

## SECTION 5

### COORDINATION OF LOCAL MITIGATION PLANNING

This section of the *Oregon Natural Hazards Mitigation Plan* addresses 44 CFR 201.4(4) – Coordination of Local Mitigation Planning. It is organized into the following subsections:

- Local Funding and Technical Assistance: 44 CFR 201.4(4)(i)
- Local Plan Coordination: 44 CFR 201.4(4)(ii)
- Prioritizing Local Assistance: 44 CFR 201.4(4)(iii)

#### Local Funding and Technical Assistance

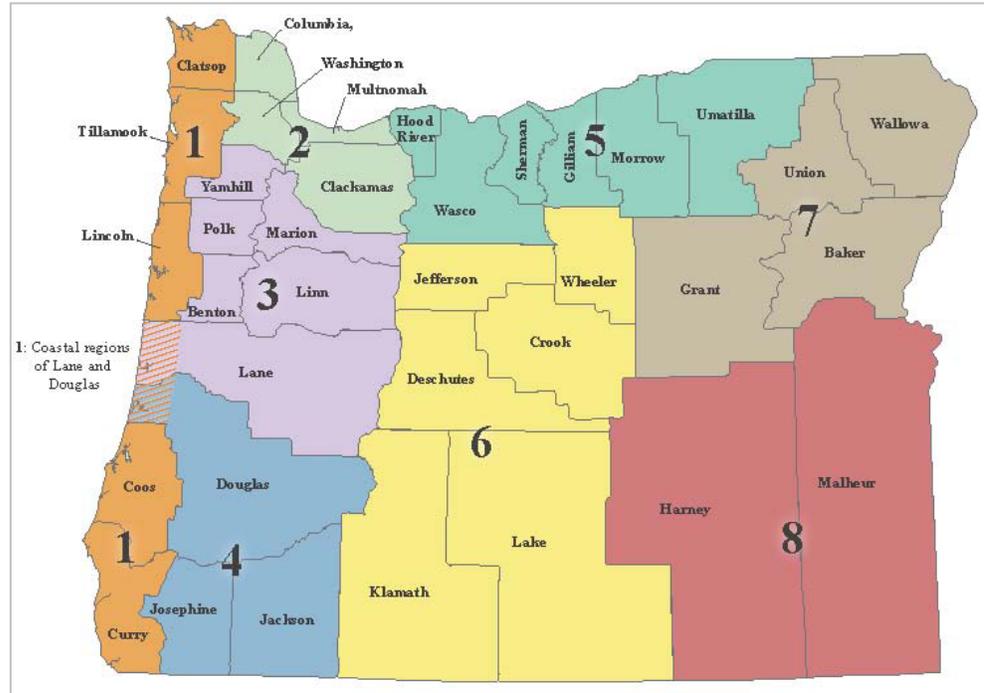
**Requirement 44 CFR §201.4(c)(4)(i), Plan Content.** To be effective the plan must include...(4) A section on the Coordination of Local Mitigation Planning that includes...(i) A description of the State process to support, through funding and technical assistance, the development of local mitigation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

#### Background and Overview

The State of Oregon aims to build local capacity in developing and implementing risk reduction strategies through plan development support, professional assistance, resource sharing, and technical assistance. Local planning and mitigation requirements are accomplished in great measure through the state's Pre-Disaster Mitigation program. Oregon Emergency Management (OEM), in partnership with the Oregon Partnership for Disaster Resilience (OPDR), established the Oregon Pre-Disaster Mitigation program in 2004 to foster partnerships among agencies, communities, academia, and organizations to determine needs, identify issues and resources, and develop strategies for risk reduction. Since that time, the program has systematically provided funding opportunities (primarily through FEMA PDM and HMGP grants) and technical assistance to local governments for the purpose of developing or updating existing local natural hazards mitigation plans.

Natural hazard mitigation planning in Oregon occurs in partnership between OEM, OPDR, the Department of Geology and Mineral Industries, the Department of Land Conservation and Development, the State Interagency Hazard Mitigation Team (State IHMT), FEMA Region X, local governments throughout Oregon and other federal, state and local stakeholders. Technical planning assistance is targeted annually to specific mitigation planning regions identified by OEM (see Figure 5.1 below).

**Figure 5.1: Oregon’s Natural Hazard Regions**



Source: OEM

The Oregon Pre-Disaster Mitigation Program provides technical assistance to each region on a five year cycle with the goal of keeping each county and municipality in the State of Oregon with FEMA approved mitigation plans. The table below shows the current update cycle. The tentative five-year regional mitigation planning schedule for Oregon is presented in Table 5.5 on page 5-8.

**GRANTS HISTORY**

The availability of an annual source of federal mitigation grant funds has increased the opportunities for mitigation planning and project implementation in Oregon. Beginning with planning funding offered as a component of Flood Mitigation Assistance (first grants offered in 1997) communities have used this funding to develop the flood hazard chapter (identifying flood hazard risks and mitigation actions) as part of an all-hazards mitigation plan. Beginning with the Pre-Disaster Mitigation Program (PDM) in 2002, the state has successfully secured planning and project implementation funding to demonstrate the importance and effectiveness of mitigation statewide. The PDM program has essentially established a funding foundation for mitigation planning that has been “institutionalized” though the Partnership for Disaster Resilience. Oregon’s mitigation planning foundation was already “in place” with FEMA mitigation planning rules first promulgated in February 2002.

**Statewide Pre-Disaster Mitigation Planning Program**

**FUNDING**

The primary sources of funding for local hazard planning assistance in Oregon are the federal Pre-Disaster Mitigation Grant (PDM) and Hazard Mitigation Grant

Programs (HMGP).<sup>1</sup> Additional funding sources include Urban Area Security Initiative funds administered by FEMA.

FEMA's Hazard Mitigation Assistance (HMA) brings together five mitigation funding programs that provide significant opportunities to reduce or eliminate potential losses to state, Tribal, and local assets through hazard mitigation planning and project grant funding. Since the FEMA HMA grant programs offer funding on a cost-share basis, there is a required non-federal cost share contribution that leverages state and community involvement in assessing risk, developing a risk reduction strategy and implementation of a natural hazards risk reduction plan. There are also state and local program activities (for example, state and local general funds, rate payer revenue, capital improvement budgets and so on) that can also support mitigation activities in the absence of any federal share contribution. State general obligation bonds are the basis for the state's Seismic Rehabilitation Grant Program that supports the seismic retrofit of K-12 schools and first responder facilities.

In Oregon, local planning assistance is primarily funded through OEM (planning and projects) and OPDR (planning) by these three HMA grant offerings: Pre-Disaster Mitigation Grant Program, Hazard Mitigation Grant Program and Flood Mitigation Assistance. The Pre-Disaster Mitigation Grant Program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds. The Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Flood Mitigation Assistance (FMA) program funding is offered on an annual basis to states to help support the development of the flood hazard portion of state and local mitigation plans. FMA planning funds are only

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<sup>1</sup> PDM provides pre-disaster funds and HMGP provides post-disaster funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects. Federal PDM grants are awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds. The Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

available to support flood hazard planning activities in communities participating in the NFIP.

Since this state mitigation plan was last updated, the following FEMA Hazard Mitigation Assistance grant funding was provided to develop and/or update local hazard mitigation plans:

**Table 5.1: Planning Grants Assistance Summary 2009-2012**

Grant Program	Resource Offering	Assistance Title	Federal Share
FMA	FY2008	Multnomah County – Cities Plan Development	\$18,100
PDM-C	FY2009	State of Oregon Local Plan Updates: Regions 3, 4 & 6	\$228,800
FMA	FY2010	Multnomah County – Plan Update	\$19,000
PDM-C	FY2011	Multihazard County Mitigation Plan Updates – Columbia Gorge Region	\$216,000
HMGP	DR-1733	Oregon Enhanced Plan Update, Risk Assessment, Campus Planning	\$750,000
HMGP	DR-1733	City of Portland – Plan Update	\$46,300
HMGP	DR-1733	Tillamook County & Cities – Plan Update	\$30,000
HMGP	DR-1733	Washington County & Cities – Plan Update	\$35,500
HMGP	DR-1733	Clackamas County & Cities – Plan Update	\$88,800
HMGP	DR-1824	Crook County/ Prineville – Plan Update	\$15,000
HMGP	DR-1824	Jackson County & Cities – Plan Update	\$33,900
HMGP	DR-1956	Clackamas County & Cities – Plan Update	
HMGP	DR-1964	Mitigation Planning – Tsunami Hazard Update	

Source: OEM, compiled by OPDR

At present, the state and federal government cost-share 2.4 FTE positions whose job duties include the provision of mitigation planning technical assistance to local communities. Oregon Emergency Management contributes 0.30 of this FTE total. In addition, DLCDC funds 0.025 FTE of the state’s floodplain coordinator and RiskMAP position as match against 0.075 FTE funded through the NFIP program. In addition, OPDR supports local NHMP development with 2.0 FTE. Table 5.2 summarizes state level mitigation planning related positions and identifies their primary funding sources.

**Table 5.2: Local NHMP State Technical Assistance Support**

Funding Source	State Funded (FTE)	Grant Funded (FTE)	Agency	Position Title
NFIP	0.025	0.075	DLCD	State Floodplain Coordinator/ RiskMAP
EMPG	0.125	0.125	OEM	Emergency Management Specialist
HMGP (SMC)	0.0	0.05	OEM	State Hazard Mitigation Officer
PDM HMGP	0.0	2.0	OPDR	Plan Development/ Technical Support

Source: OEM, compiled by OPDR

## TECHNICAL ASSISTANCE

OPDR's local plan development and plan update support follows four planning stages, described below. In partnership with OEM and others, OPDR develops and facilitates four PDM trainings for participating communities that align with each stage of the planning process. Trainings provide communities with the opportunity to: 1) receive the tools and resources to successfully facilitate and document plan development or plan update processes; 2) establish regional partnerships to discuss collaborative projects and implementation strategies; and 3) engage with a variety of state and local agencies and organizations that can assist with local risk reduction strategies.

### Getting Started

The first phase focuses on the early stages of the planning process. This involves developing a work plan for the mitigation plan's development; creating a planning committee to oversee development of the mitigation plan; developing a public involvement strategy; holding the first steering committee meeting and documenting outcomes; and completing a draft of the mitigation plan's introduction and community overview.

### Assessing Community Vulnerability

The second plan development work session is focused on assessing community vulnerability (e.g. human populations, local economy, and critical facilities), and provides communities with the tools necessary to complete a simplified risk assessment with the community's steering committee and the public. This work session utilizes resources developed by OPDR, as well as assistance from United States Geological Survey (USGS).

### Goal Setting and Action Item Development

The third work session assists communities in developing plan goals and action items. These two plan components are vital in establishing a direction and a method for reducing risk in the community. This session may take place via individual community site visits rather than a hosted session for all communities.

### Plan Implementation

The final plan development work session provides communities with information about how to develop an effective plan implementation and maintenance program. The work session provides examples from other communities and also includes discussions regarding FEMA's benefit-cost analysis requirements for mitigation projects as well as the state and FEMA plan review processes.

To assist planning efforts, OPDR has developed a number of plan development and plan update resources that are openly available to communities in Oregon. Resources include training presentations; training manuals; links to FEMA resources; technical memos; hazard resources; guidance for integrating mitigation into existing plans and policies, and several additional helpful readings. All resources can be found on OPDR's website at:

<http://opdr.uoregon.edu/mitigation/planning>

## Past Mitigation Planning Initiatives, Projects, and Reports

The following table documents OPDR’s planning initiatives, projects, and reports that have been completed between 1999 and 2012 (includes those scheduled for completion).

**Table 5.3: OPDR Mitigation Projects, 1999 - 2012**

Year	Project	Communities	Partners	Funding
1999 – 2000	Planning for Natural Hazards: Oregon Technical Resource Guide	State	OPDR; DLCD; CPW; CSC	
2003	State Natural Hazards Risk Assessment	State	OPDR; CSC	
2003 – 2004	University of Oregon “Disaster Resilient University” Mitigation Planning Project	University of Oregon		
2004	State of Oregon Enhanced Natural Hazards Mitigation Plan	State of Oregon	OPDR; State IHMT	
2004 – 2005	Mid/Southern Willamette Valley (Region 3) Natural Hazards Mitigation Plan Development	Marion, Polk, Yamhill, Linn, Benton, Lane Counties	OPDR; CSC; DOGAMI; OEM	
2005 – 2006	Mid-Columbia (Region 5) Natural Hazards Mitigation Plan Development	Gilliam, Hood River, Morrow, Sherman, Umatilla, Wheeler, and Wasco Counties	OPDR; CSC; DOGAMI; OEM	PDM FY '05 ~932K
2006 – 2007	Northeast Oregon (Region 7) Regional Natural Hazards Mitigation Plan Development	Baker, Grant, Union, and Wallowa Counties	OPDR; CSC; OEM	PDM FY '06 ~ 105K
2006 – 2008	Southeast Oregon (Region 8) Natural Hazards Mitigation Plan Development	Harney, Jefferson, Lake, and Malheur Counties	OPDR; CSC; DOGAMI; OEM	PDM FY '05 ~932K
2007 – 2008	Oregon Coast (Region 1) Natural Hazards Mitigation Plan Development	Clatsop and Lincoln Counties	OPDR; CSC; OEM	PDM FY '06 ~105K

Source: OPDR

**Table 5.3 (Continued): OPDR Mitigation Projects, 1999 - 2012**

Year	Project	Communities	Partners	Funding
2007 – 2008	Oregon Coast Cities (Region 1) Natural Hazards Mitigation Plan Development and Plan Updates	Cities of Florence, Dunes City, Reedsport, Bandon, Coos Bay, Coquille, Lakeside, Myrtle Point, North Bend, Powers, Gold Beach, Port Orford, and Brookings	OPDR; CSC; OEM	PDM FY '07 ~250K
2008	City of Salem Natural Hazards Mitigation Plan Update	City of Salem	OPDR; CSC; OEM	Local Funds ~12K
2008	Collaborative Strategies for Hazard Mitigation in the Columbia River Gorge	Gilliam, Hood River, Morrow, Sherman, Umatilla, Wheeler, and Wasco Counties	OPDR; CSC; OEM	PDM FY '05
2008 – 2009	Clackamas County Cities Natural Hazards Mitigation Plan Development and Plan Updates	Cities of Barlow, Canby, Damascus, Estacada, Gladstone, Happy Valley, Johnson City, Lake Oswego, Milwaukie, Molalla, Oregon City, Rivergrove, Sandy, and Wilsonville	OPDR; CSC; OEM	HMGF DR 1733
2008 – 2009	State of Oregon Enhanced Natural Hazards Mitigation Plan Update	State of Oregon	OPDR; State IHMT	HMGF DR 1733
2009	Mid/Southern Willamette Valley Cities (Region 3) Natural Hazards Mitigation Plan Development	Cities of Aurora, Keizer, Silverton, and Woodburn	OPDR; CSC; OEM	PDM FY '06
2010 – 2011	Multi-Jurisdictional (Regions 3, 4, 6) Natural Hazards Mitigation Planning / Plan Updates	Marion, Linn, Josephine, and Klamath Counties; Cities of Eugene and Springfield	OPDR; CSC OEM	PDM FY '09
2010 – 2011	Coos County Community Wildfire Protection Plan	Coos County;		Local Funds
2009 – 2012	State of Oregon Enhanced Natural Hazards Mitigation Plan Update & Public Post-Secondary Education Institution Planning	State; Southern Oregon University; Eastern Oregon University; Mount Hood Community College; Oregon Institute of Technology	OPDR; State IHMT; DLCD; DOGAMI	HMGF DR 1733

Source: OPDR

## Current Planning Initiatives

The following table documents OPDR's currently funded planning initiatives.

**Table 5.4: Current OPDR Planning Initiatives**

Year	Project	Communities	Partners	Funding
2011 – 2012	Mid-Columbia (Region 5) Natural Hazards Mitigation Plan Updates	Gilliam, Hood River, Morrow, Sherman, Umatilla, Wheeler, and Wasco Counties		PDM FY '11
2011 – 2012	Jackson County Natural Hazards Mitigation Plan Updates	Jackson County		HMGP DR 1824

Source: OPDR

## Future Planning Initiatives

Future planning initiatives are scheduled for the following regions. Depending on local interest and support, OPDR will seek funding for planning activities in these jurisdictions through the Pre-Disaster Mitigation Grant Program, as well as the Hazard Mitigation Grant Program, if available.

**Table 5.5: Tentative Five-Year Regional Mitigation Planning Schedule for Oregon**

Year	Region	Activities	Funding
2012 – 2014	Northeast Oregon (Region 7) and Southeast Oregon (Region 8)	Natural hazards mitigation plan updates / city addenda development. Note: OPDR has submitted a PDM 2012 planning application to FEMA for this work. Review of grant applications and funding allocation is currently pending.	PDM and/or HMGP
2013 – 2015	Central Oregon (Region 6)	Natural hazards mitigation plan updates / city addenda development	PDM and/or HMGP
2014 – 2016	Oregon Coast (Region 1) and Southwest Oregon (Region 4)	Natural hazards mitigation plan updates / city addenda development	PDM and/or HMGP
2015 – 2017	Northern Willamette Valley / Portland Metro (Region 2) and Mid/Southern Willamette Valley (Region 3)	Natural hazards mitigation plan updates / city addenda development	PDM and/or HMGP
2016 – 2018	Mid-Columbia (Region 5)	Natural hazards mitigation plan updates / city addenda development	PDM and/or HMGP

Source: OPDR

## Local Plan Coordination

*Requirement 44 CFR §201.4(c)(4)(ii), Plan Content. To be effective the plan must include...(4) A section on the Coordination of Local Mitigation Planning that includes...(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.*

### State Review of Local Plans

There are two methods of local plan review depending on how the development of the local plan was funded. If the local plan was developed through a collaborative planning approach with OPDR, the plan is initially reviewed by OPDR staff. If OPDR has no further comments for the community, then OPDR submits the plan to OEM/FEMA on behalf of the community for their official plan review. If the plan was not developed through a collaborative planning approach with OPDR, then the community submits the draft plan to OEM for review before being sent to FEMA for the official plan review. OEM maintains a database with plan statuses for all Oregon communities. OEM also maintains hard and electronic copies of all completed plans. In addition, completed plans are eventually posted on the University of Oregon's Scholar's Bank (<https://scholarsbank.uoregon.edu/>).

Both OPDR & OEM, like FEMA, maintain a 45 day turnaround time for review of draft local plans. In addition, OEM contacts local governments with existing plans one year before their 5-year update deadline to remind them of their upcoming plan update requirements.

### State and Local Plan Linkages

The Oregon NHMP is intended to be used as a resource for the development and/or update of local natural hazards mitigation plans. Likewise, the Oregon NHMP must be responsive to local needs, and supportive of local risk-reduction efforts. The following strategies help to facilitate this important exchange of information.

### ALIGNMENT OF MISSION AND GOALS

In 2009, the state IHMT reviewed and updated the state plan's goals to improve alignment with local mitigation plans. Previously, the state plan goals emphasized the administrative aspects of natural hazards mitigation, including documentation and evaluation of Oregon's mitigation projects; coordinating of mitigation programs and activities; and education or outreach to local communities. Conversely, local mitigation plans emphasized goals that minimized injuries, damages to public and private property, and impacts to local, regional, and statewide economies. In order to better reflect local efforts, as well as re-direct statewide mitigation strategies, the state IHMT altered the state plan's goals. In current local planning and plan update processes, OPDR encourages local governments to review and adopt the state mitigation plan's mission and goals. This ensures that both state and local planning efforts are aligned in their overall efforts to reduce risk.

## OREGON NHMP PLANNING RESOURCES

The Oregon NHMP risk assessment identifies and characterizes Oregon's natural hazards, and assesses risks and vulnerabilities within each of the state's eight mitigation planning regions. Where useful, local governments are encouraged to use information from the state's risk assessment in the development and/or update of local mitigation plans. Additionally, content within the state plan's risk assessment is informed by local expertise regarding the probability of hazards' occurrences, as well as locally-identified vulnerabilities (see Section 2: *Risk Assessment*). This exchange of information is useful for both state and local purposes. Whereas the state is able to broadly identify, study, and describe natural hazards' characteristics, local jurisdictions are best suited to identify specific vulnerabilities to those hazards, as well as priorities for mitigation.

Over time, the state's ability to effectively map and understand natural processes has grown. The Department of Geology and Mineral Industries (DOGAMI), for example, has developed very precise, high-resolution maps of areas of Oregon through the [Oregon Lidar Consortium](#) (OLC). As a new technology, lidar (light detection and ranging) creates an opportunity to better map existing hazards (e.g., landslides and floodplains), as well as areas of risk or vulnerability. In this current version of the Oregon NHMP, DOGAMI's lidar data has informed content within the state facility vulnerability assessment (see Section 2), as well as information within the regional hazard profiles of Section 2 (Appendix 2-A). In future updates to the Oregon NHMP, the state's risk assessment will continue to improve in both accuracy and detail, such that local risk assessments and planning processes can be less costly, better informed, and resultantly more effective in reducing risks.

## STATEWIDE MITIGATION ACTION DATABASE

OPDR hosts a searchable action item database on its website that lists all of the mitigation actions found within Oregon's local natural hazards mitigation plans<sup>2</sup>. The database is particularly useful for local planning purposes. When developing and/or updating local natural hazards mitigation plans, communities may use the database to gather ideas for actions, or to identify areas for potential intergovernmental partnerships. Additionally, the database is useful for state planning purposes as well. Frequently, local mitigation actions identify state agencies as needed resources and/or partners for implementation. As such, state agencies are able to gain a better understanding of local mitigation needs, and to implement more effective mitigation actions on a statewide level.

All actions (proposed, currently implementing, or completed) have been categorized underneath Oregon NHMP goals. This allows the state to easily track and measure statewide progress in reducing risk. Maintaining this database is time and resource intensive; as such, the database may not be entirely current at any point in time. This will be an ongoing task for OPDR and OEM staff.

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<sup>2</sup> The Action Items Database is hosted by OPDR:  
<http://csc.uoregon.edu/opdr/actionitems/>

## Prioritizing Local Assistance

**Requirement 44 CFR §201.4(c)(4)(iii), Plan Content.** To be effective the plan must include...(4) A section on the Coordination of Local Mitigation Planning that includes...(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.

The State of Oregon maintains a set of benchmarks that evaluate progress toward Oregon's strategic vision that includes, among other components, caring, safe and engaged communities. One such benchmark includes a performance measure that tracks the percentage of jurisdictions with hazard mitigation plans. This benchmark was instituted before FEMA's interim final rule on mitigation planning, and it continues to track and encourage natural hazards mitigation planning for all of Oregon's jurisdictions. Plans are tracked and inventoried at the county level (all 36 Oregon counties have a NHMP and nine cities have stand alone NHMPs). At the time of the approval of this update, 29 of Oregon's 36 counties have current FEMA approved local natural hazard mitigation plans; the remaining seven (7) counties are in an active plan update process and are projected to have approved plans by the end of 2012. In addition, based on 2010 census data, approved mitigation plans cover 87% of Oregon's population. For more information see Appendix 4-D, Policies, Programs, Capabilities and Funding, Table 4.D.6. Oregon Community Plan Status (p. 4-D-56).

The state currently does not have a set of criteria used to prioritize local planning assistance, however, the following factors may be considered:

- Community engagement and buy-in;
- Top population centers without plans; and
- High risk communities, especially those facing severe repetitive losses.

To achieve this objective, our approach fosters partnerships among agencies, communities, academia and community organizations to determine needs, identify issues and resources, and develop both short-term and long-term risk reduction strategies.

The mission of this Oregon NHMP is: "To create a disaster resilient State of Oregon." To achieve the mission the State's philosophy is to instill disaster resilience and encourage state agencies and local governments to incorporate natural hazards mitigation planning and project implementation into their normal operations. By implementing plan activities through existing local programs and initiatives, the cost of mitigation is oftentimes a small portion of the overall cost of a project. If no federal funding is used in these situations, the prioritization process may be less formal and not tied to a strict benefit-cost model, but rather a willingness to simply implement hazard mitigation.

When FEMA funding is provided, criteria for determining eligibility and selection of proposed multi-hazard mitigation measures include those developed by the state and those of the federal funding program. Following a severe storm and flooding disaster in Clatsop and Tillamook counties in January 1990, Oregon developed a state-specific set of project evaluation goals to complement FEMA post-disaster mitigation grant program eligibility requirements. After the statewide flooding disaster of February 1996, the state-specific mitigation project goals were further refined and still, today, emphasize:

- Protection of life,
- Protection of emergency response capability, and
- Protection of property, natural resources, and the environment.

Oregon was also one of the first states to include local natural hazards mitigation planning as a selection criterion for competitive multi-hazard mitigation project grant funding. More than five years before FEMA issued the interim final rule on state and local mitigation planning, Oregon established scoring criteria for HMGP grants that included a preference for local natural hazards mitigation planning. The state policy framework on hazard mitigation strongly encourages developing and implementing local multi-hazard mitigation plans that address hazard mitigation or avoidance. This emphasis on local planning encourages cooperation between the state and local governments and is essential in moving the mitigation plan to the implementation phase. Understanding local mitigation needs and priorities helps the state steer local governments to resource programs that can leverage resources for their mitigation activities. Local mitigation planning efforts that recognize grant program criteria for project implementation can tailor certain action items that meet the grant program project criteria and be eligible with little or no further development.

In addition, when any federal funding is made available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a predominate criterion in establishing project priorities. Projects to reduce or eliminate damage to infrastructure that has been damaged repeatedly by the same hazard in the same area can also be singled-out as a high priority for hazard mitigation. Critical infrastructure facilities such as police and fire stations, emergency operations centers, hospitals, utilities and primary transportation corridors that provide significant service benefits to a large population are also high priority mitigation opportunities. Businesses that carry the economic viability of a community are also likely candidates for hazard mitigation.

When using FEMA grant funding for mitigation projects, specific recognition of the federal eligibility criteria must be addressed. These "gate keeper" criteria must be met before mitigation projects can be measured against other competing, worthy projects for the oftentimes very limited grant funding. In general, the minimum criteria for FEMA-funded mitigation projects using post-disaster funding include:

- Be in conformance with the state mitigation plan and local mitigation plan approved under 44 CFR part 201;

- Have a beneficial impact upon the designated disaster area, whether or not located in the designated area;
- Be in conformance with 44 CFR Part 9, Floodplain Management and Protection of Wetlands, and 44 CFR Part 10, Environmental Considerations;
- Solve a problem independently or constitute a functional portion of a solution where there is assurance that the project as a whole will be completed - projects that merely identify or analyze hazards or problems are not eligible;
- Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. The subgrantee must demonstrate this by documenting that the project:
  1. addresses a problem that has been repetitive, or a problem that poses a significant risk to public health and safety if left unsolved,
  2. will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur - both costs and benefits will be computed on a net present value basis,
  3. has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options,
  4. contributes, to the extent practicable, to a long-term solution to the problem it is intended to address, and
  5. considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.

When using pre-disaster federal mitigation funding, there is an additional emphasis to address repetitive loss properties, particularly those insured by the National Flood Insurance Program (NFIP). By its very nature, pre-disaster mitigation funding is not specifically earmarked for disaster areas.

Therefore, the top priority federal mitigation grant funding criteria focus on the measured benefits for the cost of the mitigation and reducing damage to repetitive loss structures. Even the Increased Cost of Compliance component of NFIP flood insurance includes mitigation opportunities for those homes and businesses that have repetitive flood losses or are substantially damaged by a single flood event.

For FEMA's Hazard Mitigation Grant Program (HMGP) the state is required to have a FEMA-approved administrative plan that establishes minimum applicant and project eligibility. Oregon's HMGP Administrative Plan (current to disaster FEMA-1510-DR-OR) is an integral part of this mitigation plan; it includes these minimum applicant and project priorities, as well as selection criteria. Since DR-1510, Oregon has experienced seven more major disaster declarations, four previous to the 2009 update (DR-1632, DR-1672, DR-1683 and DR-1733) and

three since (DR-1824, DR-1956, and DR-1964) where the HMGP administrative plans for those disasters are tailored to the specific nature of the disasters by establishing general state project priorities and selection criteria that largely focus on basic project eligibility. Oregon's HMGP selection process places significant emphasis on local mitigation plans and specific priorities established at the local level. Another example: following the February 1996 (FEMA-1099-DR-OR) flooding, landslides, and stream erosion disaster, the Governor established a mitigation policy that outlines preferences for mitigation actions. These mitigation preferences are not meant to be static, but rather are intended to be responsive to the needs of both post-disaster recovery and future mitigation actions.

Federal environmental and historic criteria must also be addressed when establishing project priorities. Consideration for appropriate federal, state and local environmental laws and regulations is required. Oftentimes the multi-objective benefits of mitigation can also provide environmental benefits. Only those projects that are technically feasible should be developed. Projects that are not technically feasible and unsubstantiated by practice or engineering requirements will not be considered a high priority. Whether there is grant funding offered in the pre- or post-disaster environment, communities need to understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects.

The state has the authority to develop selection criteria that consider a number of other factors. For example, the state does not "pre-select" nor target funding to a select group of jurisdictions. Rather, the state strives for geographic equity in its multi-hazard grant programs and strongly encourages projects from all regions of the state. Whether a community is facing the challenges of intense development pressures or may not be on a fast growth curve, the state has the obligation to consider a community's needs to reduce those hazard losses that present the highest risk. Local governments are responsible for developing their jurisdiction-specific hazard mitigation plans that identify high-risk facilities, mitigation opportunities and priorities. The state will give significant consideration to those local plans that have identified and prioritized their mitigation actions and projects based on risk.

As more Oregon jurisdictions develop FEMA approved mitigation plans, county-by-county set-asides of post-disaster mitigation funds will encourage implementation of their local plans using their plan priorities to make local project decisions. This strategy was implemented following DR-1405 with planning grant set-asides earmarked for Coos and Curry counties that had FEMA-approved mitigation plans. Project set-asides could be simply calculated based on a county's (FEMA) disaster costs with a HMGP project allocation earmarked for projects in that county.

The state system used to rank mitigation measures incorporates state eligibility as well as federal eligibility criteria. Federal eligibility criteria are described in the specific FEMA/DHS grant program guidance (FMA, HMGP or PDM) while the state eligibility criteria are described in this document, HMGP Administrative Plan, and

in the grant application documents developed by the state. The state selection process strives to be as objective as possible with an emphasis on those projects that reduce serious risks associated with repetitive losses, protection of critical facilities and services, are feasible, identified as an action item in the local community mitigation plan, and are cost effective. Additionally, all Oregon communities with a FEMA-mapped flood hazard participate in the NFIP and are in good standing while a number belong to the CRS. The benefit-cost ratio is, perhaps, the most objective selection criterion. Criteria that are much less objective emphasize the importance of geographic diversity with the idea that all communities whether small or large have equal standing in the review and ranking process. There is simply not enough grant funding to address all of the state's mitigation needs, so it is important to use the grant programs to demonstrate the success of mitigation all around the state. The State Interagency Hazard Mitigation Team and Hazard Mitigation Grant Review Board (see Oregon's HMGP Administrative Plan for Board membership) play key roles in not only reviewing, ranking and selecting projects, but remain available and ready to assist OEM in developing grant program outreach strategies, particularly in the post-disaster environment. State project rankings and selections are then forwarded by Oregon Emergency Management to FEMA Region X for their consideration, approval and funding obligation.

Most importantly, the state project prioritization process requires flexibility, due to varying program criteria, associated funding sources and legislative intent. The prioritization process can be tailored to both pre- and post-disaster needs and, for example, can be adjusted to the nature of the disaster and opportunities during the recovery phase. Because the state legislature has identified mitigation priorities, legislative intent can be a significant factor in establishing project priorities as well.

When federal funding is utilized, the benefit-cost analysis (project cost effectiveness) is an essential component of the decision making and ranking process. Projects that address repetitive losses in addition to those measures that are multi-hazard in nature are oftentimes identified as stand-out projects for priority consideration. Together with local mitigation planning which identifies local mitigation measures and actions, the state prioritization process can quickly incorporate mitigation needs that have already been recognized in approved local mitigation plans.

Selection and eligibility criteria vary depending on the source of funding, however, the state prioritization process not only considers the required criteria but goes beyond whether they are simply met or not. In some cases it can be a "yes" or "no" answer while in most instances it is possible to establish a gradation or score. And, yet other prioritization criteria do not necessarily lend themselves to a simple "yes" or "no" answer or score but can lead to further discussion in the selection process. For example, geographic equity (making sure mitigation measures are implemented statewide) and past grant performance are very subjective in nature.

Not all projects submitted for federal grant funding consideration will meet the traditional program criteria. This is evident with those projects that have an educational component or function as a warning system, for example. The state does have some reasonable flexibility to work with communities to identify high priority mitigation projects that may not meet the traditional project and selection criteria. Funding in these situations is very limited and only represents a tiny portion of the overall grant program. Additional information on funding set-asides for mitigation planning and non-traditional mitigation projects can be found in the state's HMGP Administrative Plan.

### **Environmental Review Process**

The National Environmental Policy Act (NEPA) is a federal law which establishes a national policy for the protection and maintenance of the environment by providing a process which all federal agencies must follow to ensure that:

- The federal agency has considered the effects of their actions on the environment before deciding to fund and implement a proposed action, and
- Environmental information is made available to other public officials and citizens before agency decisions are made and before actions are taken.

NEPA is a component of the environmental review process that also includes, for example, historic consideration of buildings and facilities, endangered species, Presidential Executive Orders (EO), and so on. Oregon Emergency Management and FEMA Region X environmental staff work collaboratively to make sure mitigation project actions using FEMA-provided funding follow federal environmental laws. While Oregon Emergency Management has the lead role in ensuring the collection of "minimal NEPA" information from sub-applicants, the FEMA environmental review team is responsible to perform reviews for compliance with all applicable laws and regulations. The state's support of the environmental review process is described in the state's HMGP Administrative Plan, which is updated immediately following major disaster declarations when HMGP is authorized.

FEMA will assist with the required federal environmental reviews, but projects may first be required to meet a state assessment of environmental impacts. According to the state's HMGP Administrative Plan, applicants with projects that have potential environmental considerations must indicate this on the application and submit to OEM an assurance that appropriate environmental reviews will be conducted. To facilitate the collection of environmental information, the FEMA/NEPA Environmental Checklist is provided as an attachment to the state's HMGP application. The FEMA/NEPA Environmental Checklist must be completed to flag any potential environmental considerations. Because of these environmental considerations, NO project shall commence prior to this review and appropriate approval(s). OEM is responsible for communicating all relevant environmental information in proposed projects to FEMA. The applicant is encouraged to work with the State Hazard Mitigation Officer and the FEMA Regional Environmental Officer to obtain and provide a reasonable level of environmental detail that is dependent on the type and location of the proposed mitigation project.

Special attention must be directed toward floodplain and wetland management reviews (EOs 11988 and 11990), as shown on the FEMA/NEPA Environmental Checklist. The state will work with the sub-applicant to ensure the pertinent floodplain information is collected and

submitted to FEMA. This can include project location on FEMA flood maps, discussions from Flood Insurance Studies, endangered species information, and anecdotal (local) reports on past flood events.

### **Benefit-Cost Analysis Process**

FEMA has adopted the use of benefit-cost analysis as the preferred method for determining cost-effectiveness. According to FEMA's regulations, a mitigation project is cost-effective if the total cost of the project is less than the expected benefits of avoiding damage from future disasters. Thus, in simple terms the project must be expected to save at least \$1 of every \$1 spent or have a benefit-cost ratio (BCR) of no less than 1.0. This benefit-cost analysis applies to all mitigation activities, including those addressing repetitive loss properties.

Sub-applicants are responsible for providing sufficient supporting documentation to substantiate the benefit-cost analysis of their proposed projects. If a sub-applicant cannot prove the proposed project has a BCR of at least 1.0, the proposed project is likely ineligible (if using federal funding, but could still proceed with non-federal resources). The BCR can also be used by sub-applicants and the state to establish project priorities. Generally, projects with higher BCRs provide greater benefits to the community in reducing future disaster losses.

After receiving the sub-applicant's benefit-cost analysis, the state reviews the analysis and supporting documentation provided by the applicant. Particular attention is paid to the supporting documentation with special emphasis on past damages. For flood hazard mitigation projects, OEM and the applicant work together closely on documenting those past flood damages covered by the NFIP. Additional information that is checked by OEM includes total project costs, project life in years, annual maintenance costs (if any), and frequency of occurrence of the most recent disaster event. If the project benefits business properties, displacement costs and temporary rental costs are also collected.

After the state's initial review, the state and FEMA Region X staff work together to validate the benefit-cost ratio meets the federal requirements. In the case of the nationally competitive PDM grant program, the state and FEMA Region X staff will jointly review the BCA analysis prior to submitting the application for national review.

The state and sub-applicants have a variety of benefit-cost analysis resources available; these include FEMA-provided analytic tools, documentation and training. FEMA-provided benefit-cost analysis software and documentation are de facto standards that meet federal requirements. OMB directs most federal agencies on how to determine cost-effectiveness for their programs. OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, is the guidance FEMA is required to use in this area. FEMA's Hazard Mitigation Grant Program Desk Reference (Section 9: Cost-Effectiveness) outlines, in general, the process states should use in developing and submitting required benefit-cost analysis documentation to FEMA. Therefore, Oregon selects mitigation measures that are consistent with OMB Circular A-94 when federal funding is utilized.

Understanding benefit-cost analysis and using the FEMA-provided software requires training and hands-on experience. In conjunction with grant program announcement offerings, OEM provides benefit-cost analysis training for eligible applicants. Only basic BCA training is provided by OEM, while the more rigorous sessions are offered in partnership with FEMA regional staff and/or FEMA contractor support. In the past, BCA training sessions have been

offered in Portland, Bend, Eugene and Grants Pass with attendees representing jurisdictions from around the state and other FEMA Region X states. The state also directs local applicants to the BCA Helpline which is a good resource when there are questions. OEM encourages applicants to “triage” projects using the very limited data module, first, and progressively use more rigorous approaches once they have minimally satisfied a lower bound ratio of at least 1.0.

The benefit-cost analysis aspect of a potential multi-hazard mitigation project, therefore, includes many factors, such as the cost of project, damages avoided, continuity of services, population that benefits, and so on. The state and FEMA work together closely to assist potential applicants in understanding benefit-cost analysis techniques through group training sessions and specialized technical assistance. For example, FEMA and the state jointly presented benefit-cost analysis training sessions as part of the Pre-Disaster Mitigation grants during the FY 03, FY 05, FY 06, FY07, FY08, and FY09 program offerings.

## **Successes and Challenges**

### **CONDUCTING BENEFIT-COST ANALYSIS**

Perhaps one of the biggest challenges for sub-applicants seeking HMA project funding is the required benefit-cost analysis (BCA) using the prescribed FEMA methodology and software. By taking advantage of FEMA training offerings and other informational materials, potential sub-applicants for HMA funding will better understand the BCA requirements that include the collection of verifiable input data to the FEMA-approved BCA software. However, many sub-applicants simply do not have the capabilities to produce defensible benefit-cost analyses to support their project sub-applications. The BCA challenges are not new yet have become much more rigorous, particularly for seismic retrofit projects.

Oregon’s strategy to successfully deal with the BCA challenges are addressed through direct technical assistance provided to the sub-applicant. For post-disaster HMGP grants, the state uses funding from the State Management Cost allocation to retain a consulting contractor to assist sub-applicants in the collection of supporting BCA input data, running the necessary calculations and synthesizing the information into a defensible, supporting BCA report for the project activity. Initially, we encourage sub-applicants to calculate a lower-bound benefit-cost ratio (BCR) as a critical path in developing a project. This “triage” approach allows for good projects to receive further attention while projects with low BCRs (less than 0.8) will generally not be further evaluated. For non-disaster grants, this approach is encouraged as a pre-award activity.

### **CONDUCTING ENGINEERING FEASIBILITY**

Providing clear, concise documentation to support the feasibility and effectiveness of a mitigation project activity can be another challenge for sub-applicants. Being a critical path to securing project grant funding, sub-applicants are strongly encouraged to seek professional engineering assistance in developing a concise scope of work and cost estimate for their project. A sub-applicant’s commitment to applying for HMA grant funding is measured directly in the completeness and quality of their sub-application and supporting documentation. For HMGP project funding, sub-applicants are required to first submit the state’s “basic” HMGP application. Only if the project is determined to be eligible, is feasible, and potentially cost-effective, is the sub-applicant asked to complete a full project application. This incremental

approach successfully moves good projects toward approval and funding while projects that do not meet program criteria are not further developed. For non-disaster sub-grants, the state works with sub-applicants in much the same manner to evaluate potential projects before committing to the time and costs associated with developing a complete sub-application.

#### ENVIRONMENTAL AND HISTORIC PRESERVATION REQUIREMENTS AND PROCESS

After addressing both benefit-cost requirements and feasibility, a potential mitigation project must then be evaluated for environmental and historic preservation (EHP) considerations. During the project development phase, the state aims to provide technical assistance to ensure that the project SOW takes into account all potential EHP compliance issues. Sub-applicants are advised as to both cost and time issues associated with the EHP process. For example, property acquisitions that have issues identified during a Phase I Environmental Site Assessment (ESA) may not be in a position to move forward because of the non-eligibility of costs and bigger issues associated with Phase II ESAs. Property acquisition projects that include potentially eligible historic properties may require pre-application consultation with the State Historic Preservation Office. Projects approved and funded must adhere to any special considerations as the result of the EHP process.

#### **Summary**

Whether communities are planning for disaster mitigation projects in a pre-disaster environment or facing the challenges of recovering following a disaster, they will be best served by having a hazard mitigation plan that identifies and establishes priorities for mitigation activities. In the post-disaster environment, communities are encouraged to use and update their mitigation plans, and also consider new mitigation opportunities presented by lessons learned from the disaster. The state selection process for federal subgrants to local governments will be widely disseminated so that they can develop and submit their top priority projects for consideration. The utilization of benefit-cost analysis and the other grant-specific criteria will be primary factors in establishing state project priorities and selections.