

# Skagit County

## Natural Hazards Mitigation Plan



A MULTI-JURISDICTIONAL PLAN DEVELOPED FOR THE BENEFIT OF ALL  
GOVERNMENTAL JURISDICTIONS WITHIN SKAGIT COUNTY AS WELL AS THE  
SWINOMISH INDIAN TRIBAL COMMUNITY AND THE UPPER SKAGIT INDIAN TRIBE

Prepared by Skagit County Department of Emergency Management  
September 2003

# Introduction

Throughout history, the residents of Skagit County have dealt with the various natural hazards affecting the area. Photographs, journal entries, and newspapers from the mid to late 1800's to the present show that the residents of the area have dealt with high water, severe windstorms, harsh winter storms, wildfires, earthquakes, landslides, and even minor volcanic activity. Although there were fewer people in the area many years ago, the natural hazards did at times, adversely affect the lives of those who depended on the land and climate conditions for food and welfare. As the population of the county increased, the exposure to natural hazards created a greater risk than experienced historically. With an ever-continuing growth in population and the development of natural lands, the impact of these natural hazards will continue to escalate.

Skagit County's rural setting, a one-hour drive north from Seattle on I-5, combined with its mild climate and close proximity to the waters of Puget Sound and the mountains of the North Cascades create an almost ideal locale that draws people to live here. However, the potential impacts of natural hazards typical to the area make the population, business community, and the environment vulnerable to natural disaster situations.

Skagit County is subject to flooding, severe storms, landslides, earthquakes, wildfires, and volcanic activity and to a much lesser extent, avalanche, drought, tsunami, and seiche. It is impossible to predict exactly when these disasters will occur, or the extent to which they will affect the county, but occur they will – it is only a matter of time. However, with careful planning and collaboration among public agencies, private sector organizations, as well as citizens and businesses within the community, it is possible to minimize the losses that can result from these natural disasters.

Skagit County experienced large-scale destruction during the back-to-back flood events that occurred in November of 1990. The Skagit River and its tributaries swelled due to heavy rain and melting snow causing flooding in both rural and urban areas. The damage to Skagit County businesses, residences, and infrastructure from these two events exceeded \$36 million. Skagit County sought and received a Presidential Disaster Declaration to obtain federal assistance for its flood recovery effort. It is estimated that the 1990 flood events directly or indirectly affected at least three-quarters of the county's residents.

The 1990 floods were followed by similar back-to-back floods in November of 1995 (Federal Disaster Number 1079) that resulted in over \$14.5 million in damages. Another flood event in February of 1996 resulted in more than \$1.1 million in damages.

**Skagit County's damages caused by the 1995 floods represented 25% of all Federal Emergency Management Agency (FEMA) Public Assistance costs statewide, 29% of Individual Grants, 29% of Small Business Administration (SBA) loans, and 22% of all National Flood Insurance Program claims.** (Source: FEMA)

Following the 1995 floods, the City of Mount Vernon sought and received \$517,500 in disaster mitigation funds through the Hazard Mitigation Grant Program. Following the 1996 flood, Skagit County sought and received \$4,245,155 and the City of Mount Vernon sought and received \$2,024,000 in disaster mitigation funds through the Hazard Mitigation Grant Program. In addition, Skagit County also received \$1,329,109 in Community Development Block Grant funds, the bulk of which was used to buy-out, elevate, or re-locate repetitive loss properties.

As a result of this funding, 49 repetitive-loss properties were mitigated by Skagit County. Of these properties, 1 home was elevated, 7 homes were re-located outside of the floodplain, and 41 homes were purchased and removed from the floodway or floodplain. In addition 43 repetitive-loss properties were mitigated by the City of Mount Vernon. A total of 2 businesses, 25 homes, and 16 mobile homes were purchased and removed from the floodway in the City of Mount Vernon.

### **What is natural hazard mitigation?**

Natural hazard mitigation is the development and implementation of activities designed to reduce or eliminate losses resulting from natural hazards.

### **Why develop a natural hazards mitigation strategy?**

Developing a mitigation strategy for Skagit County completes the process of planning that began with the Skagit County Emergency Management Plan. This plan serves to establish a foundation for coordination and collaboration among local Indian Tribes, agencies, jurisdictions, and the citizens of Skagit County in addition to identifying mitigation strategies and future mitigation projects as a means to assist in meeting the requirements of various federal assistance programs.

The rising cost of responding to and recovering from natural disasters has led to a renewed interest in identifying effective ways to reduce the vulnerability to natural hazards and the disasters these hazards can create. Natural hazard mitigation plans assist communities in identifying the hazards that could impact them, determining the vulnerability of the community to these hazards, and identifying mitigation strategies to prevent or reduce the impacts these hazards pose to the community through a coordinated, multi-jurisdictional approach.

### **What are the benefits of hazard mitigation?**

- **Save lives and property** – communities can save lives and reduce property damage from natural hazards through mitigation actions, such as moving families and their homes out of harm's way or by limiting development and/or regulating the type of construction or structures allowed in certain areas.
- **Reduce vulnerability to future hazards** – by having a mitigation strategy in place, communities are better prepared to take the proper steps that will permanently reduce the risk of future losses.
- **Facilitate post-disaster funding** – by identifying mitigation strategies and projects before the next disaster, communities will be in a better position to obtain post-disaster funding because much of the background work necessary for funding assistance will already be in place.

- **Speed recovery** – by developing a mitigation strategy, communities can identify post-disaster mitigation opportunities in advance of a disaster.
- **Demonstrate commitment to improving community health and safety** – developing a mitigation strategy demonstrates a community's commitment to safeguarding its citizens and protecting its economic and environmental well-being.

### **Who does the natural hazards mitigation plan benefit?**

The **Skagit County Natural Hazards Mitigation Plan** was developed, written, and adopted as a multi-jurisdictional natural hazards mitigation plan for the benefit of the incorporated municipalities, various special purpose districts, the Swinomish Indian Tribal Community, and the Upper Skagit Indian Tribe as well as the unincorporated rural areas of Skagit County. It is anticipated that a large number of county special purpose districts will also adopt this plan in order to benefit from future hazard mitigation funding.

The information contained in this plan is applicable county-wide and serves to provide the framework for natural hazard mitigation within Skagit County. Much has already been gained in simply developing this plan and establishing the basic mitigation strategies that have been incorporated into this document. It is hoped that the spirit of inter-jurisdictional cooperation that has begun with this planning effort will continue in the years to come thereby providing further benefits to all jurisdictions and agencies within the county as well as the citizens these jurisdictions and agency serve.

Furthermore, the **Skagit County Natural Hazards Mitigation Plan** was developed following the process set forth in the Disaster Mitigation Act of 2000 as well as the requirements of the National Flood Insurance Program Community Rating System. By doing so, it is anticipated that the citizens living in those jurisdictions within Skagit County that participate in the Community Rating System could possibly further benefit from this plan through an additional decrease in their flood insurance premiums.

### **Natural hazards land use policy in Washington**

Planning for natural hazards in Washington has taken shape over the past 30 years beginning with the State Environmental Policy Act (1971) and the Shorelines Management Act (1971), and followed by the State Building Code Act (1974, 1985) and the Growth Management Act (1991). It is an integral element of Washington's statewide land use planning program which focuses on appropriate land use controls in critical areas that are prone to natural disasters, along with keeping up with the latest technology in construction methods to mitigate potential disasters.

### **Support for natural hazards mitigation**

The primary responsibility for the development and implementation of mitigation strategies and policies lies with local jurisdictions. However, local jurisdictions are not alone; various partners and resources exist at the state and federal levels to assist local government in the development of mitigation strategies and plans. Within Washington State, the Washington Military Department, Emergency Management Division is the lead agency for providing hazard mitigation planning assistance to local jurisdictions.

# MULTI-JURISDICTION/MULTI-HAZARD MITIGATION

## **Mitigation Goals:**

The natural hazard mitigation goals listed in this portion of the plan are multi-jurisdictional in nature and are intended to help guide the direction of and prioritize future natural hazard mitigation activities at the local level aimed at reducing risk and preventing loss from natural hazards.

### **1. Protect Life and Property**

- Implement mitigation activities that will assist in protecting lives and property by making homes, businesses, infrastructure, and critical facilities more resistant to natural hazards.
- Continue the Skagit Community Emergency Response Team (C.E.R.T.) Program to provide citizens from all areas of Skagit County with the information and tools they need to help themselves, their families, and their neighbors in the hours and days immediately following an emergency or disaster event.
- Encourage homeowners and businesses to purchase insurance coverage for damages caused by natural hazards.
- Encourage homeowners and businesses to take preventative actions in areas that are especially vulnerable to natural hazards.

### **2. Increase Public Awareness**

- Develop and implement additional education and outreach programs to increase public awareness of the risks associated with natural hazards.
- Continue the current flood awareness programs conducted by various jurisdictions as part of the National Flood Insurance Program Community Rating System.

### **3. Encourage Partnerships**

- Strengthen inter-jurisdiction and inter-agency communication and coordination and partnering of jurisdictions and agencies to foster the establishment and implementation of natural hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.

### **4. Provide for Emergency Services**

- Encourage the establishment of policies at the local level to help insure the prioritizing and implementation of mitigation strategies and/or projects designed to benefit critical/essential facilities, services, and infrastructure.
- Where appropriate, coordinate and integrate natural hazard mitigation activities with existing local emergency operations plans.

## **Multiple-Hazard Mitigation Action Items:**

For the purpose of this plan, multiple-hazard action items are those strategies and/or activities that pertain to earthquake, fire, flood, land movement, severe storm, and volcanic event. Action items were not identified for avalanche, drought, and tsunami/seiche as explained below:

- The avalanche hazard in Skagit County does not affect any populated areas. Due to the fact that avalanche is a concern only to those persons engaged in isolated, backcountry activities, specific mitigation action items were not identified for this hazard.
- While there is a remote possibility of drought affecting Skagit County, there is no record of a severe or long-term drought event that has seriously impacted persons or the economy of individual jurisdictions within Skagit County. Fire danger as a result of short-term drought conditions is addressed in the Fire section of this plan and it is anticipated that individual jurisdictions will promote mitigation actions such as public awareness and education regarding fire risk and prevention as part of this plan. For these reasons, specific mitigation action items were not identified for this hazard.
- While there is a very remote possibility that a damaging tsunami or seiche may affect certain areas of Skagit County, there is no record of such an event affecting communities in Skagit County. A study of Whidbey Island, Anacortes, and the Bellingham Bay areas is currently being conducted to determine the threat of tsunami in these areas. Should future evidence become available that damaging tsunami and/or seiche activity could affect specific areas within Skagit County, specific mitigation action items will be identified for this hazard.

The action items included in this section of the plan may be short-term, long-term, or on-going in nature. Some actions may include activities that jurisdictional agencies may implement with existing resources and authorities. Other more complex actions may require new or additional resources or authorities as well as multi-agency and/or multi-jurisdictional partnering.

Some of the mitigation actions and/or projects included in this plan are focused on reducing the effects of various natural hazards on new buildings and infrastructure. Examples of these mitigation actions and/or projects include:

- Mitigation strategies and/or ordinances and codes regarding building regulations and construction set-backs from unstable or steep slopes, alluvial fans and other critical areas.
- Community Rating System Program activities designed to reduce or limit damage from flooding to structures built within the 100-year floodplain.

Some of the mitigation actions and/or projects included in this plan are focused on reducing the effects of various natural hazards on existing buildings and infrastructure.

Examples of these mitigation actions and/or projects include:

- Construction and/or modification of river levee systems.

- Obtaining additional flood storage capacity within existing hydroelectric reservoirs located with the Skagit River and Baker River watersheds.
- Buy-out and/or elevation of flood repetitive loss properties.

**Multiple-Hazard Action Item #1:**

Each of the jurisdictions and Indian tribes participating in the **Skagit County Natural Hazards Mitigation Plan** shall establish their own Mitigation Planning Committee to assist the local governing body of that specific entity in the selecting, prioritizing, and evaluating of entity-specific mitigation measures.

In order to maintain continuity in the mitigation planning process, at least one member of this Mitigation Planning Committee shall represent the participating jurisdiction or Indian tribe as a member of the Skagit Natural Hazards Mitigation Planning Committee.

LEAD AGENCY: Local elected governing body (board of county commissioners, city or town council, tribal senate or tribal council)

FUNDING SOURCE: Jurisdiction/Indian tribe Budget and/or available grant funding

TIME-LINE: Within one (1) year of completion and promulgation of this plan

**NOTE:** Due to the lack of staff of many special purpose districts, *this action item does not apply to the special purpose districts that participate in this plan.* However, if a special purpose district elects to do so, the district may participate in this process. Non-participation in this process does not preclude a special purpose district from membership on the Skagit Natural Hazards Mitigation Planning Committee.

**Multiple-Hazard Action Item #2:**

Where appropriate, incorporate the goals and action items identified in this section of the **Skagit County Natural Hazards Mitigation Plan** into other existing plans and/or regulatory documents and programs. Possible plans, documents, and programs include:

- Jurisdictional Code(s)
- Jurisdictional Ordinance(s)
- Jurisdictional Comprehensive Plan
- Jurisdictional Capital Facilities and/or Improvement Plan
- Jurisdictional Critical Areas Ordinance(s)
- Skagit County Comprehensive Economic Development Strategy
- Growth Management Act
- Coordinated Water System Plan
- Jurisdictional Flood Plan(s)
- Jurisdictional National Flood Insurance Program Community Rating System Program

LEAD AGENCY: Jurisdiction and/or Indian tribe Planning Department and/or Public Works Department

FUNDING SOURCE: Jurisdiction/Indian tribe Budget and/or available grant funding

TIME-LINE: Upon completion and promulgation of this plan and as each jurisdiction and/or Indian tribes adoption process allows

It is important to note that the development and adoption of a multi-jurisdictional natural hazards mitigation plan is a new concept for the Indian tribes, jurisdictions and special purpose districts of Skagit County. Some jurisdictions, Indian tribes, and special purpose districts have begun this activity and listed in those entities portions of SECTION IV of this plan are links between on-going mitigation activities and in-place plans, programs, and directional documents. Unless stated otherwise within an individual entities portion of SECTION IV of this plan, the process by which mitigation action items and/or activities will be incorporated into existing plans, documents and programs should (at a minimum) involve the following components:

1. Lead Agency identifies appropriate plans, programs, and directional documents where mitigation actions items and/or activities may be inserted.
2. Public hearings and participation of all involved agencies throughout the incorporation process.
3. Inter-jurisdictional and/or inter-agency cooperation and partnering formalized by signed inter-local agreements.
4. Inter-jurisdictional and/or inter-agency studies or work sessions.
5. Final approval by the local elected governing body such as the board of county commissioners, city or town council, tribal senate or tribal council, school board, or special purpose district board of commissioners.

### **Multiple-Hazard Action Item #3:**

Continue and/or enhance existing education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. Possible ideas include:

- Continue to make the **Skagit County Natural Hazards Mitigation Plan** available to the public by providing a link to the plan on local jurisdictional websites.
- Continue and/or enhance and expand the Skagit Community Emergency Response Team (C.E.R.T.) Program.
- Continue the National Flood Insurance Program Community Rating System Program to inform citizens in participating jurisdictions about the flood risk in Skagit County.
- Continue to make public awareness materials and programs available from various sources available to the public to help inform the citizens of all communities within Skagit County as to the risks associated with various natural hazards.

**LEAD AGENCIES:** Skagit County Department of Emergency Management and local Community Rating System coordinators

**FUNDING SOURCES:** Jurisdiction Budget; Region 3 Life Safety Council Budget; various grant monies such as Washington State Department of Ecology Flood Control Assistance Account Program (FCAAP) funds

**TIME-LINE:** These programs are currently active and on-going

### **Multiple-Hazard Action Item #4:**

Develop partnerships with various jurisdictions and agencies as well as private business and industry to identify and pursue funding opportunities to implement local mitigation activities and

to foster coordination and collaboration of natural hazard mitigation goals, strategies, and projects within Skagit County. Possible actions include:

- Identify and encourage partnering with various agencies and organizations within Skagit County that have an interest in or have established natural hazard mitigation programs.
- Identify and encourage partnering with various state and federal agencies that have programs that support natural hazard mitigation programs such as the Flood Control Assistance Account Program administered by the Washington State Department of Ecology.

LEAD AGENCY: Local elected officials; jurisdiction/Indian tribe department/agency directors; Skagit County Department of Emergency Management; Skagit Natural Hazards Mitigation Planning Committee

FUNDING SOURCE: Local Jurisdictional/Private Business Funding via Budget Process

TIME-LINE: Short term (less than 3 years from funding)

### **Multiple-Hazard Action Item #5:**

Establish procedures for the Skagit Natural Hazards Mitigation Planning Committee for the development of a sustainable process for monitoring and evaluating multi-jurisdictional mitigation activities. Possible ideas include:

- Develop roles/responsibilities for members of the Skagit Natural Hazards Mitigation Planning Committee.
- Develop surveys and/or identify and utilize other reporting methods to monitor hazard mitigation activities implemented by participating entities.
- Develop procedures to facilitate annual review of current mitigation activities.
- Develop procedures to enable the modification of current mitigation activities to meet newly identified goals and objectives.
- Develop procedures to facilitate a full review of the **Skagit County Natural Hazards Mitigation Plan** every 5 years.

LEAD AGENCY: Skagit County Department of Emergency Management; Skagit Natural Hazards Mitigation Planning Committee

FUNDING SOURCE: Local Jurisdictional Funding via Budget Process

TIME-LINE: Within two (2) years of completion and promulgation of this plan

### **Multiple-Hazard Action Item #6:**

In cooperation with the Washington State Military Department, Emergency Management Division, establish local requirements and/or procedures for non-participating jurisdictions, Indian tribes, and special purpose districts located within Skagit County to adopt the **Skagit County Natural Hazards Mitigation Plan** as their plan and thereby become eligible for future federal hazard mitigation grant funding.

LEAD AGENCY: Skagit Natural Hazards Mitigation Planning Committee

FUNDING SOURCE: Local Jurisdictional Funding via Budget Process

TIME-LINE: Within two (2) years of completion and promulgation of this plan

## **Multiple-Hazard Action Item #7:**

Strengthen emergency services preparedness and response by linking emergency services with natural hazard mitigation programs. Possible ideas include:

- Promote inter-agency response planning and training among various first response agencies within Skagit County.
- Continue involvement at the county level with the Northwest Region Fire Defense Board and the Northwest Region Fire Mobilization Plan.
- Encourage local fire service, emergency medical, and law enforcement agencies to include Skagit C.E.R.T. members in training opportunities.

LEAD AGENCY: Skagit County Department of Emergency Management

FUNDING SOURCE: Department of Emergency Management Budget and/or available grant funding

TIME-LINE: Short term (less than 3 years from funding)

## **Prioritization of Mitigation Measures:**

Because this plan is multi-jurisdictional, the prioritizing of mitigation measures will be made at the jurisdictional level with direct involvement of the designated lead agency as well as the local elected governing body such as the board of county commissioners, city or town council, tribal senate or tribal council, school board, or special purpose district board of commissioners.

Due to local budget constraints, most of the mitigation measures incorporated into this plan are dependent upon local jurisdictions receiving outside funding; as a general rule, local funding is not available. As a result, local jurisdictions are unsure as to when these mitigation measures will be implemented and the conditions and/or requirements under which implementation may occur.

Unless stated otherwise within an individual entities portion of SECTION IV of this plan, the individual entities participating in this plan should prioritize their proposed mitigation measures based on the following factors:

- Mitigation measures that have a positive cost/benefit analysis.
- Mitigation measures that reduce or eliminate repetitive loss properties.
- Mitigation measures that are multi-jurisdictional and or multi-agency in nature.
- Mitigation measures that provide the greatest good for the greatest number.
- Mitigation measures that have broad-based public and/or elected official approval.
- Mitigation measures for which funding has already been secured.
- Mitigation measures that qualify for alternate and/or matching funding.

For jurisdictions and Indian tribes with a mitigation planning committee, the mitigation planning committee is charged with the responsibility to develop a prioritized preliminary list of mitigation measures. This prioritized list is then recommended to the jurisdictional or tribal governing body for final prioritization.

While it is highly recommended that each of the entities participating in this plan utilize the above-listed factors in prioritizing their mitigation measures, it is recognized that final

prioritization of mitigation measures is determined by the entities elected governing body. A change in local elected officials, changing environmental requirements, public acceptance of a project, or the occurrence of an actual disaster event may dramatically affect the priority ranking of mitigation measures at the local level.

If federal funding is involved in the implementation of a hazard mitigation project, the jurisdiction, Indian tribe, or special purpose district will conduct a cost/benefit analysis based on guidelines provided by the United States Department of Homeland Security (FEMA) and the Washington State Military Department, Emergency Management Division on how to determine cost-effectiveness of mitigation projects and how to calculate the benefit-cost ratio. The purpose of the benefit-cost analysis is to determine if the benefits of the project exceed the federal costs of the project. Both the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program require a benefit-cost ratio of at least 1.0 for a project to be considered for funding. While it may be important to emphasize a positive cost/benefit analysis in the prioritizing of mitigation measures, it is also important to recognize the influence of local political factors, sovereign authority, community needs, traditional and cultural customs and values, historic properties, and habitat and environmental issues upon the selection of specific mitigation measures.

Due to local budget constraints, most of the mitigation measures incorporated into this plan are dependent upon local jurisdictions receiving outside funding; as a general rule, local funding is not available. As a result, local jurisdictions are unsure as to when these mitigation measures will be implemented and the conditions and/or requirements under which implementation may occur.

### **Implementation of Mitigation Measures:**

Mitigation measures that are already in place at the jurisdiction level through existing plans, codes, and ordinances as well as programs such as the National Flood Insurance Program Community Rating System Program or the Skagit Community Emergency Response Team (C.E.R.T.) Program are current and on-going programs funded through existing and established budgets.

The implementation of new and/or additional mitigation measures is dependent upon the approval of the local elected governing body such as the board of county commissioners, city or town council, tribal senate or tribal council, school board, or special purpose district board of commissioners as well as obtaining funding from outside sources that have not been secured at this time. As a general rule, local funds are not available for implementation of new mitigation measures. Funding for mitigation measures is largely dependent upon individual entities applying for and receiving federal and/or state hazard mitigation grant funding.

For each action item listed and described above (as well as the entity-specific mitigation measures contained in SECTION IV) every effort has been made to identify lead agencies, current or possible funding sources, and a time-line for implementation as part of the planning process.

It should be noted that ***short term*** action items and/or mitigation measures are those activities that are expected to be completed in less than 3 years from the receipt of funding by the local

entity. **Long term** action items and/or mitigation measures are those activities that are expected to require more than 3 years to complete from the receipt of funding by the local entity. Those action items and/or mitigation measures that are current and on-going have been so indicated.

The entities participating in the **Skagit County Natural Hazards Mitigation Plan** have a variety of local, state, and federal resources available to support the implementing and administering of the mitigation actions. The Skagit Natural Hazards Mitigation Planning Committee will continue to identify additional resources to support the implementation of the action items. At this time, possible implementation funding sources include the following:

#### Local Funding Sources

Local implementation resources vary based on each entity's scope of function(s), authorities, and operational capability and capacity. They may include:

- Use of zoning ordinance and building codes.
- Enforcement of flood plain management ordinance.
- Participation in the NFIP Community Rating System.
- Incorporation into local emergency response plan(s).
- Incorporation into local economic development plan(s).
- Use and support of existing local personnel (planners, floodplain managers, city engineers, GIS specialists, emergency managers).
- Capital improvement project funding.
- Authority to levy taxes, special bonds.
- Fees for services.
- Other sources yet to be identified.

The current economic condition and funding level of the participating local entities drastically limits the use of local resources. State or federal funding will be needed to accomplish many of the action items and mitigation measures referenced in this plan.

#### State Funding Sources

- Growth management act requirements.
- Comprehensive plan requirements.
- State administered Hazard Mitigation Grant Program, Flood Mitigation Act and Pre-Disaster Mitigation Program.
- Department of Ecology Flood Control Assistance Account Program (FCAAP).
- Department of Transportation Emergency Relief Program.
- Office of Community Development Community Development Block Grants
- Programs administered by the Washington State Transportation Improvement Board
- Programs administered by the Washington State County Road Administration Board
- Other sources as yet to be identified.

**NOTE:** An extensive listing of state funding opportunities is available at the following web site:

[www.infracfunding.wa.gov](http://www.infracfunding.wa.gov)

## Federal Funding Sources

- Stafford Act, Section 406 – Public Assistance Program Mitigation Grants.
- Stafford Act, Section 404 – Hazard Mitigation Grant Program.
- Disaster Mitigation Act of 2000– Pre-Disaster Mitigation Program Competitive Grants.
- United States Fire Administration – Assistance to Firefighters Grants.
- United States Small Business Administration Pre and Post Disaster Mitigation Loans.
- United States Department of Economic Development Administration grants.
- United States Department of Housing and Urban Development Grants such as the Community Development Block Grant Program.
- United States Army Corps of Engineers.
- United States Department of the Interior, Bureau of Land Management.
- Federal Highway Administration.
- Other sources as yet to be identified.

An extensive listing of federal funding opportunities is identified in the document *"Federal Mitigation Programs, Activities, & Initiatives"* and is available at the following web site:

<http://www.fema.gov/doc/fima/fmpai.doc>

The document includes information on each federal program including the type of available assistance and contact information. A copy of the document is included in **Appendix D** of this plan.

# TOWN OF HAMILTON

## Jurisdiction-Specific Vulnerability Assessment & Mitigation Strategies

The purpose of this section of the plan is to assess the vulnerability of the Town of Hamilton in regards to the various natural hazards previously identified in SECTION II of this plan. In addition, mitigation strategies that are currently in place relating to these natural hazards as well as newly proposed mitigation strategies have been included in this section of the plan.

To complete the vulnerability assessment process, various town staff utilized a series of locally developed forms as well as forms available in the 20/20 Mitigation Software that was provided to Skagit County by the Washington State Military Department, Emergency Management Division. The information collected with these forms is included in this portion of the plan.

Critical facilities were identified and analyzed as part of the plan-development process.

There are 31 repetitive loss properties in the Town of Hamilton but due to confidentiality reasons, specific information regarding these properties may not be included in this plan. More information may be obtained from the specific jurisdiction in which the repetitive loss properties are located.

The Town of Hamilton or other public entity will acquire land out of the flood plain for the purpose of a) annexation to the Town of Hamilton, and b) relocating residential housing units from the Skagit River floodway/floodplain, through a program involving land acquisition and transfer of development rights of land in the Skagit River floodway/floodplain to the new residential area. The program will involve a variety of planning tools, including sub-area planning, re-allocation of population, acquisition of development rights, land trusts, low income housing programs, construction of public infrastructure, etc., to dovetail (FEMA) funding for flood damage prevention/mitigation with Growth Management Act compliant planning tools. While the Town of Hamilton is a primary focus of the project, it will be designed to accommodate the transfer of development rights and population allocations from portions of the Skagit River floodway/floodplain located outside the Town Limits to the annexed residential area, as well.

Representatives from Town of Hamilton government worked closely with other jurisdictions, agencies, Indian tribes, and the Skagit Natural Hazards Planning Committee to develop a comprehensive, coordinated mitigation plan intended to reduce the vulnerability to natural hazards within the Town of Hamilton.

The information contained in this document presents the results of this effort to identify the specific natural hazards threatening the Town of Hamilton, to characterize the vulnerability of the Town of Hamilton regarding these hazards, and to identify current as

well as proposed mitigation strategies, projects and/or programs to address those vulnerabilities.

The analyses conducted by Town of Hamilton staff were based on the best currently available information and data regarding the characteristics of the neighborhoods identified, the natural hazards that threaten the people, property, and environment of these neighborhoods as well as the impacts these neighborhoods have suffered in past disasters. This information includes, when available, United States Census data, local tax records, local and national geographic information system data, Flood Insurance Rate Maps, hazard specific analyses, and other environmental and demographic facts. However, very often authoritative or current information simply was not available for the planning effort. In these cases, the experience, knowledge and judgment of local officials representing Town of Hamilton government were used in the planning, including assumptions and approximations that were believed to be reasonable. In addition, straight-forward, simplified technical analyses were used for tasks such as estimating property values, determining the size of populations affected, and so forth. The reliance on the judgment of knowledgeable officials and simplified analyses is considered acceptable at this stage to allow the participating organizations to complete the tasks needed to develop this multi-jurisdictional natural hazards mitigation plan. As the planning continues in future years, or at the time when a proposed mitigation initiative is intended to be funded and/or implemented, the participating organizations/jurisdictions recognize that additional information and analyses may be required.

Town of Hamilton government is committed to the implementation of the mitigation-related projects/programs described in this section of the plan when and if resources become available. Town of Hamilton government is also committed to continuing the mitigation planning process that has resulted in the development of this document, and to the ongoing cooperation with other agencies, organizations, Indian tribes, and jurisdictions to make the Town of Hamilton County more resistant to the damages and hardships that could otherwise be the result of future natural disasters.

#### **Town of Hamilton Overview:**

<u>Contact Information:</u>	Margaret Fleek, Town Planner Town of Hamilton P.O. Box 528 Hamilton, WA 98255 Telephone: (360) 826-3983
<u>Population of Jurisdiction:</u>	309 (2000 Census)
<u>Estimated Geographical Size:</u>	.94 square miles (over 50% located in Floodway)
<u>Principal Economic Base:</u>	Business and Industrial
<u>Economic Characteristic:</u>	Median Household Income is \$31,500

Current Hazard Mitigation Codes/Plans/Ordinances:

- Comprehensive Land Use Plan
- Zoning Code
- Uniform Building and Fire Code (updating to International Codes 2004)
- Capital Facilities Plan
- Comprehensive Water System Plan
- Critical Areas Ordinance
- Flood Damage Prevention Ordinance
- Participation in NFIP Program

**TOWN OF HAMILTON ACTION PLAN FOR NATURAL HAZARD REDUCTION -  
SELECTION OF APPROPRIATE ACTIVITIES – SHORT TERM UP TO 3 YEARS  
AFTER FUNDING; LONG TERM MORE THAN 3 YEARS AFTER FUNDING**

- 1. Preventive activities, such as zoning, stormwater management regulations, building codes, and preservation of open space and the effectiveness of current regulatory and preventive standards and programs;**

ACTIVITY	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<i>Earthquake, Severe Storm, Fire, Land Movement</i>		
Utilize the latest adopted state building code to insure adequate protection in construction against Earthquakes in Seismic Zone 3, Severe storms with Wind Exposure C, Fire with Fire Resistant Construction Standards, and Land Movement with Grading Standards	<b>State Legislature</b> to adopt International Codes - <b>Town Council</b> to adopt new state code – <b>SHORT TERM -2004</b> or later	No financial impact
Utilize the latest adopted state fire code to insure adequate protection against Fire in construction with standards for Fire flow and through the annual Inspection of Commercial Structures	<b>State Legislature</b> to adopt International Codes – <b>Town Council</b> to adopt new state code – <b>SHORT TERM 2004</b> or later	No financial impact
<i>Flood</i>		
The Floodway, the Special Flood Risk Zone and the 100 year Floodplain shall be regulated to protect human life, property and the public health and safety of the citizens of Lyman; minimize the expenditure of public money; and maintain the city's flood insurance eligibility while avoiding regulations which are unnecessarily restrictive or difficult to administer.	<b>Town Council and Staff – ON-GOING</b> - Administration of 2002 Critical Areas Code and the Flood Code	No financial impact
Manage stormwater runoff to improve drainage, control stormwater quantity, prevent localized flooding of streets and private property during high water table and rainy conditions, and protect and enhance water quality.	<b>Street Department –</b> Administer Surface Water Management Standards; <b>ON-GOING</b>	Funded by general tax revenues
Because of the unique floodway and floodplain limitations on the use of the Skagit River shorelines, particularly the dike system, the majority of the shoreline shall be identified and reserved for recreational and open space uses.	<b>Town Council – LONG TERM</b> -maintain open space zoning	Funding would provide for some recreation improvements; generally not needed

ACTIVITY	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<b><i>Flood, Landslide, Earthquake</i></b>		
Utilizing Best Available Science to develop the Critical Areas title to protect, to the greatest extent practical, life, property and the environment from loss, injury and damage by pollution, erosion, flooding, landslides, strong ground motion, soil liquefaction, accelerated soil creep, settlement and subsidence, and other potential hazards, whether from natural causes or from human activity and related goals.	<b>Town Council and Staff – ON-GOING</b> Program and regulations are in place.	None required.
Coordinate with Skagit County through arrangements such as interlocal agreements, joint programs, consistent standards, or regional boards or committees.	<b>Town Council - Multi-jurisdictional All Natural Hazards Mitigation Planning project – SHORT TERM -2003</b> first plan; <b>LONG TERM</b> - Annual maintenance with five year update required	Initial development funded by State/Federal Grant.
Urban Level of Service Standards are established to ensure protection of public health, safety and welfare by meeting relevant standards	<b>Town Council – LONG TERM</b> - when Comprehensive Plan is amended	Funding provided on a project by project basis

2. The plan reviews property protection actions, such as acquisition, retrofitting, and insurance;

ACTIVITY	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<i>Landslide</i>		
Provide protection of steep slopes according to standards in the Critical Areas Ordinance.	<b>Town Council –ON-GOING</b> individual project reviews	Funding on a project by project basis
<i>Flooding</i>		
Regulations and policies shall reflect the existing dikes along the Skagit River. Nonstructural solutions to flood hazards shall be encouraged including restricting development in flood-prone areas and storm water runoff management.	<b>Town Council – SHORT TERM</b> - dike upgrade after flood event	Grant funding for dike improvements or repairs following flood event
Insure that standards for flood control measures protect and enhance the biological systems and public access opportunities of the shoreline and adjacent uplands.	<b>Town Council – LONG TERM</b>	Grant funds, general budget
The Building Official will continue to maintain elevation certificates.	<b>Building Official - ON-GOING</b>	General budget
The town staff will continue to provide technical advice to property owners, contractors and design professionals.	<b>Town Clerk &amp; consultants – ON-GOING</b>	Project by project funding
Provide adequate emergency power for Town water system and for Fire Department Update emergency radios to narrow band frequency	<b>Town Council – SHORT TERM</b> - as soon as feasible	Grant funding
<i>Earthquake, Severe Storm, Flooding</i>		
Move water system including wells, storage and treatment facilities out of the floodplain; provide Emergency Generator capability; upgrade construction to latest seismic and wind standards	<b>Town Council &amp; consultants – SHORT TERM</b> - 2003-2004	Grant funding, water utility

**3. The plan reviews activities to protect the natural and beneficial functions of the floodplain, such as wetlands protection;**

ACTIVITY	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<i><b>Flooding</b></i>		
Protect and restore critical areas; plan for flood hazard mitigation, surface water management and pollution control, establishment and maintenance of greenbelts and conservation areas and coordinate with adjoining jurisdictions.	<b>Town Council – LONG TERM</b>	Combination of funding including town budget, grant funds, local fund raising
Provide habitat for wildlife species, foodfish, and freshwater fish in close proximity to an urban area.	<b>Town Council – LONG TERM</b>	Combination of funding including town budget, grant funds
To protect and restore the wetlands to optimize water quality, habitat, best management practices and ensure that adjacent land use patterns are compatible with the protection and enhancement of the wetlands and take advantage of the unique attributes of the site, allowing no net loss of wetlands, and to remove obstructions and generally improve the flow characteristics to provide for efficient conveyance of water through the city during flood events.	<b>Town Council and Street Department – LONG TERM</b> - individual dates for specific capital projects; schedule updated annually	Combination of funding including general budget, grant funds
To allow limited use of the Skagit River and its shoreline compatible with the Dike system and with the regulatory constraints of the Floodway and Special Flood Risk Zone, including transportation, levee improvement, utilities and outfall structures, public access and recreation, open space and agriculture and similar uses. Review based on individual permits.	<b>Planning Department and Public Works Department – LONG TERM</b>	Combination of funding including department budgets, grant funds

ACTIVITY	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<b><i>Flooding, Earthquake, Landslide, Fire, Severe Storms</i></b>		
Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks. Integrate the concepts with natural functions such as drainage, agriculture, and topographic features.	<b>Town Council – LONG TERM</b>	Grant funds, fund raising

**4. The plan reviews emergency services activities, such as warning and sandbagging;**

ACTION	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<b><i>Flooding, Earthquake, Volcano</i></b>		
Develop and maintain an emergency plan that includes flood warning, earthquake response, and evacuation program for the Town .	<b>Town Council – SHORT TERM - Annual review</b>	Funding integrated into overall budget
The transportation planning goals and level of service is designed to ensure the continued ability of the transportation system to function at a reasonable level of service throughout the urban service area and coordinate the links to the regional transportation system. Critical for evacuation	<b>Town Council – LONG TERM - Review with update of Comprehensive Plan</b>	Funding integrated into overall budget
Maintain Fire, Water Treatment Critical Facilities up to date with most current technology and standards to ensure operation during hazard events.	<b>Town Council, Volunteer Fire Department and Water System– ON-GOING</b>	Grant funds, loans, utility rate structure

**5. The plan reviews structural projects, such as reservoirs and channel modifications.**

ACTION	STAFF ASSIGNMENT AND SCHEDULE	FINANCING PLAN
<b><i>Flooding</i></b>		
Structural Measures – Maintain existing dike system	<b>Town Council – SHORT TERM</b>	Grant funds, federal, state and local funds
Relocate the town out of the floodway and north across State Route 20; acquire and transfer development rights from repetitive loss properties	<b>Town Council – LONG TERM</b>	Grant funds, Federal and State funds

ACTION	STAFF ASSIGNMENT AND SCHEDULE	FINANCING PLAN
<b><i>All Hazards -</i></b>		
Six-year list of capital projects including specific actions targeted towards natural hazard mitigation.	<b>Town Council – LONG TERM -Regular Update</b>	General Funds, Utility Funds, grant funds, loans
Upgrade and maintain all community owned critical facilities, including Fire Station and Water System.	<b>Town Council –LONG TERM –All facilities updated over past 5 years</b>	General Funds, Utility Funds, Grant funds, loans

**6. The plan reviews public information activities, such as outreach projects and environmental education programs.**

ACTION	STAFF ASSIGNMENT & SCHEDULE	FINANCING PLAN
<b><i>Flooding</i></b>		
Provide on going public education at all levels, from the renter to the homeowner, regarding residential, commercial and industrial best management practice issues, flood hazard mitigation, water quality, and related local issues. Update annually.	<b>Town Clerk, Water System Staff – ON-GOING</b>	Water utility, grant funds
Make flood map determinations in response to public inquiries.	<b>Town Planner –ON-GOING</b>	General fund
<b><i>All Hazards</i></b>		
Expand the Public Information program to address other natural hazards where additional public information will be helpful, such as seismic retrofits for homes, and other topics. Hazards identified through Multi-jurisdictional Planning process	<b>Town Planner – SHORT TERM</b>	Grant funds

**TOWN OF HAMILTON  
MITIGATION-RELATED POLICY STATEMENTS AND CITATIONS**

<b>POLICY TYPE AND APPLICATION TO HAZARD</b>	<b>CITATION</b>	<b>MITIGATION-RELATED POLICY STATEMENT</b>
<b>1994 COMPREHENSIVE PLAN</b> Flooding	Major Findings	<ul style="list-style-type: none"> <li>➤ Redevelop the Town north of SR 20 on land that is not in the Floodway or Floodplain. 310 acres, or 50% of the Town is located in the Floodway and 100-year Floodplain.</li> <li>➤ Encourage the continued purchase, relocation, or elevation of eligible buildings through FEMA Section 1362 Acquisition of Flood Damaged Properties Program, and convert the land to open space, recreation and park areas.</li> </ul>
<b>1994, 1999 CAPITAL FACILITIES PLAN</b>  Flooding Severe Storm Earthquake	Major Findings	<ul style="list-style-type: none"> <li>➤ Construct new well and storage tank outside the floodway; establish well-head protection program (completed in 2003)</li> <li>➤ Construct new fire hall outside floodway (completed in 1999)</li> <li>➤ To provide needed public facilities to all residents within Hamilton in a manner which protects investments in existing facilities, and maximizes the use of existing facilities, and promotes orderly compact urban growth.</li> </ul>
<b>1994 COMPREHENSIVE PLAN and 1999 COMPREHENSIVE WATER SYSTEM PLAN</b> Flooding Earthquake Severe Storm Fire	Major Findings	<ul style="list-style-type: none"> <li>➤ Level of Service should be at a minimum of C. The transportation plan is designed to ensure the continued ability of the transportation system to function at a reasonable level of service throughout the urban service area and coordinate the links to the regional transportation system along SR 20.</li> <li>➤ The Town of Hamilton Water System Supply Plan Update is hereby adopted by reference, as may be further amended.</li> <li>➤ The area is currently served by the Town of Hamilton Fire Department Service is currently made up of volunteers.</li> </ul>
<b>2003 COMPREHENSIVE PLAN UPDATE</b> Flooding	In Process	<ul style="list-style-type: none"> <li>➤ Use innovative land use techniques include Transfer or Purchase of Development Rights and establishing a coordinated redevelopment plan to move housing and business out of the Floodway.</li> </ul>

**MITIGATION-RELATED POLICY STATEMENTS AND CITATIONS - *continued***

POLICY TYPE AND APPLICATION TO HAZARD	CITATION	MITIGATION-RELATED POLICY STATEMENT
<b>1994 COMPREHENSIVE PLAN</b> Steep Slopes Flooding Earthquake Severe Storm	Goal LU6	<ul style="list-style-type: none"> <li>➤ To improve, enhance, and protect the quality and quantity of surface and ground water.</li> </ul>
<b>1994 COMPREHENSIVE PLAN</b> Fire Land Movement Flooding	GOAL LU8 AND POLICY LU8.2	<ul style="list-style-type: none"> <li>➤ Protect and conserve forest land, agricultural land, mineral resources, and critical areas as defined under the Growth Management Act.</li> <li>➤ Conversion of designated forest lands to non forest designations and of Industrial Forest lands to Secondary Forest lands will be strongly discouraged through clearly defined land use regulations.</li> </ul>
<b>1994 COMPREHENSIVE PLAN</b>  Flooding	Policy H3.6	<ul style="list-style-type: none"> <li>➤ Measures should be taken to economically and effectively protect existing housing stock from flood damage through various techniques including the relocation, elevation and sealing of buildings. Other forms of protection that should be promoted include levees and flood walls.</li> </ul>
<b>2002 CRITICAL AREAS ORDINANCE</b> Land Movement Earthquake		<ul style="list-style-type: none"> <li>➤ Provide adequate erosion and sedimentation control during construction and additional construction practices, methods and requirements, including but not limited to best management practices and limitations on construction equipment permitted on the site, to protect critical areas on the site, on adjacent sites and within the drainage basin.</li> <li>➤ All grading in critical areas shall be stabilized by October 31st unless demonstrated to the satisfaction of the Town based on approved technical analysis that no environmental harm or safety issues would result from grading between November 1st and March 31st.</li> <li>➤ Provide protection of steep slopes according to standards in the Critical Areas Ordinance.</li> </ul>

**MITIGATION-RELATED POLICY STATEMENTS AND CITATIONS - *continued***

POLICY TYPE AND APPLICATION TO HAZARD	CITATION	MITIGATION-RELATED POLICY STATEMENT
<b>CAPITAL IMPROVEMENT PLAN</b> • Fire, Earthquake, Severe Storms	Level of Service Standards and Individual Department Submittals	<ul style="list-style-type: none"> <li>➤ Urban Level of Service Standards are established to ensure protection of public health, safety and welfare by meeting relevant standards</li> <li>➤ Six-year list of projects including specific actions targeted towards natural hazard mitigation</li> </ul>
<b>1997 UNIFORM BUILDING CODE</b> • Earthquake, Severe Storm, Fire, Landslide	Seismic and Wind Loads, Construction Standards	<ul style="list-style-type: none"> <li>➤ Seismic Zone 3</li> <li>➤ Wind Exposure C</li> <li>➤ Fire Resistive Construction Standards</li> <li>➤ Grading Standards</li> </ul>
<b>1997 UNIFORM FIRE CODE</b> • Fire	Fire protection and building maintenance standards	<ul style="list-style-type: none"> <li>➤ Fire flow</li> <li>➤ Annual Inspection of Commercial Structures</li> <li>➤ Plan Review</li> </ul>

**MITIGATION-RELATED POLICY STATEMENTS AND CITATIONS - *continued***

POLICY TYPE AND APPLICATION TO HAZARD	CITATION	MITIGATION-RELATED POLICY STATEMENT
<p><b>2002 CRITICAL AREAS CODE AND ORDINANCE 188 FLOOD DAMAGE PREVENTION</b></p> <ul style="list-style-type: none"> <li>• Flooding</li> <li>Land Movement</li> </ul>	<p>Section 15.15.020 Application-Purpose</p>	<ul style="list-style-type: none"> <li>➤ Frequently flooded areas; It is the purpose of this Chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in the floodplain and the floodway according to the provisions established under this code;</li> <li>➤ Geologically hazardous areas; Geologically hazardous areas include areas susceptible to the effects of erosion, sliding, earthquake, or other geologic events. They pose a threat to the health and safety of citizens when incompatible residential, commercial, industrial, or infrastructure development is sited in areas of a hazard. Geologic hazards pose a risk to life, property, and resources when steep slopes are destabilized by inappropriate activities and development or when structures or facilities are sited in areas susceptible to natural or human caused geologic events. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building and other construction within identified geologically hazardous areas shall be prohibited.</li> </ul>
<p><b>ZONING CODE</b></p> <ul style="list-style-type: none"> <li>• Flood, Fire, Landslide, Earthquake</li> </ul>	<p>Section 17.03.020 Purpose</p>	<ul style="list-style-type: none"> <li>➤ The purpose of this title is to implement the Town of Hamilton’s comprehensive plan. This title will be used to further the growth and development of the Town of Hamilton consistent with the adopted comprehensive plan and its implementing elements. This title will also further the purpose of promoting the health, safety, morals, convenience, comfort, prosperity, and general welfare of the city's population.</li> <li>➤ The specific zones and regulations herein are designed to facilitate adequate provisions of utilities, schools, parks and housing with essential light, air, privacy, and open space; to lessen congestion on streets and facilitate the safe movement of traffic thereon; to stabilize and enhance property values; to prevent the overcrowding of land; to facilitate adequate</li> </ul>

**MITIGATION-RELATED POLICY STATEMENTS AND CITATIONS - *continued***

POLICY TYPE AND APPLICATION TO HAZARD	CITATION	MITIGATION-RELATED POLICY STATEMENT
<p><i>continued from previous page</i></p>		<p>provisions for doing public and private business and thereby safeguard the community's economic structure upon which the prosperity and welfare of all depends and through such achievements help ensure the safety and security of home life, foster good citizenship, create and preserve a more healthful, serviceable and attractive municipality and environment in which to live.</p> <p>➤ To most effectively accomplish these purposes, this title divides the city into zones wherein the location, height and use of buildings, the use of land, the size of yards and other open space, and the provision of off-street parking and loading are regulated and restricted in accordance with the comprehensive plan for the Town of Hamilton. These zones and regulations are hereby deemed necessary and are made with reasonable consideration, among other things, as to the character of each zone and its particular suitability for specific uses, the need for such uses, the common rights and interests of all within the zone as well as those of the general public, and with the view of conserving and encouraging the most appropriate use of land throughout the town.</p>