

TOWN OF CONCRETE

INTRODUCTION:

The purpose of this section of the plan is to assess the vulnerability of the Town of Concrete 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.

As part of the vulnerability assessment process, Town of Concrete government completed an inventory of all critical facilities and has considered these critical facilities in our planning and mitigation strategy development process.

Representatives from Town of Concrete 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 Concrete.

The information contained in this document presents the results of this effort to identify the specific natural hazards threatening the Town of Concrete, to characterize the vulnerability of the Town of Concrete 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 Concrete 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 the Town of Concrete 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.

The Town of Concrete is committed to the implementation of the mitigation-related projects and/or programs described in this section of the plan when and if resources become available. The Town of Concrete 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 Concrete more resistant to the damages and hardships that could otherwise be the result of future natural disasters.

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JURISDICTION PROFILE:

Population of Jurisdiction: 845 and growing slightly

Estimated Geographic Size: 1.2 square miles

Principal Economic Base: Institutional

Economic Characteristic: Economically disadvantaged

Neighborhood Characteristics: The Town of Concrete is a modest community consisting of 800 structures with an average value of \$27,900.

Current Hazard Mitigation Codes/Plans/Ordinances:

- Comprehensive Land Use Plan
- Adopted Land Use/Zoning Code
- Critical Areas Regulations
- 2006 International Building Code
- 2006 International Fire Code
- Participation in NFIP Program

Town of Concrete 2008 Natural Hazard Identification and Risk Estimation

**Based on Mitigation 20/20 Risk Assessment Formula (Area Impacted+Health and Safety Consequences+Property Damage+Environmental Damage+Economic Disruption multiplied by Probability of Occurrence)*

***The greater the Risk Score, the greater the risk.*

	Area Impacted	Health & Safety	Property	Environment	Economic	Probability	Risk Score
Earthquake	4	2	1	1	1	2	18
Flooding	2	1	1	1	2	5	35
High Winds	4	1	1	1	1	2	16
Landslide/Erosion	2	1	2	2	3	4	40
Storm Surge/Tsunami	0	0	0	0	0	1	0
Subsidence, expansive Soils	1	0	0	0	0	1	1
Urban Fire	1	1	1	1	2	2	12
Wildfire	1	1	1	1	1	1	5
Winter Storm	4	1	1	0	1	2	14
Volcanic Activity	4	2	3	3	3	2	30

Total Jurisdictional Risk Estimation Score:	171
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Area Impacted:	0=No impact	1=<25%	2=<50%	3=<75%	4=>75%
Health & Safety:	0=No impact	1=Few injuries	2=Few fatalities, many injuries	3=Numerous fatalities	
Property:	0=No impact	1=Few destroyed or damaged		2=Few destroyed, many damaged or damaged	3=Many properties destroyed or damaged
Environment:	0=Little or No impact	1=Short term	2=Long term	3=No recovery	
Economic:	0=No impact	1=Low costs	2=High direct cost and Low indirect or Low direct and High indirect		3=High Direct and Indirect Cost
Probability:	1=Unknown but rare	2=Unknown but anticipated		3= <100 year	4=<25 year 5=Once a year or more

2008 PLAN UPDATE:

The Town of Concrete has appointed the Town Council to act as the Mitigation Planning Committee for the town. Town staff involved in the 2008 plan update process were Rich Philips, Fire Chief and Rick Cisar, Planning Director. Chief Philips and Mr. Cisar provided information to be included in the updated plan and coordinated the plan update with Skagit County Department of Emergency Management personnel. Chief Philips attended two of the five public meetings to provide information and answer citizen questions; Mr. Cisar reviewed and approved the updated document.

The Town of Concrete participates in the National Flood Insurance Program (NFIP). The identifying, analyzing, and prioritizing of mitigation measures is based (and will continue to be based) upon continued participation and compliance with the National Flood Insurance Program. Based on the 2007 FEMA-provided list of repetitive loss structures, there is only one (1) repetitive loss property (residential) within the Town of Concrete.

INCORPORATING MITIGATION INTO OTHER PLANNING MECHANISMS:

Since the development of the **Skagit County Natural Hazards Mitigation Plan** in 2003, the Town of Concrete has adopted and is implementing the 2006 International Building Code and the 2006 International Fire Code. In addition, the Town of Concrete is currently amending its Critical Area Regulations which include frequently flooded and geologically hazardous areas.

The Town of Concrete has adopted the basic planning and code framework as required by the Washington State Growth Management Act. The Town of Concrete Comprehensive Plan and Code was amended and adopted in 2005; a full update is scheduled for 2012. As part of the 2012 update of the Comprehensive Plan, the Town of Concrete will incorporate the mitigation strategy and other information contained in the mitigation plan (as appropriate) into the Comprehensive Plan. The process followed in updating the Comprehensive Plan will serve as the process for incorporating the mitigation strategy and other information contained within the plan (as appropriate) into the Comprehensive Plan during the 2012 update process.

COMPLETED MITIGATION MEASURES

For the past several years, the Town of Concrete has been working to mitigate the effects of natural and technological hazards. The following projects have been completed to help protect the citizens of the Town of Concrete:

1. The Town of Concrete has worked with Puget Sound Energy to install a siren warning system for the Town of Concrete to warn residents and business owners in the event of a dam failure. Siren installation is complete and operational.
2. To help mitigate the problem of flooding, the Town of Concrete maintains a stock of sandbags from the United States Army Corps of Engineers as well as a ready supply of sand that is available to local citizens in the event of a flood.
3. To help mitigate the effects of severe winter storm events, the Town of Concrete has snow plows, a backhoe, and a road grader that are available for use on a 24-hour basis.

4. The Town has contracted with the Skagit County Sheriff's Office to improve and increase police services and the town's ability to respond to natural disaster events within the Town of Concrete. The former town library is currently being remodeled to provide office space for Sheriff's Office personnel assigned to the Town of Concrete.
5. In 2006 the Washington State Rating Bureau improved the rating of the Concrete Fire Department from Class 7 to Class 6.
6. The Town of Concrete has recently applied for a variety of equipment through Department of Homeland Security grant programs. It is anticipated that some of this equipment, especially communications equipment, will be used to improve response and recovery efforts during natural hazard events.
7. To help insure adequate potable water storage for the citizens of the Town of Concrete, two new water storage reservoirs (each with a capacity of 200,000 gallons) have been installed in the past 6 years. In addition, the town has also refurbished the old wood storage tank that has a capacity of 100,000 gallons. An additional 500,000 gallon storage tank is proposed to provide capacity/ storage for future residential developments. Funding for the new storage tank will involve a public/private partnership with the development community.
8. To help evaluate possible sewage line problems resulting from earthquake or land movement problems, the town has purchased a sewer camera truck equipped with video and still cameras. The cameras have been installed and will be upgraded (as necessary) when funding is available.
9. The town's new wastewater treatment plant is currently undergoing testing and final inspections. The plant will be on line in the fall of 2008 and the existing 1.7 million gallon sewage lagoon will be abandoned and filled in conjunction with the construction of the new facility.

PROPOSED MITIGATION MEASURES:

In addition to the multiple-hazard mitigation action items listed in Section III of this plan, the Town of Concrete has proposed the following jurisdiction-specific mitigation measures (ranked in order of importance) for the 2008 – 2013 plan cycle:

1. **Mitigate all public safety and public health related hazards associated with the old Concrete Grade School.** *This mitigation measure is new.*

On April 27, 2008, the old Concrete Grade School was destroyed by fire. The building is constructed of concrete; the roof and all interior wood framing components were either partially or totally destroyed as a result of the fire – the concrete exterior walls and some interior concrete walls still remain. The Town of Concrete is currently coordinating with the property owner to perform cleanup and removal of asbestos and other debris as well as (hopefully) demolish the remains of the structure. At this time, cleanup efforts are expected to be completed by mid 2009. If the property owner fails to complete asbestos and debris removal, the Town of Concrete will be forced to take action to mitigate the hazards posed by the remains of this structure.

- LEAD AGENCY: Public Works Department
- FUNDING SOURCE: Various grant funding sources
- TIME-LINE: Long Term (more than 3 years from funding)

2. **Construct a new Fire Station/Public Safety Building on high ground and out of the 100-year floodplain near Main Street.** *This mitigation measure was not accomplished due to lack of funding and has been re-affirmed for the 2008 – 2013 plan cycle.*

Due to its location at the top of an unstable slope, the current public safety building is vulnerable to partial or complete collapse due to an earthquake or bank erosion due to a severe flood event or dam failure. The building currently houses all fire apparatus and associated fire fighting equipment owned by the Town of Concrete.

- LEAD AGENCY: Fire Department and Public Works Department
- FUNDING SOURCE: Various grant funding sources
- TIME-LINE: Short Term (less than 3 years from funding)

3. **Replace the existing 1968 pumper engine and the 1989 pumper engine to provide an increased level of fire protection for the Town of Concrete.** *This mitigation measure was not accomplished due to lack of funding and has been re-affirmed for the 2008 – 2013 plan cycle.*

The fire apparatus currently owned by the Town of Concrete is in need of upgrading and is not appropriate for wildland fire response.

- LEAD AGENCY: Fire Department
- FUNDING SOURCE: Various grant funding sources
- TIME-LINE: Long Term (more than 3 years from funding)

4. **Modify existing electrical services for the Sheriff's Office, Fire Department, and sewer lift stations to allow for the rapid installation/connection of a 65KW generator currently owned by the Town of Concrete.** *This mitigation measure was not accomplished due to lack of funding and has been re-affirmed for the 2008 – 2013 plan cycle.*

- LEAD AGENCY: Public Works Department
- FUNDING SOURCE: Various grant funding sources
- TIME-LINE: Short Term (less than 3 years from funding)

5. **Replace existing wood and trancite water lines with ductile iron or similar material to minimize the breakage of water lines due to land movement events.** *This mitigation measure was not accomplished due to lack of funding and has been re-affirmed for the 2008 – 2013 plan cycle.*

- LEAD AGENCY: Public Works Department
- FUNDING SOURCE: Various grant funding sources
- TIME-LINE: Long Term (more than 3 years from funding)