a fixed nuclear site. The possibility of some type of nuclear exchange does exist. Mason County would not be considered a target area but is located close to targeted areas. There are no fallout shelters and little indoor space to place refugees. Mitigation efforts on the local level would involve having written material available on fallout shelters and have individuals trained in radiological monitoring.

Nuclear accidents/incidents involving facilities in Kitsap County or the transportation of materials through Mason County could have an impact on the communities in near proximity to them. Emergency plans and procedures need to address the county's response and recovery activities, regardless of the probability of such occurrence.

## **TERRORISM**

Terrorism is defined as the use of force or violence against persons or property violating the criminal laws of the United States for purposes of intimidation, coercion, or ransom. Terrorists often use threats to create fear among the public; try to convince citizens that their government is powerless to prevent terrorism; and try to get publicity for their causes.

A terrorist attack can take several forms depending on the technological means available to the terrorist, the nature of the political issue motivating the attack, and the points of weakness of the terrorist targets. Bombings are the most frequently used terrorist method in the United States. Other possibilities include attacks upon transportation facilities, utilities or other public services, or incidents involving chemical or biological agents. The Federal Bureau of Investigation categorizes terrorism in the United States as one of two types: domestic or international terrorism.

Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction, such as the Oklahoma City bombings and the series of domestic attacks and bank robberies in 1995 in Spokane by a militia group.

International terrorism involves groups or individuals whose terrorist activities are foreign based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries, such as the attack on the World Trade Center in 1993, and the recent attack on New York's Twin Towers and on the Pentagon.

## IMPACT

The impact of terrorism can vary significantly from massive loss of life and property damage to nuisance service interruptions. Threatened services include power, water supply, public transportation, communications and public safety.

## VULNERABILITY

The type of terrorist act would determine vulnerability. This could include a large portion of the population or infrastructure with the destruction of a major power distribution line, a pipeline, or the contamination of a municipal well or a small segment with a bomb threat to a business or

environment that can harm population, animals, and food supplies.

Hazardous chemicals are used for a variety of purposes and are regularly transported through Mason County. Ammonia is used as a refrigerant, in agriculture, and in wastewater treatment. Chlorine is used in wastewater treatment, water systems, swimming pools, and in the paper industry. Propane is widely used as a fuel. U.S. Highway 101 is the transportation corridor for transportation of hazardous materials to the rest of the Olympic Peninsula. State Highway 3 and Burlington Northern provide the transportation routes for, to, and from Kitsap County.

Hazardous materials include those used in manufacturing, household chemicals, crude oil, petroleum products, pesticides, paints, medical waste, fertilizers, etc.

### IMPACT

Major spills and accumulations from minor spills or unsafe disposal could cause long-term damage to resources such as water, forests, or beaches. Spills could cause population evacuation, unsafe working or living conditions, unemployment or economic impact.

### VULNERABILITY

Virtually every household and business in the county stores and uses varying amounts and kinds of hazardous chemicals.

Hazardous chemical shipments, bulk users, wholesalers and retailers are managed in accordance with federal and state law. They must submit an annual Tier II report as to type of hazardous materials on their premises. (See Attachment I)

Chemical spills, primarily oil and fuel spills, occur in Mason County on both land and water.

Hazardous material spills are a regular occurrence in Mason County. The smaller spills are most often petroleum products or illegally disposed of household materials. The increase in the number of methamphetamine related incidents in the County indicate an increase in this activity and the threat this poses to emergency responders, the community and the environment.

Small amounts of non-regulated chemicals usually in the form of household materials are routinely disposed of by dumping them into the environment through waste collection systems or directly into the ground or water.

The potential for a catastrophic spill of bulk hazardous chemicals exists. Due to the lack of a Class A Hazardous Materials Response Team, the county is placed at moderate risk in the event of a major spill.

## **NUCLEAR**

Puget Sound Naval Shipyard and the Naval Submarine Base at Bangor are both located in Kitsap County. Puget Sound Naval Shipyard stores spent fuel rods and decommissioned nuclear submarines. The Submarine Base at Bangor is the home of the Trident submarine, a nuclear powered submarine.



A failure at the Cushman Dam would result in extensive property damage and loss of life. Tacoma City Light, the owners and operators of the dam and hydroelectric project, carefully monitor the dam and maintain updated emergency plans as well as hold emergency exercises. Local authorities are responsible for warning and evacuation should a breach occur.

A breach in Anderson Dam at Lakeland Village could create a threat to approximately 25 residences downstream.

Casad Dam in Kitsap County could affect residents along the Union River if there was a breach to this dam.

### VULNERABILITY

Mason County is vulnerable to dam failure. To assure dam safety, the State Department of Ecology inspects all dams in Mason County and requires safety plans from the owner of each dam in the county.

History indicates a low probability of dam failure in Mason County. The failure of a high hazard dam would threaten an important segment of the county suggesting moderate vulnerability. Because the major dams within the county are well maintained and operated provides no reason to anticipate a compromise in the structural integrity other than from a major natural disaster or from terrorist actions there is a low risk assigned.

### MASON COUNTY DAMS

1. Anderson Lake Dam
2. Bennettsen Lake Dam
3. Buck Lake Dam
4. Christine Lake Dam
5. Cranberry Lake Stormwater Detention Dam
6. Cushman Dam #1
7. Cushman Dam #1 – Spillway Head works
8. Cushman Dam #2
9. Fawn Lake Dam
10. Haven Lake Dam
11. Lakeland Village Pond No. 1
12. Leprechaun Lake Dam
13. Lake Limerick Dam
14. Little Twin Lakes Dam
15. Melbourne Lake Dam
16. Rosand Dam
17. Timberlake Dam
18. Trask Lake Dam
19. Uddenberg Dam
20. West Lake Dam

### **HAZARDOUS MATERIALS INCIDENT**

Chemical hazards are created when there is a release of toxic agents into the atmosphere and

Mason County experienced some ash fall but no reported loss.

### IMPACT

Ash fall from the eruption of Mount St. Helens ranged from non-existent to light in Mason County. It did not cause any significant damage. It is unknown if an eruption of Mount Rainier would have a direct impact upon the County, but it could cause a major disruption to transportation of supplies if the main corridors of transportation were affected.

### VULNERABILITY

Mason County is at low risk for significant threat from volcanic eruption.

### **Man-Made Hazards:**

## **CIVIL DISORDER**

Civil disturbance or unrest is the result of individuals or groups within the population feeling their needs or "rights" are not being met by society, a segment of it, or the current political system. Civil unrest spans a variety of actions including labor unrest, strikes, civil disobedience, demonstrations, riots and rebellion. Events that could trigger these actions include racial tension, unemployment, unpopular political actions, and a decrease in the supply of essential goods or services.

Mason County has experienced no significant incidents of local civil disorder or disturbance.

### IMPACT

There is little likelihood of significant impact in the County.

### VULNERABILITY

History suggests a low probability of occurrence and low vulnerability.

## **DAM FAILURE**

Dam failure may be caused by flooding, earthquakes, poor construction, lack of maintenance and repair, improper operation, or acts of vandalism or terrorism.

### IMPACT

Dam failure could result in loss of life and damage to property including structures, transportation routes, utilities, agriculture and aquaculture. Depending on location, dam failure could result in a lowered tax base, lack of power profits or other significant economic loss. Mason County has twenty (20) dams that are listed with the State Department of Ecology.

water 30 feet or more in height. Debris can be deposited up to 1000 feet inland. A large tsunami can cross the entire Pacific in 24 hours.

There is some debate as to whether or not a tsunami could be generated in the Puget Sound by a local or offshore earthquake.

High waves, usually caused by wind and storm activity have battered the Puget Sound in the past and must also be considered a hazard to Mason County.

#### IMPACT

Much of Mason County is surrounded by water. Although there is no record of tsunami activity in the South Puget Sound area, the Pacific Coast has been threatened several times. A strong earthquake below either Puget Sound or Hood Canal could cause damaging waves, which could impact residences built along the shorelines. The most significant damage would be similar to those created during abnormally high tides in the region.

#### VULNERABILITY

Mason County is at low risk for significant threat from these events.

### **VOLCANOS/ASH FALL**

Mount Rainier is the most dangerous volcano in the Cascade Range because of the large population and the huge area and volume of ice and snow on its slopes that could melt to generate debris flows during a catastrophic eruption. Each of the five major rivers, the Carbon, White Cowlitz, Nisqually and the Puyallup flows westerly. Each, with the exception of the Cowlitz, empties into Puget Sound near Tacoma. The Cowlitz flows into the Columbia River and then into the Pacific Ocean. Much of the lowland to the east of Tacoma and the south of Seattle is formed of pre-historic debris from Mount Rainier.

Volcanic eruptions can cause damage in Mason County primarily by ash fall. The probability of ash fall depends on wind direction and the volcanic source of the eruption causing the ash fall. Most of the dangers are to persons in the near vicinity of the volcano. Other dangers, such as mudflows and ash fall, may exist miles downstream and down wind. The most recent was the 1980 volcanic eruption of Mount St. Helens in the Cascade Mountain Range. This eruption claimed 57 lives and cost approximately one billion dollars in damage.

In the last 515 years, Mount St Helens is known to have produced 4 major explosive eruptions (each with at least 1 cubic kilometer of eruption deposits) and dozens of lesser eruptions. Prior to its latest eruption, there were more than 10,000 earthquakes in the vicinity, hundreds of small steam-blast explosions, and the outward growth of the volcano's entire northern flank by more than 80 meters. A magnitude 5.1 earthquake struck beneath the volcano at 8:32 A.M. on May 18, setting in motion the devastating eruption. Within seconds of the earthquake, the volcano's north flank slid away in the largest landslide in recorded history. The explosion swept across the landscape as fast as 1,100 kilometers per hour. Temperatures were as high as 300 degrees Celsius within the blast. A gigantic plume of ash reached 19 kilometers into the sky and approximately 490 tons of ash was carried across 57,000 square kilometers of the Western United States.

The path of these lows determines their effect locally. The more southerly ones bring heavy rains while the northerly ones bring cold air and the potential for snow and ice. Any winter storm, regardless of its trajectory, can create high winds. Winds above 30 miles per hour can cause widespread damage and those above 50 miles per hour can be devastating.

### IMPACT

Since 1972 Mason County has experienced fifteen severe storms. Twelve lead to Federal Disaster Declarations. Most of these events were a combination of wind, heavy rain, snow or ice and the accompanying flooding. The most recent event that impacted all of Mason County was the ice and windstorm of December 1996.

High winds can cause widespread damage to trees and power lines and interrupt transportation, communications, and power distribution. Prolonged heavy rains cause ground saturation, rivers and streams to rise, and result in flooding and landslides.

Ice storms occur when rain falls out of a warm atmospheric layer into a cold one near the ground. The rain freezes on contact with cold objects including the ground, trees, structures, and power lines, causing buildings to collapse and power lines to snap. Isolated residents without power are more likely to be impacted due to power outages and the time it takes to restore power. Some rural residences were without power for over two weeks during the ice storm of 1996.

### VULNERABILITY

The entire county is vulnerable to the effects of a storm. There is a very high probability and risk of a storm impacting Mason County again. Historical damage and cumulative costs of destructive storms indicates a high vulnerability.

## **TSUNAMI / HIGH WAVES / SEICHES**

Tsunamis are sea waves generated by seismic activity, underwater volcanic eruptions, meteor impacts, or landslides. Every enclosed body of water has a number of natural resources. If you sit in a partially full tub of water and rock back and forth you will find that at the right time you can easily get the waves to grow until they overflow the bathtub. The resonant oscillation of the water is a "seiche". A seiche can occur not only on the southern portion of Hood Canal or Puget Sound but also on lakes, reservoirs, or any other enclosed body of water.

During the Northridge earthquake of 1994, swimming pools all over Southern California overflowed. During the Anchorage earthquake in 1964, swimming pools as far away as Puerto Rico were set into oscillation. This quake also caused a serious tsunami along the Washington coast, resulting in \$105,000 in damage, which is based on 1964-dollar value. In 1994, a tsunami warning was issued for the Washington coast due to a magnitude 8.1 earthquake off Russia's Kuril Islands.

Large Pacific Ocean tsunamis have wave crest to wave crest distances of 60 miles apart and can travel at speeds of 450 to 600 miles per hour in the open ocean. As the waves reach the shallow water of the shoreline, the waves are slowed which forces the water to form walls of

Landslides are influenced by human activity (mining and construction of buildings and highways) and natural factors (geology, precipitation, and topography).

The identification of dormant slides areas is important as earthquakes or unusually wet winters can reactivate them. High land movement areas can be identified on or at the base of slopes; in or at the base of minor drainage hollows; at the base or top of an old fill slopes, at the base or top of a steep cut slope.

Erosion refers to the gradual removal of soil through wind or water action. Erosion may be induced or increased by failure to use ground covers to protect soil from wind or drainage systems to allow good dispersal of storm water. Slopes on waterfront can also be severely undercut by normal water flow, wave action, or large waves produced by storms.

### IMPACT

Mason County experiences landslides every year with most of them causing much less damage than others. The areas that typically have landslides are along U. S. Highway 101, North shore Road, Trails Road, and U. S. Highway 106.

Severe slides may affect travel routes to the extent that economic loss results. This loss can be particularly severe on tourists and businesses dependent upon recreational type activities. Uncontrolled water flow frequently causes erosion, which in turn can cause landslides. The effects of erosion are usually much less dramatic than landslides, but the final results may be more costly.

### VULNERABILITY

Mason County is subject to soil erosion due to wind, water and flooding at all times of the year. Mason County continues to be impacted by landslides and erosion issues with each new winter storm. Soil erosion continues to occur during wind and rainstorms.

The most significant effects of landslides are the disruption of transportation and the destruction of property.

Mason County has identified slide hazard areas and required geo-technical investigation and preventative improvements before development can take place on top of or below slopes subject to sliding.

Mason County remains highly vulnerable to landslides due to the impact of rain, snow, and windstorms.

### **STORM**

Destructive storms come in several forms: wind, rain, ice, snow or a combination. Any winter storm can pack high winds and heavy rain causing widespread damage. High winds of short duration, such as tornadoes and strong gusts from thunderstorms, can also be destructive though generally not as widespread.

Nearly all destructive local storms occur from November through April when the jet stream is over the west coast of the United States and Pacific low-pressure systems are more frequent.

humans. Form of ignition is usually cigarettes, fireworks and outdoor burning. Wildland fires started by heat spark ember cause the largest dollar loss, followed by debris burning and cigarettes. Loss per incident for debris fires is three times higher than any other fire cause.

### IMPACT

All areas of Mason County have the potential for fires. The impact of a major fire would be significantly increased by the loss of the vegetation, which helps prevent landslides, runoff and flooding. There would be loss to property owners, the logging industry, wildlife and wildlife habitat, watersheds and the community infrastructure. There would be an immediate impact upon the economy due to loss of jobs and reduction of tax revenue.

### VULNERABILITY

Mason County has a moderate to high risk for a forest fire occurring. The increase in population, increased recreational activities, large amounts of public and private forestland and the changing climate all increase the potential for a forest fire/wildfire.

## **HEAT WAVES**

A heat wave is characterized by five or more consecutive days of unusually hot weather. The National Weather Service considers hot weather for Mason County to be 90 degrees or higher.

There has not been a heat wave in Mason County. The unpredictable weather of recent history and the possibility of global warming suggest the possibility in the near future. The heat waves that hit the Chicago area during July of 1995 were responsible for more than 450 deaths and numerous heat-related injuries. Several extra refrigeration facilities had to be rented by hospitals in the area whose morgues were full due to the fatalities.

### IMPACT

Most residences in Mason County do not have air conditioning because of the mild marine climate. Senior citizens, infants and those who are ill would be most susceptible to heat and its effects. Those living alone without a caregiver would be even more susceptible.

### VULNERABILITY

Due to the mild marine climate there is a low probability for or risk of a heat wave in Mason County.

## **LANDSLIDE/EROSION**

The term "landslide" refers to the downward movement of a slope or masses of rock, soil or other debris under the force of gravity. Slides range in size from thin masses of soil a few yards wide to deep-seated bedrock slides. The form of initial failure commonly categorizes slides, but they may travel in a variety of forms along their paths. This travel rate may range in velocity from a few inches per month to many feet per second, depending largely on slope, material and water content.

Floods may result in loss of life as well as damage to residences, business establishments, public buildings, roads and bridges, utilities, agricultural land, fish and shellfish habitats, stream banks and flood control structures.

Gravel and silt build-up from logging activities and natural causes increase the possibility of flooding as the streams fill with silt and debris, which divert their course.

The Tahuya River is creating problems for individuals who own summer homes along that river. The debris that is carried by the river during flooding and the increased water flow are eroding the banks of the river.

The U.S. Army Corps of Engineers indicated after the 1996-1997 winter storm that the frequency of a groundwater flood disaster is approximately every 25 years. The winter storm created the first widespread groundwater-flooding event since 1972.

### VULNERABILITY

Flood vulnerability is the likelihood of something to be damaged by a flood. Generally, it is measured by how much something will be damaged as a percentage of its replacement value. There are two things that determine vulnerability to a flood. The first is the tendency of physical things to get damaged. The second is the potential loss of function from losing certain elements of a community because of a flood.

Mason County will always be vulnerable to flooding, especially in the areas surrounding the major rivers. Because mitigation efforts in the form of buyouts and the elevation of homes along the Skokomish River, the monetary impact to both the property owners and the taxpayers has been basically eliminated. Flooding along this river has become more of a nuisance than a major threat.

Mason County experiences flooding every year, which indicates there is a very high probability of it continuing. Because a large percentage of the county's population chooses to live along water bodies and the population continues to grow, the county is exposed to more impact due to this category of disaster. The increased frequency of flooding, the potential for the major rivers to flood simultaneously, plus the county's record for property damage put it at a level of high risk.

### **FOREST FIRES/WILDFIRE**

A forest fire is considered to be any uncontrolled burning within a forested area and uncontrolled and hard to extinguish burning in grassland, brush or woodland.

Fires are most likely to occur during the local dry season, which is normally from mid-May through October or any time during prolonged dry seasons. The impact from these fires is dependent upon weather, fuel, and ignition factors. They are usually extinguished while still small, but can spread to over 100,000 acres and require thousands of fire personnel several weeks to extinguish

Wildland fires responded to by city and county fire departments are most often started by

environment, which is not favorable to many of the world's most contagious diseases; our low population density; clean water and food supplies; effective sanitation; availability of inoculations and monitoring provided by public health officials. This does not make the county immune to the potential for a disease outbreak.

### IMPACT

During the influenza epidemic in 1918-1919, an estimated 20 million people died. The polio epidemic in 1946 killed approximately 25,000 people in the United States. The Legionnaire's Disease outbreak in Philadelphia claimed 30 lives. Due to our mobile society and the threat of terrorism there is growing concern that no one will be safe from the spread of diseases.

### VULNERABILITY

Everyone is vulnerable to an epidemic. There could be short or long term impact and massive loss of life. Devastating impact on the economy and on essential public safety and health services would be an issue.

Mason County has a low probability of a major outbreak but because the potential is so great there is a moderate risk for an epidemic.

## **FLOODING**

Flooding is the most common hazard occurring in Mason County. Heavy, prolonged rain in the fall, winter or spring months often results in saturated ground and high stream flows. Unusually warm temperatures may cause the snow pack to melt quickly, running off to overflow and fill streambeds. The three rivers in the county, which cause the most problem, are the Skokomish, Tahuya and Satsop. The county can expect two to five or more flooding events during the typical year.

Some floods are termed "flash floods" as they build quickly, move swiftly and carry debris in a raging torrent. The Skokomish River is now considered to be a "flash flood" river due to the build up of debris and silt in the riverbed.

Tidal flooding is also possible along the inland water. Extremely high tides accompanied by low atmospheric pressure, runoff or wind can cause tidal flooding along Hood Canal.

Groundwater flooding occurs when the water table is high and there is persistent heavy rain. Water collects in any natural depression when the soil can no longer absorb the water.

### IMPACT

The Skokomish Valley and the Skokomish Indian Reservation are subject to periodic flooding from the Skokomish River accompanied by tidal floods at the river's mouth. This river is dammed upstream, posing special problems if Tacoma Public Utilities must release water at their hydroelectric project when the river is at or near flood stage. The problem is compounded if there are exceptionally high tides during this time. Careful monitoring by Tacoma Public Utilities with warnings through dispatch, local fire services and the Mason County Division of Emergency Management are necessary to warn the residents of flood danger.



## VULNERABILITY

Mason County has a high probability to experience another damaging earthquake within the next 25 years. Since 1870 there have been 6 earthquakes, which have been magnitude 6.0 or greater. Population and development have increased and without mitigation efforts we can expect higher loss due to greater exposure. Mason County is at high risk for earthquake damage.

Washington State Significant Earthquakes				
Date	Time (PST)	Location	Depth (Km)	Magnitude
December 14, 1872	2140	North Cascades	Shallow	7.4
December 12, 1880	2040	Puget Sound		5.5
April 30, 1882	2248	Olympia area	Deep	6.0
November 29, 1891	1521	Puget Sound		5.0
March 6, 1893	1703	Southeast Washington	Shallow	4.9
January 3, 1896	2215	Puget Sound		5.7
March 16, 1904	2020	Olympics, Eastside		5.3
January 11, 1909	1549	Puget Sound	Deep	6.0
August 18, 1915	0605	North Cascades		5.6
January 23, 1920	2309	Puget Sound		5.5
July 17, 1932	2201	Central Cascades	Shallow	5.2
July 15, 1936	2308	Southeast Washington	Shallow	5.7
November 12, 1939	2346	Puget Sound	Deep	5.7
April 29, 1945	1216	Central Cascades		5.5
February 14, 1946	1914	Puget Sound	40	6.3
April 13, 1949	1155	Puget Sound	54	7.1
August 5, 1959	1944	Northwest Cascades	35	
April 29, 1965	0728	Puget Sound	63	6/5
February 13, 1981	2209	South Cascades	7	5.5
April 13, 1990	2133	Deming	5	5.0
January 28, 1995	1911	17.6 km NNE of Tacoma	16	5.0
May 2, 1996	2104	10.2 km ENE of Duvall	7	5.3
June 23, 1997	1113	5.5 km NE of Bremerton	7.4	4.9
July 2, 1999	1743	8.2 km N of Satsop	41	5/1
February 28, 2001	1054	17.6 km NE of Olympia	52.4	6.8

## **EPIDEMIC**

Epidemics are outbreaks of disease that affect, or threaten to affect, a significant portion of a population in a relatively short period of time. Although usually referring to human contagious disease, epidemics can also affect domestic and wild animals and crops. Epidemic diseases are usually introduced into an area from remote regions and inflict devastation because there is no natural or induced immunity.

There has been no epidemic reported in Mason County. This is probably due to our

environment, which is not favorable to many of the world's most contagious diseases; our low population density; clean water and food supplies; effective sanitation; availability of inoculations and monitoring provided by public health officials. This does not make the county immune to the potential for a disease outbreak.

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Mason County has a high probability of experiencing drought conditions. An extended period of drought for the area is low due to the marine climate. Actual drought conditions have been limited even during extended dry spells. As the county continues to grow and the natural resources are more heavily impacted there may be an increase in vulnerability. Mason County is at moderate risk to experience drought conditions for an extended period of time.

## **EARTHQUAKES**

Earthquakes are one of nature's most damaging hazards. An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the earth's tectonic plates. The severity of these effects is dependent on the amount of energy released from the fault or epicenter. They usually occur without warning and after just a few seconds can cause massive damage and extensive amount of casualties.

Each year, since 1980, the Pacific Northwest Seismograph Network has recorded an average of more than a thousand earthquakes in the Pacific Northwest. The three most damaging earthquakes in Washington State occurred in 1949, a 7.1 magnitude earthquake near Olympia; 1965, a magnitude 6.5 quake between Seattle and Tacoma, which killed 15 people and caused more than \$200 million in damage in several counties; and 2001, a magnitude 6.5 quake northeast of Olympia, which caused damage estimated to be in excess of \$1 billion.

There is a possibility of three different types of earthquake threats to Mason County. A number of earthquakes have occurred within the downward thrusting Juan de Fuca Plate. Many are located beneath Puget Sound. Seismologists speculate that an earthquake within this plate could be as large as magnitude 7.5. The second type is the shallow earthquake under the Puget Sound basin within the overlying North American Plate. Historically, the most damaging events occur at depths of 15 to 60 miles in the subduction plates. These are the least likely to occur but they could reach magnitude 9+. An earthquake of this magnitude would probably be located off the coast and has the potential of causing considerable damage hundreds of miles away from the epicenter.

Earthquakes cause damage by strong ground shaking and by the secondary effects of ground failures and tsunamis. The strength of ground shaking generally decreases with the distance from the earthquake source. Shaking can be much higher when earthquake waves are intensified by bedrock and then pass through softer earth materials such as sediment. Olympia is a good example of this amplification occurring and the ground shaking was much stronger there than in other areas.

Ground failure caused by earthquakes includes fault rupture, ground cracking, landslides, rock falls, liquefaction and uplift. Faults do not often rupture through to the surface. Unstable ground is mostly at risk of the other effects. Any of these failures will affect structures above or below them.

### **IMPACT**

The damage could range from minimal to catastrophic, depending on the magnitude of the earthquake and the degree of preparedness. Damage could range from minimal structural damage to extreme loss of life and destruction of property.

Earthquakes  
Epidemics  
Floods  
Forest Fires/Wildfires  
Heat Waves  
Landslides  
Severe Storms  
Tsunami, High Tides, Seiches  
Volcanoes

Man-Made Hazards:

Civil Disorder  
Dam Failure  
Hazardous Materials Incident  
Nuclear Incidents  
Terrorism

A. Natural Hazards:

**DROUGHT**

A drought is defined as "a period of abnormally dry weather sufficiently prolonged and severe enough to reduce soil moisture, water and snow levels to drop below the minimum levels necessary to sustain animal, plant and economic systems."

IMPACT

Western Washington has been affected during 11 drought periods since 1902. Three of these were during extended dry periods: April 1934-March 1937, October 1976-September 1977 and October 1991-September 1994. This indicates an interval of occurrence of less than 10 years.

The possibility of drought exists in Mason County. Normally, yearly rainfall is about 66 inches in the lower elevations while it may be 200 inches or more in the higher elevations of the Olympic Forest. However, several consecutive, hot, dry summer months can create parched and tinder dry conditions.

During periods of drought, municipal systems and private wells experience reduced water availability. This is mostly the result of declining aquifer levels. Water tables also experience noticeable decline. Residents are then notified to conserve. Brown lawns, water rationing, and having to ask for water in restaurants have done more to make people aware of the potential for drought in this state than have the problems of farmers and loggers in the past.

Potential impacts can be decreased ability to provide hydroelectric power; impact upon fish resources; shutdown and loss in the timber industry; potential for wildfires; closures to recreational areas. Problems are created for municipal and private water supplies.

VULNERABILITY

County is a recreational area, the population during summer weekends can approach 100,000.

#### A. ECONOMY

The top employer in Mason County as of 2000 is Simpson Timber Company with 845 employees and the Washington Corrections Center and the Shelton School District are in second place with 650 employees each. The average household income in 1997 was \$35,419, compared to the state average of \$41,715.

#### B. TRANSPORTATION

U.S. Highway 101 is the County's major north/south highway. This scenic route skirts the Hood Canal on its western banks and then circles the Olympic Peninsula. State Highway 3 connects Shelton and Belfair and into Kitsap County.

The County is also bisected north/south by the Burlington Railroad. This railroad line services Kitsap County. Simpson Timber Company has a railroad line which travels east/west through the County.

Because of the easy access to the salt water there are numerous small marinas throughout the County.

Sanderson Air Field is located just north of Shelton's city limits. This airfield provides services primarily to the private aviation community.

Northwest Pipeline Corporation has a natural gas pipeline that parallels US Highway 101 as it enters Mason County from Thurston County. A feeder line branches off this pipeline just southwest of Shelton and then crosses to State Highway 3 which it then parallels until it reaches Kitsap County.

### IV. HAZARDS

Mason County, due to its location and geological features, is vulnerable to the damaging effects of major natural and technological hazards. Events may occur at any time and may create varying degrees of damage and economic hardship to individuals, businesses and the governmental departments in Mason County.

Potential and actual hazards are shown in the attached sections. The sections are divided into natural and technological hazards. The hazards are listed alphabetically under each division; no inference should be made as to severity or probability of occurrence.

#### A. POTENTIAL HAZARDS FOR MASON COUNTY

Potential All Hazards for Mason County is arranged in two categories: Natural hazards and Man-made Hazards. A list of those events, within their categories are presented below:

##### Natural Hazards:

Drought

in the Olympic Mountains and flows through the County before reaching the Great Bend of the Hood Canal. The Hamma Hamma River runs east near the Mason/Jefferson boundary before reaching the Hood Canal. The Satsop River, which is in the southwestern portion of the County, flows into Grays Harbor and eventually the Pacific Ocean.

Two hundred thirty beautiful lakes dot Mason County. The most popular are Lake Cushman, Mason Lake, Timberlakes, Spencer Lake, Lake Limerick, and Lake Isabella. Earthen dams are commonplace in Mason County. The Lake Cushman hydroelectric project has two large, concrete dams supporting the Tacoma Public Utilities power plants at Lake Cushman and near Hoodport.

Elevations range from sea level to 6,000 feet in the majestic Olympic Mountains. Mason County's topography was heavily influenced by glacial activity. After the ice retreated, the more mountainous areas in the county's interior evolved into dense forestland.

Much of the native vegetation consists of conifers, maples, alder and evergreen shrubs that make up the under story. Soil conditions include wetlands, the fertile delta-like farmlands of the Skokomish Valley, rocky mountainous conditions, and poor soils with varying proportions of sand, gravel, loam, and clay.

#### C. CLIMATE

Mason County enjoys a moderate marine climate with an average temperature in January of 31.7 degrees Fahrenheit and in July of 77.6 F.

During the winter rainfall is usually light to moderate. Rainfall which is intense or which lasts for several hours will create flooding which is Mason County's major cause for local disaster.

The average yearly rainfall is 64 inches. The months of October through March provide the most precipitation. July is normally the driest month. Average snowfall is 8.2 inches at the lower elevations and up to 44 inches in the Lake Cushman area.

### **III. DEMOGRAPHIC CHARACTERISTICS**

The total population of Mason County for the year 2000 is 49,405 with a growth rate of 28.9% since the 1990 census. The city of Shelton is the only incorporated city in the county and has a population of 8,154, as of the year 2000.

Most population growth takes place in the rural, unincorporated areas of Mason County with Belfair and numerous lakeside developments attracting many newcomers. Mason County

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Most population growth takes place in the rural, unincorporated areas of Mason County with Belfair and numerous lakeside developments attracting many newcomers. Mason County serves as a bedroom community with many residents commuting to Bremerton, Olympia, Tacoma, and even the Seattle area. The county also attracts many retirees. Since Mason

## **Appendix D**

### **HAZARD IDENTIFICATION VULNERABILITY ANALYSIS (HIVA)**

#### **FOR**

#### **MASON COUNTY**

##### **I. INTRODUCTION**

The Hazard Identification Vulnerability Analysis (HIVA) is an element of an All Hazard mitigation effort allowing emergency managers to set goals according to the public need for protection. This document enhances public and private agency understanding and awareness, influencing the adoption of hazard mitigation programs. The findings revealed in the Hazard Vulnerability Analysis also serve as a basis for preparedness as well as influencing effective response and recovery programs.

This analysis covers hazards most threatening to Mason County as determined by history, geologic projections and social and technological trends. There are no hazards unique to the County, the Skokomish and Squaxin Indian Tribes, or Mason County Fire Protection District 2 and 5.

##### **II. GEOGRAPHIC CHARACTERISTICS**

###### **A. GEOGRAPHY**

Mason County is located in Western Washington on the southeastern portion of the Olympic peninsula. Shelton, the County seat, is 25 air miles southwest of Seattle, Washington, 15 air miles northwest of Olympia, WA, and 53 air miles northeast of the Pacific Ocean beaches at Westport, WA. Geographically, Mason County is divided into four sections: The City of Shelton and adjacent areas south, east and northeast; The communities of Belfair and Tahuya in the north; the upper Hood Canal areas around the community of Hoodspport; and the west and southwest areas around the Matlock community. Based on this geographical makeup, floods, slides, liquefaction, and/or severe storms could isolate portions of the county for several days.

Mason County has fourteen fire districts in the unincorporated county, four port districts, six school districts and a conservation district. There are two tribal areas: the Skokomish Reservation along the southwestern Hood Canal and the Squaxin Reservation in the south county.

###### **B. TOPOGRAPHY**

The total area of Mason County is 1,051 square miles, with 961 square miles of land and 90 square miles of water. It ranks twenty-ninth in size among Washington counties. The saltwater area, which makes up most of Mason County's 90 square miles of water, includes portions of Puget Sound and Hood Canal. Two thirds of Hood Canal is in Mason County. The Skokomish, Hamma Hamma, Tahuya, and the east fork of the Satsop constitute the major rivers in the county. The Skokomish is the longest and most powerful river in Mason County. It begins high



government agency.

Mason County receives bomb threats at county facilities and schools periodically, but is at low risk for a terrorist attack.



**ATTACHMENT I**

**SARA TITLE III FACILITIES  
2002  
TIER TWO REPORTS**

CRK000022930 Shelton	AM. TWR Kamilche Sulfuric Acid	9 MI South of Shelton
CRK000048380 Shelton	WSDOT Fuels	W. 633 Dayton- Airport Rd.
CRK000003750 Shelton	Tacoma DPU Cushman Fuels	1451 HWY 101
CRK000042640 Elma	Bingham Crk. Hatchery Fuel/Formalin	3914 Fish Hatchery Rd.
WAD988501557 Shelton	WA. State Patrol Fuel	631 Dayton Airport Rd.
WAD988522272 Shelton	Shelton City Shop Fuel	1000 W. Pine St.
CRK000007040 Hoodsport	FerrellGas Propane	19920 HWY. 101
WA0000137604 Shelton	Central Shop Antifreeze/Lube Oil CMS-2Asphalt Emulsion/ CRS-2 Asphalt Emulsion/ Coherex/Fuels	E. 3620 Johns Prairie Rd.
CRK000042280 Shelton	Courthouse Fuels	419 North 4 <sup>TH</sup> Street
CRK000042160 Shelton	Jarrell's CV Marina Fuel/Propane	220 E. Wilson Rd
WAT540011061 Hoodsport	Hoodsport CDO Lead/Sulfuric Acid	121 Schoolhouse Hill Rd.
WAD000641282 Belfair	Belfair Co PE 26099 Lead/Sulfuric Acid	23650 St. Route 3
WAT540011400 Shelton	Shelton CO Lead/Diesel/Sulfuric Acid	522 W. Railroad Ave.



## **Appendix E**

# **HAZARD IDENTIFICATION VULNERABILITY ANALYSIS (HIVA) FOR CITY OF SHELTON**

## **I. INTRODUCTION**

The Hazard Identification Vulnerability Analysis (HIVA) is an element of an All Hazard mitigation effort allowing emergency managers to set goals according to the public need for protection. This document enhances public and private agency understanding and awareness, influencing the adoption of hazard mitigation programs. The findings revealed in the Hazard Vulnerability Analysis also serve as a basis for preparedness as well as influencing effective response and recovery programs.

This analysis covers hazards most threatening to City of Shelton as determined by history, geologic projections and social and technological trends.

## **II. GEOGRAPHIC CHARACTERISTICS**

### **A. GEOGRAPHY**

City of Shelton is located in Western Washington on the southeastern portion of the Olympic peninsula. Shelton, the County seat, is 25 air miles southwest of Seattle, Washington, 15 air miles northwest of Olympia, WA, and 53 air miles northeast of the Pacific Ocean beaches at Westport, WA. City of Shelton is positioned 47.21 degrees north of the equator and 123.10 degrees west of the prime meridian.

City of Shelton has one fire department and one police department. In the surrounding areas of unincorporated Mason County there is a port district, five school districts and a conservation district. There are two tribal areas: the Skokomish Reservation along the southwestern Hood Canal north of Shelton and the Squaxin Island Reservation south of Shelton.

### **B. TOPOGRAPHY**

The total area of City of Shelton is 10.56 square kilometers, with 9.799 square kilometers of land and .761 square kilometers of water. It is the only incorporated city in Mason County. We are located on Oakland Bay and are connected to the Puget Sound via Hammersly Inlet. Goldsborough Creek is the only main "river" that runs through town into the Oakland Bay. However there are two more creeks; Canyon Creek flows into Shelton Creek which drains into Hammersly Inlet. Elevations range from sea level to approximately 225 feet on the surrounding hillside neighborhoods. City of Shelton's topography was heavily influenced by glacial activity.

After the ice retreated, the more mountainous areas in the county's interior evolved into dense forestland.

Much of the native vegetation consists of conifers, maples, alder and evergreen shrubs that make up the understory. Soil conditions include wetlands, and poor soils with varying proportions of sand, gravel, loam, and clay.

### C. CLIMATE

City of Shelton enjoys a moderate marine climate with an average temperature in January of 31.7 degrees Fahrenheit and in July of 77.6 degrees Fahrenheit.

During the winter rainfall is usually light to moderate. Rainfall which is intense or which last for several hours will create flooding which is the City of Shelton's major cause for local disaster.

The average yearly rainfall is 64 inches. The months of October through March provide the most precipitation. July is normally the driest month. Average snowfall is 8.2 inches in town and up to 44 inches in the higher elevations north of the City.

## III. DEMOGRAPHIC CHARACTERISTICS

The City of Shelton is the only incorporated city in Mason County and has a population of 8,422, as of the year 2000. The total population of Mason County for the year 2002 is 49,405 with a growth rate of 28.9% since the 1990 census.

Most population growth is taking place in the rural, unincorporated areas surrounding the City of Shelton, however, a significant amount of this growth is taking place within the City limits and our Urban Growth Area (UGA), identified in our Comprehensive Plan and in line with the Growth Management Act (GMA). The City of Shelton serves as a bedroom community with many residents commuting to Bremerton, Olympia, Tacoma, and even the Seattle area. The county also attracts many retirees. Since Mason County is a recreational area, being the gateway to the Olympic Peninsula, the population during summer weekends could approach 100,000.

### A. ECONOMY

Timber products is the leading industry in the City of Shelton. This is closely followed by the Washington Corrections Center and the Shelton School District. The average household income in 1997 was \$34,852, compared to the state average of \$41,715.

### B. TRANSPORTATION

U.S. Highway 101 is the City's major north/south highway. This scenic route skirts the Hood Canal on its western banks and then circles the Olympic Peninsula. State Highway 3 runs through the City and connects Shelton, Belfair and Kitsap County.

The City of Shelton is also bisected north/south by the Burlington Railroad. This railroad line services Kitsap County, the Bremerton Naval Shipyard, Bangor Submarine Base and Keyport

Naval Testing Facility. Simpson Timber Company, also, has a railroad line which travels east/west through the City.

The City of Shelton's location on Hammersly Inlet includes a small marina just outside the City, allowing access to the Puget Sound.

Sanderson Air Field is located just north of Shelton's city limits. This airfield provides services primarily to the private aviation community. It is owned and operated by the Port of Mason County and includes industrial occupancies.

Northwest Pipeline Corporation has a natural gas pipeline that parallels US Highway 101 as it enters Mason County from Thurston County. A feeder line branches off this pipeline just southwest of the City of Shelton and then crosses to State Highway 3 which it then parallels until it reaches Kitsap County.

#### IV. HAZARDS

The City of Shelton, due to its location and geological features, is vulnerable to the damaging effects of major natural and technological hazards. Events could occur at any time and could create varying degrees of damage and economic hardship to individuals, businesses and the departments within City Government.

Potential and actual hazards are shown in the attached sections. The sections are divided into natural and technological hazards. The hazards are listed alphabetically under each division; therefore, no inference should be made as to severity or probability of occurrence.

#### **POTENTIAL HAZARDS FOR THE CITY OF SHELTON**

Potential Hazards for the City is arranged in two categories; Natural hazards and Man-Made Hazards. A list of those events, within their categories are presented on the following pages:

##### Natural Hazards:

Drought  
Earthquakes  
Floods  
Forest/Urban Interface Fires  
Heat Waves  
Landslides  
Severe Storms  
Tsunami, High Tides, Seiches  
Volcanoes

##### Man-Made Hazards:

Civil Disorders  
Dam Failure  
Hazardous Materials Incidents, includes both chemical and biological  
Nuclear Incidents  
Search and Rescue Emergencies  
Terrorism and/or Civil Disorders

Explosions, including catastrophic fire

### **Natural Hazards:**

#### **DROUGHT**

A drought is defined as "a period of abnormally dry weather sufficiently prolonged and severe enough to reduce soil moisture, water and snow levels to drop below the minimum levels necessary to sustain animal, plant and economic systems."

#### **IMPACT**

Western Washington has been affected during 11 drought periods since 1902. Three of these were during extended dry periods: April 1934-March 1937, October 1976-September 1977, October 1991-September 1994, and October 2000-September 2001. This indicates an interval of occurrence of less than 10 years.

The possibility of drought exists in the City of Shelton. Normally, yearly rainfall is about 66 inches in the lower elevations while it could be 200 inches or more in the higher elevations of the Olympic Forest. However, several consecutive, hot, dry summer months can create parched and tinder dry conditions.

During periods of drought, municipal systems and private wells experience reduced water availability. This is mostly the result of declining aquifer levels. Water tables also experience noticeable decline. Residents are then notified to conserve. Brown lawns, water rationing, and having to ask for water in restaurants have done more to make people aware of the potential for drought in this state than have the problems of farmers and loggers in the past.

Potential impacts can be decreased ability to provide hydroelectric power; impact upon fish resources; shutdown and loss in the timber industry; potential for wildfires; closures to recreational areas. Problems are created for municipal and private water supplies.

#### **VULNERABILITY**

The City of Shelton has a high probability of experiencing drought conditions. An extended period of drought for the area is low due to the marine climate. Actual drought conditions have been limited even during extended dry spells. As the city continues to grow and expand into our UGA and the natural resources are more heavily impacted there could be an increase in vulnerability. Our City is at moderate risk to experience drought conditions for an extended period of time.

#### **EARTHQUAKES**

Earthquakes are one of nature's most damaging hazards. An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of Earth's tectonic plates. The severity of these effects is dependent on the amount of energy released



from the fault or epicenter. They usually occur without warning and after just a few seconds can cause massive damage and extensive amounts of casualties.

Each year, since 1980, the Pacific Northwest Seismograph Network has recorded an average of more than a thousand earthquakes in the Pacific Northwest.

The three most damaging earthquakes in Washington State occurred in 1949 a 7.1 magnitude quake near Olympia; 1965 a magnitude 6.5 quake between Seattle and Tacoma, which killed 15 people and caused more than \$200 million in damage in several counties; and 2001 a magnitude 6.5 quake northeast of Olympia, which caused an estimated to be in excess of \$1 billion.

There is a possibility of three different types of earthquake threats to the City of Shelton. A number of earthquakes have occurred within the downward thrusting Juan de Fuca Plate. Many are located beneath Puget Sound Seismologists speculate that an earthquake within this plate could be as large as magnitude 7.5. The second type is the shallow earthquake under the Puget Sound basin within the overlying North American Plate. Historically, the most damaging events occur at depths of 15 to 60 miles in the subduction plates. These are the least likely to occur but they could reach magnitude 9+. An earthquake of this magnitude would probably be located off the coast and has the potential of causing considerable damage hundreds of miles away from the epicenter.

Earthquakes cause damage by strong ground shaking and by the secondary effects of ground failures and tsunamis. The strength of ground shaking generally decreases with the distance from the earthquake source. Shaking can be much higher when earthquake waves are intensified by bedrock and then pass through softer earth materials such as sediment. Olympia is a good example of this amplification occurring and the ground shaking was much stronger there than in other areas.

Ground failure caused by earthquakes includes fault rupture, ground cracking, landslides, rockfalls, liquefaction and uplift. Faults do not often rupture through to the surface. Unstable ground is mostly at risk of the other effects. Any of these failures will affect structures above or below them.

### IMPACT

The damage could range from minimal to catastrophic, depending on the magnitude of the earthquake and the degree of preparedness. Damage could range from minimal structural damage to extreme loss of life and destruction of property.

### VULNERABILITY

The City of Shelton has a high probability to experience another damaging earthquake within the next 25 years. Since 1870 there have been 6 earthquakes that have been magnitude 6.0 or greater. Population and development have increased and without mitigation efforts we can expect higher loss due to greater exposure. City of Shelton is at high risk for earthquake damage.

Date	Time (PST)	Location	Depth (Km)	Magnitude
December 14, 1872	2140	North Cascades	Shallow	7.4
December 12, 1880	2040	Puget Sound		5.5
April 30, 1882	2248	Olympia area	Deep	6.0
November 29, 1891	1521	Puget Sound		5.0
March 6, 1893	1703	Southeast Washington	Shallow	4.9
January 3, 1896	2215	Puget Sound		5.7
March 16, 1904	2020	Olympics, Eastside		5.3
January 11, 1909	1549	Puget Sound	Deep	6.0
August 18, 1915	0605	North Cascades		5.6
January 23, 1920	2309	Puget Sound		5.5
July 17, 1932	2201	Central Cascades	Shallow	5.2
July 15, 1936	2308	Southeast Washington	Shallow	5.7
November 12, 1939	2346	Puget Sound	Deep	5.7
April 29, 1945	1216	Central Cascades		5.5
February 14, 1946	1914	Puget Sound	40	6.3
April 13, 1949	1155	Puget Sound	54	7.1
August 5, 1959	1944	Northwest Cascades	35	
April 29, 1965	0728	Puget Sound	63	6/5
February 13, 1981	2209	South Cascades	7	5.5
April 13, 1990	2133	Deming	5	5.0
January 28, 1995	1911	17.6 km NNE of Tacoma	16	5.0
May 2, 1996	2104	10.2 km ENE of Duvall	7	5.3
June 23, 1997	1113	5.5 km NE of Bremerton	7.4	4.9
July 2, 1999	1743	8.2 km N of Satsop	41	5/1
February 28, 2001	1054	17.6 km NE of Olympia	52.4	6.8

## EPIDEMIC

Epidemics are outbreaks of disease that affect, or threaten to affect, a significant portion of a population in a relatively short period of time. Although usually referring to human contagious disease, epidemics can also affect domestic and wild animals, crops and shellfish. Epidemic diseases are usually introduced into an area from remote regions and inflict devastation because there is no natural or induced immunity.

There has been no epidemic reported in the City of Shelton. This is probably due to our environment, which is not favorable to many of the world's most contagious diseases; our low population density; clean water and food supplies; effective sanitation; availability of inoculations and monitoring provided by public health officials. This does not make the county immune to the potential for a disease outbreak.

### IMPACT

During the influenza epidemic in 1918-1919, an estimated 20 million people died. The polio epidemic in 1946 killed approximately 25,000 people in the United States. The Legionnaire's Disease outbreak in Philadelphia claimed 30 lives. Due to our mobile society and the threat of terrorism there is growing concern that no one will be safe from the spread of diseases.

## VULNERABILITY

Everyone is vulnerable to an epidemic. There could be short or long term impact and massive loss of life. Devastating impact of the economy and on essential public safety and health services would be an issue.

The City of Shelton has a low probability of a major outbreak but the potential is great that there is a moderate risk for an epidemic.

## **FLOODING**

Flooding is the most common hazard occurring in the City of Shelton. Heavy, prolonged rain in the fall, winter or spring months often results in saturated ground and high stream flows. The three rivers/creeks in the City of Shelton, which cause the most problem, are Goldsborough, Shelton Creek, and Canyon Creek. The city can expect two to five or more flooding events during the typical year.

Some floods are termed "flash floods" as they build quickly, move swiftly and carry debris in a raging torrent. The three rivers/creeks that directly impact the City of Shelton are not considered significant threats of flash flooding.

Tidal flooding is also possible along the inland water. Extremely high tides accompanied by low atmospheric pressure, runoff or wind can cause tidal flooding along Hammersly Inlet.

Groundwater flooding occurs when the water table is high and there is persistent heavy rain. Water collects in any natural depression when the soil can no longer absorb the water.

## IMPACT

The Shelton Downtown Business Core and Neighborhood are subject to periodic flooding from the Goldsborough, Shelton and Canyon Creeks accompanied by tidal surges at the creek's mouth.

Floods could result in loss of life as well as damage to residences, business establishments, public buildings, roads and bridges, utilities, agricultural land, fish and shellfish habitats, stream banks and flood control structures.

Gravel and silt build-up from logging activities and natural causes increase the possibility of flooding as the streams fill with silt and debris, which divert their course.

The U.S. Army Corps of Engineers indicated after the 1996-1997 winter storm that the frequency of a groundwater flood disaster is approximately every 25 years. The winter storm created the first widespread groundwater-flooding event since 1972.

## VULNERABILITY

Flood vulnerability is the likelihood of something to be damaged by a flood. Generally, it is

measured by how much something will be damaged as a percentage of its replacement value.

There are two things that determine vulnerability to a flood. The first is the tendency of physical things to get damaged. The second is the potential loss of function from losing certain elements of a community because of a flood.

The City of Shelton is vulnerable to flooding, especially in the areas surrounding the three creeks. Because mitigation efforts in the form of stormwater projects and the elevation of homes in the flood plains of the three creeks, the monetary impact to both the property owners and the taxpayers is being reduced. Flooding along these creeks is more of a nuisance rather than a major threat.

The City of Shelton experiences flooding every year, which indicates there is a probability of it continuing. Because a percentage of the City's business population choose to live along water bodies and the population continues to grow expanding the City's impervious surfaces, the City is exposed to impact due to this category of disaster. The increased frequency of flooding, the potential for the three creeks to flood simultaneously, plus the City's record for property damage put it at a level of moderate risk.

## **FOREST FIRES/WILDFIRE**

A forest fire is considered as any uncontrolled burning within a forested area and uncontrolled and hard to extinguish burning in grassland, brush or woodland.

Fires are most likely to occur during the local dry season, which is normally from mid-May through October or any time during prolonged dry seasons. The impact from these fires is dependent upon weather, fuel, and ignition factors. They are usually extinguished while still small, but can spread to over 100,000 acres and require thousands of fire personnel several weeks to extinguish.

Wildland fires responded to by city and county fire departments are most often started by humans. Form of ignition is usually cigarettes, fireworks and outdoor burning. Wildland fires started by heat spark ember caused the largest dollar loss, followed by debris burning and cigarettes. Loss per incident for debris fires is three times higher than any other fire cause.

### **IMPACT**

The City of Shelton has the potential for fires. The impact of a major fire would be significantly increased by the loss of the vegetation that helps prevent landslides, runoff and flooding. There would be loss to property owners, the logging industry, wildlife, wildlife habitat, watersheds and the community infrastructure. There would be an immediate impact upon the economy due to loss of jobs reduction of tax revenue.

### **VULNERABILITY**

The City of Shelton has a moderate to high risk for a forest fire occurring. The increase in population, increased recreational activities, large amounts of public and private forestland and the changing climate all increase the potential for a forest fire/wildfire.

## HEAT WAVES

A heat wave is characterized by five or more consecutive days of unusually hot weather. The National Weather Service considers hot weather for the City of Shelton to be 90 degrees or higher.

There has not been a significant event of heat waves in our City. The unpredictable weather of recent history and the possibility of global warming suggest the possibility in the near future. The heat waves that hit the Chicago area during July of 1995 were responsible for more than 450 deaths and numerous heat-related injuries. Several extra refrigeration facilities had to be rented by hospitals in the area whose morgues were full due to the fatalities.

### IMPACT

Most residences in the City of Shelton do not have air conditioning because of the mild marine climate. Senior citizens, infants and those who are ill would be most susceptible to heat and its effects. Those living alone without a caregiver would be even more susceptible.

### VULNERABILITY

Due to the mild marine climate there is a low probability for or risk of a heat wave in the City of Shelton.

## LANDSLIDE /EROSION

The term landslide refers to the downward movement of a slope and masses of rock, soil or other debris under the force of gravity. Slides range in size from thin masses of soil a few yards wide to deep-seated bedrock slides. The form of initial failure commonly categorizes slides, but they could travel in a variety of forms along their paths. This travel rate could range in velocity from a few inches per month to many feet per second, depending largely on slope, material and water content.

Landslides are influenced by human activity (mining and construction of buildings and highways) and natural factors (geology, precipitation, and topography).

The identification of dormant slide areas is important; earthquakes or unusually wet winters can reactivate them. High land movement areas can be identified on or at the base of slopes; in or at the base of minor drainage hollows; at the base or top of an old fill slope; at the base or top of a steep cut slope.

Erosion refers to the gradual removal of soil through wind or water action. Erosion could be induced or increased by failure to use ground covers to protect soil from wind or drainage systems to allow good dispersal of storm water. Slopes on waterfront can also be severely undercut by normal water flow, wave action or large waves produced by storms.

### IMPACT

The City has not experienced major landslides within the past 25 years.

Severe slides in the City, but more importantly in Mason County, could affect travel routes to the extent that economic loss results. This loss can be particularly severe on tourists and businesses dependent upon recreational type activities.

Uncontrolled water flow frequently causes erosion, which in turn can cause landslides. The effects of erosion are usually much less dramatic than landslides, but the final results could be more costly.

### VULNERABILITY

The City of Shelton is subject to soil erosion due to wind, water and flooding at all times of the year. We are minimally impacted by landslides and erosion issues with each new winter storm. Soil erosion continues to occur during wind and rainstorms.

The most significant effects of landslides are the disruption of transportation and the destruction of property.

The City has identified slide hazard areas and required geo-technical investigation and preventative improvements before development can take place on top of or below slopes subject to sliding.

High winds have caused extensive damage through the county in past years. The most noted storm was the "Columbus Day " (hurricane type) storm of 1962. Severe winds also occurred during the Inauguration Day storm of 1993.

The City of Shelton remains moderately vulnerable to landslides due to the impact of rain, snow and windstorms.

### **STORM**

Destructive storms come in several forms: wind, rain, ice, snow and a combination. Any winter storm can pack high winds and heavy rain causing widespread damage. High winds of short duration, such as tornadoes and strong gusts from thunderstorms, can also be destructive though generally not as widespread.

Nearly all of the destructive local storms occur from November through April when the jet stream is over the United States West Coast and Pacific low-pressure systems are more frequent. The path of these lows determines their effect locally. The more southerly ones bring heavy rains while the northerly ones bring cold air and the potential for snow and ice. Any winter storm, regardless of its trajectory, can create high winds. Winds above 30 miles per hour can cause widespread damage and those above 50 miles per hour can be devastating.

### IMPACT

Since 1972 the City of Shelton has experienced fifteen severe storms. Twelve lead to Federal

**Disaster Declarations.** Most of these events were a combination of wind, heavy rain, snow or ice and the accompanying flooding.

The most recent event that impacted the City was the ice and windstorm of December 1996.

High winds can cause widespread damage to trees and power lines and interrupt transportation, communications, and power distribution. Prolonged heavy rains cause ground saturation, rivers and streams to rise, and result in flooding and landslides.

Ice storms occur when the rain falls out of a warm atmospheric layer into a cold one near the ground. The rain freezes on contact with cold objects including the ground, trees, structures, and power lines, causing buildings to collapse and power lines to snap.

Isolated residents without power are more likely to be impacted due to power outages and the time it takes to restore power. Some rural residences were without power for over two weeks during the ice storm of 1996.

### VULNERABILITY

The entire county is vulnerable to the effects of a storm. There is a very high probability and risk of a storm impacting the City of Shelton again. Historical damage and cumulative costs of destructive storms indicates a high vulnerability.

### **TSUNAMI / HIGH WAVES / SEICHES**

Tsunamis are sea waves generated by seismic activity, underwater volcanic eruptions, meteor impacts, or landslides. Every enclosed body of water has a number of natural resources. If you sit in a partially full tub of water and rock back and forth you will find that at the right time you can easily get the waves to grow until they overflow the bathtub. The resonant oscillation of the water is a "seiche". A seiche can occur not only on the southern portion of Hood Canal or Puget Sound but also on lakes, reservoirs, or any other enclosed body of water.

During the Northridge earthquake of 1994, swimming pools all over Southern California overflowed. During the Anchorage earthquake in 1964, swimming pools as far away as Puerto Rico were set into oscillation. This quake also caused a serious tsunami along the Washington Coast, resulting in \$105,000 in damage, which is based on 1964 dollars value. In 1994, a

tsunami warning was issued for the Washington coast due to a magnitude earthquake of 8.7, off Russia's Kuril Islands.

Large Pacific Ocean tsunamis have wave crest to wave crest distances of 60 miles and apart and can travel at speeds of 450 to 600 miles per hour in the open ocean. As the waves reach the shallow water of the shoreline, the waves are slowed which forces the water to form walls of water 30 feet or more in height. Debris can be deposited up to 1000 feet inland. A large tsunami can cross the entire Pacific in 24 hours.

There is some debate as to whether or not a tsunami could be generated in the Puget Sound by a local or offshore earthquake.

High waves, usually caused by wind and storm activity have battered the Puget Sound in the past and must also be considered a hazard to the City of Shelton.

### IMPACT

The City of Shelton borders the Puget Sound on the northeast side. Although there is no record of tsunami activity in the South Puget Sound area, the Pacific Coast has been threatened several times. A strong earthquake below either Puget Sound or Hood Canal could cause damaging waves, which could impact residences built along the shorelines. The most significant damage would be similar to those created during abnormally high tides in the region.

### VULNERABILITY

The City of Shelton is at low risk for significant threat from these events.

## **VOLCANOS/ASH FALL**

Mount Rainier is the most dangerous volcano in the Cascade Range because of the large population and the huge area and volume of ice and snow on its slopes that could melt to generate debris flows during a catastrophic eruption. Each of the five major rivers, the Carbon, White, Cowlitz, Nisqually and the Puyallup flows westerly. Each, with the exception of the Cowlitz, empties into Puget Sound near Tacoma. The Cowlitz flows into the Columbia River and then into the Pacific Ocean. Much of the lowland to the east of Tacoma and the south of Seattle is formed of pre-historic debris from Mount Rainier.

Volcanic eruptions can cause damage in the City of Shelton primarily by ash fall. The probability of ash fall depends on wind direction and the volcanic source of the eruption causing the ash fall. Most of the dangers are to persons in the near vicinity of the volcano. Other dangers, such as mudflows and ash fall, could exist miles downstream and down wind. The most recent was the 1980 volcanic eruption of Mount St. Helens in the Cascade Mountain Range. This eruption claimed 57 lives and cost approximately one billion dollars in damage.

In the last 515 years, Mount St Helens is known to have produced 4 major explosive eruptions (each with at least 1 cubic kilometer of eruption deposits) and dozens of lesser eruptions. Prior to its latest eruption, there were more than 10,000 earthquakes in the vicinity, hundreds of small steam-blast explosions, and the outward growth of the volcano's entire northern flank by more than 80 meters. A magnitude earthquake of 5.1 struck beneath the volcano at 8:32 A.M. on May 18, setting in motion the devastating eruption. Within seconds of the earthquake, the volcano's north flank slid away in the largest landslide in recorded history. The explosion swept across the landscape as fast as 1,100 kilometers per hour. Temperatures were as high as 300 degrees Celsius within the blast. A gigantic plume of ash reached 19 kilometers into the sky and approximately 490 tons of ash was carried across 57,000 square kilometers of the Western United States.

The City of Shelton experienced some ash fall but no reported loss. In the past 200 years this volcano has erupted three times.



## IMPACT

Ash fall from the eruption of Mount St. Helens was non-existent to light in the City. It did not cause any significant damage. It is unknown if an eruption of Mount Rainier would have a direct impact upon the City, but it could cause a major disruption to transportation of supplies if the main corridors of transportation were affected.

## VULNERABILITY

The City of Shelton is at low risk for significant threat from volcanic eruption.

### Man-Made Hazards:

#### **CIVIL DISTURBANCE**

Civil disturbance or unrest is the result of individuals or groups within the population feeling their needs or "rights" are not being met by society, a segment of it, or the current political system. Civil unrest spans a variety of actions including labor unrest, strikes, civil disobedience, demonstrations, riots and rebellion. Events that could trigger these actions include racial tension, unemployment, unpopular political actions, and a decrease in the supply of essential goods or services.

The City of Shelton has experienced no significant incidents of local civil disorder or disturbance.

## IMPACT

There is little likelihood of significant impact in the City.

## VULNERABILITY

History suggests a low probability of occurrence and low vulnerability.

#### **DAM FAILURE**

Flooding, earthquakes, poor construction, lack of maintenance and repair, improper operation, or acts of vandalism or terrorism could cause Dam failure.

## IMPACT

Major impact to the City of Shelton would be accommodating large numbers of displaced residents and impact other local services. Dam failure could result in loss of life and damage to property including structures, transportation routes, utilities, agriculture and aquaculture. Depending on location,

Dam failure could result in a lowered tax base, lack of power profits or other significant economic loss.

A failure at the Cushman Dam would result in extensive property damage and loss of life. Tacoma City Light, the owners and operators of the dam and hydroelectric project, carefully monitor the dam and maintain updated emergency plans as well as hold emergency exercises. Local authorities are responsible for warning and evacuation should a breach occur.

A breach in Anderson Dam at Lakeland Village could create a threat to approximately 25 residences downstream.

Casad Dam in Kitsap County could affect residents along the Union River if there was a breach to this dam.

### VULNERABILITY

Mason County is vulnerable to dam failure and therefore creating an impact to the City of Shelton. To assure Dam safety, the State Department of Ecology inspects all dams in Mason County and requires safety plans from the owner of each dam in the County.

History indicates a low probability of dam failure in Mason County. The failure of a high hazard dam would threaten an important segment of the County suggesting moderate vulnerability. Because the major dams within the County are well maintained and operated provides no reason to anticipate a compromise in the structural integrity other than from a major natural disaster or from terrorist actions there is a low risk assigned.

### MASON COUNTY DAMS

1. Anderson Lake Dam
2. Bennettsen Lake Dam
3. Buck Lake Dam
4. Christine Lake Dam
5. Cranberry Lake Storm Water Detention Dam
6. Cushman Dam #1
7. Cushman Dam #1 – Spillway Headworks
8. Cushman Dam #2
9. Fawn Lake Dam
10. Haven Lake Dam
11. Lakeland Village Pond No. 1
12. Leprechaun Lake Dam
13. Lake Limerick Dam
14. Little Twin Lakes Dam
15. Melbourne Lake Dam
16. Rosand Dam
17. Timberlake Dam
18. Trask Lake Dam
19. Uddenberg Dam
20. West Lake Dam

## HAZARDOUS MATERIALS INCIDENTS

Chemical hazards are created when there is a release of toxic agents into the atmosphere and environment that can harm population, animals, and food supplies.

Hazardous chemicals are used for a variety of purposes and are regularly transported through the City of Shelton. Ammonia is used as a refrigerant, in agriculture, and in wastewater treatment. Chlorine is used in wastewater treatment, water systems, swimming pools, and in the paper industry. Propane is widely used as a fuel. U.S. Highway 101 is the transportation corridor for transportation of hazardous materials to the rest of the Olympic Peninsula. State Highway 3 and Burlington Northern provide the transportation routes to and from Kitsap County and the Bremerton Naval Base.

Hazardous materials include those used in manufacturing, household chemical, crude oil, petroleum products, pesticides, paints, medical waste, fertilizers, etc.

### IMPACT

Major spills and accumulations from minor spills or unsafe disposal could cause long-term damage to resources such as water, forests, or beaches. Spills could cause population evacuation, unsafe working or living conditions, unemployment or economic impact.

### VULNERABILITY

Virtually every household and business in the county stores and uses varying amounts and kinds of hazardous chemicals.

Hazardous chemical shipments, bulk users, wholesalers and retailers are managed in accordance with federal and state law. They must submit an annual Tier II report as to type of hazardous materials on their premises. (See Attachment I)

Chemical spills, primarily oil and fuel spills, occur in the City of Shelton on both land and water. Hazardous material spills are a regular occurrence in the City. The smaller spills are most often petroleum products or illegally disposed of household materials. The increase in the number of methamphetamine related incidents in the City and County indicate an increase in this activity and the threat this poses to emergency responders, the community and the environment.

Small amounts of non-regulated chemicals usually in the form of household materials are routinely disposed of by dumping them into the environment through waste collection systems or directly into the ground or water.

The potential for a catastrophic spill of bulk hazardous chemicals exists. Due to the lack of a Class A Hazardous Materials Response Team, the city is placed at moderate risk in the event of a major spill.



**ATTACHMENT I**

**SARA TITLE III FACILITIES  
 2002  
 TIER TWO REPORTS**

CRK000022930	AM TWR Kamilche Sulfuric Acid	9 mi south of Shelton	Shelton
CRK000048380	WSDOT Fuels	633 W Dayton-Airport Rd	Shelton
CRK000004750	Tacoma DPU Cushman Fuels	1451 Highway 101	Shelton
CRK000042640	Bingham Crk Hatchery Fuels/Formalin	3914 Fish Hatchery Rd	Elma
WAD988501557	Washington State Patrol Fuel	631 Dayton-Airport Road	Shelton
WAD988522272	Shelton City Shop Fuel	1000 West Pine	Shelton
CRK000007040	Ferrell Gas Propane	19920 Highway 101	Hoodsport
WA0000137604	Central Shop Antifreeze/Lube Oil/ CMS-2 Asphalt Emulsion/ CRS-2 Asphalt Emulsion/ Coherex/Fuels	3620 E. Johns Prairie Road	Shelton
CRK000042280	Courthouse Fuels	419 North 4th Street	Shelton
CRK000042160	Jarrell's Cove Marina Fuel/Propane	220 E Wilson Road	Shelton
WAT540011061	Hoodsport CDO	121 Schoolhouse Hill Rd	Hoodsport

Mason County Hazard Mitigation Plan  
October 2004

WAD00641282	Belfair Co PE 26099	Lead/Sulfuric Acid Lead/Sulfuric Acid	23650 St Route 3	Belfair
WAT540011400	Shelton CO	Lead/Diesel/Sulfuric Acid	522 West Railroad Ave	Shelton

SERVICE STATIONS

Bob's Hoodsport Auto and Towing	Fuel	24151 North Highway 101	Hoodsport
Chevron	Fuel	661 East Pine Street	Shelton
Jarrell's Cove Marina	Fuel	Harstene Island	Shelton
NOW Convenience Store-Shell	Fuel	1528 Olympic Highway So	Shelton

## **TERRORISM**

Terrorism is defined as the use of force or violence against persons or property violating the criminal laws of the United States for purposes of intimidation, coercion, or ransom. Terrorists often use threats to create fear among the public; try to convince citizens that their government is powerless to prevent terrorism; and try to get publicity for their causes.

A terrorist attack can take several forms depending on the technological means available to the terrorist, the nature of the political issue motivating the attack, and the points of weakness of the terrorist targets. Bombings are the most frequently used terrorist method in the United States. Other possibilities include attacks upon transportation facilities, utilities or other public services, or incidents involving chemical or biological agents. The Federal Bureau of Investigation categorizes terrorism in the United States as one of two types: domestic or international terrorism.

Domestic terrorism involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction, such as the Oklahoma City bombings and the series of domestic attacks and bank robberies in 1995 in Spokane by a militia group.

International terrorism involves groups or individuals whose terrorist activities are foreign based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries, such as the attack on the World Trade Center in 1993, and the recent attack on New York's Twin Towers and on the Pentagon.

### **IMPACT**

The impact of terrorism can vary significantly from massive loss of life and property damage to nuisance service interruptions. Threatened services include power, water supply, public transportation, communications, and public safety.

### **VULNERABILITY**

The type of terrorist act would determine vulnerability. This could include a large portion of the population or infrastructure with the destruction of a major power distribution line, a pipeline, or the contamination of a municipal well or a small segment with a bomb threat to a business or government agency.

City of Shelton receives bomb threats at county facilities and schools periodically, but is at low risk for a terrorist attack.

## **NUCLEAR INCIDENTS**

Puget Sound Naval Shipyard and the Naval Submarine Base at Bangor are both located in Kitsap County. Puget Sound Naval Shipyard stores spent fuel rods and decommissioned nuclear submarines. The Submarine Base at Bangor is the home of the Trident submarine, a nuclear powered submarine.

### **VULNERABILITY**

The City of Shelton is not in close proximity to a fixed nuclear site. The possibility of some type of nuclear exchange does exist.

The City of Shelton would not be considered a target area but is located close to targeted areas. There are no fall out shelters and little indoor space to place refugees. Mitigation efforts on the local level would involve having written material available on fall out shelters and have individuals trained in radiological monitoring.

Nuclear accidents/incidents involving facilities in Kitsap County or the transportation of materials through Mason County could have an impact on the communities in near proximity to them. Emergency plans and procedures need to address the county's response and recovery activities, regardless of the probability of such occurrence.



Mason County Hazard Mitigation Plan  
October 2004

County commission roundup: *Shelton Journal*  
*9-18-03*

# Sheriff's office gets grant for natural hazards plan

The Washington State Military Department and the Federal Emergency Management Agency have awarded a \$50,000 grant to the Mason County Division of Emergency Management. These funds will allow the Emergency Management Council to develop a Natural Hazards Mitigation Plan. Mason County Sheriff Steve Whybark stated in a press release.

The plan includes the development and documentation of a vulnerability assessment, the development and prioritization of a mitigation strategy, the development and documentation of a plan maintenance process, and a plan review every five years. The council meets twice a month to assure that the county's hazard mitigation plan is established by November 1, 2004. Whybark continued in the press release.

This council works with each local fire jurisdiction to gather information for neighborhood profiles. Currently, department representatives from city and county governments along with port authorities, local fire districts, schools, the American Red Cross, and the hospital district make up this council. The committee is looking for additional representatives from community organizations, religious groups and the county at large. Whybark added.

In other business on Tuesday, September 16, the Mason County Commission:

- Received word that all re-

quirements for the North Bay and Case Inlet Wastewater Facilities Construction Project have been satisfactorily completed. With that in mind the county accepts \$5,000,000 from the Centennial Clean Water Fund Program toward the project.

- Approved and signed the agreement with Tire Disposal and Recycling, Incorporated for the removal and recycling of tires collected at the Mason County Solid Waste Facility and drop box stations.

- Authorized a contract with Mason County Washington State University Cooperative Extension and Mason County Drug Abuse Prevention to provide \$10,555 for the extension to implement the prevention program "Strengthening Families" in four locations between September 2003 and

June 2005.

- Approved an Adopt-a-Road agreement with the Lost Lake Trash Pickers for Frosty Lane and a mile and a half of Lost Lake Road.

- Approved an agreement with the United States Geological Survey, U.S. Department of the Interior for gaging stations in the Skokomish River basin. The county's annual cost is \$3,190.

- Approved a resolution stating the county's intention to condemn certain property to allow for the widening and realignment of Old Olympic Highway.

- Postponed a scheduled discussion regarding the need for interim measures or alternatives to address signs in the county, including billboards, while the planning processes to review certain sign standards proceed.

## MASON COUNTY Emergency agency gets \$50,000 grant

The Mason County Division of Emergency Management has been awarded a \$50,000 grant from the state and the Federal Emergency Management Agency.

The funds will be used to develop a Natural Hazards Mitigation Plan, which will include vulnerability assessment, development of a mitigation strategy, development of a plan process and a plan review every five years.

The plan is scheduled to be established by Nov. 1, 2004.

To volunteer to be a member of the committee or for more information, call the Division of Emergency Management at 360-127-7526.

*Whybark 9/16/03*

Press release

Representatives from many different disciplines with Mason County are gathering monthly to assure that a County Hazard Mitigation Plan is established by Nov 1<sup>st</sup> 2004. The Federal Emergency Management Agency (FEMA) has require that all state and local jurisdictions develop and begin to institute the plan by 2004 if they wish to receive future disaster recovery or mitigation funds. Mitigation are those actions taken by a government or citizen to reduce the impacts of the next future disaster, whether its flooding, an earthquake or winter storm.

Currently, department heads from city and county government along with representatives from some of the county's port authorities and local fire districts are undertaking this mammoth task of gathering the information that is require just to begin this process of developing the All Hazards Mitigation Plan. A start has been made, but involvement from other entities within the county is needed. School districts, business and community organizations, religious groups in short the public needs to be involved. In order for this plan to be effective, the entire community needs to be involved. We, the community, need to gather the bits and pieces to identify pre-disaster projects and activities that will help reduce our community's vulnerability to disaster that in turn will save lives and property. In the business community alone about 80% of the small businesses that close their doors because of the effects of a disaster, never re-open. The effects of poor planning can have lasting effects on the private sector as well. The cost of rebuilding can be astronomical.

In a time of diminishing resources and increasing need it is incumbant upon all of us to be apart of the process of making our community safer for our families, friends and neighbors. The benefits of planning is two-fold it helps us prepare to lessen the effects of a disaster and it guarantees that monies and resources will be there to aid in a speedy recovery. Mason County cannot afford to be unprepared for the future. Any questions or comments should be addressed to the Division of Emergency Management at 427-7535.

**Appendix F**

**PRESS RELEASES**

September 16, 2003

**TO: KMAS, KRXY, SHELTON-MASON COUNTY JOURNAL, THE OLYMPIAN, SHELTON CHAMBER OF COMMERCE, NORTH MASON CHAMBER OF COMMERCE, CITY OF SHELTON, ECONOMIC DEVELOPMENT COUNCIL, THE SUN**

**RE: Mason County Emergency Management Council Receives a Grant to Complete Hazard Mitigation Plan**

The Mason County Division of Emergency Management has been awarded a \$50,000 grant from the Washington State Military Department and the Federal Emergency Management Agency. The funds will allow the Emergency Management Council to develop a Natural Hazards Mitigation Plan.

The plan includes the development and documentation of a vulnerability assessment, the development and prioritization of a mitigation strategy, the development and documentation of a plan maintenance process, and a plan review every five years. The Mason County Emergency Management Council meets twice a month to assure that the County's Hazard Mitigation Plan is established by November 1, 2004.

The Mason County Emergency Management Council is working with each local fire jurisdiction to gather information for neighborhood profiles. Currently, the council is made up of department representatives from city and county governments along with port authorities, local fire districts, schools, the American Red Cross, and the hospital district. The committee is looking for additional representatives from community organizations, religious groups and the county at large.

To volunteer to be part of the Natural Hazards Mitigation Plan process or for answers to any questions you might have, please contact the Division of Emergency Management at (360) 427-7535.

Steve Whybark, Mason County Sheriff

# County working on secret plan for emergencies

By ANDY COCHRAN  
and REBECCA WELLS

A hearing on a proposal to rename the disaster assistance council and the director of emergency management, create a countywide emergency management planning team, and assign appropriate duties has been continued again.

The hearing before the Mason County Commission was first continued from July 22, then postponed on August 19, to September 9 and yet again to Tuesday, October 21. Robert Fink, a planner with the department of community development, asked for the delay so the various agencies involved could continue "additional information gathering."

The county and the City of Shelton have been working with local entities to develop a comprehensive plan to deal with multiple types of disasters. Officials would respond differently, for example, to an earthquake than they would to a fire or a major loss of power such as the recent East Coast blackout. Fink explained in a staff report.

As of the July 19 meeting, the proposed amendments to the existing plan involved naming the members of the emergency management planning team, including the county fire marshal and assistant director of the Mason County Sheriff's Office division of emergency management, who will act as chair of the team.

**OTHER MEMBERS** could be the directors of the Mason County departments of public works, health services and community development as well as the city's fire chief and chief of police.

Also listed are firefighters, first-aid and health professionals, representatives of the media, and community groups.

During the public hearing August 19, Ray Hanson of Union asked if the county had a plan to deal with emergencies.

When commissioners responded that such a plan was in place, Hanson asked if the public had access to the plan. Commissioners said that, no, the public was not allowed to see the plan because it deals with county and city facilities and offering them to the public would be a security breach.

At the September 9 continuation of the public hearing, Harvey Warnaca, of Shelton, asked commissioners to identify who would head up the team, but the commissioners responded to him just as they did to Hanson.

According to commissioners, there is another plan to mitigate hazards that is being assembled right now. Sandi Loertscher of the Mason County Office of Emergency Management, says the plan will hopefully be finished by June 2004. At that time, it will be submitted to the state for review, then sent back to the county for corrections, and then on to the federal Office of Homeland Security for another round of scrutiny.

**ONCE BOTH** of those offices have given it their stamp of approval, the plan will be available to the public.

Loertscher says her office hopes to release the plan to the public early in 2005. A copy of this document is available for public review at the William G. Reed Public Library, 710 West Alder Street, Shelton.