Element C Mitigation Strategy

ELEMENT C: Mitigation Strategy		Page
Requirement §201.4(c)(3)	*A Mitigation Strategy that provides the State's blueprint for reducing the losses identified in the risk assessment. This section shall include:*	*2*
§201.4(c)(3)(i)	*A description of State goals to guide the selection of activities to mitigate and reduce potential losses.*	*2*
§201.4(c)(3)(ii)	*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; and a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.*	*4*
§201.4(c)(3)(iii)	*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.*	*31*
§201.4(c)(3)(iv)	*Identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.*	*33*
§201.4(c)(4)(iii)	*Criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. Further, that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.*	*37*
§201.4(c)(5)(ii)	*A system for monitoring implementation of mitigation measures and project closeouts.*	*41*
§201.4(c)(5)(iii)	*A system for reviewing progress on achieving goals as well as activities and projects identified in the Mitigation Strategy.*	*42*
Requirement §201.4(d)	*Plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities and resubmitted for approval to the appropriate Regional Administrator every three years.*	*43*
§201.4(c)(4)(i)	*A description of the State process to support, through funding and technical assistance, the development of local mitigation plans.*	*49*
§201.4(c)(4)(ii)	*A description of the State process and timeframe by which the local plans will be reviewed, coordinated, and linked to the State Mitigation Plan.*	*58*

I. Documentation of the Mitigation Strategy

Requirement 44 CFR §201.4(c)(3): *Plan Content.* 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

The State Hazard Mitigation Advisory Team (SHMAT) reviewed the State Hazard Mitigation Plan (SHMP): its mission, goals, objectives, initiatives and action agenda. These guided the development of the mitigation action item agenda for the 2004, 2007, 2010, and 2013 plans.

The mitigation strategy action items or action agenda addresses state mitigation issues and are rolled up into a table (see Appendix 2). State agencies participating in this plan update developed their specific mitigation actions and those can be site specific e.g. seismic retrofit or perpetual in nature e.g. educating new employees on hazards. Those mitigation action items completed or removed are placed into a table (see Appendix 3).

All tables, charts and funding information have been updated for the 2013 plan edition to the most current data available as of November 2012. They foster a vision for hazard mitigation and disaster resistance throughout the state government of Washington.

II. Hazard Mitigation Goals

Requirement 44 CFR §201.4(c)(3)(i): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a description of the State goals to guide the selection of activities to mitigate and reduce potential losses.

State Hazard Mitigation Plan Mission is to reduce the adverse impacts and losses caused by natural hazard events.

The SHMAT confirmed the goals and objectives of this plan at its December 2011 meeting taking into account the progress by state agencies on mitigation actions in the previous state plans. The economic recession has dampened agency efforts recently.

State Mitigation Plan Goals and Objectives

Goal 1: Protect Life.

Objective 1.1 – Improve systems that provide warning and emergency communications.

Objective 1.2 – Develop or amend laws so they effectively address hazard mitigation.

Objective 1.3 – Reduce the impacts of hazards on vulnerable populations.

Objective 1.4 – Strengthen state and local building code enforcement.

Objective 1.5 – Train emergency responders.

Goal 2: Protect Property.

Objective 2.1 – Protect assets, particularly critical assets.

Objective 2.2 – Protect and preserve facility contents.

Objective 2.3 – Reduce repetitive and severe repetitive losses, including those caused by flooding.

Goal 3: Promote a Sustainable Economy.

Objective 3.1 – Provide incentives for mitigation initiatives.

Objective 3.2 – Continue critical business operations.

Objective 3.3 – Form partnerships to leverage and share resources.

Goal 4: Protect the Environment.

Objective 4.1 – Develop hazard mitigation policies that protect and improve the environment.

Goal 5: Increase Public Preparedness for Disasters.

Objective 5.1 – Improve the understanding of natural hazards and the risk they pose.

Objective 5.2 – Improve hazard information, including databases and maps.

Objective 5.3 – Improve public knowledge of hazards and protective measures so individuals appropriately respond during hazard events.

Objective 5.4 – Develop new policies to enhance hazard mitigation initiatives.

III. State Capability Assessment

Requirement 44 CFR §201.4(c)(3)(ii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes 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.

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 was made available to local jurisdictions for flood control projects and planning (RCW 86.26). 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 (RCW 36.70A). More recently, the 2012 editions of the International Codes (I-Codes) for building, residential, fire, and mechanical codes will be effective July 1, 2013 (RCW 19.27.031).

Among the best examples of hazard mitigation in state government are the Growth Management Act (GMA), the Flood Control Assistance Account Program (FCAAP), the Transportation Partnership Account (TPA), and the FEMA-funded (with State and Local matching funds) state-administered Hazard Mitigation Assistance programs (HMA). 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 later in this section.

Staff from the Mitigation 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 related to hazard mitigation. The state hazard mitigation capability matrix, below, is the result of this effort. However, additional regulations are also incorporated into other portions of the SHMP, such as the Loss Avoidance Study, the Enhanced portion of the plan, and the Coordination of Local Planning.

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 Section staff found that the state's hazard management capabilities improved somewhat from October 2010 through November 2012. For example, since approval of the 2010 state plan:

- Critical Areas Ordinance updates have stagnated (see narrative below on the GMA). Originally, the first tier of communities was required to update their Critical Areas Ordinances by 2008. Many ordinances were originally prepared in the 1990s and had not been reviewed or updated since. While progress has been made in updating these regulations, the rate of completion is behind the original schedule required by state law. The Legislature extended the due date by another seven years in the 2010 session citing the economic downturn, loss of GMA grants for local planning, and elimination of local planners from budget cuts. Consequently, critical area ordinance updates are due beginning 2015. 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. The jurisdictions are required to write regulations designed to protect these areas and limit the types of development which can occur in those areas. 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 Flood Control Assistance Account Program (FCAAP) was suspended in the 2009-11 and 2011-13 state budgets (see narrative below). The program, administered by the Department of Ecology (Ecology), helps local governments with flood-hazard reduction plans and projects. Ecology provided $2.7 million for FCAAP grants during the 2007-09 biennium and over $35 million since its inception. The legislature provided Ecology $1.35 million capital budget for local government projects that will prevent flood damage in the 2009-11 biennium. But these were not FCAAP monies.

- Funding for the Transportation Partnership Account (TPA) declined (see narrative below). The tax is based on gallons sold rather than price so reduced consumption results in reduced revenues. The TPA was created by the Legislature in 2005 to fund various transportation projects throughout the state. Of the total funding from that account, $2.98 billion was allocated to the *at-risk structures* category of projects, including a bridge seismic retrofit program, and replacement of the Alaskan Way Viaduct. As of June 2012, 330 projects valued at $4.8 billion of the 421 projects valued at $16.3 billion were completed including 27 bridges. The remaining 91 projects are estimated to cost $11.5 billion.

- International Building Codes (I-Codes) continue to be adopted (see narrative below). Briefly, the Legislature approved a measure for adoption of the International Codes (I-Codes) for building, residential, fire, and mechanical codes through the agency rule making authority (RCW 19.27.031). The 2012 editions of the I-Codes will be effective July 1, 2013.

- Funding for federal mitigation grant funds for mitigation plans and mitigation projects in Washington State has increased (see narrative below). Since it became available in 2002, the Pre-Disaster Mitigation Program (PDM) has funded about $30.3 million in mitigation plans and projects in the state through federal fiscal year 2012. However, PDM is targeted for federal elimination by Congress in 2013. Additionally, the Flood Mitigation Assistance (FMA) program has awarded nearly $3 million since 2009. The Hazard Mitigation Grant Program (HMGP) has funded $55.9 million in mitigation projects in the state for disasters #1671 through #1963. The 2012 Disasters DR-4056 is expected to be $6.4 million and DR-4083 is expected to be $1.9 million in eligible funding for projects and plans.

- Funding for habitat and recreation lands is flat (see narrative below). In 2005, state-owned habitat and recreation land made up about 1.7 percent of all lands in Washington. The Washington State Recreation and Conservation Office requested a legislative appropriation to update the inventory of state-owned habitat and recreation lands into a GIS based layer. Once completed, Ecology and EMD could add this data as a layer superimposed on the floodplain maps, landslide susceptibility areas, liquefaction susceptibility areas, and critical area ordinance maps to clarify how mitigation and conservation agendas are synergic.

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.

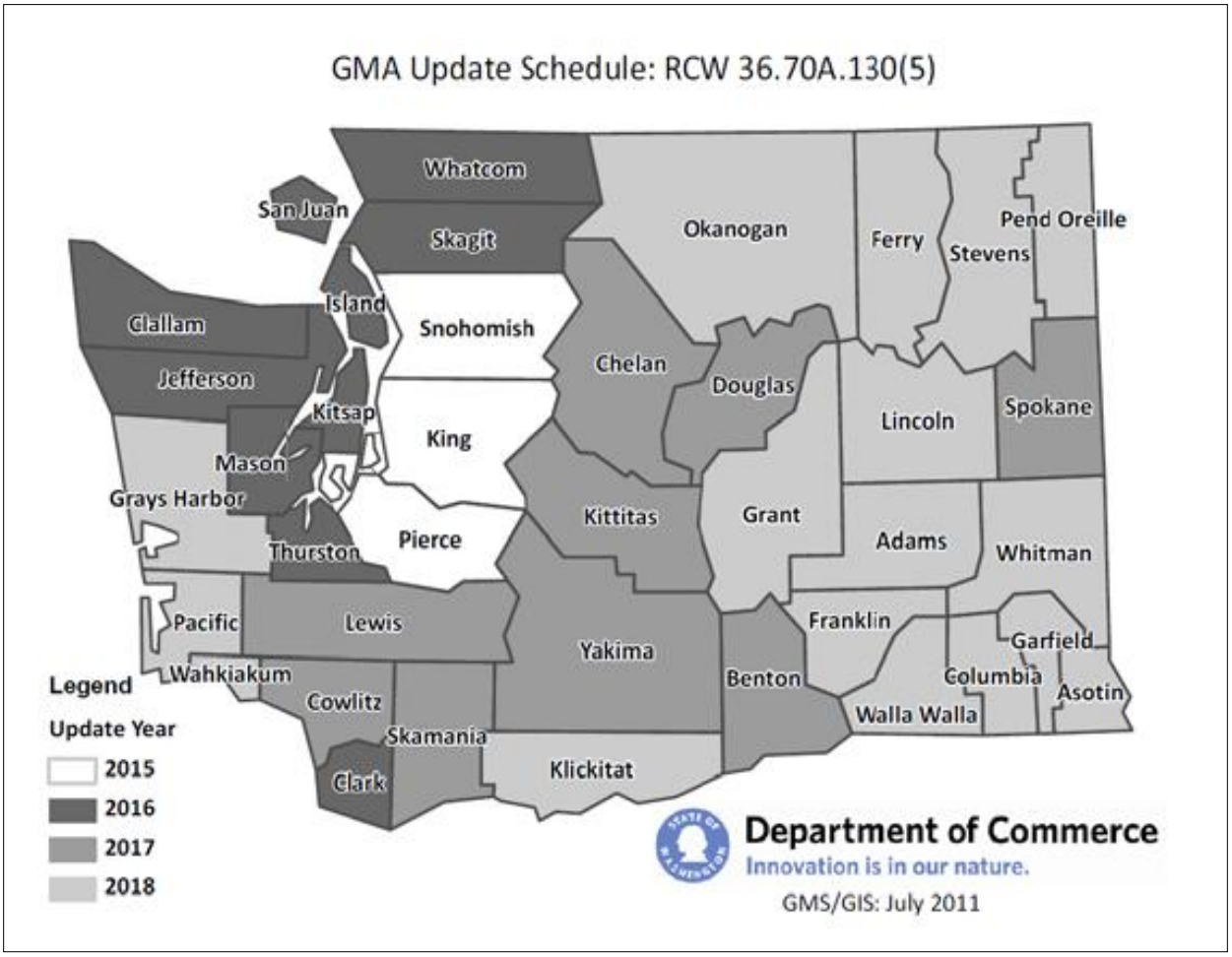
Since 1995, local governments must consider best available science in their identification and protection of critical areas; a catalog of sources of best available science has been prepared for their use. Legislation passed in 2003 requires cities, towns and counties to review and revise as necessary their critical areas policies every seven years. Legislation passed in 2010 extended the current update cycle to ten years due to the severe economic downturn and resulting budget cuts in government services.

The GMA requires counties and cities to review, at least every eight years, designated Urban Growth Areas (UGAs), the densities permitted within each UGA, and the nature of development that has occurred. UGAs and comprehensive plans are to be revised to accommodate the urban growth projected for the succeeding twenty-year period. Commerce produced its first UGA guidebooks in March of 1992. In 2011, Commerce consolidated and replaced all of its existing UGA guidebooks with a

single guidebook on designation of Urban Growth Areas under the GMA. Commerce's goal has been to produce a succinct guidebook that provides useful information for local government officials and planning practitioners on how to implement the GMA requirements for designating Urban Growth Areas.

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 Commerce – 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. This guidebook is available at the following Commerce website: Natural Hazard Reduction.

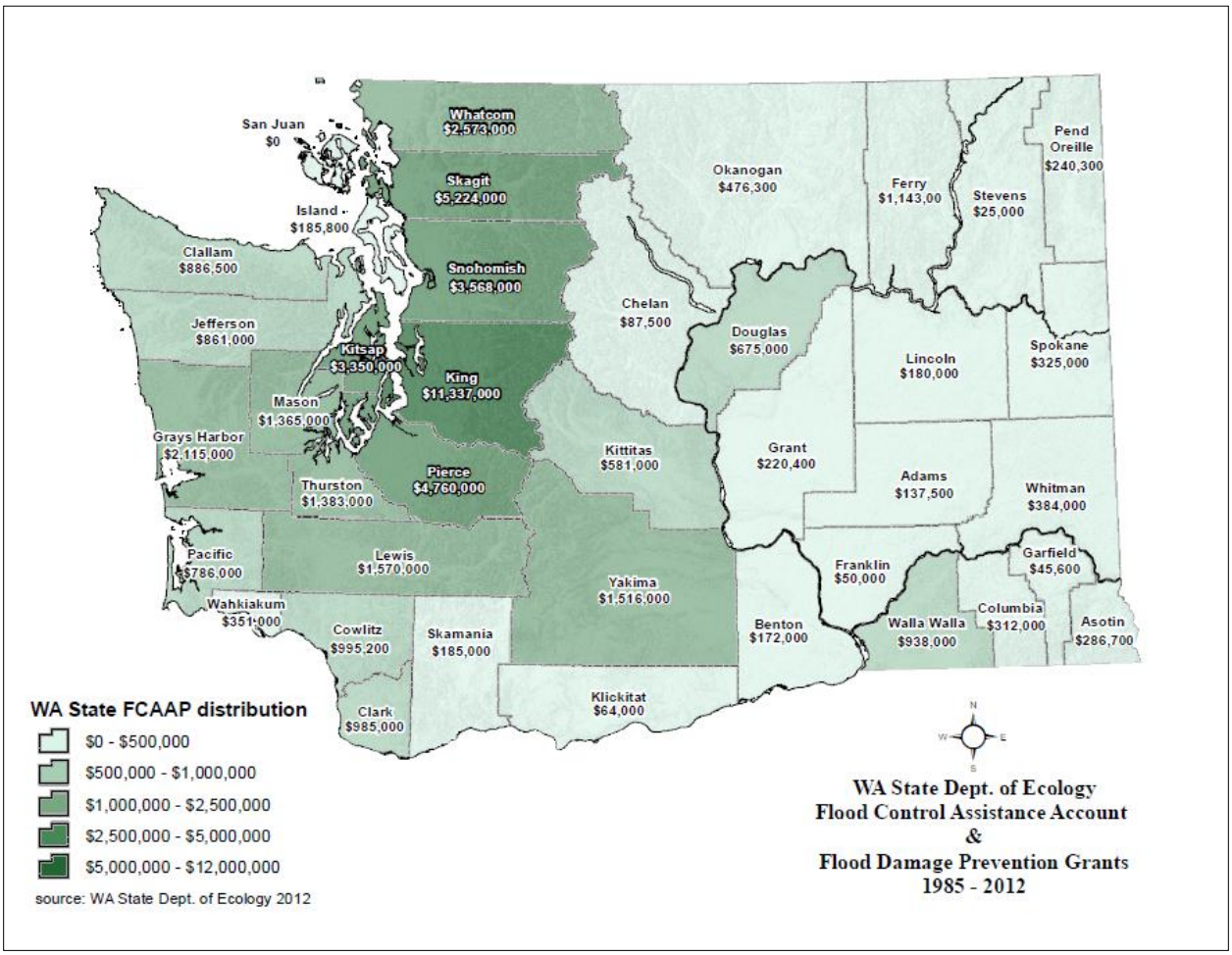
The graphic below details the current state of planning for both the GMA and Critical Areas Ordinance within Washington State.



Source: Washington Department of Commerce

Flood Control Assistance Account Program (FCAAP) – This program, administered by the Department of Ecology (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). FCAAP also provides current and consistent information on flooding and flood hazard areas, including improved maps and mapping tools. Ecology is partnering with FEMA in the RiskMAP program to effectively utilize flood mapping resources in conducting accurate risk assessments and communicating the risks to communities. 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.

Per RCW 86.26.007, the account is provided $4 million per biennium for grants for these activities. However, this amount can be reduced by legislative action. State budget reductions were implemented for the past and present biennium, 2009-11 and 2011-13, which cut FCAAP funding by 50%. This effectively eliminated the competitive grant portion of FCAAP, leaving less than $400,000 per year for emergency projects. The map below demonstrates the funding provided by this program since 1985.



Source: Washington Department of Ecology (via direct correspondence with Jerry Franklin, Department of Ecology, December 2012)

<u>2005 Transportation Partnership Account (TPA)</u> – The TPA is a revenue generation and expenditure plan that funds 274 transportation projects across the state over a 16-year period. The revenue comes from a combination of taxes on transportation related items, including gasoline taxes. The expenditure plan allocated a total of $2.98 billion towards projects with a hazard mitigation element, including the seismic retrofit or replacement of existing bridges and structures that are vulnerable to earthquakes. In 2007, the State Department of Transportation began work on the portion of the bridge seismic retrofit program that was allocated $87 million in funds from TPA. This program is focused on strengthening the support columns of bridges in the Central Puget Sound region to make them more resistant to earthquake damage.

The TPA provides $2 billion in funds for the replacement of the Alaskan Way Viaduct (State Route 99). The Alaskan Way Viaduct is an elevated roadway running along the City of Seattle's waterfront, and accounts for approximately 25 percent of the traffic through the downtown area. After the 6.8 magnitude Nisqually earthquake in 2001, the viaduct was damaged and temporarily shut down. A team of experts concluded that the existing structure could not be adequately retrofitted and had to be

replaced. With work scheduled 2010-2019, the eventual replacement of the viaduct will result in a new and earthquake-resilient segment of the arterial system through the State's most populous city.

Additionally, the TPA provides $891 million towards replacing the oldest and most vulnerable bridges, including $500 million towards the State Route 520 floating bridge. The existing State Route 520 floating bridge system that crosses Lake Washington is vulnerable to failure during severe windstorms and earthquakes. The new bridge system is designed to withstand effects from winds up to 92 mph and a 1,000-year earthquake. The construction timeline is 2010-2014.

The table below provides a summary of the status of the Bridge Seismic Retrofit Program. To date nearly $100 million has been invested in the program since 1991 including $87 million to retrofit bridges in Central Puget Sound. The TPA funded work began in 2007 and will be complete by 2015.

Bridges in the Seismic Retrofit Program as of March 2012	
Completely Retrofitted	268
Partially Retrofitted	134
Needing Retrofitting	487
Under Contract	12
Total	901

Source: WSDOT Bridge Office, March 2012, available at:
http://www.wsdot.wa.gov/Bridge/Reporting/SeismicRetrofitProgram.htm

International Building Code Program - The Washington State Building Code is comprised of several different codes. Most are national model codes adopted by reference and amended at the state level. Others, such as the Washington State Energy Code, are state-written state-specific codes. The State Building Code Council (SBCC) was created in 1974 to provide independent analysis and objective advice to the legislature and the Governor's Office on state building code issues. The SBCC establishes the minimum building, mechanical, fire, plumbing, and energy code requirements necessary to promote the health, safety and welfare of the people of the state of Washington by reviewing, developing and adopting the state building code. For example, fire deaths per million residents have declined from 10.3 in 2000 to 8.8 in 2009.

Briefly, the Legislature approved a measure for adoption of the International Codes (I-Codes) for building, residential, fire, and mechanical codes through the agency rule making authority (RCW 19.27.031). This provision allows for incorporation of the latest I-Codes and takes into account the current seismic risk and other hazard factors in the state. The I-Codes took affect statewide July 2004. The Washington State Building Code Council (SBCC) reviews and adopts the I-Codes. The 2012 editions of the I-Codes will be effective July 1, 2013. In addition to adopting the I-Codes, the SBCC also adopts other types of codes (and amendments to the I-Codes) to enhance building regulations to account for conditions unique to our state.

Federal Hazard Mitigation Assistance Programs – The Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMA), and the PDM Program 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 $129.9 million (through DR-4083) 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 the purchase of repetitive flood-loss properties, to property elevations, and seismic retrofits of critical infrastructure. Overall, 88% of the HMGP funds have gone towards projects, 7% has gone to planning, and 5% to initiatives like DNR soil maps to implement state building codes and OFM for mapping state facilities in hazard areas. The PDM (est. $22.8 million) and the FMA (est. $2.4 million) have helped fund several mitigation projects and development of hazard mitigation and flood plans throughout the state. Additionally, several local jurisdictions have invested their Emergency Management Performance Grant funds in hazard mitigation planning.

Repetitive Flood Claims (RFC) program requires that neither the applicant nor the subapplicant be able to meet the FMA non-Federal share requirement. So far, this has not been applicable to any jurisdictions in the state. The State has not received any applications for this program to date. The Severe Repetitive Loss (SRL) program is a relatively new program and requires a very involved and detailed consultation process with the prospective homeowners. The state has funded only one project to date.

The state's Administrative Plan for HMGP, PDM and HMA 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, and remain "in good standing" in the program. Without such membership and standing, the applicant could not obtain a project grant from any of the federally funded mitigation programs.

The state's Administrative Plan and associated hazard mitigation project applications encourage the mitigation of properties subject to repetitive losses. Applications receive extra points in the adjudication process if they mitigate repetitive loss properties (including, but not limited to repetitive losses due to flooding).

Recently funded mitigation projects include:

- FY11 FMA – Pierce County Sportsman Clubhouse elevation project
- FY11 PDM –City of Port Townsend Lake Outflow Control System, Seismic Retrofit
- FY11 PDM – Planning projects for Pierce County update, City of Seattle update, King County update, Spokane County update, State EMD update, and State Office of Superintendent of Public Instruction for a new plan.
- FY11 SRL – King County Severe Repetitive Loss Elevations

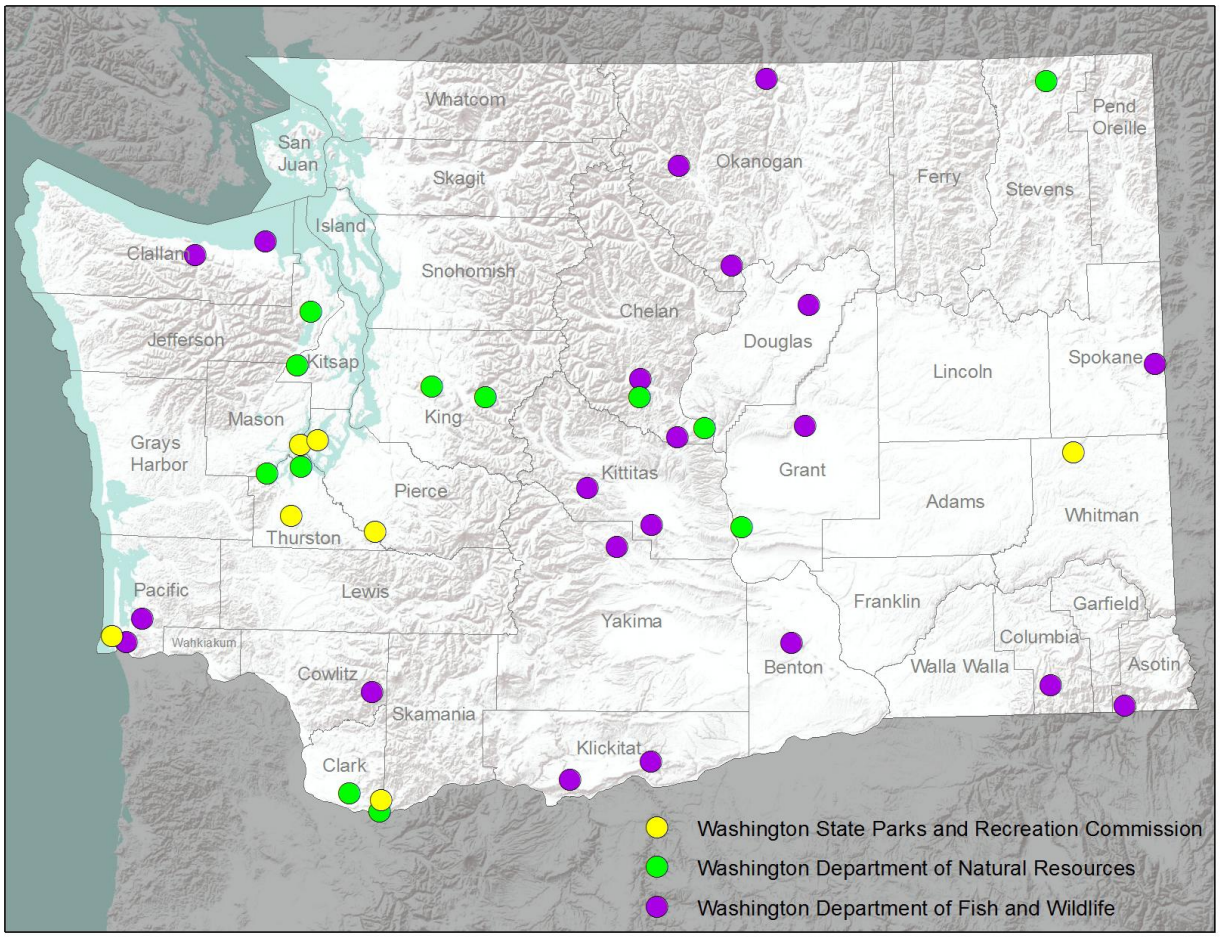
Habitat and Recreation Lands Coordinating Group - The Washington State Recreation and Conservation Office administers 15 different grant programs aimed at developing outdoor recreation facilities and conserving wildlife habitat and farmland. Many of these grant programs are funded with federal dollars. Since 2005, the Recreation and Conservation Office has brought in an average of nearly $54 million in

federal funding each biennium. Most grant recipients are required to match the grant with their own resources—cash, staff labor, equipment, materials, and donations. Grant recipients have contributed more than $950 million in matching resources.

The Habitat and Recreation Lands Coordinating Group is comprised of representatives from the Department of Ecology, Department of Fish and Wildlife, Department of Natural Resources, Department of Transportation, Puget Sound Partnership, Recreation and Conservation Office, State Conservation Commission, and State Parks and Recreation Commission. The lands group also includes representatives of nonprofit organizations, local governments, the Legislature, and others including The Nature Conservancy, Washington Forest Practices Association, Pacific Coast Joint Venture, and the Washington Association of Land Trusts.

In 2005, state-owned habitat and recreation land made up about 1.7 percent of all lands in Washington (727,000 acres of a total 43.3 million acres of uplands in the state). Public agencies own about 40 percent (17.5 million acres) of the total 43.3 million upland acres in Washington. When tribally owned lands are included, the percentage climbs to 45 percent. That is low when compared with the average of the 11 western states, which stands at 59 percent of uplands in public and tribal ownership. The proposed state land acquisitions for 2013-2015 are identified in the map below.

In response to legislator requests, RCO submitted a budget request to the Office of Financial Management on behalf of the Habitat and Recreation Lands Coordinating Group for an update of the inventory of state-owned habitat and recreation lands. If approved for funding, the inventory will be GIS-based and Web-accessible. Legislators and others have requested this type of tool to provide a statewide picture of habitat and recreation land the state owns, including the amount of money that has gone towards acquisitions in areas of the state. Once completed, Ecology and Emergency Management Division could add this data as a layer superimposed on the floodplain maps, landslide susceptibility areas, liquefaction susceptibility areas, and critical area ordinance maps to clarify how mitigation and conservation agendas are synergic.



Source: Proposed State Land Acquisitions 2013-2015

http://www.rco.wa.gov/documents/hrlcg/2012BiennialStateLandAcquisitionForecast.pdf

IV. State Funding Capability

Requirement 44 CFR §201.4(c)(3)(ii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including:

- A discussion of State funding capabilities for hazard mitigation projects.

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.infrafunding.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.

State Mitigation Capability Assessment

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
Department of Commerce, Growth Management Services	Critical Areas Ordinance (RCW 36.70A, WAC 365-190-080)	X			Yes	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.
	Critical Areas Ordinance – One-hundred year floodplain element (RCW 36.70A.110)	X				Growth Management Act, as amended, prohibits expansions of urban growth areas into one-hundred year floodplains. A county, city, or town is generally prohibited from expanding an urban growth area into the 100-year floodplain of any river or river segment that is located west of the Cascade Mountains and has a mean annual flow of 1,000 or more cubic feet per second, except under certain specified circumstances.
	Natural Hazard Reduction Element of Local Comprehensive Plan (RCW 36.70A, WAC 365-190-080)		X			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 Commerce, Local Government Division	Community Development Block Grant (CDBG) programs (RCW 35.21, 35.81, 43.168, WAC 182-20)		X		Yes	Several of the seven CDBG 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.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
Department of Commerce, 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.
	Floodplain Management Act (RCW 86.16, WAC 173-158)	X				Requires development to avoid the floodway and minimize harm to floodplains and wetlands.
	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 (RCW 43.21A, 70.105D, WAC 173-22, 173-27, 197-11)		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.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	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 Enterprise Services, State Building Code Council	State Building Code (RCW 19.27, WAC 51)	X				State Building Code Act adopted in 1974; set 1973 UBC codes as statewide minimum. The Legislature approved use of the IBC building codes in 2003. The State Building Code Council is responsible for code adoptions, which take effect in July every three years: 2004, 2007, 2010, and 2013. The adopted IEBC has performance criteria for seismic forces and requires seismic upgrades where 30 percent of a building roof or floor area is involved in an alteration.
	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 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 must comply with the State Environmental Policy Act.
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.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	Division of Geology and Earth Resources / State Geological Survey (WAC 332)		X			Evaluates geologic hazards, develops hazard maps, conducts damage assessment following disasters, and provides advice on mitigation measures.
	Firewise Program	X				Provides homeowners and communities with information on how best to protect their homes and facilities from the risk of wildland fire.
	Forest Stewardship Program	X			Yes	Helps family forestland owners with hazard reduction training and funding to assist with thinning and other actions to reduce wildfire hazard.
Department of Transportation	Bridge Seismic Retrofit Program	X			Yes	Funds the seismic retrofitting of state-owned bridges to minimize and avoid catastrophic bridge failure due to earthquakes.
	Federal Highways Bridge Program	X			Yes	Funds repair and rehabilitation of 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.
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	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	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.
	Washington Climate Change Challenge 07-02		X			Establish greenhouse gas emissions reduction and clean energy economy goals.
	Washington's Leadership on Climate Change 09-05		X			Provides emission directives, transportation directives and sea level rise impact contingencies.
	Achieving Energy Efficiency in State Buildings 12-06		X			Directive to reduce energy use in buildings.
	Washington's Response to Ocean Acidification 12-07		X			Advocate for reductions in emissions of carbon dioxide at a global, national and regional level and implement local solutions.
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.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	Public Assistance Program – Hazard Mitigation Funding under Section 406 (Stafford Act)	**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.
	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.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	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.
Recreation and Conservation Office	Salmon Recovery Funding Board (RCW 77.85)	X			Yes	Provides grants to protect and restore salmon habitat which includes acquisition of land in floodplains.
	Aquatic Lands Enhancement Account (RCW 79.90, 79.105, WAS 286-42)	X			Yes	Provides grants to buy, protect, and restore aquatic lands habitat and to provide public access to the waterfront.
	Estuary and Salmon Restoration Program	X			Yes	Provides grants to restore or protect Puget Sound near-shore ecosystem processes and functions.
	Land and Water Conservation Fund (WAC 286-40)	X			Yes	Provides grants to buy or develop public outdoor recreation areas and facilities.

State Agency	Programs, Plans, Policies, Regulations, Funding or Practices	Effect on Loss Reduction (X)			Provides Funding for Mitigation Initiatives	Description
		Support	Facilitate (make easier)	Hinder		
	Washington Wildlife and Recreation Program (RCW 77.85, WAC 286.27)	**X**			**Yes**	Provides grants for local and state parks, trails, water access, state land conservation and restoration, farmland preservation, and habitat conservation.
County Road Administration Board	Rural Arterial Program (RCW 36.78 and 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. In some cases, the Board may provide 100% of a county's required matching funds for federal funding on a project.
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.
University of Washington, and various partner organizations	Pacific Northwest Seismic Network		**X**			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.

V. Local Capability Assessment

Requirement 44 CFR §201.4(c)(3)(ii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes 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.

Local Capability Assessment

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Building codes	Adoption of building codes initially was the discretion of individual cities and counties. Passage of the State Building Code Act in 1974 (RCW 19.27) 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. The State Building Code Council (SBCC) 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. As of this plan update, the SBCC has adopted and amended the 2012 editions of the International Codes for Building, Residential, Mechanical, and Fire as published by the International Code Council (ICC), and the 2012 edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials. Additionally, it adopted the ICC's International Existing Building Code and Wildland and Urban Interface Codes as appendix chapters available for local adoption The SBCC also adopted the 2009 Washington State Energy Code. It is still debating the merits of the 2012 energy code at the time this section was revised.	Since 1974, building codes adopted by the State Building Code Council have been applicable statewide. Counties and cities can amend the state codes, but they cannot diminish the minimum performance standards of the codes. The 2012 versions of the codes take effect July 1, 2013. All structures built after that date must comply with the new building codes, which includes provisions for the state's seismic hazard. Prior to July 1, 2013, new structures had to comply with the 2009 versions of the codes which also included provisions for the seismic hazard.	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. 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. 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.[1 2]

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Land-use planning	The Planning Enabling Act in 1963 (RCW 36.7) provides the framework for guiding and regulating the physical development of a county or region. 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. 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.	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. As a practical matter, only the state's smaller, slow-growing, rural counties are planning under this state law.	The Planning Enabling Act provides the basic framework for local jurisdictions to develop land-use plans and development regulations. 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. The Planning Enabling Act is silent on the need for comprehensive plans to address hazard avoidance or hazard reduction. Local compliance with state requirements of this law is better than under the much more comprehensive Growth Management Act.

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Critical areas protection	The Growth Management Act of 1990 (RCW 36.70A) 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. The concept of protecting the function and values of critical areas includes protecting humans from flood and geologic hazards. Critical areas regulations must be reviewed and evaluated every seven years; amendments can be made annually.	All counties, cities and towns in the state must develop regulations to designate and protect critical areas. 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 (most jurisdictions that originally had a due date of Dec 1, 2007 were given a one-year extension). Legislation passed in 2011 extends the deadline for the first tier of city and county updates to June 30, 2015.	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. 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. Most jurisdictions have prepared critical area regulations that meet minimum state standards, but their effectiveness varies, depending upon local resources and local political considerations. As of January 2010, only 92 percent of jurisdictions required to have their critical areas regulations completed by the end of 2004 had done so. The completion percentage drops to 69 percent for 2005 jurisdictions, 38 percent for 2006 jurisdictions, and 27 percent for 2007 jurisdictions.

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Growth Management Act (GMA) land-use planning	The GMA, which became law in 1990, builds on the Planning Enabling Act by requiring all cities and counties in the state to: • Designate and protect critical areas (see previous page). • Designate farmlands, forestlands and other natural resource areas. • Determine that new residential subdivisions have appropriate provisions for public services and facilities. 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. 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. 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.	Counties that meet the following criteria must fully plan under the Growth Management Act: Counties with a population greater than 50,000 and: • Before May 1995 had a 10 percent increase in population in the previous 10 years, OR • After May 1995 had a 17 percent increase in population in the previous 10 years. Cities or Counties with populations under 50,000 that meet the following criteria must fully plan under the GMA: • Population has increased 20 percent in the previous 10 years. Cities or Counties that do not fit the above criteria can voluntarily choose to plan under the Growth Management Act. Under legislation passed in 2003, Counties or Cities required to fully plan must review every 10 years their designated urban growth areas, and review every 7 years their comprehensive plans and development regulations. In 2010, the Legislature extended the comprehensive plan review cycle by three years due to budget cuts that eliminated State funds for GMA planning grants during the 2009-2011 biennium. The first update is not due until June 30, 2015.	Twenty-nine of the state's 39 counties are fully planning under GMA; 218 cities within these counties also must fully plan. Land-use plans and regulations under GMA requirements are much more comprehensive than those developed under the Planning Enabling Act. 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. 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. As of January 2010, 100 percent of jurisdictions required to have their comprehensive plans completed by the end of 2004 had done so. The completion percentage drops to 85 percent for 2005 jurisdictions, 57 percent for 2006 jurisdictions, and 29 percent for 2007 jurisdictions. Percentages for completion of development regulations range from 91 percent of 2004 jurisdictions to 20 percent of 2007 jurisdictions.

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Floodplain management	Three state laws govern floodplain management: 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. 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.	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. 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. Flood damage reduction projects must be consistent with local comprehensive flood hazard management plans. Emergency grants are available to respond to unusual flood conditions.	Despite a lack of funding, communities continue making floodplain management a priority. The State provided Flood Damage Prevention Grant funding to 13 local projects in the 2009-11 biennium. Grants for these projects total $1.35 million. Funding for FCAAP was suspended for the 2012-13 biennium. Washington has 33 communities participating in the Community Rating System. King County has a CRS rating of 2, making it the highest ranked county in the nation. Many communities have created innovative floodplain management techniques, such as: • Higher freeboard standards than federal regulations require (e.g., Everett and Chelan County). • Prohibiting fill for structural support of residential buildings in floodplains (e.g., Skagit and King Counties.) • Providing storage to compensate for filling floodplains (many localities). • Prohibiting new residential structures in the floodplain (Thurston County) • Exceeding federal standards for floodways (Pierce County).

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
Shoreline management	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. The act covers three basic policy areas: 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. 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. 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. 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.	The Shoreline Management Act applies to all 39 counties and more than 220 cities with shorelines created from: • Marine waters (Pacific Ocean, Strait of Juan de Fuca, Puget Sound). • Streams and rivers with a mean annual flow greater than 20 cubic feet per second. • Lakes and reservoirs greater than 20 acres in area. • Upland areas called shorelands that extend 200 feet landward from the edge of these waters. • Biological wetlands and river deltas, and some or all of the 100-year floodplain when associated with one of the above. The act establishes a balance of authority between local and state government. Cities and counties are the primary regulators.	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. Strength of local shoreline regulations is avoiding development on unstable shoreline slopes and in frequently flooded areas. Obstacles to successful development of shoreline master programs (SMP) include local political will to develop regulations sufficient to protect shorelines via buffers, setbacks, and appropriate design criteria. With adoption of new state regulations for local SMPs, all communities must revise their master programs by Dec 2014. The Department of Ecology has made planning grants available to eligible communities to inventory shoreline resources and develop updated SMPs. This includes the delineation of channel migration zones which are potentially hazardous areas.

Existing Local Policies			
Policy	***Description***	***Applicability***	***Effectiveness***
State Environmental Policy Act	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. SEPA was modeled after the National Environmental Policy Act. 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: 1. To declare state policy this will encourage productive and enjoyable harmony between man and the environment. 2. To promote efforts which will prevent or eliminate damage to the environment. 3. To stimulate the health and welfare of man. 4. To enrich the understanding of the ecological systems and natural resources important to the state and nation.	The law requires local governments to: • 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. • Ensure that environmental amenities and values are given appropriate consideration in decision making along with economic and technical considerations.	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. 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. 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. 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.

VI. Mitigation Actions

Requirement 44 CFR §201.4(c)(3)(iii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes 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 represents the mitigation actions and initiatives for the state government of Washington to pursue during the 2013-2016 period as identified by the State Hazard Mitigation Action Team (SHMAT) and the state agencies participating in this edition of the plan (see Appendix 2 Open Mitigation Strategy Action Items). The mitigation initiatives represent a mix of actions continued from the 2004, 2007 and 2010 plans because they remain a work in progress. A number of action items identified in the 2004, 2007 and 2010 plans were completed or removed (see Appendix 3 Completed or Removed Mitigation Strategy Action Items). The downsizing of state government, the consolidation of state agencies, and the general economic recession has dampened the hazard mitigation actions taken by state agencies.

Revisions to the Mitigation Action Agenda

Participating state agencies reviewed the mitigation actions they identified in the mitigation action agenda and made revisions as appropriate for the 2013 plan. If during the 2013 update cycle it was determined that an item was no longer valid, it was removed from the mitigation strategy action items matrix (see Completed or Removed Mitigation Strategy Action Items Appendix 3). This is different from an action item being completed. Most of the items are perpetual in scope.

In revising the mitigation action agenda for state government for the period of 2013 to 2016, the SHMAT took into account the progress by state agencies on their mitigation actions (see Plan Maintenance, Element A). Furthermore, 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 propagated through the 2013 plan.

Local jurisdictions set their own mitigation action agendas in their jurisdiction's hazard mitigation plans or their local multiple jurisdiction hazard mitigation plan based on their circumstances, community priorities and political policies. The state solicits projects for federally funded hazard mitigation grants from local jurisdictions in a statewide competition between all jurisdictions whether state agency, county government, city corporation, or special purpose district.

Prioritizing Mitigation Action Agenda

The philosophy of the State Hazard Mitigation Program is to foster holistic state agency and local programs that make hazard mitigation a way of doing business. The state program encourages state agencies to include hazard mitigation when they consider construction and location of new buildings, make existing facilities safer, train new employees, and develop strategic plans for their organizational operations. Consequently, the mitigation strategy action agenda is not prioritized but rather displayed alphabetically by agency. The hope is if the state leads by example, then local programs will incorporate similar and ideally better methodologies.

Additionally, the State Hazard Mitigation Program does not target available resources to a handful of local jurisdictions or to just a few hazards. Since Washington has a home-rule style of governance, 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. All disasters start and end locally. Local governments know their contingencies best and can facilitate a better community dialogue about disaster mitigation or recovery than the state can. Thus, sharing grant funds widely keeps more jurisdictions developing and maintaining hazard mitigation programs, plans and projects then if all of available resources went to a targeted hazard area or a handful of local jurisdictions.

So, 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 State Hazard Mitigation Plan.

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 to ensure that federal grant-funded state and local projects address state hazard mitigation priorities with the highest benefit cost analysis.

The State Hazard Mitigation Program emphasized outreach to tribal communities in the past two plans to encourage them to complete hazard mitigation plans for their communities. This outreach has culminated in those interested tribes have either completed or are nearing completion of their plans. Additionally, only two counties have conducted no mitigation planning activities to date. The other 37 counties either have a plan in place or are in the process of updating an existing plan. Additionally, the state revised the Hazard Mitigation Grant Program application to reduce the number of repetitive loss (RL) and severe repetitive loss (SRL) properties. Consequently, the state is beginning to see more projects submitted by local jurisdictions to mitigate these properties.

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 (see Administrative Plan, Appendix 9).

VII. Funding Sources

Requirement 44 CFR §201.4(c)(3)(iv): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes the identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.

The primary sources for state and local hazard mitigation projects have been the federally funded programs available through the Federal Emergency Management Agency (FEMA). 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* (above) 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 are identified in the table titled *Federal Mitigation Programs and Activities*, Appendix 8.

State Financial Outlook

The primary sources of revenue for Washington State general governmental operations are the state share of sales and use taxes, property tax, and the business and occupations tax (a tax on the gross receipts of businesses). Washington State does not have an income tax. 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. The state's constitution requires a balanced budget. The state cannot fund ongoing operations with bonds. The state's gasoline tax primarily funds transportation. The state also has a biennial Capital Budget, funded through bonded debt as well as general fund appropriations for

capital construction projects and a variety of other funds earmarked for specific purposes (e.g., timber trust revenue for school construction).

Along with the rest of the nation, the State's budget over the last couple of years has been severely impacted by the economic downturn. The budget for the 2009-2011 biennium faced a $9 billion shortfall (27% of the state's General Fund operating budget) near the beginning of the biennium period, and another $2.6 billion shortfall in early 2010. A significant portion of this shortfall was covered by budget cuts, including reductions in the state workforce and program funding. The Department of Ecology's hazard mitigation related programs, including the FCAAP, were reduced. The budget for the 2011-2013 biennium included a $5.1 billion shortfall and precipitated 23 major reforms during the legislative session. As of November 2012, the Washington State Economic and Revenue Forecast Council[iii] describes that Washington State faces a projected $900 million shortfall in the 2013-2015 biennium and a larger $1.1 billion shortfall in the 2015-2017 biennium. In addition, the recent Washington State Supreme Court decision mandates that the state had been neglecting its primary constitutional duty of funding primary education to the amount of $2.1 billion for the 2013-2015 biennium.

It is difficult to predict the future budgetary outlook for the State with respect to its hazard mitigation initiatives. The longer range budget plans include the current hazard mitigation related programs at their fully funded levels. However, there remains the possibility of future cuts if the current budget woes continue. Additional information on the state's economic status can be found within Element B, *Risk Assessment*.

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 flood control districts, cemetery districts, 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. These local governments can authorize fees for various permits and business activities that take place within their jurisdictions, 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 issuances. All local government units with the ability to issue long-term bonds are limited to the amount of debt they can hold. This amount is based on a specific percentage of the assessed valuation of the district codified in state law.

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 (e.g. motor vehicle excise tax and state liquor stores) and restricted annual local tax increases. In general, the economic recession has 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, Salmon Recovery Fund 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 Commerce to help pay for development of critical areas ordinances, comprehensive plans, associated land-use development regulations, and capital improvement plans.

Private Funding

The Foundation Center, www.fdncenter.org, is an organization that promotes public understanding of philanthropy and helps grant seekers. This site showed some information on private and corporate giving related to disaster preparedness (through mitigation actions) and disaster relief.

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, the Home Depot home improvement chain has sponsored in-store earthquake retrofit clinics at several stores throughout the Puget Sound region and has posted disaster mitigation related information on its website. The websites below are specifically dedicated to mitigation and recovery efforts, and provide hazard specific, detailed information.

www.homedepot.com/hdus/en_US/DTCCOM/HomePage/Know_How/Weather_Center/Earthquake/Docs/Earthquake_Preparation.pdf

www.homedepot.com/webapp/wcs/stores/servlet/ContentView?pn=KH_Weather_Center&langId=-1&storeId=10051&catalogId=10053&cm_sp=9dced3c9-31ad-4f78-a9fe-1bb673cc78b7

The Washington State Military Department and Green Diamond Resource Company completed negotiations regarding an agreement to permit evacuation of coastal residents within Pacific County, Washington onto land privately held by Green Diamond during a disaster. Green Diamond Resource Company has agreed to make privately held timber land available as an evacuation route/site in the event of a disaster, including a tsunami, to citizens, first responders, and emergency management officials. In exchange for use of the aforementioned property as an evacuation site, the Washington State Military Department agrees to assume liability for damage to property and injury/death to persons caused by evacuation activities as allowed by law and subject to RCW 38.52.180. The agreement was executed in March 2009.

In March 2010, the Washington State Department of Natural Resources and the Weyerhaeuser Company (a major forest products company) reached an agreement that the company would voluntarily increase landslide protections in watersheds. As part of this agreement, DNR and Weyerhaeuser will apply emerging technologies like slope stability models, digital elevation terrain mapping, and advanced aerial photography imaging to enhance detection of potentially unstable slopes. See website below for more info. www.dnr.wa.gov/BusinessPermits/News/Pages/2010_03_25_dnr_weyco_landslide_protec_nr.aspx

To encourage more private funding activities, EMD launched a website on November 19, 2007, to provide businesses with a roadmap to prepare for and mitigate the effects of all types of emergencies. The website, http://emd.wa.gov/preparedness/prep_business.shtml, is meant to be a one-stop destination to provide user-friendly information to assist businesses in achieving their highest readiness level. Among other things, the site offers a 12-step Comprehensive Business Preparedness and Planning guide; statewide local training, exercise and volunteer program listings; embedded links to related web sites, source documents and easy-to-use templates that can be customized for any business; and an Industry Standard, Best Practice and Benchmarking section so that businesses can track their progress in relation to established standards within their business sector.

In May 2010, EMD added a new section, External Affairs, to the division in an effort to continue to contribute to the overall renewal of the State's commitment to mitigation, response, recovery and preparedness activities through the public/private partnership. It included a new position tasked with instituting the state's corporate relations program in its continued efforts to integrate public education, information and outreach to private businesses into one cohesive approach.

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 Pre-Disaster Mitigation Grant Program (PDM) is targeted for elimination by Congress. Washington State applicants have been very successful getting funds awarded from the PDM program for mitigation plans and mitigation projects.

The *Federal Mitigation Programs and Activities Table* in Appendix 8 of this plan identifies an extensive list of potential federal funding opportunities for hazard mitigation projects and initiatives.

VIII. Prioritizing Local Assistance

Requirement 44 CFR §201.4(c)(4)(iii): *Plan Content*. To be effective the plan must include a *Mitigation Strategy* section that includes criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. Further, that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.

The process used by the State of Washington to review, evaluate and select projects for the various mitigation grant programs is based on years of public participation and supports the State's home-rule form of government. Home rule provides that government at the lowest-possible level is the one best prepared to make decisions that affect it the most – including those involving hazard mitigation projects.

Washington's concept is to support all local mitigation efforts. Typically, hazard mitigation funds following a disaster are available to all eligible agencies and organizations statewide for projects that reduce the risk of future damage, regardless of the hazard being addressed (i.e., funds available following an earthquake disaster can address problems presented by other hazards). Occasionally, when mitigation funds are limited, grants can be restricted to specific areas of the state or address specific hazards. This occurred following the October 2003 and the January 2006 flood and storm disasters, when construction grants were limited to projects designed to address repetitive flood losses within the counties declared as disaster areas. However, planning grants were available to eligible applicants statewide.

The State's Hazard Mitigation Program uses a competitive system to evaluate and recommend for funding only the most environmentally sound and cost-effective projects. Projects recommended for funding are those that best document their ability to reduce future impacts of natural disasters as well as demonstrate cost-effectiveness through a benefit-cost analysis.

Potential projects are evaluated using a weighted scoring process emphasizing protection of life and property, reduction of risk, and cost-effectiveness. EMD's Mitigation Section staff clearly communicates and demonstrates the importance of cost-effective projects to potential grant applicants throughout the application process. For example, all applicant briefings and application materials state that the benefit-cost ratio must be greater than 1.0 for the project to be eligible for any FEMA funded Hazard Mitigation Assistance grant. Staff from the Mitigation Section works with each potential grant applicant to ensure that proposed projects provide as great a public benefit as possible, with a minimum public benefit of at least one dollar for each dollar spent on the project. Only projects with a minimum benefit-cost ratio of 1.0 receive further consideration by a review committee.

Prioritization of Proposed Mitigation Construction Projects

A Mitigation Grant Review Committee of state and local representatives evaluates and prioritizes eligible mitigation grant applications. The committee uses a scoring system to prioritize projects according to both federal eligibility criteria and the state eligibility criteria. The criteria are published in the Mitigation Program Administrative Plan and the application documents, Appendix 9. Additionally, the benefit-cost ratio may be used as a tiebreaker when projects are ranked.

For each round of grant funding, a committee of at least five members, as described below, is convened:

- Two individuals from the EMD – normally the Mitigation and Recovery Section Manager and the State Hazard Mitigation Programs Manager.
- One designee from a state agency that deals with issues related to the particular type or nature of the disaster (example: Department of Ecology representative for floods).
- Two individuals representing local government from outside of the declared disaster area or from a community not applying for mitigation funds.

The committee uses a scoring system that emphasizes seriousness of risk when considering an applicant's responses to the federal and state eligibility criteria for construction projects. Among the criteria receiving greatest weight in scoring are those dealing with reduction of risk posed by hazards, prevention of repetitive losses, and protection of critical areas including frequently flooded areas and geologically hazardous areas. Overall, the applicant must demonstrate, through a written narrative that they have considered three alternatives (one being 'no action') and determined the proposed alternative to be the most practical, effective, and environmentally sound among the possible solutions. The specific criteria for construction (both structural and non-structural) projects are based on twelve scored items depicted below from the Hazard Mitigation Grant Programs Project Application, Review Committee Evaluation Score Sheet, dated April 2012. The applicant must demonstrate the project meets the following federal and state criteria:

- It substantially reduces the risk of future damage, hardship, loss, or suffering resulting from a major disaster?
- It addresses, minimizes, or avoids impacts to environmental/historic preservation, natural, cultural or historic resources?
- It provides a long-term solution to a repetitive or imminently dangerous situation?
- It solves a problem independently, or functions as a beneficial part of an overall solution?
- It clearly describes the problem(s) to be mitigated, the project's purpose and outcome(s)?
- It clearly defines the population that directly or indirectly benefits from the proposed project?
- It includes details about the conceptual design, specific work components for implementation and construction, how it will be implemented, and by whom?
- Reflects the most practical, effective and environmentally sound solution from among all alternatives considered?
- Project completed within 0-12 months or Project completed within 13-24 months?
- It addresses structures in repetitive flood loss areas either by acquisition, elevation, or relocation?
- It has multiple objectives such as damage reduction, environmental enhancement, and economic recovery?
- It has a beneficial impact on more than one community or is multi-jurisdictional?

Prioritization of Proposed Mitigation Planning Projects

A Mitigation Grant Review Committee of state and local representatives evaluates and prioritizes eligible mitigation grant applications. The committee uses a scoring system to prioritize projects according to both federal eligibility criteria and the state eligibility criteria published in the Mitigation Program Administrative Plan and the application documents. The committee uses a scoring system that emphasizes Criteria for planning projects from the Hazard Mitigation Grant Programs Planning Application, Review Committee Evaluation Score Sheet, dated April 2012:

Part 1. Planning process:

- How well do they describe how they will provide the public an opportunity to participate in the planning process?
- How well do they describe how they will include neighboring communities, local and regional agencies, business, academia, and other interests in the planning process?
- How well do they describe previous planning efforts and how they will incorporate them into this all hazards planning process?

Part 2. Risk assessment element:

- If the applicant has a current Risk Assessment, does it contain a description of the type, location, and extent of all natural hazards that can affect the jurisdiction?
- If the community does not have a Risk Assessment, how well do they describe how they will complete it?
- How well did they document previous occurrences of hazard events and the probability of future hazard events?
- Has the applicant completed a vulnerability assessment for the hazards identified in their risk assessment that includes:
    - The types and numbers of existing and future buildings, infrastructure and critical facilities located in the identified hazard areas;
    - An estimate of the potential dollar losses to vulnerable structures identified and a description of the methodology used to develop this estimate;
    - A general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
- If the applicant has not completed a vulnerability assessment, how well did they describe how they will complete the above elements of a vulnerability assessment?

Part 3. Mitigation strategy element:

- If the applicant currently has a mitigation strategy, does it contain a description of local mitigation goals and objectives with proposed strategies, programs, and actions to reduce or avoid long-term vulnerabilities to the identified hazards?

- If not, how well does the applicant describe how they will develop these goals, objectives, strategies, and programs?
- Has the applicant conducted an analysis of a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each identified hazard, with particular emphasis on new and existing buildings and infrastructure?
- If not, how well did they describe how they will complete the analysis and what areas it will cover?
- How well did the applicant describe how they will develop an action plan describing the actions in the analysis element and how they will prioritize and implement the plan?
- Did the applicant develop a set of specific cost effective mitigation projects that will reduce damages from future disasters that included a summary of how they identified and prioritized these actions?
- If not, did the applicant describe what types of projects they might consider and how they would prioritize them?
- Did the applicant describe how these actions will support the mitigation goals and priorities of the community?
- Did the applicant provide a description of their process to reduce the number of NFIP target repetitive loss properties in the community that included a summary of the process?
- If not, did the applicant describe how it would address the repetitive flood loss issue in their community?
- How well did the applicant describe how their community is committed to reducing damages from future natural disasters through the development of partnerships with businesses, academia and other private and non-profit interests able to provide financial or technical assistance in support of the community's mitigation goals and priorities to include specific examples of any current activities?
- How well did the applicant describe the development trends within their community and discuss actions to mitigate disaster losses in these areas?
- Did the applicant discuss if their plan will require any interagency agreements to implement?

Part 4. Plan maintenance element:

- A section describing the established method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
- A process by which the applicant will incorporate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans.
- A discussion on how the community will maintain public participation in the planning process.
- Plans for formal adoption of the plan by the community.
- A section describing how the local plan will be implemented and administered by the local government including discussion of how officials will approach and manage mitigation actions involving the acquisition of private property.

Additionally, to be eligible for hazard mitigation grant funding, potential grant applicants that are eligible for NFIP have to demonstrate they are in good standing with the program, and cities, counties and towns must have either a current approved Critical Areas Ordinance and / or a current approved comprehensive land-use plan as required by the State GMA.

Once the Mitigation Grant Review Committee evaluates and ranks proposed applications in priority order, the State EMD's Mitigation Section forwards the ranked applications to the Region 10 office of FEMA for additional review, approval, and funding.

IX. Monitoring Mitigation Implementation

Requirement 44 CFR §201.4(c)(5)(ii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a system for monitoring implementation of mitigation measures and project closeouts.

The process used to monitor the implementation of mitigation measures and project closeouts will be similar to the one used to monitor, evaluate and update the plan. EMD's Mitigation and Recovery Section is responsible for monitoring implementation of projects identified in the state plan. The section's Hazard Mitigation Strategist will oversee this work.

Review on progress implementing the actions and projects identified in the state plan's Mitigation Strategy will occur once a year. State agencies that are part of the state plan will submit brief progress reports on an annual basis, in April. The EMD Mitigation and Recovery Section will track progress of actions and projects identified in the state plan and agency annexes.

Once a year, the SHMAT and the state agencies that are part of the plan will:

- Examine progress on mitigation actions and projects in the state plan's Mitigation Strategy and in agency annexes, using information from progress reports and the project database.
- Identify implementation problems (technical, political, legal, and financial) and, as appropriate, develop recommendations and strategies to overcome them.
- Develop a summary of progress for the annual report of the Governor's Emergency Management Council submitted by EMD's Mitigation Section.

State agencies with projects identified that end up funded by the HMGP, the PDM, the FMA, and other federally funded mitigation grant programs, will be required to make quarterly reports of progress to EMD's Mitigation Section. Additionally, agencies and local governments receiving hazard mitigation grants are required to submit a closeout report at the conclusion of any grant-funded project. Information from these reports also will be tracked and reviewed on an annual basis, using the process described above.

Consequently, state agencies provided two annual reports and SHMAT was convened in December 2010 and January 2013 to examine the progress on implementation of mitigation actions. The State Hazard

Mitigation Programs Manager made quarterly reports to FEMA on progress implementing mitigation grant-funded projects and conducted project monitoring and closeout activities as described in the state's *Hazard Mitigation Programs Administrative Plan, Appendix 9*. EMD Mitigation and Recovery Section staff prepared an annual report of mitigation activities that was included in the annual report of the Governor's Emergency Management Council.

X. Process for Reviewing Achievement of Mitigation Goals

Requirement 44 CFR §201.4(c)(5)(iii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a system for reviewing progress on achieving goals as well as activities and projects identified in the Mitigation Strategy.

The process used to monitor the implementation of mitigation measures and project closeouts will be similar to the one used to monitor, evaluate and update the plan. EMD's Mitigation and Recovery Section is responsible for monitoring implementation of projects identified in the state plan. The section's Hazard Mitigation Strategist will oversee this work.

Review on progress implementing the actions and projects identified in the state plan's Mitigation Strategy will occur once a year. State agencies that are part of the state plan will submit brief progress reports on an annual basis, in April. The EMD Mitigation and Recovery Section will track progress of actions and projects identified in the state plan and agency annexes.

Once a year, the SHMAT and the state agencies that are part of the plan will:

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- Identify implementation problems (technical, political, legal, and financial) and, as appropriate, develop recommendations and strategies to overcome them.
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Consequently, state agencies provided two annual reports and SHMAT was convened in December 2010 and January 2013 to examine the progress on implementation of mitigation actions. The State Hazard Mitigation Programs Manager made quarterly reports to FEMA on progress implementing mitigation grant-funded projects and conducted project monitoring and closeout activities as described in the state's *Hazard Mitigation Programs Administrative Plan, Appendix 9*. EMD Mitigation and Recovery Section staff prepared an annual report of mitigation activities that was included in the annual report of the Governor's Emergency Management Council.

XI. Three-Year Update Cycle

Requirement 44 CFR §201.4(d): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a plan for how the state hazard mitigation plan will be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities and resubmitted for approval to the appropriate Regional Administrator every three years.

The Mitigation and Recovery Section of the State Emergency Management Division (EMD) is responsible for developing and maintaining the SHMP. The section's Hazard Mitigation Strategist is the individual responsible for overseeing this work.

Participants in the plan maintenance process include the following:

- Members of the State Hazard Mitigation Advisory Team (SHMAT) (see Planning Process, Element A, for information on the makeup and involvement of this team in the state plan).
- Representatives of the agencies of Washington State Government that participated in development of the state plan (see Planning Process, Element A, for information on the agencies that are part of the state plan).
- Representatives of local jurisdictions whose hazard mitigation plans were used in the development of the state plan.

The state plan review will take place in three ways:

- Annually, for progress made on mitigation actions and projects identified in the Mitigation Strategy of the state plan and in the agency annexes. This is typically done in April through an email based survey to state agencies.
- After each major disaster in Washington State declared by the President, to look for areas where the state plan should be refocused due to the impact of the disaster. This is typically done by key members of the SHMAT and the Mitigation and Recovery Section.

- Every three years, before submission to FEMA for approval. Typically, the SHMAT provides advisory direction to the State Hazard Mitigation Strategist who revises all the plans components and facilitates their review by subject matter experts.

Annual Progress Review

The purpose of the annual review is to gauge the progress as well as any changed conditions that may affect hazard mitigation planning and implementation in Washington State. The state plan will be revised annually only as necessary to reflect significant policy changes that took place during the preceding year or during the state's legislative session (typically January through April time period).

Review on progress implementing the actions and projects identified in the state plan's Mitigation Strategy will occur annually. State agencies that are part of the state plan will submit brief progress reports on an annual basis during the spring but before the end of the state budget biennium. Information from these reports will form the basis for a summary of progress submitted by EMD's Mitigation and Recovery Section for the annual report of the State Emergency Management Council.

Once a year, the SHMAT and the participating state agencies in the plan will:

- Review and revise the state plan's Risk Assessment as necessary to ensure its currency. This will include a review and update of hazard profiles and data on vulnerable state facilities as new information becomes available.

- Examine progress on mitigation actions and projects in the state plan's Mitigation Strategy Action Item or Action Agenda.

- Identify implementation problems (technical, political, legal, and financial).

- Recommend how to increase involvement by state agencies and local jurisdictions in hazard mitigation.

- Recommend revisions to the Risk Assessment and to the Mitigation Strategy's goals and objectives, projects and timelines only to reflect major changes in policies, priorities, programs, and funding.

As part of the 2013 update, the 2010 process was analyzed and revised to better reflect the resource capabilities of the State and more specifically the Mitigation Response and Recovering Section. The changes reflect the needs of the State and lessons learned during the previous 3-year planning period.

Plan maintenance implies an ongoing effort to monitor and evaluate plan implementation and to update the plan as progress, roadblocks, or changing circumstances are recognized. During the current update cycle the state faced some significant roadblocks which impacted not only the plan's update, but also the plan's status with respect to the mitigation activities of the state agencies. Due to limited state revenue, many of the action items which had an anticipated end date during the lifespan of this plan did

not occur. Therefore, those action items which were not completed will continue within the plan. Some of the action items became obsolete or are no longer practical, and have been removed from the general strategies and moved to the *Completed or Removed Mitigation Strategy Action Items*, Appendix 9. Additionally, staff turnover in the State Hazard Mitigation Strategist position slowed outreach and update efforts.

As was with previous plan editions and for the 2013-2016 update cycle, various plan elements will be monitored, evaluated and updated throughout the three year planning period via the Mitigation Strategist, with the SHMAT monitoring efforts and providing information as needed/requested. It was also determined the most efficient way to lead the update effort is to manage the Plan as any large project. As such, there will be a dedicated mitigation staff member assigned to monitor and evaluate the Plan throughout the three year update process.

In coordination with the SHMAT, this dedicated staff person will manage the following:

- Progress made on goals and objectives
- Modifications to the State risk and vulnerabilities as needed
- Implementation of mitigation actions and projects
- Changes in policies or programs discussed in the Plan

Sub-groups will be established, with representatives from the various SHMAT agencies and organizations responsible for reviewing the plan and providing input and suggested changes. This input is based on subject matter expertise, on-going studies, best available science, and mitigation initiatives being undertaken by SHMAT members and their respective agencies or organizations. Additional emphasis will be placed on developing a system for tracking mitigation strategies, and assisting the state agencies in developing more in-depth action items.

During the planning period, state agencies will:

- Review hazard mitigation projects and initiatives and report on progress of completed, deleted, or deferred projects, as well as reporting any new initiatives/projects.
- State agencies will also review existing state/federal programs to ensure that the state is taking full advantage of possible funding sources in its implementation of the state hazard mitigation program.
- Continue working on a method of Risk Assessment which can be utilized by the local jurisdiction plans. The next plan edition should include economic and social risk ranking criteria.
- Develop a method of capturing in greater detail the strategies of the local jurisdictions for inclusion within the State's plan. The focus of these strategies should be geared towards those strategies which are significant in nature, not generic or overly broad.

Separate agency annexes to the state plan, each with separate narratives and mitigation goals, objectives and action items will not be required. Continuing with this plan, one set of mitigation goals will cover all participating agencies, and all agency mitigation action items will be included into one table in the Mitigation Strategy section of this plan. State agency participation will continue to be required in

the plan review and revision process. Annual progress reports by participating state agencies will be required rather than semi-annual reports.

Post-Disaster Review

After each Presidentially-declared major disaster in Washington State, EMD's Mitigation and Recovery Section will document the effects of the disaster, and convene the SHMAT to examine the disaster and, as necessary, develop recommendations to improve resistance to the hazard. This process allows for a review of the state plan and the impacts of the hazard that caused the event, as well as providing an opportunity to determine whether any of the Mitigation Strategies require revisions.

In documenting the disaster, EMD's Mitigation and Recovery Section may consult representatives from FEMA, appropriate state and local agencies, and private sector partners impacted by the disaster. If determined necessary, approximately six months after the event, the Mitigation Section will prepare and disseminate a report outlining the disaster and its impact, and propose new or revised recommendations for the state plan's Mitigation Strategy.

Such a post-disaster review may replace an annual review in any year a major disaster event occurs, depending upon severity of the disaster event and on the timing of the survey and the state plan's annual progress review.

The state received three disaster declarations after approval of the 2010 plan:

- January 2011 Severe Winter Storms (DR-1963);
- January 2012 Severe Winter Storm (DR-4056); and
- July 2012 Wind Storm (DR-4083).

The Hazard Mitigation Strategist met with the SHMAT to review the Severe Storm, Landslide, and Flooding profiles after these events occurred. It was determined that the profiles remained fairly current as written, with the exception of inclusion of the new disaster events in the historical data portion of the profile. The Strategist and SHMAT came to the conclusion that as the plan was again in its update cycle, the profiles would be updated with new information during the normal update cycle, which was already underway at the time the team met. Additionally, EMD's Mitigation and Recovery Section documented impacts of the disasters to make certain accurate information would be included.

The Mitigation staff at the Joint Field Office also requested Losses Avoided Studies be conducted for properties impacted by the disasters. The projects included in this study were:

- Drainage improvements consisting of a culvert upsizing and channel dredging in the City of Issaquah, and
- Installation of a flood drainage gate along the Stillaguamish River levee near the City of Stanwood.

The drainage improvement projects reported an overall Return on Investment of 96.7% successful after only two years into the project's useful life cycle.

Three-Year Plan Review and Revision:

Every three years, EMD's Hazard Mitigation Section, will facilitate an update of the Washington SHMP prior to its submission to FEMA for approval. The review will begin approximately 12 months before FEMA approval is required. Review and revision will involve SHMAT and state agencies and local jurisdictions whose plans influenced development of the state plan. Additionally, the SHMP will be coordinated with other state plans, as appropriate.

It is the state's intent that the 2013 edition of the plan should continue to address both natural and manmade or technological hazards. The state plan's Risk Assessment will incorporate profiles for each of the identified manmade or technological hazards that affect Washington State.

To the extent possible, local multi-jurisdiction hazard mitigation plans completed as of the start of the three-year review and revision cycle will provide the basis for revising the state plan, especially those sections related to hazard identification and risk assessment.

During the 2010-2013 update cycle it is the intent of State and FEMA Region X to work together in an attempt to develop a method to incorporate already existing plans such as Flood Hazard Management / Mitigation Plans, Comprehensive Wildfire Protection Plans, etc., into the appropriate components of the local jurisdiction's mitigation plan in an effort to reduce redundancy in planning efforts.

The following framework will be the process used for the Three-Year Plan Review and Revision prior to the state plan's submission to FEMA in 2013:

- Review will continue to involve SHMAT and participating state agencies, as well as local jurisdictions as appropriate.

- Hazard and risk-assessment information in local plans that are revised and re-approved by fall 2012 will be reviewed and considered in the 2013 state plan update process.

- Hazard Profiles - New information and maps, as available, will be included in natural hazard profiles. Additionally, hazard experts will review the profiles for completeness and accuracy.

- Implementing Mitigation Actions - Participating state agencies and SHMAT will review the status of and progress on mitigation actions identified in the Mitigation Strategy of this plan.

- Effectiveness of state-funded, Local Mitigation Projects is addressed in the section of the state plan entitled "Loss Avoidance Study," Appendix 10 and Appendix 11, per the requirements of 44 CFR 201.5.b.2.iv.

- Identification of Implementation Issues - the EMD Mitigation and Recovery Section in conjunction with SHMAT will examine issues related to implementing mitigation actions identified in this plan and make recommendations for their resolution in the 2013 plan.

- Increase State, Local Participation in Hazard Mitigation:

- The EMD Mitigation and Recovery Section will continue its outreach to state agencies in a variety of ways, including but not limited to State Agency Liaison meetings; one-on-one meetings with agency staff; through critical infrastructure protection, homeland security, and other related planning initiatives; and through the office of The Adjutant General, State Military Department, to the Governor's Cabinet, as necessary.
- Section staff also will continue outreach to local jurisdictions through presentations at conferences, web-based trainings, one-on-one technical assistance visits, scheduling of mitigation-related training and workshops (mitigation planning, benefit-cost analysis, application preparation, etc.); and continued communication through phone, email and Internet, among other means.
- An inventory of state-owned and leased facilities maintained annually by the State Office of Financial Management will again be used as the facilities database for the 2013 SHMP. Use of this database will continue to be expanded in the coming years to meet the needs of a variety of state planning initiatives, including hazard mitigation; this will streamline the collection of information on state facilities, reduce the burden on state agencies participating in the state hazard mitigation planning initiative, and should encourage increased participation.

- SHMAT, hazard experts and others will continue to review the various elements of the plan, and assist with the update of the Risk Assessment and Mitigation Strategy portions for the 2013 plan.

- The EMD Mitigation and Recovery Section will continue to monitor the process of maintaining the state plan, involving SHMAT and others as needed and appropriate.

- In coordination with FEMA Region X, establish a subcommittee of the State Advisory Team to explore the feasibility of integrating hazard mitigation with other statewide planning initiatives.

The three-year review of the plan began in earnest August 2012, with involvement from SHMAT and participating state agencies occurring electronically throughout the update cycle. All natural hazard profiles were updated and several new man-made / technological hazards were incorporated. The state Hazard Identification and Vulnerability Assessment (HIVA) was incorporated. An inventory of state-owned and leased facilities maintained annually by the State Office of Financial Management was used. The EMD Mitigation and Recovery Section increased outreach to local jurisdictions through presentations at conferences, one-on-one technical assistance visits, scheduling of mitigation-related training and workshops (mitigation planning, benefit-cost analysis, application preparation, etc.); and increased communication through phone, email and Internet, among other means. Local hazard mitigation plans were reviewed in January 2012 for hazard information and potential losses from risk assessments that potentially could be incorporated into this update of the state plan.

XII. Local Funding and Technical Assistance

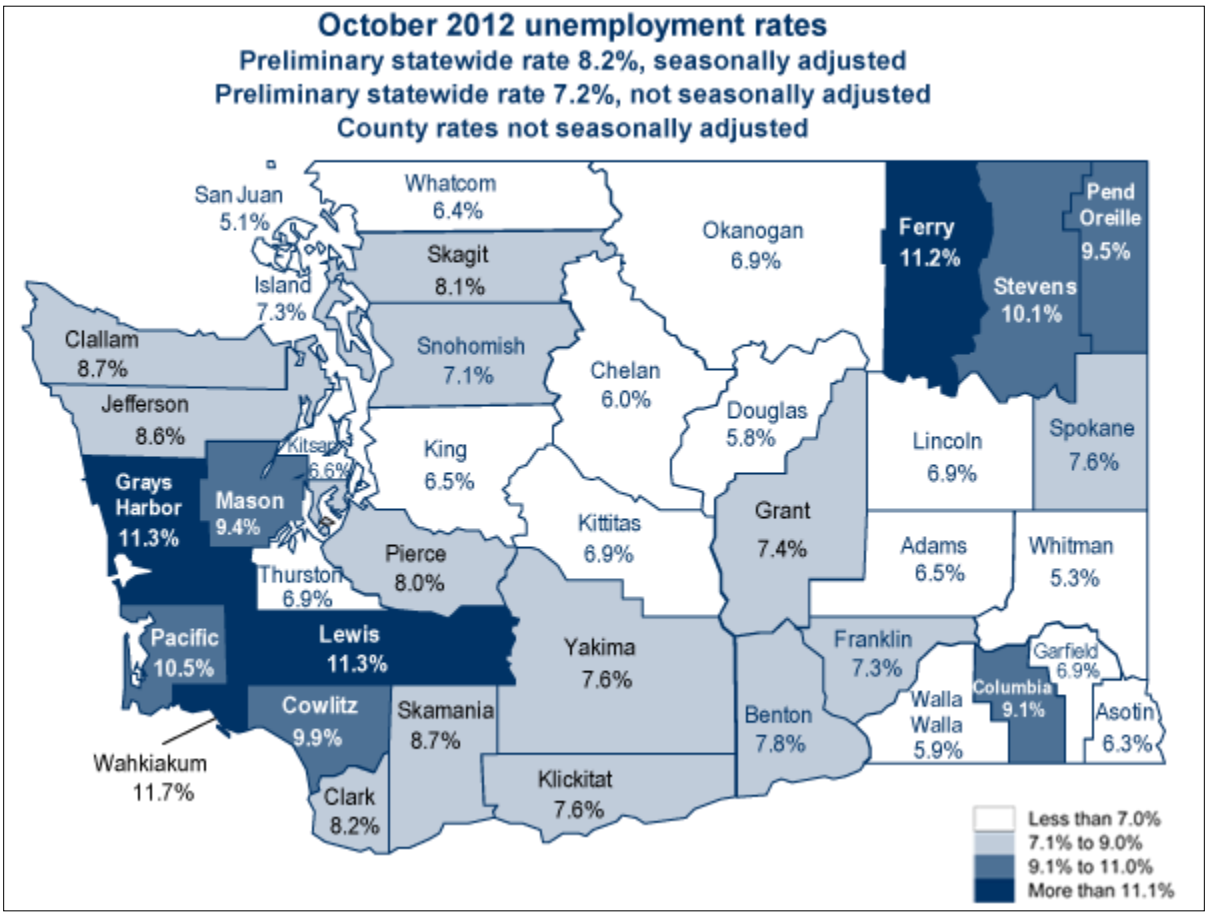
Requirement 44 CFR §201.4(c)(4)(i): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a description of the State process to support, through funding and technical assistance, the development of local mitigation plans.

Planning Initiatives 2010-2013

The State EMD Mitigation Section staff continued to provide support to local planning initiatives during this update cycle. The level of assistance requested and provided by Mitigation Section staff varied by community and their level of experience and knowledge, as well as by complexity of issues and the numbers of jurisdictions involved in a particular plan. Anecdotally, it appears counties are moving towards multiple jurisdictional hazard mitigation plans instead of individual cities and special purpose districts submitting their own hazard mitigation plans except for some of the most urbanized counties.

Washington State has 39 counties. As of October 31, 2012, twenty-nine counties have current plans while ten counties have expired plans. Eight counties are actively updating their expired plans. Adams and Klickitat counties have not had the emergency management staffing in recent years to either oversee a contractor or a jurisdictional team to develop a county or multiple jurisdictional hazard mitigation plan despite the state's mitigation section staff repeated attempts to get them to fill out a PDM or HMGP planning application. Three county plans are due for renewal in 2013 and are actively being updated. Most county plans are multiple jurisdiction hazard mitigation plans that include cities and special purpose districts components. The next bubble of local plans due for renewal is 2015-2016.

The condition of the state's economy directly impacted the update and development process throughout the state. In 2009, 19 of 39 counties in Washington were considered *distressed*, meaning that each of the counties maintained a three-year average unemployment rate equal to or greater than 120% of the statewide unemployment rate. Because of this, many jurisdictions were required to reduce their work force and limit the amount of travel for their employees. This left a large void within many jurisdictions which lost personnel who, in many cases, were the people who had previously developed the mitigation plans. By late 2012, ten counties remained distressed. Organic, locally funded mitigation planning was not happening at the pace of previous plan update cycles.



State Mitigation Section staff continued to give technical assistance in 2010-2013 because FEMA requirements changed since the original plans were developed. FEMA Mitigation Planning Guidance and Crosswalk Tool for local jurisdictions went into effect October 2012 after a one year review period. In particular, the Mitigation Strategist attended meetings held in conjunction with other events which are well attended by representatives from across the state: the Partners in Preparedness Conference, Coastal Sea Level Rise symposiums, and the annual SERC/TERC/LEPC conference held in Eastern Washington to provide outreach. In addition, an extensive amount of one-on-one technical assistance was also provided via telephone and web-based meetings, as well as several workshops, and many on-site technical assistance sessions.

<u>Methods of Delivering Technical Assistance</u>

- site visits – one-on-one or planning teams
- workshops
- attendance at kick-off meetings
- via phone and conference calls
- web-based meetings
- emails
- written correspondence

- classroom setting
- webinars
- attendance at public meetings
- samples and templates

Areas in which Technical Assistance was Provided (non-inclusive but most common areas where assistance was provided)

- update versus new plan – differences and what is needed
- kick-off meetings to detail process involved
- public meetings – what fulfills this requirement
- meeting with local planning teams to assist with issue resolution
- mitigation strategy development
- gaining public input and participation
- risk analysis
- capabilities assessment
- plan layout
- data gathering - sources
- HAZUS-MH development
- Benefit-Cost Analysis (BCA) development
- planning process
- planning team development – who should be involved
- NFIP requirements
- Repetitive/Severe Repetitive Loss Properties
- funding sources
- coordination with local planning mechanisms
- inclusion of local jurisdictions, special purpose districts – level of involvement/add-on
- review of plan drafts while under development (to make certain any issues the jurisdiction was experiencing were being handled immediately rather than waiting until the plan was completed)
- GIS maps for jurisdictions that do not have GIS capabilities

Requests for Proposals - Bidding Process for Contractor Selection

- assistance with development of the scope of work for contract bids (some jurisdictions require engineering studies for projects as part of their contracts)
- review of bids to determine thoroughness and level of services provided (e.g., were all requirements of plan development included?)
- selection process for contractors – assisted with the creation of questions to ask which would indicate level of experience and knowledge base of contractors

Samples/documentation provided to jurisdiction at onset of planning phase

At the beginning of the plan update or development, the Mitigation Strategist provided templates and information to each jurisdiction which would assist in the process. Providing samples of previously-approved annexes, plans, templates, etc., proved to be very effective for many jurisdictions, especially those who were new to planning. Below are some of the examples provided to the planners:

- Crosswalk (new requirement by the state that locals must complete crosswalk and submit along with plan to the state – since this policy was enacted, level of plan accuracy increased dramatically)
- Planning Guidance
- Matrix of Change for Plan Updates
- Community add-on language
- Risk analysis – samples of various ways in which a risk analysis can be conducted
- STAPLEE worksheets
- Special Purpose District Annexes (fire, hospital, school district, water district)
- Resolution for Adoption
- Templates for information gathering (Tetra Tech provided these to the state and has authorized their dissemination to local jurisdictions to assist with plan development for regional and local annexes)
- NFIP guidelines/requirements (provided to us from FEMA Region X)
- Public Meeting Notice
- Newspaper Ads announcing community meetings

In addition to the samples provided, Mitigation Section Staff also provided several workshops and training events during this plan update cycle, to include:

Training and Workshops

1. L273 Managing Floodplain Development through the National Flood Insurance Program at Seattle March 2011 (33 students)
2. MGT338 Risk and Vulnerability Assessment for Rural Communities at Grays Harbor March 2011 (35 students)
3. Pilot U of H Coastal Floodplain Management at UW June 2011 (25 students)
4. L276 Benefit Cost Analysis (BCA) at Camp Murray July 2011 (23 students)
5. AWR 228 Coastal Community Resilience November 2011 at Clallam County (4 students)
6. G393 Mitigation for Emergency Managers at Ellensburg March 2012 (18 students)
7. AWR 213 CIKR Planning Threat Analysis at Richland March 2012 (35 students)
8. L276 Benefit Cost Analysis (BCA) at Camp Murray May 2012 (27 students)
9. Pilot Seminar Disaster Management for Wastewater Utilities at University Place May 2012 (88 students)
10. NDPTC Coastal Flood Risk Reduction at Bellingham June 2012 (22 students)
11. L273 Managing Floodplain Development through the National Flood Insurance Program at Spokane October 2012 (22 students)
12. Pilot NDPTC Coastal Flood Risk Reduction at Port Angeles February 2013 (24 students)
13. L317 Comprehensive Data Management for HAZUS at Tacoma March 2013 (20 students)
14. G393 Mitigation for Emergency Managers at TBD Summer 2013 (anticipating 30 students)
15. L273 Managing Floodplain Development through the National Flood Insurance Program at TBD Summer 2013 (anticipating 25 students)

HMGP OUTREACH/TRAINING PLAN DR-4056 DRAFT 3/30/12				
HMGP Applications are due on 11/1/12. Formal outreach to occur between June 1-October 1st. Technical Assistance ongoing until Application deadline				
***TOPIC**	**TYPE**	**TIMEFRAME**	**WHO DELIVERS Where**	**DATES**
LOI Eligibility Screening Interviews	Phone Calls	15 mins-45 min. per call	EMD Mitigation Staff	April 1-May 31, 2012
Notify Eligible HMGP Applicants to Apply	Email		EMD Mitigation Staff	Friday, June 01, 2012
Benefit Cost Analysis (Mark request to FEMA)	Class Training	2 days	FEMA Camp Murray	Tues – Wednesday May 29-30, 2012
Managing Floodplain through NFIP (Mark request to FEMA)	Class Training	3-4 days	FEMA location TBD	Fall - Spokane, Spring - West Side
Acquisition & Elevation Requirements	Webinar	1 hour (2x)	EMD Mitigation Staff	Tuesday, July 24, 2012
Acquisition & Elevation Requirements	Webinar	1 hour (2x)	EMD Mitigation Staff	Tuesday, August 21, 2012
BCA Follow-up on Applicant's specific issues	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Monday, July 09, 2012
BCA Follow-up on Applicant's specific issues	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Tuesday, August 14, 2012
Budget Development	Webinar	1 hour (2x)	EMD Mitigation Staff	Thursday, August 09, 2012
Budget Development	Webinar	1 hour (2x)	EMD Mitigation Staff	Monday, September 10, 2012
Developing a Scope of Work For Planning Initiatives	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Tuesday, June 19, 2012
Developing a Scope of Work For Planning Initiatives	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Tuesday, August 07, 2012
Developing a Scope of Work For Projects	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Monday, June 25, 2012
Developing a Scope of Work For Projects	Webinar	1.5 hours (2x)	EMD Mitigation Staff	Thursday, July 19, 2012
EHP Review / SHPO On-Line Submittal	Webinar	1.5 hours (1x)	Science Kilner / Russ Holter	Thursday, July 12, 2012
EHP Review / SHPO On-Line Submittal	Webinar	1.5 hours (1x)	Science Kilner / Russ Holter	Thursday, July 12, 2012
How to Complete the HMGP Application	Webinar	2 hours (3x)	EMD Mitigation Staff	Tuesday, June 12, 2012
How to Complete the HMGP Application	Webinar	2 hours (3x)	EMD Mitigation Staff	Tuesday, July 17, 2012
How to Complete the HMGP Application	Webinar	2 hours (3x)	EMD Mitigation Staff	Wednesday, September 12, 2012
ICC Compliance & HMGP Grants	Webinar	1 hour (1x)	EMD Mitigation Staff	Friday, June 15, 2012

In total, during the 2011-2013 timeframe, EMD either provided or coordinated training for 364 students involved in mitigation planning efforts in a classroom setting. Additionally, 50 students attended BCA training for use not only to enhance grant applications, but also mitigation strategy development, as many jurisdictions are completing BCA evaluations on their various structural projects for prioritization of mitigation actions. EMD provided 32 technical assistance webinars for DR-4056 for an estimated 300 attendees.

GIS Datasets for Risk Analysis

During the 2010-2013 update cycle, a continued emphasis has been placed on the use of GIS to assist jurisdictions to conduct a more viable risk assessment EMD subcontracted with Washington State Department of Natural Resources (WA-DNR), Division of Geology and Earth Resources (DGER), to perform a Landslide Mapping Project using LiDAR data for the coastal bluffs surrounding the Puget Sound Basin and with the Office of Financial Management (OFM) Facilities Management for a GIS dataset and layer for owned and leased state facilities.

During the previous plan update cycle, EMD supported the augmentation of HAZUS to enable more accurate modeling studies in Washington State. DNR's Division of Geology and Earth Resources (DGER) gathered enhanced information which jurisdictions can utilize during their risk assessment rather than relying on the HAZUS-MH default data. In addition, a soils and liquefaction hazard maps database, USGS ShakeMaps Scenarios for Washington State for HAZUS earthquake modeling, plus tsunami inundation zone maps remain available for local users. See the Washington HAZUS User Group (WAHUG) website http://www.usehazus.com/wahug or the Washington State Geologic Information Portal website http://www.dnr.wa.gov/ResearchScience/Topics/GeosciencesData/Pages/geology_portal.aspx.

WAHUG Users Group

During the 2010-2013 plan update cycle, the Washington HAZUS User's Group (WAHUG) continued in providing on-site technical assistance for both GIS and HAZUS to Emergency Management and Cartography staff statewide. This technical assistance included general software installation and hands-on instruction for the flood and earthquake models for mitigation planning activities, as well as instruction and assistance understanding the HAZUS reports. A FEMA Region X Risk Analyst from their mitigation section leads the group.

Mitigation Planning User's Group

During the 2010-2013 plan update cycle, the successive departures of the State Hazard Mitigation Strategists and multiple months recruitment effort for each new hire meant that the Mitigation Planning User's Group, which included representatives from the State, local jurisdictions, private industry and the Washington State Emergency Management Association (WASEMA), went into remission. The purpose of this group was to establish a mechanism by which issues and difficulties that the local jurisdictions were experiencing could be discussed by those immediately involved in local mitigation planning in an effort to come up with solutions. During the 2007-2010 plan update cycle, a group of 8 planners (both public and private industry) with a sound working knowledge of mitigation planning, the State's Mitigation Strategist and two FEMA Region X planners provided technical assistance to approximately 30 jurisdictions. The collaboration during these workshops was well received. This group will hopefully be resurrected in 2013-2015 to assist the next bubble of local plans due for renewal.

Tribal Partners Participation

In previous two plans (2007 and 2010), getting increased tribal partner participation in mitigation planning activities was emphasized. Extensive outreach was provided to those jurisdictions to either create their own plans or integrate into their regional county based plan updates. Consequently, those tribal partners willing to develop a hazard mitigation plan are either doing so or have completed their plans. Consequently, this planning initiative has been a success. The next effort will be getting tribal partner projects submitted for consideration in getting HMGP / PDM / HMA funding.

Technical Assistance for Planning Grants

The Mitigation Section provided over $4.2 million to help with local plan development in 13 jurisdictions. Funding was provided through the HMGP and PDM. The state provided half of the non-federal match for HMGP-funded hazard mitigation plans.

During the HMGP application periods for DRs 1963, 4056 and 4083, the Mitigation Section staff provided significant technical assistance to local jurisdictions and tribes for both planning and project application development. The staff provided any assistance requested by the subapplicants in order to complete a successful application. This is demonstrated by the fact that all planning applications submitted under those HMGPs were ultimately sent to FEMA and approved for funding. The below chart details various grant activities during the 2010-2013 timeframe.

Additionally, the Mitigation Section staff hired a Benefit-Cost Analysis (BCA) contractor to review all BCAs submitted with the HMGP project applications for DRs 1963, 4056 and 4083. If the reviews found errors in the BCAs, the staff worked with the local jurisdictions to correct the errors and ultimately complete an accurate BCA. As of the date of this plan, FEMA has not found any of the BCAs in the HMGP applications for DRs 1817 and 1825 to be in error. EMD intends to continue this trend of success with HMGP applications for DRs 1963, 4056 and 4083.

Table of Mitigation Grants for Hazard Mitigation Plans

Jurisdiction	planning activity	HMGP 1817	HMGP 1963	HMGP 4056	HMGP 4083 (pending LOI)	PDM 10, 11, pending 12	Total Funding
Clallam County	HAZUS data update		$81,160				$81,160
Covington, City	*new plan*			$49,625			$49,625
Cowlitz County	plan update	$115,000					$115,000
Everett, City	plan update					$94,476	$94,476
Island County	plan update			$149,965			$149,965
King County	plan update					$532,386	$532,386
Pierce County	plan update					$534,000	$534,000
Puyallup, City	plan update	$45,044					$45,044

Quileute Tribe	*new plan*			$74,925			$74,925
Seattle, City	plan update					$379,221	$379,221
Spokane County	plan update					$550,000	$550,000
Washington State EMD	plan update					$457,670	$457,670
Washington State OSPI	*new plan*					$1,099,998	$1,099,998
Whitman County	plan update	$134,890					$134,890
		$294,934		**$274,515**	**$0**	**$3,647,750**	**$4,217,199**
source: EMD statistics on FEMA grants received, November 2012							

Local Plans Status as of October 31, 2012

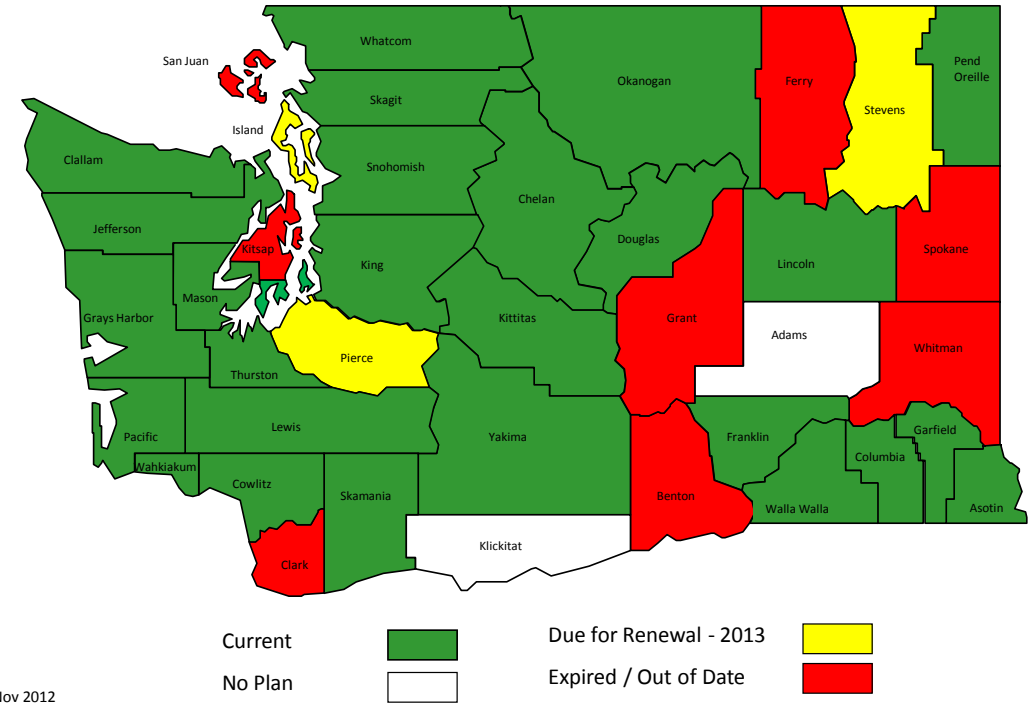
There are 61 approved local and tribal hazard mitigation plans in Washington. While the number of overall plans is down, many of the individual plans have become regional or county-wide plans which include many more jurisdictions and special purpose districts than the original individual plans. These plans cover in excess of 400 local jurisdictions – cities, towns, counties, special districts such as schools, hospitals, fire, cemetery, water, sewer, dike and flood control districts, and a handful of private, non-profit organizations. Consequently, less than 40,000 residents are not covered by a hazard mitigation plan, with only Adams and Klickitat Counties without plans. Thus, 99.43 percent of the state's population of 6,817,770 is covered by a hazard mitigation plan.

During the time period 2010 to 2013, 51 plans were initiated / reviewed by the state Mitigation Section staff and 40 plans were approved by FEMA. These include:

- 18 County plans
- 9 City Plans
- 9 Tribal Plans
- 4 Special Purpose Districts

The map below depicts the status of local hazard mitigation planning initiatives. All the counties with expiring or expired plans are either actively working on their updates or awaiting federal grant funds to help pay for the update effort.

Status of County Mitigation Plans



As of 15 Nov 2012

XIII. Local Plan Integration

Requirement 44 CFR §201.4(c)(4)(ii): *Plan Content.* To be effective the plan must include a *Mitigation Strategy* section that includes a description of the State process and timeframe by which the local plans will be reviewed, coordinated, and linked to the State Mitigation Plan.

Reviewing Local Plans

The goal of the Mitigation Section of EMD is to work with communities developing hazard mitigation plans throughout their planning effort so that their plans are as close as possible to pre-adoption approval once they are submitted to FEMA Region X. Mitigation Section staff endeavor to review a local plan within 30 days of its submission to the state. Note: This time frame is a goal that depends upon other urgent state emergency response or disaster recovery activities going on at the time of submission, or other urgent hazard mitigation programmatic issues.

Mitigation Section staff review local plans according to the following process:

- The plans are evaluated against the local plan review crosswalk; the crosswalk will be completed with comments and suggestions for improvement if any element of the plan is found to be not satisfactory or not in compliance with federal plan guidance. When the review is complete, a copy of the completed plan review crosswalk is returned to the community.
- If the Mitigation Section believes the local plan meets FEMA's planning requirements for pre-adoption approval, then the staff forwards to FEMA Region X's mitigation planning staff electronic copies of the local plan, the completed plan review crosswalk with local and state comments, and the state's recommendation for pre-adoption approval.
- If the Mitigation Section believes the local plan does not meet FEMA's planning requirements for pre-adoption approval, then , a copy of the completed plan review crosswalk is returned to the community with the state's not approved recommendation plus comments and suggestions required to make the plan compliant with federal plan guidance. As requested, Mitigation Section staff will discuss and / or meet with community planners to give the findings of the review along with suggestions for necessary revisions. Mitigation Section staff will continue to review the plan and work with the community until the staff believes the local plan meets FEMA's planning requirements.
- If FEMA's review of the plan indicates any inadequacies in the submitted local plan, the EMD Mitigation Section staff will continue working and coordinating with the community until its plans receives pre-adoption approval from FEMA. Both the State and Region X provide recommendations and examples to assist the jurisdiction via conference call or webinar in meeting the various planning requirements in which deficiencies are noted on the crosswalk. Rather than merely returning the crosswalk to the jurisdiction, this practice allows the jurisdiction to have a better understanding of what is needed, and how they can meet the various requirements. This extra communication step has been effective in that most plans are

able to gain successful submission FEMA pre-adoption approval during the second review process.

- Once plans receive FEMA's approval, the Mitigation Section staff forwards approval letters to the community.

When requested, Mitigation Section folks undertake a works in progress review of a draft plan to ascertain whether the jurisdiction is on target, compliant with federal guidance and receiving public input before the plan is complete. The jurisdictions engaged in this informal, cursory review as a check in that they were on the right path of plan development.

Washington State is very fortunate to have many very well written plans, which other local jurisdictions can utilize as templates when developing their own plans. A few of these include: Grays Harbor, Skagit, Pierce and Thurston Counties. All of these plans vary greatly in nature, and represent different, successful planning techniques which can be useful examples for review when attempting to determine the type of plan to develop.

Coordinating and Linking Local Plans with the State Plan

Mitigation Section staff reviewed 51 local plans during the performance period of the 2010 state hazard mitigation plan (SHMP), examining in great detail the local plans' risk assessments, mitigation goals, and proposed mitigation actions. This review again indicates that the number of approved local plans and the regional areas covered by those plans provides sufficient information to supplement and improve the accuracy and depth of portions of the 2013 edition of the SHMP. Elements of local plans incorporated into the State's plan include:

- Locations of hazard areas identified by the local jurisdiction.
- Information on populations and structures located in or near local hazard areas/critical areas.
- Information on projected growth in or near identified local hazard areas/critical areas.
- Identification of mitigation goals and strategies that require state attention through inclusion in the state plan.

The review of the local plans revealed that many local plans were built on the foundation provided by the state plan. The review determined that the goals and objectives of these local plans and the goals and objectives of this state plan closely tracked with one another. Specifically, an examination of the 40 local hazard mitigation plans completed since 2010 demonstrated that the jurisdiction's mitigation goals in general aligned with the mitigation goals of the SHMP. Consequently, the 2013 SHMP's five mitigation goals continue to be: Protect Life; Protect Property; Promote a Sustainable Economy; Protect the Environment; and Increased Public Preparedness for Disaster.

Additionally, the review indicated that local jurisdictions evaluated hazards and risks in a similar manner and came to similar conclusions as those found within the SHMP. It has become apparent that the local jurisdictions, when developing their plans, have realized the benefit of hazard mitigation planning beyond the plan merely being an avenue to grant funds, but for its actual intended purpose to make a jurisdiction more resilient to hazards. Strategies have become more specific rather than overly broad; more project-oriented rather than process oriented. Many of the strategies developed during this cycle have also included engineer-completed Benefit-Cost Analysis, which demonstrates the level of commitment the locals are incorporating into their plan development. Interestingly, local hazard

mitigation plans had difficulty describing or demonstrating the process and criteria used to prioritize the mitigation actions in their plans.

Analysis of Local Plans' Risk Assessments

An analysis of local plan hazard vulnerability was performed for the 2013 State Hazard Mitigation Plan update. There were 29 plans approved between October 1, 2010 and December 31, 2012. This included 9 tribal plans, 5 city plans, 2 special district plans, and 13 county plans. The plans analyzed were Clallam, Douglas, Franklin, Grays Harbor, Kittitas, Lincoln, Pend Oreille, Skamania, Southeast Washington (Asotin, Columbia, and Garfield) counties, Walla Walla, and Whatcom counties.

Each of the local plans' risk assessments were reviewed for specific local information that would improve the SHMP's assessment of vulnerability, as well as determination of which jurisdictions were at greatest risk from the natural hazards addressed in the plan. Local plans use a variety of methodology to categorize or rate their vulnerability to hazards. Most rated hazards through a three-tier, *high – medium or moderate – low* vulnerability system. Some methodologies were simple, using only probability of future occurrence, sometimes in combination with projected loss estimates, while others used a wide variety of social and economic factors along with probability of future occurrence. A few jurisdictions rated hazards using a numerical priority scale. Whatever method utilized, there was little consistency between the jurisdictions in performing this analysis.

The hazards of greatest concern to local jurisdictions that developed hazard mitigation plans in 2007-2010 were flood, severe storm, and earthquake. Severe storms and flooding were concerns because of their frequency of occurrence and their propensity to cause damage; when plans determined vulnerability to one or more severe storm types, high wind storms and winter storms were listed most frequently. Earthquake was a concern because of the significant amount of damage it can cause.

The hazards of greatest concern to local jurisdictions that developed hazard mitigation plans in 2010-2012 were similar. Severe Storm, Flood, and Fire received the highest number of *high* ratings. Earthquake, Fire, and Landslide received the highest number of *medium* ratings. Volcano received the highest number by far of *low* ratings.

The following subjective observations come from the review of the local plans' risk assessments:

- Much of the information contained in the local risk assessments that describe hazards and vulnerability mirrors that which appears in the SHMP, though in much less detail. Many local plans used and attributed information from the SHMP's risk assessment or used information from the same sources. Consequently, jurisdictions are not necessarily reviewing the hazard profiles at jurisdiction-specific level but rather statewide. Jurisdictions should focus on hazards which impact their area specifically (riverine flooding vs. coastal flooding vs. stormwater runoff).
- Local plans in general did not appear to take advantage of information available from local planning departments regarding locations of frequently flooded areas or other sources for the geologically hazardous areas.
- Determining losses and the vulnerability of critical facilities within the hazard area using the HAZUS default data without the use of an enhanced dataset has not been very reliable. While for most jurisdictions, HAZUS is their *Best Available Science* and it meets requirements, its outputs have been either understated or overstated compared to actual losses.

- The methodology for determining the probability of future events was poorly explained.
- Local plans in general had difficulty describing and demonstrating incorporation of existing plans, studies, and reports that specifically related to their jurisdiction.

County Jurisdiction	Earthquake	Flood	Wildland Fire	Severe Storm	Tsunami, Seiche	Volcano	Landslide	Other	Participating Jurisdictions
Adams								NO PLAN	0
Benton		H	H	H					6
Chelan	M	H	H	H		L	M	Avalanche, Drought - H	6
Clallam	M	H	M	M		M	H	Drought - M	8
Clark	H	M	M	M		L	M	HazMat - M; Terrorism - L	8
Cowlitz	H	H	M	H	L	M	M	Drought, Infestation / Disease - L	27
Douglas	M	H	H	H		L	M	Drought, Loss of Electrical - H; HazMat, Loss of Water - M	7
Douglas Update	M	H	H	H		L	H	Drought, High Winds, Hail, Infestation, Lightning, Subsidence, Urban Fire - H	7
Ferry		H	H	H			M		4
Franklin	M	M	M	M		M	M	Drought - M	12
Franklin Update	M	M	M				M		15
Grant	L	L	M	M		L	L	High Winds - H; Drought - M	33
Grays Harbor	H	H	M	H	H	M	M		
Grays Harbor Update	H	H		H	H		H		
Island	H	H	H	M	H	L	H	Drought - Low	11
Jefferson	H	L	H	H	H	L	H	Drought - M	19
King	H	H	M	H	M		H	HazMat, Transportation, Drought, Terrorism, Civil Disorder, Avalanche, Cyber-terrorism - M; Dam Failure - H	37
Kitsap	H	H	M	H	M		H	Drought - M	36

County Jurisdiction	Earthquake	Flood	Wildland Fire	Severe Storm	Tsunami, Seiche	Volcano	Landslide	Other	Participating Jurisdictions
Kittitas	M	M	H	M	L	L	L	Avalanche, Dam Failure - L	19
Klickitat								NO PLAN	0
Lewis	H	H	L	M		H	H	Dam/Levee Failure - Dependant on initial hazard	47
Lincoln	M	L	H	H	L	M	L	Avalanche - L, Drought - M	17
Mason	H	H	M	H	L	L	H	Drought - H	6
North King / South Snohomish								digital copy unavailable on N drive	10
Okanogan	H	M	H	H		M	M	Dam Failure - H; HazMat, Terrorism/Civil Unrest - M; Avalanche - L	23
Pacific	M	M	M	M	M			HazMat - M; Dam Failure - L	
Pend Oreille	M		H	H			M	Drought, Avalanche - M; Tornado - L	11
Pend Oreille Update	M	**H**	H	H		L	M	Avalanche, Biological, Dam Failure, Nuclear, Terrorism - L Drought, Extreme Heat, HazMat - M	18
Pierce	M	M	L	L	L	L	L		48
San Juan									
Skagit	H	H	H	M	L	M	M	Drought - L	13
Skamania	H	M	H	H		M	H	Avalanche, Drought - M	22
Snohomish	H	H	M	H	L	L	M		42
Southeast Washington (Asotin, Columbia, Garfield)	L	M	H	M	L	M	M	Drought - H; Avalanche - L	18

County Jurisdiction	Earthquake	Flood	Wildland Fire	Severe Storm	Tsunami, Seiche	Volcano	Landslide	Other	Participating Jurisdictions
Spokane	M	M	H	M		M	L	Drought, Terrorism, Civil Disturbance - M; HazMat - H	3
Stevens	H	M	H	M		L	M	Pandemic, Dam Failure - H; HazMat, Terrorism / Civil Unrest - M	15
Thurston	H	H	M	H		L	M		26
Wahkiakum	M	H	H	L		L	H	Drought - L	1
Walla Walla	M	L	M	M					6
Walla Walla Update	H	M	H	H		L		Dam Failure, Radiological, Terrorism - M; HazMat, School Violence, Civil Unrest, Urban Fire - L	7
Whatcom	H	H	H		H	H	H	HazMat - H	9
Whatcom Update								Did not use H, M, L rating format	13
Whitman	M	H	M	H		L		Drought - L	21
Yakima	L	M	M	H		L	L	HazMat - L	25
									656
High Hazard Score	18	21	20	22	4	2	12	Severe Storm, Flood, Fire	
Medium Hazard Score	16	13	16	13	3	10	16	Earthquake, Fire, Landslide	
Low Hazard Score	4	5	3	3	9	19	7	Volcano	
Notes									

County Jurisdiction	Earthquake	Flood	Wildland Fire	Severe Storm	Tsunami, Seiche	Volcano	Landslide	Other	Participating Jurisdictions
*Vulnerability listed in table is as categorized by local plans as of January 31, 2010. Unless otherwise described in table or noted below, vulnerability to hazards is categorized as High (H), Medium / Moderate (M), or Low (L). If vulnerability to a hazard is rated as "low to moderate" for example, the higher rating ("moderate") was used in table above. No rating is listed for hazards which are not categorized. If the jurisdiction utilized a numerical system of categorizing their plans, those rankings were transferred to the High/Moderate/Low scale based on the following: 0-3.0 = Low; 3.1-6.5 = Moderate; 6.5-10.0 = High. For those county plans which were multi-jurisdictional, only the overall county data was captured, and not each jurisdiction covered within the plan. For jurisdictions currently in the planning process, data from previously approved plan was utilized.									
Black font counties are from 2010 update; blue font counties are from 2013 update.									

References

[1] Burby, Raymond J and May, Peter J. *Issues for Regulatory Enforcement and Compliance with Building Codes: American Perspectives, 12wcee2000, # 2558*. Accessed 5 December 2012. Available at http://www.iitk.ac.in/nicee/wcee/article/2558.pdf

[2] Structural Engineers Association of Washington (SEAW), Spokane Chapter. *Study Of Structural Failures Associated With The Winter 2008-2009 Snow Event In The Spokane/Coeur D'alene Area, December 2009*. Accessed 5 December 2012. Available at http://www.seaw.org/documents/SEAW%20Spokane%20Snow%20White%20Paper%2012-09.pdf

[iii] The Washington State Economic and Revenue Forecast Council. *November 2012 Revenue Forecast*. Accessed 10 December 2012. Available at http://www.erfc.wa.gov/index.shtml.