



# Washington State Enhanced Hazard Mitigation Plan

## Mitigation Strategy

**Requirement 201.4.c.3:** *To be effective the plan must include A Mitigation Strategy that provides the State's blueprint for reducing the losses identified in the risk assessment.*

### Introduction

In updating this plan, the State Hazard Mitigation Advisory Team (SHMAT) reviewed the mission of the State Hazard Mitigation Plan (SHMP), and its goals, objectives, and mitigation actions and initiatives – the mitigation action agenda.

The goals and objectives for hazard mitigation guided development of the initial action agenda for the 2004 plan as well as for the revised action agenda in this updated plan. They foster a vision for hazard mitigation and disaster resistance throughout the state government of Washington.

In general, the mitigation action agenda addresses or solves statewide mitigation issues or problems rather than identifying which state facilities require seismic retrofit, for example. State agencies participating in the review and revision of this plan developed the mitigation actions in the action agenda that begins on page 29.

**Mission of the State Hazard Mitigation Plan** – Reduce the adverse impacts and losses caused by natural hazard events.

### I. Hazard Mitigation Goals

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**Requirement 201.4.c.3.i:** *This section shall include a description of State goals to guide the selection of activities to mitigate and reduce potential losses.*

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### State Mitigation Goals and Objectives

**Goal 1: Protect Life.**

- Objective (Obj.) 1.1 – Improve systems that provide warning and emergency communications.
- Obj. 1.2 – Develop or amend laws so they effectively address hazard mitigation.
- Obj. 1.3 – Reduce the impacts of hazards on vulnerable populations.
- Obj. 1.4 – Strengthen state and local building code enforcement.
- Obj. 1.5 – Train emergency responders.

**Goal 2: Protect Property.**

- Obj. 2.1 – Protect critical assets.
- Obj. 2.2 – Protect and preserve facility contents.
- Obj. 2.3 – Reduce repetitive and severe repetitive losses, including those caused by flooding.

**Goal 3: Promote a Sustainable Economy.**

- Obj. 3.1 – Provide incentives for mitigation initiatives.
- Obj. 3.2 – Continue critical business operations.
- Obj. 3.3 – Form partnerships to leverage and share resources.

**Goal 4: Protect the Environment.**

- Obj. 4.1 – Develop hazard mitigation policies that protect the environment.

**Goal 5: Increase Public Preparedness for Disasters.**

- Obj. 5.1 – Understand natural hazards and the risk they pose.
- Obj. 5.2 – Improve hazard information, including databases and maps.
- Obj. 5.3 – Improve public knowledge of hazards and protective measures so individuals appropriately respond during hazard events.
- Obj. 5.4 – Develop new policies to enhance hazard mitigation initiatives.

The SHMAT reviewed the goals and objectives of this plan in its January 2007 meeting. The review was made taking the following into account:

- Progress by state agencies on mitigation actions in the 2004 state plan (for more details, see Plan Maintenance, Tab 4).
- Review of mitigation priorities identified in the public outreach sessions conducted by the State Emergency Management Division (EMD) in the fall of 2006 (for more details, see Planning Process, Tab 2).
- Identification of mitigation strategies and actions in the hazard mitigation plans of the state's fastest-growing counties (for more details, see Planning Process, Tab 2).

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Following this review, the SHMAT reaffirmed the plan's five goals and their objectives, as stated previously.

### II. State Capability Assessment

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**Requirement 201.4.c.3.ii: This section shall include a discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including:**

- **An evaluation of State laws, regulations, policies and programs related to hazard mitigation as well as to development in hazard prone areas.**
- **A discussion of State funding capabilities for hazard mitigation projects.**
- **A general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.**

Reducing hazards has long been a priority of the State of Washington. In the 1950s, earthquake construction standards were established in state law for schools, hospitals and places of public assembly for 300 or more people (RCW 70.86) and assistance made available to local jurisdictions for flood control projects and planning. More recently, the Growth Management Act (GMA) of 1990 requires all cities, towns and counties to identify and protect critical areas such as frequently flooded areas and geologically hazardous areas, and for the fastest-growing counties (and their cities) to develop comprehensive land use plans to limit growth to identified urban growth areas. In 2003, the Legislature approved a measure that adopts new International Building Code (IBC) international building, fire and mechanical codes that take into account the current seismic risk and other hazard factors. These codes took effect statewide in July 2004 and were enhanced in 2006 by the State Building Code Council (SBCC) to take effect in July 2007.

Among the best examples of hazard mitigation in state government are the GMA, the Flood Control Assistance Account Program (FCAAP), and the FEMA-funded, state-administered hazard mitigation programs; however, a myriad of other programs, funding sources, executive orders, and interagency agreements have elements that support or facilitate hazard mitigation. These programs are discussed on pages 5-6.

Staff from the Mitigation and Recovery Section of the State EMD worked with SHMAT and state agencies to evaluate the state regulations, policies and state-funded or administered programs that include a hazard mitigation component or benefit hazard mitigation activities to develop a better understanding of state government activities

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related to hazard mitigation. The state hazard mitigation capability matrix on pages 8-15 is the result of this effort.

### *Changes in the State's Hazard Management Capabilities*

In reviewing state laws and regulations as well as state-administered programs with a hazard mitigation component, EMD Mitigation and Recovery Section staff found that the state's hazard management capabilities improved somewhat from mid 2004 to mid 2007. Many of these laws, regulations and state-administered programs remain unchanged, however, some improvement in the state's hazard management capability was made. For example, since approval of the 2004 state plan:

- Most communities required to update their Critical Areas Ordinances (see narrative below on the GMA) by 2008 have begun doing so. Many ordinances originally were prepared in the 1990s and had not been reviewed or updated. While progress is being made in updating these regulations, the rate of completion is behind the schedule required by state law. As of October 2007, only 88 percent of jurisdictions required to have their critical areas regulations completed by the end of 2004 had done so. The completion percentage drops to 40 percent for 2005 jurisdictions and 16 percent for 2006 jurisdictions. In updating their ordinances, communities must use a concept known as best available science to identify critical areas, which include frequently flooded areas and geologically hazardous areas, and to write regulations designed to protect these areas and limit the types of development placed there. Depending upon the type and scale of development in these areas, mitigation actions are required to limit the threat to public safety and prevent property damage.
- Funding for the FCAAP (see narrative below) was restored in the 2007-09 state budget to the level required by state law. The program, administered by the Department of Ecology, helps local governments with flood-hazard reduction plans and projects. The Department of Ecology will have \$2.1 million for FCAAP during the 2007-09 biennium.
- The 2003 IBC took affect statewide on July 1, 2004 following approval by the Legislature and adoption statewide by the State Building Code Council. The new building codes require an assessment of site-specific seismic conditions and for the design of new buildings constructed after July 1, 2004 to account for the identified risk. The building codes are driven in part by soils and liquefaction maps prepared by the Department of Natural Resources (paid for in part by Hazard Mitigation Grant Program (HMGP) funds provided following the Nisqually Earthquake disaster in 2001). Community planning departments and buildings officials administer the codes locally. Amendments to enhance the building codes were adopted in 2006 by the SBCC and took affect July 1, 2007; they are the second set of amendments made to the IBC since their original adoption.

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- The availability of an annual source of federal mitigation grant funds has increased the mitigation projects funded in Washington State. Since it became available in 2002, the Pre-Disaster Mitigation Program (PDM) has funded about \$16.1 million in mitigation plans (22) and projects (15) in Washington through FFY 2007. Included in the funded plans and projects is one to seismically retrofit all schools in the Edmonds School District in the Puget Sound region, one to acquire repetitive-loss homes in the Cedar River watershed of King County, and a multi-campus mitigation plan for Washington State University, the state's land-grant university and one of its two research institutions.

### *State Programs with Hazard Mitigation Component*

Growth Management Act – This state law (RCW 36.70A) requires all cities, towns and counties in the state to identify critical areas, and to establish regulations to protect and limit development in those areas. Among the critical areas defined by state law are frequently flooded areas (floodplains, and areas potentially impacted by tsunamis and high tides driven by strong winds) and geologically hazardous areas (those areas susceptible to erosion, landslide, seismic activity, or other geological events such as coalmine hazards, volcanic hazard, mass wasting, debris flows, rock falls, and differential settlement).

Guidance provided to local government states that critical areas protection programs should address a number of issues, including:

- Protecting members of the public, public resources and facilities from injury, loss of life, or property damage due to landslides and slope failures, erosion, seismic events, volcanic eruptions, or flooding.
- Maintaining healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment.
- Directing activities not dependent on critical areas resources to less ecologically sensitive sites, and mitigating unavoidable impacts to critical areas by regulating alterations in and adjacent to those areas.
- Preventing cumulative adverse environmental impacts to frequently flooded areas.

Since 1995, local governments must consider best available science in their identification and protection of critical areas; a catalog of sources of best available science has been prepared for their use. (Note: Initial critical area regulations, developed in the early 1990s, were not prepared to the best available science standard.) Legislation passed in 2003 requires cities, towns and counties to review and revise as necessary their critical areas policies every seven years. All jurisdictions are required to have updated critical areas regulations by the end of 2008.

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The GMA also allows those cities, towns and counties required or voluntarily choosing to develop comprehensive plans to add an optional natural hazard reduction element to those plans. To facilitate the development of natural hazard reduction elements, the Department of Community Trade and Economic Development – Growth Management Services used an HMGP grant to develop and publish a guidebook on how to incorporate natural hazard reduction into local land-use plans.

Flood Control Assistance Account Program – This program, administered by the Department of Ecology, assists local governments in reducing flood hazards and damages by providing technical and financial assistance in the development and implementation of comprehensive flood hazard management plans, engineering feasibility studies, physical flood damage reduction projects, acquisition of flood-prone properties, public awareness programs, flood warning systems, and other emergency projects to protect human life and property from flood related events. Eligible local entities must be within a jurisdiction that participates in the National Flood Insurance Program (NFIP). The program provides up to \$4 million per biennium for grants for these activities. It also provides current and consistent information on flooding and flood hazard areas, including improved maps and mapping tools. Additionally, it provides assistance in developing methods and strategies to address local floodplain management objectives and assistance to assure effective compliance with state and federal regulations.

Federal hazard mitigation programs – The HMGP, Flood Mitigation Assistance Program (FMA), and the PDM have been the state's best and most significant tools for hazard mitigation in recent years. Since April 1989, the HMGP has provided an aggregate investment of more than \$98.7 million for planning and projects designed to reduce or eliminate hazard-caused damage throughout the state. HMGP has funded a wide range of hazard-reduction projects, ranging from strengthening water towers so they do not fall during earthquakes to purchase of repetitive flood-loss properties.

Much smaller investments from the PDM (est. \$16.1 million) and the FMA (est. \$2.1 million) have paid for mitigation projects, and development of hazard mitigation and flood plans. Additionally, several local jurisdictions have invested their Emergency Management Performance Grant funds in hazard mitigation planning.

The state's administrative plan for these three hazard mitigation programs requires all construction-related mitigation projects to support the mitigation goals in the state's hazard mitigation plan. Additionally, beginning with the November 2006 flood disaster DR-1671, the state required recipients of HMGP planning grants eligible to join the NFIP to do so if they were not already members. The purpose for this requirement is that without such membership, the applicant could not obtain a project grant from any of the federally funded mitigation programs.

*Repetitive Flood Claims (RFC) and Severe Repetitive Loss* – The Hazard Mitigation Programs Administrative Plan and associated hazard mitigation project applications encourage the mitigation of properties subject to repetitive loss. Applications receive

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extra points in the adjudication process if they mitigate repetitive loss properties (including but not limited to flood repetitive loss). Recently funded flood mitigation projects include:

- FY05 PDM – King County acquisition of eight properties, one of which is a repetitive loss property
- FY06 FMA – King county acquisition of one repetitive loss property
- FY07 FMA – King County elevation project, 6 of 10 properties are repetitive loss
- FY07 PDM – Snohomish County elevation project, four of four are repetitive loss properties (in pre-award status)
- FY07 PDM – Town of Hamilton acquisition project, three of six are repetitive loss properties

### *State Hazard Mitigation Capability Matrix*

The matrix below identifies the most significant state funded or state administered programs, policies, regulations or practices related to hazard mitigation or loss reduction. Many of the listed programs provide funding for various hazard mitigation activities.

State law (Revised Code of Washington, or RCW) and implementing regulations (Washington Administrative Code, or WAC) are cited for state programs in listings below.

Other state and federal programs or initiatives may support or facilitate hazard mitigation or loss reduction. Information on these programs can be found on the website maintained by the State Infrastructure Assistance Coordinating Council, [www.infracfunding.wa.gov](http://www.infracfunding.wa.gov).

Definitions:

*Support loss reduction* – Programs, plans, policies, regulations, funding or practices that help implement mitigation measures.

*Facilitate loss reduction* – Programs, plans, policies, etc., that make implementing mitigation measures easier.

*Hinder loss reduction* – Programs, plans, policies, etc., that pose obstacles to implementing mitigation measures.

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### State Mitigation Capability Assessment

Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
Department of Community Trade and Economic Development, Growth Management Services	Critical Areas Ordinance (RCW 36.70A, WAC 365-190-080)	<b>X</b>			<b>Yes, for developing plans and regulations</b>	Growth Management Act requires all cities and counties in the state to identify critical areas including frequently flooded areas and geologically hazardous areas, and to establish regulations that limit development in those areas.
	Natural Hazard Reduction Element of Local Comprehensive Plan (RCW 36.70A, WAC 365-190-080)		<b>X</b>			Growth Management Act allows local planning jurisdictions to add optional elements to their comprehensive land-use plans, including an element dealing with natural hazard reduction.
Department of Community Trade and Economic Development, State Building Code Council	State Building Code (RCW 19-27, WAC 51)	<b>X</b>				State Building Code Act adopted in 1974; set 1973 UBC codes as statewide minimum. The Legislature approved use of the IBC 2003 building codes during the 2003 legislative session. The State Building Code Council adopted the codes, and made amendments that took effect July 2004 and July 2007.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
	Earthquake Construction Standards (RCW 70.86)			X		Approved in 1955. Requires newly constructed schools, hospitals, and places of public assembly to withstand a lateral force of 5 percent of the building weight. Law did not keep up with changes in code criteria; outdated by time 1973 building codes adopted. Remains on the books.
Department of Community Trade and Economic Development, Local Government Division	Community Services Block Grant loan and grant programs		X		Yes	Several of the eight CSBG programs fund projects in eligible communities that improve, repair or rehabilitate housing or infrastructure systems to meet urgent needs or to deal with an imminent threat to public health and safety.
Department of Community Trade and Economic Development, Public Works Board	Public Works Trust Fund – Construction Loans, Emergency Loans (RCW 43.155, WAC 399-30)		X		Yes	Trust fund construction loans allow for rehabilitation and reconstruction of eligible public works systems.
Department of Ecology	Flood Control Assistance Account Program (RCW 86.26, WAC 173-145)	X			Yes	Provides financial assistance to local agencies to prepare comprehensive flood control management plans and flood control maintenance projects.
	Flood Plain Management Act (RCW 86.16, WAC 173-158).	X				Requires development to avoid the floodway and minimize harm to floodplains and wetlands.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
	Shoreline Management Act (RCW 90.58, WAC 173-18 and -20).		X		Yes	Citizens passed the Shoreline Management Act in 1971 to restrict development in shoreline areas to “reasonable and appropriate uses” and to protect shoreline resources and aquatic life.
	Coastal Zone Management Act (PL 104-150). Section 306/306A supports Shoreline Management Act.		X		Yes	Grant funds are available to eligible local governments for planning, environmental inventories, land-use designation mapping, and policy development related to shorelines.
	Water Resources Program – Drought Response (RCW 43.83B.400 to -430, WAC 173-166)	X			Yes	Provides emergency water permits, financial assistance and temporary transfer of water rights during a state-declared drought emergency.
	Emergency Agricultural Water Supply Funds (RCW 43.83B.415, WAC 173-166)	X			Yes	Provides grants and loans for emergency water supply projects in declared drought areas to help irrigated crops and fisheries survive.
Department of Natural Resources	Forest Practices Act (RCW 76.09, WAC 222).		X			Among other things, the act requires owners of forestlands to prevent landslides caused by logging or other uses.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
	Division of Geology and Earth Resources (State Geological Survey)		<b>X</b>			Evaluates geologic hazards, develops hazard maps, conducts damage assessment following disasters, and provides advice on mitigation measures.
	Firewise Program	<b>X</b>				Helps landowners in eligible communities remove trees and brush that pose a fire hazard to homes that border forestlands. Property owners who pay fees to the department for fire protection are eligible to participate.
	Forest Stewardship Program (FSP)	<b>X</b>			<b>Yes</b>	Helps family forestland owners with hazard reduction training and funding to assist with thinning and other actions to reduce wildfire hazard.
	Forest Land Enhancement Program	<b>X</b>			<b>Yes</b>	Provides education, on-site advice and cost-share assistance to help non-industrial private forest landowners develop Forest Stewardship Plans, complementary to FSP
University of Washington, and various partner organizations	Pacific Northwest Seismograph Network		<b>X</b>			Operates network of seismographs whose data help scientists understand Pacific Northwest earthquake hazards and predict volcanic eruptions at Mount St. Helens. Network scientists are active in public outreach and education for these hazards.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
Governor's Office	Evaluation of Flood Hazard in Locating State Facilities, and Reviewing and Approving Sewage and Water Facilities and Subdivisions, Executive Order 77-11.	X				Requires state agencies to avoid locating and building state facilities, roads, and campgrounds in floodplains, requires agencies to flood proof existing facilities, and to consider reduction of potential flood damage when reviewing plans for water and wastewater facilities and residential subdivisions and trailer parks.
	State Agency Risk Management, Executive Order 01-05		X			Requires state executive agencies to reduce and minimize loss from tort claims against the state; it includes language that could apply to reducing threats posed by natural hazards through mitigation.
	Sustainable Practices by State Agencies, Executive Order 02-03.		X			Requires state executive agencies to establish sustainability objectives regarding facility construction, operation and maintenance; it includes language that could apply to reducing threats posed by natural hazards through mitigation.
Military Department (Emergency Management Division)	Hazard Mitigation Grant Program	X			Yes	This program, available after a Presidential disaster declaration, funds hazard mitigation plans and cost-effective projects that reduce or eliminate the effects of hazards and/or vulnerability to future disaster damage. Typically, the state provides a portion of the required non-federal match.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
	Public Assistance Program		X		Yes	This program, available after a Presidential disaster declaration, allows mitigation measures to be designed into projects to repair or restore public facilities damaged by the disaster event.
	Pre-Disaster Mitigation Grant Program	X			Yes	This annual, nationally competitive program funds hazard mitigation plans and cost-effective projects that reduce or eliminate the effects of hazards and/or vulnerability to future disaster damage.
	Flood Mitigation Assistance Program	X			Yes	This program funds flood mitigation plans, provides technical assistance, and funds construction projects that reduce flood risk to insured, repetitive loss properties.
	Repetitive Flood Claims Program	X			Yes	This program provides funding to reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP that have had one or more claim payments for flood damages.
	Severe Repetitive Loss	X			Yes	This program provides funding to reduce or eliminate the long-term risk of flood damage to structures that are insured under NFIP and meet the definition of severe repetitive loss.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
	National Tsunami Hazard Mitigation Program	X			Yes	This program provides tsunami modeling for preparedness planning, mitigation initiatives, and public education; provides warning guidance to local jurisdictions; and facilitates installation of all-hazard alert systems in coastal areas.
	Earthquake Program		X			Provides coordination and oversight of seismic safety programs, supports public education and mitigation planning, and provides tools to support seismic hazard reduction.
	HAZUS (Hazards United States)		X			The division provides training and facilitates local and state use of HAZUS to support mitigation planning and development of mitigation strategies for areas at risk to earthquake.
	Volcano Program		X			The division coordinates the efforts of workgroups for each of the state's five volcanoes, and helps in the development of response, preparedness and mitigation initiatives.
Department of Fish and Wildlife	Hydraulic Code (RCW 77.55, WAC 220-110).		X			This law requires development in shorelines of marine and fresh waters of the state to include mitigation measures that protect aquatic habitat and fish. Work also must comply with the State Environmental Policy Act.

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Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate	Hinder		
Department of Transportation	Highway Bridge Replacement and Rehabilitation Program	X			Yes	Funds repair and rehabilitation of eligible locally owned bridges, to include seismic retrofit and scour mitigation.
	Emergency Relief Program	X			Yes	Funds temporary and permanent repairs to federal-aid roads and bridges damaged by natural disaster. Also funds "betterments" that provide a reasonable assurance of preventing future disaster damage.
Transportation Improvement Board	Six grant programs for local transportation projects (RCW 47.26, WAC 479)		X		Yes	Grant funds can reimburse local jurisdictions for mitigation items that do not exceed state or federal requirements.
County Road Administration Board	Rural Arterial Program (RCW 46.68, WAC 136-163)		X		Yes	Under Emergency and Emergent Provisions, the program provides funding for temporary or permanent restoration work on rural roads and bridges to pre-disaster condition; it may include reconstruction to current design standards.

### III. Local Capability Assessment

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**Requirement 201.4.c.3.ii: *This section shall include a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.***

Local governments have policies, programs and capabilities designed to mitigate – or assist in the mitigation of – impacts of hazard events on communities. Each community has its own policies, programs and capabilities, depending upon a number of factors such as size of area and population, and amount of funding available through local resources.

Regardless of its relative size or wealth, each community will have a core set of policies, programs and capabilities at its disposal related to hazard reduction and mitigation – building codes and land use plans and regulations. The table that follows highlights local capability related to these issues.

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### Local Capability Assessment

Existing Local Policies			
<i>Policy</i>	<i>Description</i>	<i>Applicability</i>	<i>Effectiveness</i>
Building codes	<p>Adoption of building codes initially was the discretion of individual cities and counties. Passage of the State Building Code Act in 1974 mandated the use of 1973 UBC building codes throughout the state. Since this time, local jurisdictions can make amendments to the code but changes cannot diminish code requirements.</p> <p>The State Building Code Council now adopts building, fire and mechanical codes for the state of Washington. These codes set minimum performance standards for buildings. The council amends the codes to meet state needs, but only if changes improve upon the original codes.</p> <p>The council adopted and amended the 2003 editions of the International Code Council building, residential, mechanical and fire codes published by the International Code Council, and the 2003 edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials. The council also amended the state energy code.</p> <p>Adoption of 2003 building, mechanical, fire, and plumbing codes brings Washington State's building codes to the highest level nationwide and they address the state's seismic hazard.</p>	<p>Since 1974, building codes adopted by the State Building Code Council have been applicable statewide.</p> <p>Counties and cities can amend the state codes, but they cannot diminish the minimum performance standards of the codes.</p> <p>State amendments to the 2003 building codes drafted in 2006 took effect July 1, 2007. All structures built after that date must comply with the new building codes, which includes provisions for the state's seismic hazard.</p>	<p>Before adoption of a statewide building code in 1974, there was a wide variation of minimum standards, as well as variation in use of requirements to address hazards including earthquake and winter storm.</p> <p>The state building code is updated regularly to account for new knowledge of hazards and changes in construction methods and materials, and to incorporate new designs and technologies. Despite 30 years of uniform building codes, consistent enforcement remains a problem.</p> <p>Local building departments are responsible for enforcing federal, state and local codes related to building construction projects. A study of structural failures following the December 1996 – January 1997 winter storms recommended more education and better communication for all parties involved in construction of buildings, including construction plans examiners and local building inspectors.</p>

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<b>Existing Local Policies</b>			
<b><i>Policy</i></b>	<b><i>Description</i></b>	<b><i>Applicability</i></b>	<b><i>Effectiveness</i></b>
Land-use planning	<p>The Planning Enabling Act provides the framework for guiding and regulating the physical development of a county or region.</p> <p>Comprehensive plans prepared under this act must include a land-use element to designate the general distribution, location and extent of various land uses (i.e., agriculture, housing, commerce, industry, education, recreation), and a circulation element with the location, alignment and extend of various transportation routes.</p> <p>Optional elements of comprehensive plans prepared under this act cover conservation of natural resources, use of solar energy, recreation, transportation, public services and facilities, housing, renewal and redevelopment, and capital improvements.</p>	<p>This land-use planning law applies to all local jurisdictions in the state – including counties, cities and towns, school districts, public utility districts, housing authorities, and port districts.</p> <p>As a practical matter, only the state’s smaller, slow-growing, rural counties are planning under this state law.</p>	<p>The Planning Enabling Act provides the basic framework for local jurisdictions to develop land-use plans and development regulations.</p> <p>Planning under this law is not as comprehensive as required by the Growth Management Act (see below). It does not address ties between transportation and housing, and other factors required under GMA planning.</p> <p>The Planning Enabling Act is silent on the need for comprehensive plans to address hazard avoidance or hazard reduction.</p> <p>Local compliance with state requirements of this law is better than under the much more comprehensive Growth Management Act.</p>

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<b>Existing Local Policies</b>			
<b><i>Policy</i></b>	<b><i>Description</i></b>	<b><i>Applicability</i></b>	<b><i>Effectiveness</i></b>
<p>Critical areas protection</p>	<p>The Growth Management Act of 1990 requires all cities, towns and counties in the state to identify and protect the functions and values of critical areas. The act defines critical areas as frequently flooded areas (including areas prone to tsunamis), geologically hazardous areas (including areas prone to erosion, landslide, seismic activity, volcanic activity, etc.), fish and wildlife habitat conservation areas, wetlands, and recharge areas for aquifers used for potable water.</p> <p>The concept of protecting the function and values of critical areas includes protecting humans from flood and geologic hazards.</p> <p>Critical areas regulations must be reviewed and evaluated every seven years; amendments can be made annually.</p>	<p>All counties, cities and towns in the state must develop regulations to designate and protect critical areas.</p> <p>Legislation approved in 2003 established a schedule requiring cities and counties to update their critical areas regulations every seven years beginning in 2004. All updates must be complete by December 1, 2008.</p>	<p>Cities and counties since 1995 must use best available science to develop policies and regulations to protect the function and values of critical areas. Most initial critical area regulations did not take into account best available science.</p> <p>Among the issues facing local jurisdictions preparing critical area regulations are balancing the use of scarce available resources for detailed planning and regulation development versus providing other services, and balancing the protection of critical areas with rights of owners to use or develop their property. Some believe that critical area protection requires communities to prevent development on too much land.</p> <p>Most jurisdictions have prepared critical area regulations that meet minimum state standards, but their effectiveness varies, depending upon local resources and local political considerations.</p> <p>As of October 2007, only 88 percent of jurisdictions required to have their critical areas regulations completed by the end of 2004 had done so. The completion percentage drops to 40 percent for 2005 jurisdictions and 16 percent for 2006 jurisdictions.</p>

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Existing Local Policies			
<i>Policy</i>	<i>Description</i>	<i>Applicability</i>	<i>Effectiveness</i>
<p>Growth Management Act land-use planning</p>	<p>The Growth Management Act, which became law in 1990, builds on the Planning Enabling Act by requiring all cities and counties in the state to:</p> <ul style="list-style-type: none"> <li>• Designate and protect critical areas (see above).</li> <li>• Designate farmlands, forestlands and other natural resource areas.</li> <li>• Determine that new residential subdivisions have appropriate provisions for public services and facilities.</li> </ul> <p>Additionally, fully planning counties (and their cities) must agree on countywide land-use policies, plan for growth within designated urban growth areas, identify lands for public purposes and essential public facilities, and adopt development regulations to carry out comprehensive plans.</p> <p>Comprehensive plans are built around 14 goals, and must provide for 20 years of growth and development needs. Plans must include elements on land use, utilities, housing transportation, capital facilities, rural lands, and shorelines.</p> <p>Comprehensive plans must identify hazard prone areas, and include policies to reduce vulnerability of housing, public facilities, transportation and utilities to identified hazards. Plans can address hazard reduction or hazard avoidance in one of two ways – through the required planning elements or through a separate but optional natural hazard reduction element.</p>	<p>Counties that meet one of the following criteria must fully plan under the Growth Management Act:</p> <p>1) Counties with a population greater than 50,000 and:</p> <ul style="list-style-type: none"> <li>• Before May 1995 had a 10 percent increase in population in the previous 10 years, OR</li> <li>• After May 1995 had a 17 percent increase in population in the previous 10 years.</li> </ul> <p>2) Counties whose population increased 20 percent in the previous 10 years.</p> <p>Counties that do not fit the above criteria can voluntarily choose to plan under the Growth Management Act.</p> <p>Under legislation passed in 2003, must review every 10 years their designated urban growth areas, and review every 7 years their comprehensive plans and development regulations.</p>	<p>Twenty-nine of the state's 39 counties are fully planning under GMA; 218 cities within these counties also must fully plan.</p> <p>Land-use plans and regulations developed under GMA requirements are much more comprehensive than those developed under the Planning Enabling Act.</p> <p>Among the issues facing local jurisdictions preparing GMA plans and regulations include balancing the use of scarce available resources for detailed planning and regulation development versus providing other services, and balancing the protection of critical areas with rights of owners to use or develop their property.</p> <p>Most jurisdictions have prepared land-use plans and regulations that meet minimum state standards, but their effectiveness varies, depending upon local resources and local political considerations.</p> <p>As of October 2007, 94 percent of jurisdictions required to have their comprehensive plans completed by the end of 2004 had done so. The completion percentage drops to 74 percent for 2005 jurisdictions and 51 percent for 2006 jurisdictions. Percentages for completion of development regulations range from 83 percent of 2004 jurisdictions to 38 percent of 2006 jurisdictions.</p>
<p>Washington State</p>	<p>Hazard Mitigation Plan</p>		<p>November 2007</p>

## Mitigation Strategy

Existing Local Policies			
<i>Policy</i>	<i>Description</i>	<i>Applicability</i>	<i>Effectiveness</i>
Floodplain management	<p>Three state laws govern floodplain management:</p> <p>RCW 86.12, Flood Control by Counties, gives counties the power to levy taxes, condemn properties and undertake flood control activities directed toward a public purpose. RCW 86.26, State Participation in Flood Control Maintenance, established the Flood Control Assistance Account Program (FCAAP) to provide state funding for local flood hazard management planning and implementation efforts. RCW 86.16, Floodplain Management, states that prevention of flood damage is a matter of statewide public concern and placed regulatory control within the responsibilities of the Department of Ecology.</p> <p>The state's floodplain management law allows local governments to adopt floodplain management requirements that exceed National Flood Insurance Program requirements, and requires local governments to enforce restrictions prohibiting new residential construction or reconstruction of substantially damaged residential structures in mapped floodways. Allowed under certain circumstances is reconstruction or replacement of substantially damaged farmhouses in the floodway.</p>	<p>RCW 86.12 applies to all counties of the state. Participation in the Flood Control Assistance Account Program requires local jurisdictions to participate and be in good standing in the National Flood Insurance Program, and their activities must be approved by the Department of Ecology in consultation with the Department of Fish and Wildlife.</p> <p>Grants are available for up to 75 percent of the cost of flood hazard management planning, and 50 percent for the cost of flood damage reduction projects, including purchase of flood prone properties, limited flood mapping, and flood warning systems.</p> <p>Flood damage reduction projects must be consistent with local comprehensive flood hazard management plans.</p> <p>Emergency grants are available to respond to unusual flood conditions.</p>	<p>Despite a lack of funding, communities continue making floodplain management a priority.</p> <p>The State Flood Control Assistance Account Program is funding 26 local projects in the 2007-09 biennium. Grants for these projects total approximately \$2.1 million.</p> <p>Washington has 27 communities participating in the Community Rating System, ranking Washington 14<sup>th</sup> among the 50 states. King County has a CRS rating of 3, making it the highest ranked county in the nation, behind only the municipality of Tulsa in overall CRS ranking.</p> <p>Many communities have created innovative floodplain management techniques, such as:</p> <ul style="list-style-type: none"> <li>• Higher freeboard standards than federal regulations require (e.g., Everett and Chelan County).</li> <li>• Prohibiting fill for structural support of residential buildings in floodplains (e.g., Skagit and King Counties.)</li> <li>• Providing storage to compensate for filling floodplains (many localities).</li> <li>• Prohibiting new residential structures in the floodplain (Thurston County)</li> <li>• Exceeding federal standards for floodways (Pierce County).</li> </ul>

## Mitigation Strategy

<b>Existing Local Policies</b>			
<b>Policy</b>	<b>Description</b>	<b>Applicability</b>	<b>Effectiveness</b>
Shoreline management	<p>A public referendum adopted the Shoreline Management Act in 1971 to prevent the “inherent harm in an uncoordinated and piecemeal development of the state’s shorelines.” Implementing regulations were updated in late 2003 for the first time in 30 years.</p> <p>The act covers three basic policy areas:</p> <ol style="list-style-type: none"> <li>1. Accommodation of reasonable and appropriate uses. The act prefers uses consistent with control of pollution and prevention of damage to the natural environment, or uses that are unique to or dependent upon shorelines.</li> <li>2. Protection of the shoreline environmental resources. The act intends to protect shoreline natural resources including the land and its vegetation and wildlife, and the waters of the state and their aquatic life, against adverse impacts.</li> <li>3. Protection of the public’s right to access and use the shorelines. The act requires local shoreline master programs to include provisions for public access and recreational opportunities at publicly owned shorelines.</li> </ol> <p>State shoreline regulations were updated in 2003; they are more comprehensive than before and include a greater basis in science; they take into consideration protection of critical resources and physical and biological processes and functions.</p>	<p>The Shoreline Management Act applies to 39 counties and more than 200 cities with shorelines created from:</p> <ul style="list-style-type: none"> <li>• Marine waters (Pacific Ocean, Strait of Juan de Fuca, Puget Sound).</li> <li>• Streams and rivers with a mean annual flow greater than 30 cubic feet per second.</li> <li>• Lakes and reservoirs greater than 20 acres in areas.</li> <li>• Upland areas called shorelands that extend 200 feet landward from the edge of these waters.</li> <li>• Biological wetlands and river deltas, and some or all of the 100-year floodplain when associated with one of the above.</li> </ul> <p>The act establishes a balance of authority between local and state government. Cities and counties are the primary regulators.</p>	<p>Unlike land-use plans prepared under the Growth Management Act, presumed valid upon local adoption, local shoreline regulations must be approved by the Department of Ecology before they are considered valid and implemented.</p> <p>Strength of local shoreline regulations are avoiding development on unstable shoreline slopes and in frequently flooded areas.</p> <p>Obstacles to successful development of shoreline master plans include local political will to develop regulations sufficient to protect shorelines via buffers, setbacks, and appropriate design criteria.</p> <p>With adoption of new state regulations for local shoreline master plans in December 2003, all communities must revise their master plans by 2013. The Department of Ecology made \$2 million in planning grants available to 12 early adopters during the 2003-05 biennium, and will have about \$4 million in each successive biennium through 2014 to fund planning and regulation development efforts. An estimated \$4.5 million in grants is available in the current 2007-09 biennium.</p>

## Mitigation Strategy

<b>Existing Local Policies</b>			
<b><i>Policy</i></b>	<b><i>Description</i></b>	<b><i>Applicability</i></b>	<b><i>Effectiveness</i></b>
<p>State Environmental Policy Act</p>	<p>The State Environmental Policy Act was adopted in 1971 to provide a regulatory framework for state and local agencies to address environmental issues in their decisions. The act provides information to agencies, applicants and the public to encourage the development of environmentally sound proposals. The environmental review process involves the identification and evaluation of probable environmental impacts and the development of mitigation measures that will reduce adverse impacts.</p> <p>SEPA was modeled after the National Environmental Policy Act.</p> <p>The act ensures that environmental values are considered during decision making by state and local agencies. When the act was adopted, the Legislature identified four primary purposes:</p> <ol style="list-style-type: none"> <li>1. To declare state policy which will encourage productive and enjoyable harmony between man and the environment.</li> <li>2. To promote efforts which will prevent or eliminate damage to the environment.</li> <li>3. To stimulate the health and welfare of man.</li> <li>4. To enrich the understanding of the ecological systems and natural resources important to the state and nation.</li> </ol>	<p>The law requires local governments to:</p> <ul style="list-style-type: none"> <li>• Utilize a systematic, interdisciplinary approach that ensures the integrated use of natural and social sciences and the environmental design arts in planning and decision-making that may affect the environment.</li> <li>• Ensure that environmental amenities and values are given appropriate consideration in decision making along with economic and technical considerations.</li> </ul>	<p>SEPA provides a process to give local decision makers information on environmental protection and hazard reduction related to new development. In its early years, this law was the only mechanism that provided for mitigation from natural hazards such as flooding and landslides. Today, critical area regulations required by the Growth Management Act have taken much of this responsibility.</p> <p>SEPA's effectiveness depends upon its application by local jurisdictions. Many communities face the issue of balancing environmental protection with rights of owners to use or develop their property.</p> <p>Larger and more sophisticated counties use SEPA in combination with their own critical area regulations to provide a holistic approach to environmental protection and hazard avoidance. Thurston County, for example, uses SEPA to fill gaps in local regulations related to mitigating hazards. However, this county is the exception rather than the rule throughout the state.</p> <p>Communities that take the SEPA process seriously can use it to improve their mitigation efforts. A checklist helps communities determine the environmental impact of a proposed development.</p>

## Mitigation Strategy

### IV. Mitigation Actions

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**Requirement 201.4.c.3.iii: *This section shall include an identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.***

#### *Mitigation Action Agenda*

The Mitigation Action Agenda on pages 29-58 represents the mitigation actions and initiatives for the state government of Washington to pursue during the 2007-2010 period as identified by the SHMAT and the state agencies participating in this edition of the plan. The mitigation initiatives represent a mix of actions continued from the 2004 plan because they remain a work in progress and a few initiatives whose language was revised but whose intent remains the same. A number of action items identified in the 2004 plan were dropped.

#### Revisions to the Mitigation Action Agenda

In revising the mitigation action agenda for state government for the period of 2007 to 2010, the SHMAT took the following into account:

- Progress by state agencies on mitigation actions in the 2004 state plan (for details, see Plan Maintenance, Tab 4).
- Review of mitigation priorities identified in the public outreach sessions conducted by the State EMD in the fall of 2006 (for details, see Planning Process, Tab 2).
- Identification of mitigation strategies and actions in the hazard mitigation plans of the state's fastest-growing counties (for details, see Planning Process, Tab 2).

As a result of this review, the advisory team reaffirmed the five goals for mitigation as identified in the state's original hazard mitigation plan, and made minor changes in the language of a few of the identified mitigation strategies.

Additionally, participating state agencies also reviewed the mitigation actions they identified in the 2004 plan and made revisions as appropriate for the 2007 plan.

For this edition of the state plan, there is one matrix containing all state agency mitigation actions. This is a change from the 2004 plan, when each participating state agency developed its own goals and listed its mitigation actions separately in agency-

## Mitigation Strategy

specific annexes. The purpose of the revision was to reduce the burden on participating agencies and to streamline the mitigation plan review and revision process.

Another change, as noted above, is that revisions were made to the text describing several action items. However, each revision is not listed below, because the general intent of the action items as identified in the 2004 plan remains the same. Revisions were made either to strengthen, to provide more specificity to, or to expand an action item. For example:

Action 2.1.5 – Develop a plan to examine the vulnerability of transportation infrastructure and lifelines along the Interstate 5 corridor from Vancouver, B.C., to Portland, OR, and the Interstate 90 corridor from Seattle to Coeur d’Alene, ID, using the recently completed Port-to-Port Transportation Corridor Earthquake Vulnerability Study as a model. The plan should include strategies to obtain funding for this work. (2004 Plan)

**BECAME**

Action 2.1.3 – Develop a plan to complete seismic retrofit projects on vulnerable bridges in important state transportation corridors. (2007 Plan)

A number of action items identified in the 2004 state plan were not included in the 2007 plan. The following is the list of deleted mitigation actions, along with the reason for their deletion.

- Action 1.3.2, Pilot project with incentives for seismic mitigation in low-income households and housing vulnerable to natural hazards. Reason for deletion – the action was duplicative of the recently completed City of Seattle / Project Impact demonstration project that strengthened about 1,000 homes in Seattle.
- Actions 2.1.3 and 2.1.4 – Not included in original 2004 plan because of numbering error in matrix; there were no action items associated with these numbers.
- Action 3.1.2, Develop web-based hazard risk-awareness tool. Reason for deletion – action superseded by other mitigation actions considered by the Emergency Management Division to be of greater importance.
- Action 3.2.2, Plan for backup electrical systems in critical state-owned facilities. Reason for deletion – the action is removed from the plan until the identified responsible agency participates in state hazard mitigation planning initiative.

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- Action 4.1.1, Establish workgroup to explore selective de-energizing of power lines during wildfire. Reason for deletion – workgroup was not established. De-energizing power lines is problematic because many electric utilities do not have alternate line routes that would allow them to continue serving customers; utilities instead use vegetation management to reduce the risk of fire spread by overhead lines.
- Action 4.1.2, Establish workgroup to explore use of underground cable in high-hazard areas. Reason for deletion – workgroup was not established. Placing power lines underground is not cost-effective and they have a shorter life span than overhead facilities.
- Action 5.1.2, Establish minimum standards for geotechnical reports. Reason for deletion – action completed.
- Action 5.3.1, Assess effectiveness of state’s public education program on emergency preparedness. Reason for deletion – responsible agency does not plan such an assessment at this time.

Additionally, the action items in the 2004 plan identified by the following agencies are not included this plan because of a lack of participation by the agencies in the review process (they will be included as they rejoin the planning process later in 2007):

Department of Agriculture	Employment Security Department	Everett Community College	Higher Education Coordinating Board
Department of Licensing	Department of Social and Health Services	Washington State Patrol	

### Prioritizing Mitigation Actions

The mitigation actions and initiatives are not in a 1-2-3 priority order, nor are they categorized as being of high, medium or low priority. The reason for this is the philosophy of the State Hazard Mitigation Program to foster holistic state agency and local programs that make hazard mitigation a way of doing business. Rather than encouraging eligible agencies to develop a list of planning and construction projects for federal hazard mitigation grants when they become available, the state program encourages agencies and organizations to include mitigation as they consider construction and location of new buildings, make existing facilities safer and develop strategic plans for organization operations.

The State Hazard Mitigation Program does not target available resources to a handful of local jurisdictions or to just a few hazards. The reason for this is two-fold.

## Mitigation Strategy

1. Washington has a home-rule style of governance. This means that local governments are responsible for maintaining control of government services and actions at the lowest possible level, rather than the state providing top-down direction to control decisions that affect local citizens.
2. Pouring most or all of available resources into a small area (three to five flood-prone counties, for example) or for limited mitigation tasks (for elevating or purchasing of repetitive flood-loss properties, for example) is politically untenable and it discourages non-funded jurisdictions from developing and maintaining hazard mitigation programs, plans and projects.

Rather than establish project priorities, the State Hazard Mitigation Program requires any mitigation project proposed for funding through the federal hazard mitigation grant programs administered by the State EMD (including state agency projects) to:

1. Support the goals and objectives of the SHMP.
2. Reduce identified hazard risk.
3. Reduce repetitive and severe repetitive losses, without regard to hazard.
4. Protect critical areas, particularly frequently flooded areas and geologically hazardous areas.

Proposed state projects must compete with projects proposed by eligible local governments; this ensures that federal grant-funded state and local projects address state hazard mitigation priorities.

Upon adoption of this plan, the State Hazard Mitigation Program will begin placing a greater focus on fast-growing jurisdictions identified as most vulnerable to natural hazard events. The purpose will be to ensure they have FEMA-approved hazard mitigation plans, as well as the tools and capability to develop hazard mitigation projects and successful grant funding applications.

In addition, in order to reduce the number of repetitive and severe repetitive loss properties, the state will revise its Hazard Mitigation Programs Administrative Plan / Application Packet to more specifically state that mitigation of repetitive loss and severe repetitive loss properties are a state priority and that additional points will be awarded for projects that mitigate these properties. Additionally the state will target and specifically work with local jurisdictions to facilitate development of mitigation projects geared toward these properties. This will include some of the state's technical assistance / management grant funds available through PDM / FMA / and RFC for project development to include, as necessary, site visits, training, obtaining damage and flood frequency data and / or funding elevation certificates for identified repetitive and severe repetitive loss properties. Finally, the state will work with local jurisdictions

## **Mitigation Strategy**

developing or revising mitigation plans to encourage placement of a repetitive loss and severe repetitive loss strategy in their new / revised plans.

### Addressing Cost-Effectiveness, Environmental Soundness, Technical Feasibility

Any state government construction project – regardless of potential funding source – has to be cost-effective, technically feasible and meet all appropriate federal, state, and local environmental laws and regulations before it is started.

State government projects funded by federal hazard mitigation grant programs administered by the State EMD must meet specific criteria related to cost-effectiveness, environmental soundness, and technical feasibility. The criteria are established in the state's Hazard Mitigation Programs Administrative Plan, Tab 8.

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
1.1 – Improve systems that provide warning and emergency communications.	1.1.1 – Develop a plan and seek funding to expand the pilot All-Hazard Alert Broadcasting (AHAB) radio local warning system statewide.	State Emergency Management Division	Ongoing; 51 systems primarily in tsunami-vulnerable communities; 43 were operational by June 30, 2007	Ongoing, continuing to seek funds from state, federal sources for additional installations	\$2.4 million to date	State general fund, NOAA National Tsunami Hazard Mitigation Program
	1.1.2 – Help National Weather Service expand NOAA Weather Radio coverage, especially in high terrain areas.	State Emergency Management Division, with the National Weather Service	Ongoing. Upper Cowlitz station operational in fall 2007, planning ongoing for Spanish language NWS station in Yakima	Ongoing, continuing to seek funding for system expansion	\$50,000 for two stations	NOAA National Weather Service, local funds

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.1.3 – Investigate the feasibility of developing a real-time landslide warning system along key transportation routes.	Department of Natural Resources – Division of Geology and Earth Resources, Department of Transportation, and State Emergency Management Division with US Geological Survey	Still in scoping phase	Ongoing; continuing to seek funds from state, federal sources	Dependent on scope	State general fund, US Geological Survey
	1.1.4 – Develop a plan to install satellite-based, real-time tsunami and earthquake information systems in county and city emergency operation centers.	State Emergency Management Division with US Geological Survey and National Oceanic and Atmospheric Administration	Ongoing	Ongoing, as funding is available to support CISN software and training sessions	\$25,000	State general fund, NOAA National Tsunami Hazard Mitigation Program
	1.1.5 – Develop maps with information on land ownership, response boundaries, roads, and other features to allow fire fighting agencies to adequately prepare for response to wildland fires in interface areas.	Department of Natural Resources – Resource Protection Division	Ongoing, maps provided through our DNR regional offices and via the Internet	Ongoing	variable	DNR Resource Protection budget
	1.1.6 – Expand emergency power system	University of Washington	Ongoing			State funding sources

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.1.7 – Enhance and ensure interoperable communication	University of Washington	Ongoing	Ongoing	Not available	Urban Areas Security Initiative Grant, Self-sustaining Revenue, State Funds
	1.1.8 – Continue upgrade of fire alarm systems	University of Washington	Ongoing	Ongoing		Minor Capital Safety
	1.1.9 – Install building intercom systems	Attorney General's Office	Ongoing	Ongoing	\$50,000	State general fund
	1.1.10 – Continue to upgrade the campus two-way radio system	South Puget Sound Community College	Ongoing	August 2007	\$1000	Outside source/college budget
	1.1.11 – Purchase back up wireless communication system	South Puget Sound Community College	Ongoing	August 2008	\$1,000	Outside source/college budget
	1.1.13 – Incorporate a review and upgrade of the fire alarm and fire sprinkler systems in all renovation and replacement projects	Clark College	Ongoing	Ongoing	Cost dependent upon project	State general fund

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
1.2 – Develop or amend laws so they effectively address hazard mitigation.	1.2.1 – Develop and promote comprehensive and cost-effective recommendations for local land-use plans and ordinances that reduce the risk of natural hazards, including wildland fire in interface areas.	Department of Natural Resources – Resource Protection Division, Department of Community Trade and Economic Development – Growth Management Division, Department of Ecology – Floodplain Management	Ongoing, DOE conducting outreach to 35-50 communities per year on floodplain management.	Ongoing	DOE - \$120,000/year per year DNR - \$150,000	DOE – State Flood Control Assistance Account and FEMA, CAP-SSSE  DNR – State general funds, National Fire Plan grants
	1.2.2 – Expand the number of local governments that include hazard reduction planning into their land-use plans and development regulations.	Department of Community Trade and Economic Development – Growth Management Division, with State Emergency Management Division  Department of Ecology – Floodplain Management	Ongoing, DOE conducting outreach to 35-50 communities per year plus communities that initiate or revise Comprehensive Flood Hazard Management Plans (CFHMPs)	Ongoing	DOE - \$120,000/year plus up to \$500,000 to \$1 million per biennium in local grants for CFHMPs	DOE – State Flood Control Assistance Account (all CFHMP grants) and FEMA, CAP-SSSE

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.2.3 – Develop and promote recommendations for local ordinances to prevent fires in interface areas resulting from fireworks, debris burning, campfires, and other human-caused sources.	Department of Natural Resources – Resource Protection Division, with Department of Community Trade and Economic Development – Local Government Division and Washington State Patrol – Office of the State Fire Marshal	Ongoing, DNR provides model hazard language for ordinances, cooperative agreements for burning regulations, fire prevention teams supporting local July 4 fireworks	Ongoing	DNR - \$100,000/year	DNR fire prevention budget
	1.2.4 – Identify and resolve conflicts in laws and regulations that currently prevent effective fuel management in wildland fire interface areas.	Department of Natural Resources – Resource Protection Division, with Department of Community Trade and Economic Development – Local Government Division	DNR works with DOE to resolve conflicts and provide alternatives to burning	Ongoing	Minimal	Not Available

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.2.5 – Request the Governor’s Office prepare an executive order requiring state agencies to include hazard mitigation actions into owned and leased structures upon first occupancy, into renovation of existing owned structures, and into the design or redesign of interior work spaces.	State Emergency Management Division, with Department of General Administration, Governor’s Emergency Management Council, and Office of Financial Management – Executive Policy Office	Ongoing; Emergency Management Division has drafted an executive order on non-structural mitigation, but has not yet worked this issue	Ongoing	\$0	Not Applicable
1.3 – Reduce the impacts of hazards on vulnerable populations	1.3.1 – Help K-12 schools and state colleges and universities develop vulnerability assessments, mitigation plans and mitigation projects to improve safety in their most vulnerable buildings.	State Emergency Management Division, with Office of Superintendent of Public Instruction, public schools and higher education institutions	Ongoing	Ongoing	Unknown	State general and capital funds, and federal hazard mitigation grants
	1.3.2 – Develop Mass Care and Shelter Plan and capabilities	University of Washington	Not yet initiated	Unknown	Unknown	Funding Source not identified
	1.3.3 – Emphasize the consideration of life safety issues and risks in capital budget process	University of Washington	Ongoing	Unknown	Unknown	Capital Budget, Ongoing operational budgets

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
1.4 – Strengthen state and local building codes and enforcement.	1.4.1– Pursue certification of building inspectors through code organizations and provide continuing education to improve the quality of building inspections.	State Building Code Council, with Washington Association of Building Officials	Ongoing	Ongoing	\$750,000 per fiscal year	Private/local
	1.4.2 – Ensure that all renovations and replacement projects include design elements to address potential hazards.	Clark College	Ongoing	Ongoing	No incremental cost	State general fund
1.5 – Train emergency responders.	1.5.1 – Deliver standardized training on wildland fires to firefighters responding to fires in interface areas.	Department of Natural Resources – Resource Protection Division, with Washington State Patrol – Office of the State Fire Marshal, and the state’s fire services	Ongoing, all fire training includes urban interface training	Ongoing	\$2,400,000	DNR Resource Protection training budget
	1.5.2 – Upgrade emergency response equipment and training.	Attorney General’s Office	Ongoing	Dec 2007	\$16,000	State general fund
	1.5.3 – National Incident Management System training.	Attorney General’s Office, South Puget Sound Community College	Ongoing	AGO – Ongoing SPSCC – August 2008	AGP – Minimal SPSCC – \$2,000	AGO – State general fund SPSCC – Outside source/college budget

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.5.4 – Conduct, participate in emergency drills and exercises.	Attorney General's Office, South Puget Sound Community College, Clark College, Economic and Revenue Forecast Council, Dept. of Revenue	Ongoing. SPSCC developing all-hazard college-wide exercise program	AGO – Ongoing SPSCC – August 2008 Clark College – July 2008	AGO – Unknown SPSCC - \$5,000 Clark College – No incremental cost	AGO, Clark College, Revenue – State general fund SPSCC – Outside source/college budget
	1.5.5 – Develop a comprehensive agency Safety & Security Plan and corresponding Plans for each facility.	Attorney General's Office	Ongoing	March 2007	Not available	State general fund
	1.5.6 – Complete emergency response CD to be disturbed to emergency response agencies.	South Puget Sound Community College	Ongoing	August 2008	\$2,000	Outside source/college budget
	1.5.7 – Verify that building evaluation coordinators are identified and trained.	Clark College	Ongoing	June 2008	\$1,000	State general fund
	1.5.8 – Review and update the Emergency Response Procedures and Guide consistent with natural and other emergency response issues.	Clark College	Ongoing	June 2008	No incremental cost	State general fund

## Mitigation Strategy

Goal #1 – Protect Life						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	1.5.9 – Provide training to staff on topics such as preparedness, response and disaster recovery, First Aid, Cardio-Pulmonary Resuscitation, and use of Automated External Defibrillator.	Economic and Revenue Forecast Council, Dept. of Labor and Industries, Utilities and Transportation Commission, Dept., of Revenue	Ongoing	Ongoing	Forecast Council – \$250 UTC – \$550/year	Forecast Council, L&I, Revenue – State general fund UTC – Public Services Revolving Fund
	1.5.10 – Test individual Unit Response Center plans.	University of Washington	Not initiated	Unknown	Unknown	Funding not determined
	1.5.11 – Expand and support Campus Emergency Response Team program.	University of Washington	Ongoing, training started March 2007	Ongoing	\$25,000	Internal grant
	1.5.12– Expand and enhance Unit Response Centers.	University of Washington	Not determined	Unknown	Unknown	Funding source not identified
	1.5.13 – Conduct ATC 20 Training.	University of Washington	Ongoing	Ongoing	Unknown	Funding not determined

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
2.1 – Protect critical assets.	2.1.1 – Prioritize structural and non-structural retrofits for critical state-owned facilities based on their vulnerability to natural hazards.	Department of General Administration, State Emergency Management Division	State EMD will pursue this initiative in conjunction with the ongoing critical infrastructure protection planning initiative	Unknown	Unknown	Prioritization would have minimal cost. Retrofit projects could be funded with state capital funds and/or federal mitigation grants.
	2.1.2 – Develop a pilot project that analyzes vulnerability of various school construction types to earthquake damage and recommend mitigation measures for each construction type.	State Emergency Management Division, with the State Building Code Council, Office of Superintendent of Public Instruction, and local school districts	State EMD will pursue this initiative with the identified agencies	Unknown	Unknown	Unidentified at this time
	2.1.3 – Develop a plan to complete seismic retrofit projects on vulnerable bridges in important state transportation corridors.	Department of Transportation	Ongoing, via the Lifeline Routes state bridge seismic retrofit program	2015	\$87 million	State capital budget
	2.1.4 – Replacement of gym	School for the Blind	Ongoing	July 2009	\$8.2 million	State general fund
	2.1.5 – Seismic stabilization of Arts & Crafts building	School for the Blind	Ongoing	June 2007	\$600,000	State general fund

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.1.6 – Design and build new emergency supply storage shed. Building also will be used as a command post. It will be shared with neighboring building.	Labor and Industries	Ongoing	Estimated mid-2007	\$140,000	Agency funds
	2.1.7 – Continue seismic retrofit of critical facilities and infrastructure	University of Washington	Ongoing	Ongoing	Not available	State funding requested
	2.1.5- Purchase a portable generator for emergency operation center	South Puget Sound Community College	Ongoing	August 2007	\$1,500	Outside source, college budget
	2.1.8 – Renovate Carver Gymnasium, Art Annex, and Miller Hall, including seismic upgrade to 100 percent of ATC 22 minimum life safety standards	Western Washington University	Ongoing	Funding requested in 2007-09 budget. Carver Hall – \$400,000 requested for pre-design work in 2007-09 budget	Carver Hall – \$51.9 million Art Annex – \$4.8 million (\$291,570 estimated for seismic retrofit) Miller Hall – \$58 million	State capital funds
	2.1.9 – Redirect data communications line underground to remove it from an above-ground crossing over a busy arterial	Department of Revenue	Not yet scheduled	To be determined	\$20,000	State general fund

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.1.10 – Review procedures to ensure furniture acquisitions, building remodels and other purchases consider seismic hazards.	Utilities and Transportation Commission	Ongoing	Mid 2007	No incremental cost	
2.2 – Protect and preserve facility contents.	2.2.1 – Develop a pilot project that provides funding or incentives for non-structural seismic mitigation in facilities that serve vulnerable populations (e.g., children, elderly, low income).	State Emergency Management Division, with Department of Community Trade and Economic Development – Local Government Division, Department of Social and Health Services, and Department of Health	No work completed on this initiative during plan period. State EMD pursue this initiative in conjunction with identified agencies	Unknown, ongoing	Unknown	State general and capital funds and federal hazard mitigation grants
	2.2.2 – Help state agencies and the state’s colleges and universities assess the seismic safety of facilities in high-risk areas and develop recommendations to mitigate seismic hazards.	Department of General Administration and State Emergency Management Division, with state agencies and higher education institutions	State EMD will pursue this initiative in conjunction with ongoing critical infrastructure protection planning	Unknown, ongoing	Unknown	State general and capital funds, federal mitigation grants

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.2.3 – Encourage increased funding to speed up mitigation of identified seismic hazards in vulnerable state agency facilities and the state’s colleges and universities.	State Emergency Management Division, Department of General Administration, and Higher Education Coordinating Board	State EMD will pursue this effort in conjunction with ongoing critical infrastructure protection planning	Unknown, ongoing	Unknown	State general and capital funds
	2.2.4 – Develop a real-time monitoring program (SHAKECAST) for critical state bridges and make the data available for use in regional shake maps.	Department of Transportation and University of Washington	System in place, ground shaking of sufficient intensity to trigger system has not yet taken place	Monitoring ongoing.	\$60,000 to date	State general fund; federal grants
	2.2.5 – Secure equipment and supplies from the impact of ground shaking.	Attorney General’s Office, Economic and Revenue Forecast Council, Dept. of Labor and Industries, Utilities and Transportation Commission, Dept. of Revenue	Ongoing	AGO – December 2007 Forecast Council – 2008 L&I – Ongoing UTC – June 2008 Revenue – Ongoing	AGO, Forecast Council, L&I – Varying cost per item, total unavailable UTC – \$5,000 Revenue – \$10,000	AGO, Revenue – State general fund UTC – Public Service Revolving Fund, hazard mitigation grant
	2.2.6 – Consolidate information on contents of significant value.	University of Washington	Not determined	Unknown	Unknown	Funding source not identified

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.2.7 – Replace Nisqually EQ-damaged and non-compliant library shelving.	University of Washington	Submitted funding request for next biennia	Unknown	\$2.6 million	Requested state funding
	2.2.9 – Assess utility and network systems, capabilities, and vulnerabilities.	University of Washington	Ongoing	Ongoing	Not available	Funding not determined
	2.2.10 – Review records retention and management policies.	Economic and Revenue Forecast Council	Ongoing	Ongoing	\$0	Not applicable
2.3 – Reduce repetitive and severe repetitive losses, including those caused by flooding.	2.3.1 – Help communities identify repetitive and severe repetitive loss properties and obtain potential funding for mitigation for those properties.	Department of Ecology – Floodplain Management, Department of Natural Resources, with State Emergency Management Division	Ongoing. In 2006-07, revised repetitive loss property list for CRS communities using National Mitigation Tool; will work to expand this to all affected communities.	October 2009	\$50,000/ year in staff, \$500,000 or more in grants to locals for repetitive loss property acquisition per biennium	State Flood Control Assistance Account Program (all grants) and FEMA CAP-SSSE

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.3.2 – Streamline the permitting and funding processes for flood damage reduction and stream improvement projects.	Department of Ecology – Floodplain Management, Department of Fish and Wildlife, and Governor’s Office of Regulatory Assistance	Ongoing. Streamlining particularly for WSDOT projects are in progress and evolving. \$4 million funding level restored for FCAAP for 2007-09 biennium	Ongoing	\$3 million available for local grants from FCAAP per biennium	State Flood Control Assistance Account Program
	2.3.3 – Update guidelines for comprehensive flood hazard management plans, the state model flood damage prevention ordinance, and policy guidance to reduce flood losses.	Department of Ecology – Floodplain Management	Ongoing. Providing interim guidance to communities engaged in developing or revising CFHMPs	Guidance document republication by July 2009	\$150 -200,000 for publication and distribution of new guidance document	State Flood Control Assistance Account Program
	2.3.4 – Encourage communities to record high water marks to improve or update flood maps or develop other measures to reduce flood damage.	Department of Ecology – Floodplain Management	Ongoing	Ongoing	No specific costs established for high water mark recording. Map updates will be accomplished through the FEMA Map Modernization process	FEMA Map Modernization Program funds

## Mitigation Strategy

Goal #2 – Protect Property						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	2.3.5 – Seek additional resources to expand Flood Control Assistance Account Program.	Department of Ecology – Floodplain Management, with Emergency Management Council	Ongoing. 2007-09 budget restored FCAAP funding to statutory levels. However, additional funding still needed for flood control planning and projects	Each state budget cycle attempts will be made to secure additional funding	\$4 million available in 2007-07 biennium	State general fund
	2.3.6 – Establish database to record effectiveness of hazard mitigation projects.	State Emergency Management Division	Ongoing. Initial work delayed by two disasters in late 2006.	2009	\$5,000	State general fund
	2.3.7 – Expand Forest or Landscape management plan	University of Washington	Ongoing	Not available	Not available	To be determined
	2.3.8 – Conduct routine parking lot patrols during severe weather conditions to ensure storm drains are not clogged, reducing flooding opportunities.	Labor and Industries	Ongoing	Ongoing	Not available	Not available
	2.3.9 – Continue abatement of friable asbestos.	University of Washington	Ongoing	Ongoing	Not available	Requested state funding

## Mitigation Strategy

Goal #3 – Promote A Sustainable Economy						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
3.1 – Provide incentives for mitigation initiatives	3.1.1 – Provide grants, planning tools, training and technical assistance to increase the number of hazard mitigation plans and projects, especially in fast-growing communities.	State Emergency Management Division	Ongoing. State EMD will increase training opportunities and technical assistance to help state and local organizations revise existing plans or develop new plans and projects. The focus will be on fast-growing jurisdictions, especially those without mitigation plans or viable hazard mitigation programs.	Ongoing	Unknown	State general funds, federal mitigation grants

## Mitigation Strategy

Goal #3 – Promote A Sustainable Economy						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	3.1.2 – Develop a hazard event database to help state and local emergency managers with hazard mitigation and other planning initiatives.	State Emergency Management Division	State EMD held initial discussion, but no substantive work was completed, will continue pursuing this initiative.	Ongoing	\$10,000	State general funds
	3.1.3 – Develop state hazard profiles for manmade and technological hazards.	State Emergency Management Division	Ongoing	Mid-2008	Minimal	State general funds, Emergency Management Program Grant funds
	3.1.4 – Increase the number of state agencies participating as planning partners in the State Hazard Mitigation Plan.	State Emergency Management Division	Ongoing, outreach to non-participating agencies will be a priority in FY 2008 through a variety of means	Ongoing	Minimal	State general fund, Emergency Management Program Grant funds

## Mitigation Strategy

Goal #3 – Promote A Sustainable Economy						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
3.2 – Continue critical business operations.	3.2.1 – Help state agencies develop continuity of operations and evacuation/relocation plans for critical business operations located in high-risk hazard areas, including lahar inundation zones and areas of high seismic risk.	State Emergency Management Division, with Department of Natural Resources – Division of Geology and Earth Resources	Ongoing	Ongoing, continuing to seek funds from state, federal sources		State general fund, NOAA National Tsunami Hazard Mitigation Program
	3.2.2 – Develop contingency plans to provide for continuation of programs in the event of disaster.	Clark College	Ongoing	June 2008	No incremental cost	
	3.2.3 – Conduct periodic review or and update business continuity/resumption or disaster recovery plans.	Economic and Revenue Forecast Council, Dept. of Labor and Industries, Utilities and Transportation Commission	Ongoing	Forecast Council – Annual review L&I – Two-year review complete September 2007 UTC – June 2008	Forecast Council – \$0 L&I – Not available UTC – No incremental cost	
	3.2.4 – Establish Business Continuity Management Program	University of Washington	Ongoing	Not available	Not available	UW operational 2007-2009 budget request

## Mitigation Strategy

Goal #3 – Promote A Sustainable Economy						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	3.2.5 – Develop a plan and seek funding for installing backup telecommunication systems in critical state-owned facilities.	Department of Information Services	Ongoing. Project in place for establishing disaster recovery and operational capacity in Eastern Washington	June 2009	One-time expenses, for equipment and consulting, are \$606,010 in 2007-09 biennium. Ongoing funding FY08: \$3 million FY09: \$2.7 million	State General Fund Public Safety & Education Account-State Dependent Care Administrative Acct State Patrol Highway Account Motor Vehicle Account Data Processing Revolving Account Dept of Retirement Systems Expense Accident Account Medical Aid Account Deferred Compensation Admin Account

## Mitigation Strategy

Goal #3 – Promote A Sustainable Economy						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	3.2.6 – Help state agencies develop, implement and test mandated plans to ensure their information technology infrastructure are protected against service interruptions, including those caused by large-scale disasters.	Department of Information Services – Information Services Board	Ongoing. Required for state agencies, established in Information Services Board (ISB) policy. Compliance monitored through annual certifications provided by agencies to ISB.	Not Applicable	Not Available	State general funds
	3.2.7 – Make regular backups of critical electronic data.	Economic and Revenue Forecast Council	Ongoing	Quarterly	Nominal	State general fund
3.3 – Form partnerships to leverage and share resources	3.3.1 – Establish arrangements with off-site organizations to share facilities, personnel and equipment in event of a disaster.	University of Washington, Economic and Revenue Forecast Council, Dept. of Labor and Industries	UW – Not yet initiated Forecast Council, L&I – Ongoing	Ongoing	Unknown	UW – Funding not determined Forecast Council – State general fund

## Mitigation Strategy

Goal # 4 – Protect The Environment						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
4.1 – Develop hazard mitigation policies that protect the environment.	4.1.1 – Develop and implement effective silviculture strategies that improve the health of forests and reduce the amount of fuels available for wildland fires from dead and dying trees.	Department of Natural Resources – Resource Protection Division	Ongoing. Fuel reduction projects underway in high-risk communities. Forest health risk assessment complete in 2008.	Ongoing. Fuels reduction strategies added to hazard mitigation plans in Chelan, Okanogan, Ferry, Stevens, and Yakima counties. Fuels reduction projects active in these counties. Forest health mitigation strategies, demonstration project planned for 2009.	\$1,500,000	National Fire Plan grants

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
5.1 – Understand natural hazards and the risk they pose.	5.1.1 – Continue Map Modernization Project to ensure that hydraulic analysis of watersheds and updated flood maps use the most current modeling available in order to provide an accurate portrayal of anticipated flood conditions.	Department of Ecology	Ongoing, DOE participates as a Cooperating Technical Partner (CTP) with FEMA	October 2010	\$120,000/year in staff costs and \$3-5 million in mapping costs over life of project	FEMA Map Modernization Program funds – CTP, and Map Mod Management Support (MMMS) funds
	5.1.2 – Establish a funded program for state agency or peer review of geotechnical and geologic reports to ensure their accuracy and basis on best available science.	Department of Natural Resources – Division of Geology and Earth Resources	Still in scoping phase	Ongoing, continuing to seek funds from state, federal sources		State general fund

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.1.3 – Seek additional funding for the state’s geologic survey for research to improve understanding of the threats posed by earthquakes, landslides, and other geologic hazards in Washington.	Department of Natural Resources – Division of Geology and Earth Resources, with Governor’s Emergency Management Council	Ongoing, recruiting staff for landslide and ground motion amplification mapping, and contracted with UW for landslide hazard mapping in King, Pierce, and Kitsap Counties; received an additional \$156,000/year for ground failure susceptibility mapping in tsunami hazard zones to facilitate evacuation planning, effective July 1, 2007.	Ongoing, continuing to seek funds from state, federal sources	\$1 million/year	State general fund

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.1.4 – Seek additional funding for maintenance and expansion of the Pacific Northwest Seismic Network (PNSN), and for deploying the Advanced National Seismic System.	Department of Natural Resources – Division of Geology and Earth Resources, State Emergency Management Division, with University of Washington and Governor’s Emergency Management Council	Ongoing	Ongoing	\$400,000/year (State general fund); \$1.5 million (US Geological Survey)	State general fund, US Geological Survey
	5.1.5 – Obtain funding to complete tsunami modeling for all coastal areas of the state, including Puget Sound.	State Emergency Management Division, with Department of Natural Resources – Division of Geology and Earth Resources	Inundation mapping in Tacoma scheduled for FY 08. Modeling for Everett scheduled for FFY 08, and inundation mapping for FFY 09.	FFY 2009	\$100,000/yr for 6 years	NOAA National Tsunami Hazard Mitigation Program
5.2 – Improve hazard information, including databases and maps.	5.2.1 – Develop and maintain an inventory of existing geographical databases for natural hazards.	Department of Natural Resources, with State Emergency Management Division and State Geographic Information Council	In scoping phase	Ongoing, continuing to seek funds from state, federal sources	\$100,000/year	State general fund, US Geological Survey

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.2.2 – Accelerate mapping of natural hazard areas around the state, including tsunami inundation areas in coastal areas, and develop GIS-compatible database products for them.	Department of Natural Resources – Division of Geology and Earth Resources	See 5.1.4; all hazard mapping is now being done in GIS	Ongoing, continuing to seek funds from state, federal sources	\$1million/year	State general fund, NOAA National Tsunami Hazard Mitigation Program
	5.2.3 – Develop and maintain a central repository of geotechnical, geologic and hydrologic historical data.	Department of Natural Resources – Division of Geology and Earth Resources	Developing proposal for legislation	Ongoing, continuing to seek funds from state, federal sources	\$100,000/year	State general fund
	5.2.4 – Conduct Risk Analysis through the use of spatial technologies	University of Washington	Evaluating project	Unknown	Not available	Funding source not identified
	5.2.5 – Establish official digital latitude and longitude coordinates for University owned and leased facilities and infrastructure	University of Washington	Evaluating project	Unknown	Not available	Not identified

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
5.3 – Improve public knowledge of hazards and protective measures so individuals appropriately respond during hazard events.	<p>5.3.1 – Develop and implement a coordinated state all-hazard public education strategy that builds on the results of the assessment of previous education efforts. The strategy shall address development of programs and materials that:</p> <ul style="list-style-type: none"> <li>• Motivate individuals and families to take action to prepare for and then respond appropriately to hazard events.</li> <li>• Are culturally relevant for various ethnic populations.</li> <li>• Address the needs of special population groups, including but not limited to school children, senior citizens, and low-income families.</li> </ul>	State Emergency Management Division	Ongoing	Ongoing	Est. \$200,000 per year	State General Fund, Emergency Management Program Grant, Homeland Security grant funds, NOAA Tsunami funds, Hazmat funds.

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.3.2 – Develop and maintain a comprehensive public education program that increases awareness of the wildland interface fire risk and promotes actions that reduce the risk of fire to life and property.	Department of Natural Resources – Resource Protection Division	Ongoing	Ongoing	Fire Risk website update - \$50,000	National Fire Plan grant and DNR funds
	5.3.3 – Expand the concept of the disaster information clearinghouse (e.g., Nisqually Earthquake Clearinghouse) into a multi-hazard information center.	State Emergency Management Division, in conjunction with Department of Natural Resources – Division of Geology and Earth Resources, and Federal Emergency Management Agency	Ongoing, DNR researching legislative requirements	Ongoing, continuing to seek funds from state, federal sources	Unknown at this time	State general fund
	5.3.4 – Disseminate disaster preparedness and emergency information to constituents (e.g., faculty, staff, student).	University of Washington, Liquor Control Board, Dept. of Labor and Industries, Utilities and Transportation Commission	Ongoing	Ongoing	UW – Not available Liquor Board – \$1,500 UTC – \$150/year	State general fund, grants UTC – Public Service Revolving Fund

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.3.5 – Implement Risk Reduction Campaign	University of Washington, Liquor Control Board, Dept. of Revenue	Ongoing	Ongoing	UW – Not available Liquor Board - \$1,500/year	UW – Internal grant Liquor Board, Revenue – State general fund
	5.3.1- Ensure all employees are knowledgeable about agency emergency procedures and maintain emergency supplies at desk	Economic and Revenue Forecast Council	Ongoing	Ongoing	Minimal	Not applicable
5.4 – Develop new policies to enhance hazard mitigation initiatives.	5.4.1 – Research and develop the rationale for a permanent state organization (board, commission, etc.) to establish, coordinate, and evaluate state policy on seismic safety.	State Emergency Management Division, with Department of Natural Resources and Governor’s Emergency Management Council	Developing proposal for legislative authority	Ongoing, continuing to seek funds from state, federal sources		State general fund
	5.4.2 – Educate key state officials and policy makers about the state’s natural hazards, the threats they pose, and strategies to reduce the risk.	State Emergency Management Division, with Governor’s Emergency Management Council	Ongoing; EMD developed and delivered training to local elected officials, legislators, and Governor’s Cabinet in 2007	Ongoing	\$99,558	Special appropriation for SFY 2007

## Mitigation Strategy

Goal # 5 – Increase Public Preparedness For Disasters						
Strategy	Action	Responsible Agency	Project Status	Projected Completion Date	Estimated Cost	Funding Source
	5.4.3 – Continue implementation of Nonstructural Mitigation measures in critical university facilities.	University of Washington	Ongoing	Ongoing	Not available	Minor Capital SafetyUW Internal grant Program Renewal
	5.4.4 – Improve Financing for Catastrophic Losses.	University of Washington	Evaluating project	Unknown	Not available	Funding source not identified
	5.4.5 – Develop Debris Management Plan.	University of Washington	Ongoing	Ongoing	Not available	Funding not determined
	5.4.6 – Assess impacts and conditions to University transportation system in a disaster.	University of Washington	Ongoing	Ongoing	Not available	Funding not determined

## Mitigation Strategy

### V. Funding Sources

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**Requirement 201.4.c.3.iv: *This section shall include an identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.***

As stated in the State Capability Assessment at the beginning of this chapter, the primary sources for state and local hazard mitigation projects have been the federally funded programs available through the Federal Emergency Management Agency (FEMA) and the state-funded FCAAP. Funds for the state match or state contribution to local jurisdiction non-federal match comes from the state's general fund budget. Local governments have used a variety of other sources to fund hazard mitigation projects, including local revenues, Community Development Block Grants, Public Works Trust Fund loans, and a variety of transportation grant programs.

The State Capability Assessment matrix that begins on page 8 of this chapter contains a variety of sources that have been – and will continue to be – used to fund hazard mitigation projects, plans and initiatives by local and state governments. Additionally, federal funding opportunities identified in the table entitled *Federal Mitigation Programs, Activities and Initiatives*, beginning on page 62 of this chapter, will be examined for applicability for future state and local hazard mitigation projects.

Traditionally, state general-fund resources have been scarce for state programs and services directly or indirectly related to hazard mitigation. While the recent economic improvement in Washington State has resulted in increased revenue from a wide range of sources, expanding public service caseloads, increasing pension costs for retirees and initiatives limiting state revenue collections and expenditures to date have reduced the ability of state government to expand funding for hazard mitigation programs beyond those previously identified in this chapter.

#### *State Financial Outlook*

The primary sources of revenue for Washington State general governmental operations are sales and use taxes, state share of the property tax, and the business and occupations tax, a tax on the gross receipts of businesses. (Note: The state does not have an income tax.) These three sources made up about 56 percent of the \$28.5 billion, state general-fund budget for the 2005-2007 biennium. A variety of other taxes, fees and federal grants make up the rest of the state general-fund budget.

The bulk of the state general-fund budget – more than 90 percent – pays for K-12 and higher education, and social, health and other human services. The rest is spent on all other general government operations (that includes hazard mitigation initiatives), legislative and judicial services, transportation, and debt repayment. (Note: The state gasoline tax and federal sources primarily fund transportation.)

## Mitigation Strategy

The state also has a biennial Capital Budget, funded through bonded debt as well as general fund appropriations and a variety of other funds earmarked for specific purposes (e.g., timber trust revenue for school construction).

Forecasts made in June 2007 (the latest available as of this writing) indicate that the state can expect an additional \$288.5 million in general-fund revenue during the upcoming 2007-2009 biennium than projected in March 2007. The 2007-07 state general-fund budget is \$29.6 billion.

While the state's revenue continues to grow along with its economy, projections show the long-term general-fund budget situation appears difficult. The Office of Financial Management in December 2006 prepared a six-year projection for the state general-fund budget, examining projected expenditures, human services and education caseloads, current policies affecting the budget, and revenue trends. The projection shows the state budget going into deficit beginning in fiscal year 2010 (July 1, 2009 – June 30, 2010), with projected deficits increasing from \$438.5 million at the end of FY 2009 to \$2.7 billion at the end of FY 2013.

### *Local Funding*

Within Washington State, there are 39 counties, 281 cities and towns, and more than 1,700 special districts of about 70 different types; special districts include diking and drainage districts, school districts, housing authorities, public stadium authorities, transportation and transit districts, park districts, and a television reception improvement district (one in the state).

The primary revenue sources for general operations of counties, cities and towns are the local shares of property taxes, state sales and use taxes, and intergovernmental revenues such as local shares of the state gas tax, state timber revenue, and profits from state liquor sales. Counties, cities and towns also can authorize special levies to build roads, provide emergency medical services, maintain local hospitals, and make flood control improvements, for example. These local governments can authorize fees for various permits and business activities that take place there, but these revenues generally offset the cost of licensing or regulating the identified activities; additionally, they can issue bonds to pay for long-term capital projects.

Most special districts, such as school districts, public utility districts and port districts, also obtain money for operations and maintenance and for capital projects through both property tax levies and bonds.

All local government units with the ability to issue long-term bonds are limited to the amount of debt they can hold; the amount is based on a specific percentage of the assessed valuation of the district codified in state law.

## Mitigation Strategy

In recent years, resources available to local governments for their operations have been squeezed by voter-approved initiatives that have eliminated some state revenue sources (motor vehicle excise tax, for example) and restricted annual local tax increases, as well as by economic conditions that reduced both local and state revenues.

As stated in the State Capability Assessment, above, the primary sources for local hazard mitigation projects have been the federally funded programs available through the Federal Emergency Management Agency and the state's Flood Control Assistance Account Program. Local governments have used a variety of other sources to fund hazard mitigation projects, including local revenues, Community Development Block Grants, Public Works Trust Fund loans, and a variety of transportation grant programs.

Additionally, cities, towns and counties receive state grants from the Department of Community Trade and Economic Development to help pay for development of critical areas ordinances, comprehensive plans, associated land-use development regulations, and capital improvement plans.

### *Private Funding*

It appears that little, if any private funding is available for state government hazard mitigation projects and initiatives, particularly construction-related projects.

A June 2007 search of the web site for The Foundation Center, [www.fdncenter.org](http://www.fdncenter.org), an organization that promotes public understanding of philanthropy and helps grant seekers, looked for information on private or corporate giving related to disaster preparedness (through mitigation actions) and disaster relief. The search showed the following:

- The major focus of giving by corporations and private, family and community foundations is education and health care, which received the largest shares of grants, capturing 45 percent of grant dollars in 2005 (source: The Foundation Center, 2007).
- Only 0.7 percent of the grants made by foundations in 2005 went for safety and disaster relief (source: The Foundation Center, 2007). The total granted by these foundations was \$120 million. The bulk of the funds went for relief after a disaster event to meet immediate human needs (food, shelter, clothing, health care) rather than for long-term recovery or disaster prevention (hazard mitigation) activities.

Occasionally, corporations provide money and in-kind services for various mitigation projects that meet corporate community service goals; this occurs primarily on the local government or community level. For example, for Seattle's Project Impact and The Home Depot home improvement chain sponsored in-store earthquake retrofit clinics at

## Mitigation Strategy

five stores throughout the Puget Sound region during January-May 2004; other organizations provided promotional support.

In the next three years, the state once again will attempt to examine private funding opportunities for state hazard mitigation projects and initiatives, and attempt to build on the success and corporate partnerships established by local governments.

### *Federal Funding*

As stated previously, the state relies heavily upon federal hazard mitigation grant programs available through the Federal Emergency Management Agency to fund state government hazard mitigation projects. The following table identifies an extensive list of potential federal funding opportunities for hazard mitigation projects and initiatives.

## Mitigation Strategy

### Federal Mitigation Programs, Activities, and Initiatives

Program / Activity	Type of Assistance	Agency & Contact
<b>Basic &amp; Applied Research/Development</b>		
Center for Integration of Natural Disaster Information	<b>Technical Assistance:</b> Develops and evaluates technology for information integration and dissemination	Department of Interior ( <b>DOI</b> ) –US Geological Survey ( <b>USGS</b> ) The Center for Integration of Natural Hazards Research: (703) 648-6059 <a href="mailto:hazinfo@usgs.gov">hazinfo@usgs.gov</a>
Hazard Reduction Program	<b>Funding</b> for research and related educational activities on hazards.	National Science Foundation ( <b>NSF</b> ), Directorate for Engineering, Division of Civil and Mechanical Systems, Hazard Reduction Program: (703) 306-1360
Decision, Risk, and Management Science Program	<b>Funding</b> for research and related educational activities on risk, perception, communication, and management (primarily technological hazards)	<b>NSF</b> – Directorate for Social, Behavioral and Economic Science, Division of Social Behavioral and Economic Research, Decision, Risk, and Management Science Program (DRMS): (703) 306-1757 <a href="http://www.nsf.gov/sbe/drms/start.htm">www.nsf.gov/sbe/drms/start.htm</a>
Societal Dimensions of Engineering, Science, and Technology Program	<b>Funding</b> for research and related educational activities on topics such as ethics, values, and the assessment, communication, management and perception of risk	<b>NSF</b> – Directorate for Social, Behavioral and Economic Science, Division of Social, Behavioral and Economic Research, Societal Dimensions of Engineering, Science and Technology Program: (703) 306-1743
National Earthquake Hazard Reduction Program (NEHRP) in Earth Sciences	<b>Research</b> into basic and applied earth and building sciences.	<b>NSF</b> – Directorate for Geosciences, Division of Earth Sciences: (703) 306-1550

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
<b>Technical and Planning Assistance</b>		
Planning Assistance to States	<b>Technical and planning assistance</b> for the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources.	Department of Defense ( <b>DOD</b> ) US Army Corps of Engineers ( <b>USACE</b> ) Contact the Floodplain Management Staff in the Appropriate USACE Regional Office Northwestern: (503) 808-3853
Disaster Mitigation Planning and Technical Assistance	<b>Technical and planning assistance</b> grants for capacity building and mitigation project activities focusing on creating disaster resistant jobs and workplaces.	Department of Commerce ( <b>DOC</b> ), Economic Development Administration ( <b>EDA</b> ): (800) 345-1222 <b>EDA's</b> Disaster Recovery Coordinator: (202) 482-6225 <a href="http://www.doc.gov/eda">www.doc.gov/eda</a>
Watershed Surveys and Planning	<b>Surveys and planning studies</b> for appraising water and related resources, and formulating alternative plans for conservation use and development. Grants and advisory/counseling services to assist w/ planning and implementation improvement.	US Department of Agriculture ( <b>USDA</b> ) – National Resources Conservation Service ( <b>NRCS</b> ) Watersheds and Wetlands Division: (202) 720-4527 Deputy Chief for Programs: (202) 690-0848 <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>
National Flood Insurance Program	<b>Formula grants to States</b> to assist communities to comply with NFIP floodplain management requirements (Community Assistance Program).	<b>FEMA</b>
Emergency Management / Mitigation Training	<b>Training</b> in disaster mitigation, preparedness, planning.	<b>FEMA</b>

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
National Dam Safety Program	<b>Technical assistance</b> , training, and grants to help improve State dam safety programs.	<b>FEMA</b>
National Earthquake Hazards Reduction Program	<b>Training, planning and technical assistance</b> under grants to States or local jurisdictions.	<b>FEMA; DOI-USGS</b> USGS Earthquake Program Coordinator: (703) 648-6785
Volcano Hazards Program	<b>Technical assistance:</b> Volcano hazard warnings and operation of four volcano observatories to monitor and assess volcano hazard risk.	<b>DOI-USGS</b> Volcanic Hazards Program Coordinator: (703) 648-6708 or (650) 329-5228
Floodplain Management Services	<b>Technical and planning assistance</b> at the local, regional, or national level needed to support effective floodplain management.	<b>DOD-USACE</b> Northwestern Division: (503) 808-3853
Watershed Protection and Flood Prevention Program	<b>Technical and financial assistance</b> for installing works of improvement to protect, develop, and utilize land or water resources in small watersheds under 250,000 acres.	<b>USDA-NRCS</b> Director, Watersheds and Wetlands Division: (202) 720-3042, (202) 690-4614 <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>
Environmental Quality Incentives Program (EQIP)	<b>Technical</b> , educational, and limited <b>financial assistance</b> to encourage environmental enhancement.	<b>USDA-NRCS</b> NRCS County Offices or NRCS EQUIP Program Manager: (202) 720-1834 <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
National Earthquake Hazard Reduction Program	<b>Technical and planning assistance</b> for activities associated with earthquake hazards mitigation.	<b>FEMA, DOI-USGS</b> Earthquake Program Coordinator: (703) 648-6785
<b>Hazard ID &amp; Mapping</b>		
National Flood Insurance Program: Flood Mapping;	<b>Flood insurance rate maps</b> and flood plain management maps for all NFIP communities;	<b>FEMA</b>
National Flood Insurance Program: Technical Mapping Advisory Council	<b>Technical guidance and advice</b> to coordinate FEMA's map modernization efforts for the National Flood Insurance Program.	<b>DOI-USGS</b> National Mapping Division: (573) 308-3802
National Digital Orthophoto Program	Develops <b>topographic quadrangles</b> for use in mapping of flood and other hazards.	<b>DOI-USGS</b> National Mapping Division: (573) 308-3802
Streamgaging and Flood Monitoring Network	Operation of a <b>network of over 7,000 streamgaging stations</b> that provide data on the flood characteristics of rivers.	<b>DOI-USGS</b> Chief, Office of Surface Water, (703) 648-5303
Mapping Standards Support	<b>Expertise in mapping and digital data</b> standards to support the National Flood Insurance Program.	<b>DOI-USGS</b> National Mapping Division: (573) 308-3802
Soil Survey	<b>Maintains soil surveys</b> of counties or other areas to assist with farming, conservation, mitigation or related purposes.	<b>USDA-NRCS</b> Deputy Chief for Soil Science and Resource Assessment: (202) 720-4630

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
National Earthquake Hazards Reduction Program	<b>Seismic mapping for U.S.</b>	<b>DOI-USGS</b> USGS Earthquake Program Coordinator: (703) 648-6785
<b>Project Support</b>		
Aquatic Ecosystem Restoration	<b>Direct support</b> for carrying out aquatic ecosystem restoration projects that will improve the quality of the environment.	<b>DOD-USACE</b> Chief of Planning at USACE Regional Office Northwestern Division: (503) 808-3850
Beneficial Uses of Dredged Materials	<b>Direct assistance</b> for projects that protect, restore, and create aquatic and ecologically-related habitats, including wetlands, in connection with dredging an authorized Federal navigation project.	<b>DOD-USACE</b> Same as above
Wetlands Protection – Development Grants	<b>Grants</b> to support the development and enhancement of State and tribal wetlands protection programs.	Environmental Protection Agency ( <b>EPA</b> ) EPA Wetlands Hotline: (800) 832-7828 Or EPA Headquarters, Office of Water Chief, Wetlands Strategies and State Programs: (202) 260-6045
Clean Water Act Section 319 Grants	<b>Grants to States</b> to implement non-point source programs, including support for non-structural watershed resource restoration activities.	<b>EPA</b> Office of Water Chief, Non-Point Source Control Branch: (202) 260-7088, 7100

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Coastal Zone Management Program	<b>Grants</b> for planning and implementation of non-structural coastal flood and hurricane hazard mitigation projects and coastal wetlands restoration.	Department of Commerce <b>DOC</b> National Oceanic and Atmospheric Administration ( <b>NOAA</b> ) National Ocean Service Office of Ocean and Coastal Resource Management Chief, Coastal Programs Division: (301) 713-3102
Community Development Block Grant (CDBG) State Administered Program	<b>Grants to States</b> to develop viable communities (e.g., housing, a suitable living environment, expanded economic opportunities) in non-entitled areas, for low- and moderate-income persons.	US Department of Housing and Urban Development ( <b>HUD</b> ) State CDBG Program Manager Or State and Small Cities Division, Office of Block Grant Assistance, HUD Headquarters: (202) 708-3587
Community Development Block Grant Entitlement Communities Program	<b>Grants</b> to entitled cities and urban counties to develop viable communities (e.g., decent housing, a suitable living environment, expanded economic opportunities), principally for low- and moderate-income persons.	<b>HUD</b> City and county applicants should call the Community Planning and Development staff of their appropriate HUD field office. As an alternative, they may call the Entitlement Communities Division, Office of Block Grant Assistance, HUD Headquarters: (202) 708-1577, 3587

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Emergency Watershed Protection Program	Provides <b>technical and financial assistance</b> for relief from imminent hazards in small watersheds, and to reduce vulnerability of life and property in small watershed areas damaged by severe natural hazard events.	<b>USDA – NRCS</b> National Office – (202) 690-0848 Watersheds and Wetlands Division: (202) 720-3042
Rural Development Assistance -- Utilities	Direct and guaranteed rural economic <b>loans and business enterprise grants</b> to address utility issues and development needs.	<b>USDA-Rural Utilities Service (RUS)</b> Program Support: (202) 720-1382 Northern Regional Division: (202) 720-1402 Electric Staff Division: (202) 720-1900 Power Supply Division: (202) 720-6436
Rural Development Assistance – Housing	<b>Grants, loans, and technical assistance</b> in addressing rehabilitation, health and safety needs in primarily low-income rural areas. Declaration of major disaster necessary.	<b>USDA-Rural Housing Service (RHS)</b> Community Programs: (202) 720-1502 Single Family Housing: (202) 720-3773 Multi Family Housing: (202) 720-5177
Project Impact: Building Disaster Resistant Communities	<b>Funding and technical assistance</b> to communities and States to implement a sustained pre-disaster mitigation program.	<b>FEMA</b>
Flood Mitigation Assistance	<b>Grants to States</b> and communities for pre-disaster mitigation to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program.	<b>FEMA</b>

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Hazard Mitigation Grant Program	<b>Grants to States and communities</b> for implementing long-term hazard mitigation measures following a major disaster declaration.	<b>FEMA</b>
Public Assistance Program (Infrastructure)	<b>Grants to States and communities</b> to repair damaged infrastructure and public facilities, and help restore government or government-related services. Mitigation funding is available for work related to damaged components of the eligible building or structure.	<b>FEMA</b>
National Flood Insurance Program	Makes available <b>flood insurance</b> to residents of communities that adopt and enforce minimum floodplain management requirements.	<b>FEMA</b>
HOME Investments Partnerships Program	<b>Grants to States, local government</b> and consortia for permanent and transitional housing (including support for property acquisition and rehabilitation) for low-income persons.	<b>HUD</b> Community Planning and Development, Grant Programs, Office of Affordable Housing, HOME Investment Partnership Programs: (202) 708-2685 (202) 708 0614 extension 4594 1-800-998-9999
Disaster Recovery Initiative	<b>Grants</b> to fund gaps in available recovery assistance after disasters (including mitigation).	<b>HUD</b> Community Planning and Development Divisions in their respective HUD field offices or HUD Community Planning and Development: (202) 708-2605

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Non-Structural Alternatives to Structural Rehabilitation of Damaged Flood Control Works	<b>Direct planning and construction grants</b> for non-structural alternatives to the structural rehabilitation of flood control works damaged in floods or coastal storms. \$9 million FY99	<b>DOD-USACE</b> Emergency Management contact in Northwestern Regional Office: (503) 808-3903
Partners for Fish and Wildlife	<b>Financial and technical assistance</b> to private landowners interested in pursuing restoration projects affecting wetlands and riparian habitats.	Department of Interior ( <b>DOI</b> ) – Fish and Wildlife Service ( <b>FWS</b> ) National Coordinator, Ecological Services: (703) 358-2201 A list of State and Regional contacts is available from the National Coordinator upon request.
Project Modifications for Improvement of the Environment	Provides for <b>ecosystem restoration</b> by modifying structures and/or operations or water resources projects constructed by the USACE, or restoring areas where a USACE project contributed to the degradation of an area.	<b>DOD-USACE</b> Chief of Planning at Northwestern Regional Office: (503) 808-3850
Post-Disaster Economic Recovery Grants and Assistance	<b>Grant funding</b> to assist with the long-term economic recovery of communities, industries, and firms adversely impacted by disasters.	Department of Commerce ( <b>DOC</b> ) – Economic Development Administration ( <b>EDA</b> ) EDA Headquarters Disaster Recovery Coordinator: (202) 482-6225
Public Housing Modernization Reserve for Disasters and Emergencies	<b>Funding</b> to public housing agencies for modernization needs resulting from natural disasters (including elevation, flood proofing, and retrofit).	<b>HUD</b> Director, Office of Capital Improvements: (202) 708-1640

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Indian Housing Assistance (Housing Improvement Program)	<b>Project grants and technical assistance</b> to substantially eliminate sub-standard Indian housing.	Department of Interior (DOI)-Bureau of Indian Affairs (BIA) Division of Housing Assistance, Office of Tribal Services: (202) 208-5427
Land Protection	<b>Technical assistance</b> for run-off retardation and soil erosion prevention to reduce hazards to life and property.	<b>USDA-NRCS</b> Applicants should contact the National NRCS office: (202) 720-4527
North American Wetland Conservation Fund	<b>Cost-share grants</b> to stimulate public/private partnerships for the protection, restoration and management of wetland habitats.	<b>DOI-FWS</b> North American Waterfowl and Wetlands Office: (703) 358-1784
Land Acquisition	<b>Acquires or purchases easements</b> on high-quality lands and waters for inclusion into the National Wildlife Refuge System.	<b>DOI-FWS</b> Division of Realty, National Coordinator: (703) 358-1713
Federal Land Transfer / Federal Land to Parks Program	<b>Identifies, assesses, and transfers available Federal real</b> property for acquisition for State and local parks and recreation, such as open space.	<b>DOI-NPS</b> General Services Administration Offices Fort Worth, TX: (817) 334-2331 Boston, MA: (617) 835-5700 Or Federal Lands to Parks Leader NPS National Office: (202) 565-1184
Wetlands Reserve Program	<b>Financial and technical assistance</b> to protect and restore wetlands through easements and restoration agreements.	<b>USDA-NRCS</b> National Policy Coordinator NRCS Watersheds and Wetlands Division: (202) 720-3042

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Transfers of Inventory Farm Properties to Federal and State Agencies for Conservation Purposes	Transfers title of certain inventory farm properties owned by FSA to Federal and State agencies for <b>conservation</b> purposes (including the restoration of wetlands and floodplain areas to reduce future flood potential)	US Department of Agriculture ( <b>USDA</b> ) – Farm Service Agency ( <b>FSA</b> ) Farm Loan Programs National Office: (202) 720-3467, 1632
<b>Financing and Loan Guarantees</b>		
Physical Disaster Loans and Economic Injury Disaster Loans	<b>Disaster loans</b> to non-farm, private sector owners of disaster damaged property for uninsured losses. Loans can be increased by up to 20 percent for mitigation purposes.	Small Business Administration ( <b>SBA</b> ) National Headquarters, Associate Administrator for Disaster Assistance: (202) 205-6734
Conservation Contracts	<b>Debt reduction</b> for delinquent and non-delinquent borrowers in exchange for conservation contracts placed on environmentally sensitive real property that secures FSA loans.	<b>USDA-FSA</b> Farm Loan Programs FSA National Office: (202) 720-3467, 1632 or local FSA office
Clean Water State Revolving Funds	<b>Loans</b> at actual or below-market interest rates to help build, repair, relocate, or replace wastewater treatment plants.	<b>EPA</b> EPA Office of Water, State Revolving Fund, Branch Chief: (202) 260-7359 A list of Regional Offices is available upon request
Section 108 Loan Guarantee Program	<b>Loan guarantees</b> to public entities for community and economic development (including mitigation measures).	<b>HUD</b> Community Planning and Development staff at appropriate HUD field office, or the Section 108 Office in HUD Headquarters: (202) 708-1871

## Mitigation Strategy

Program / Activity	Type of Assistance	Agency & Contact
Section 504 Loans for Housing	<b>Repair loans, grants and technical assistance</b> to very low-income senior homeowners living in rural areas to repair their homes and remove health and safety hazards.	US Department of Agriculture ( <b>USDA</b> ) – Rural Housing Service ( <b>RHS</b> ) Contact local RHS Field Office, or RHS Headquarters, Director, Single Family Housing Direct Loan Division: (202) 720-1474
Section 502 Loan and Guaranteed Loan Program	Provides <b>loans, loan guarantees, and technical assistance</b> to very low and low-income applicants to purchase, build, or rehabilitate a home in a rural area.	<b>USDA-RHS</b> Contact the Local RHS Field Office, or the Director, Single Family Housing Guaranteed Loan Division, RHS: (202) 720-1452
Rural Development Assistance -- Utilities	Direct and guaranteed <b>rural economic loans and business enterprise grants</b> to address utility issues and development needs.	<b>USDA-Rural Utility Service (RUS)</b> Contact Rural Development Field Offices, or RHS, Deputy Administrator, Community Programs Division: (202) 720-1490
Farm Ownership Loans	<b>Direct loans, guaranteed / insured loans, and technical assistance</b> to farmers so that they may develop, construct, improve, or repair farm homes, farms, and service buildings, and to make other necessary improvements.	<b>USDA-FSA</b> Director, Farm Programs Loan Making Division, FSA: (202) 720-1632