

Hazard Mitigation Strategy Workshop

Oct. 1, 2015, 1:00-3:30 pm

Multnomah County East, Chinook Room

600 NE 8th St., Gresham, OR 97030

AGENDA ITEM	TIME
Welcome Introductions Review agenda Recap process	1:00-1:15
Vision and Goals Comments on proposed draft Seek consensus	1:15-1:25
Considerations for Actions and Prioritization Criteria Defining mitigation actions Implementation/tracking info needed Screening criteria Prioritization process	1:25-1:50
Hazard Risks What are the major/priority problems we're trying to address?	1:50-2:00
Action Ideas Review by Hazard and Action type groupings <ul style="list-style-type: none">– Does it meet the screening criteria?– Could it be improved?– Who wishes to participate?– Who else needs to provide feedback?– What priority?	2:00-3:00
Additional Action Suggestions What else should be considered? Are all goals, hazards, and jurisdictions addressed?	3:00-3:20
Next Steps Further refinement and review Completing the update	3:20-3:30

Proposed Vision, Goals, and Objectives for 2015 Plan Update

Hazard Mitigation Strategy Workshop

The vision for Multnomah County and its partners is to foster a disaster-resilient community in which

- Risk-consciousness at all levels – from individuals and businesses to government agencies – is forefront in decision-making.
- Efforts to reduce risk are conducted in an inclusive and collaborative environment.
- Equity is a key consideration in identifying and implementing mitigation and disaster recovery actions.
- The risk to health and safety of all citizens from disaster events is minimized.
- All communities within the county are able to effectively and efficiently recover from disasters because impacts to the economy, built environment, and natural and cultural resources have been greatly reduced.

To reach this vision of resilience, the mitigation strategy is built upon the following goals and objectives:

Goal 1. Strengthen the capacity of the whole community¹ to reduce risk by increasing hazard awareness, creating partnerships, and leveraging multiple implementation mechanisms and funding opportunities.

Obj. 1.1. Ensure the risk assessment and related risk information materials are current with the best available science and appropriate for diverse audiences.

Obj. 1.2. Support community outreach activities that increase stakeholder awareness and understanding of hazard risk and mitigation options.

Obj. 1.3. Continue efforts to build effective partnerships with community-based organizations, businesses, and government agencies to identify and implement mitigation actions.

Obj. 1.4. Integrate risk reduction concepts, policies, and projects into existing planning and implementation mechanisms, such as comprehensive plans, development codes, and capital improvement plans.

Obj. 1.5. Seek various funding opportunities including mitigation-specific grant sources and local financing solutions.

Obj. 1.6. Enhance efforts to monitor vulnerability reduction and document progress towards resiliency.

Goal 2. Develop mitigation actions that consider all community systems: economic, health and social services, housing, infrastructure, and natural and cultural resources.

Obj. 2.1. Consider strategies that support a prosperous and resilient economy and that would expedite economic restoration following an incident.

Obj. 2.2. Consider strategies that promote the health, independence, and well-being of the whole community.

¹ The whole community includes individuals, families, and households; communities; non-governmental organizations; private sector entities; and government agencies (National Mitigation Framework, 2013).

- Obj. 2.3. Consider strategies that mitigate existing housing risks and increase resilience in new construction, repair, and rebuilding.
- Obj. 2.4. Consider strategies that strengthen essential infrastructure and services, decrease disruptions, and increase resilience in new construction, repair, and rebuilding.
- Obj. 2.5. Consider strategies that conserve, protect, and restore the natural and cultural assets of the community.

Goal 3. Prioritize mitigation actions that have a high benefit-to-cost ratio and increase social equity.

- Obj. 3.1. Use the principles of benefit-cost analysis to assess whether the expected long-term benefits of losses avoided will exceed the cost of the mitigation action.
- Obj. 3.2. Prioritize the allocation of resources for mitigation actions that benefit underserved and under-represented communities, especially those in high hazard risk areas.
- Obj. 3.3. Use the County's Equity Lens and the Climate Action Plan's Equity Objectives to assess the potential impact of mitigation actions and to evaluate the level of equity achieved during implementation.
- Obj. 3.4. Seek opportunities in which hazard mitigation also benefits other community goals, such as economic development, energy efficiency, public health, or environmental conservation.
- Obj. 3.5. Consider the increased benefit an action may have that reduces risk from multiple hazards, e.g. restricting development in a lahar zone also decreases flood risk.

Goal 4. Plan for including mitigation activities during post-disaster recovery and reconstruction.

- Obj. 4.1. Integrate policies that reduce disaster risk into recovery plans and reconstruction standards by planning for recovery prior to a disaster.
- Obj. 4.2. Educate stakeholders on post-disaster mitigation funding sources and opportunities to build back resiliently.

Types of Mitigation Actions

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Subdivision regulations • Development review • Building codes and enforcement • NFIP Community Rating System • Capital improvement programs • Open space preservation • Stormwater management regulations and master plans
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> • Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to result in risk-conscious decision-making.	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • StormReady • Firewise Communities
Planning Process and Analysis	These are improvements to the Hazard Mitigation Planning Process and to the resulting plan document.	<ul style="list-style-type: none"> • More detailed or advanced risk assessments • Including additional stakeholders in planning and implementation processes • Enhanced sections or improved format to plan or accessory documents

Table 3: Eligible Activities by Program

Eligible Activities	HMGP	PDM	FMA
1. Mitigation Projects	✓	✓	✓
Property Acquisition and Structure Demolition	✓	✓	✓
Property Acquisition and Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓
Dry Floodproofing of Non-residential Structures	✓	✓	✓
Generators	✓	✓	
Localized Flood Risk Reduction Projects	✓	✓	✓
Non-localized Flood Risk Reduction Projects	✓	✓	
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-structural Retrofitting of Existing Buildings and Facilities	✓	✓	✓
Safe Room Construction	✓	✓	
Wind Retrofit for One- and Two-Family Residences	✓	✓	
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildfire Mitigation	✓	✓	
Post-Disaster Code Enforcement	✓		
Advance Assistance	✓		
5 Percent Initiative Projects	✓		
Miscellaneous/Other ⁽¹⁾	✓	✓	✓
2. Hazard Mitigation Planning	✓	✓	✓
Planning Related Activities	✓		
3. Technical Assistance			✓
4. Management Cost	✓	✓	✓

⁽¹⁾ Miscellaneous/Other indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Additional information regarding eligible projects for **HMGP** is included in Part VIII, A.11 and A.12, and for **FMA**, in Part VIII, C.1.

Costs for eligible activities must be reasonable, allowable, allocable, and necessary as required by 2 CFR Part 200 Subpart E, applicable program regulations, and this guidance.

Hazard Mitigation // Screening Criteria

- ✓ No adverse social impacts
- ✓ Technically feasible
- ✓ Legal authority
- ✓ Administrative capacity exists
- ✓ Political/public support
- ✓ No adverse environmental impacts
- ✓ Addresses an identified risk
- ✓ Meets goals and consistent with other community plans' goals



Hazard Mitigation // Prioritization

Criteria	High	Medium	Low
Equity	Social equity benefits are highly likely	Social equity impacts likely neutral to positive	Social equity impacts likely neutral to positive
Benefit-Cost Ratio	Highly likely that benefits will outweigh costs	Likely that benefits will outweigh costs	May need more info for preliminary estimate of BC
Timing	Should implement as soon as possible	Implementation in 1-5 years would be desirable	Implementation can wait beyond 5 years if necessary
Available capacity	Capacity/funding highly feasible in 1-3 years	Capacity/funding feasible within 5 years but may need to be further explored	Capacity/funding uncertain to unlikely within 5 years



CAP Update - Climate Equity

CAP Equity Goals:

These are the high level goals we want to strive to achieve through the update and implementation of the CAP.

- A. Healthy:** The CAP will mitigate environmental factors leading to health disparities, such as barriers to active lifestyles and transportation, pollution exposure, disparate access to greenspace and other natural resources.
- B. Safe and Livable:** The CAP will promote investments in housing energy efficiency that will make them safer, more comfortable and affordable, and in community infrastructure that enhances pedestrian and bike safety, and other elements of livability.
- C. Accessible:** The CAP will promote investments that improve neighborhood accessibility, by bringing services to underserved neighborhoods and supporting equitable expansions of public transit and active transportation infrastructure.
- D. Prosperous:** The CAP will promote the creation of employment and small business opportunities with potential to lift up and empower households and communities, and maximize that potential through equitable hiring and contracting policies that target those opportunities toward historically underrepresented populations.
- E. Inclusive:** Communities of color and other historically underrepresented populations will be included in every step of the CAP process, from the definition of goals to implementation. Proactive, culturally-appropriate strategies will be undertaken to reach out to these populations and involve and empower them through the CAP's actions and programs.

CAP Actions - Equity Considerations:

These equity considerations reflect themes presented through the Equity Workgroup and the Equity Scan and were integrated into the actions.

1. DISPROPORTIONATE IMPACTS:

- Does the proposed action generate burdens (including costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?

2. SHARED BENEFITS:

- Can the benefits of the proposed action be targeted in progressive ways to reduce historical or current disparities?

3. ACCESSIBILITY:

- Are the benefits of the proposed action broadly accessible to households and businesses throughout the community - particularly communities of color, low income populations, and minority, women, and emerging small businesses?

4. ENGAGEMENT:

- Does the proposed action engage and empower communities of color and low income populations in a meaningful, authentic and culturally appropriate manner?

5. CAPACITY BUILDING:

- Does the proposed action help build community capacity through funding, an expanded knowledge base or other resources?

6. ALIGNMENT and PARTNERSHIP:

- Does the proposed action align with and support existing communities of color and low income population priorities - creating an opportunity to leverage resources and build collaborative partnerships?

7. RELATIONSHIP BUILDING:

- Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government?

8. ECONOMIC OPPORTUNITY and STAFF DIVERSITY:

- Does the proposed action support communities of color and low income populations through workforce development, contracting opportunities or the increased diversity of City and County staff?

9. ACCOUNTABILITY:

- Does the proposed action have appropriate accountability mechanisms to ensure that communities of color, low-income populations, or other vulnerable communities will equitably benefit and not be disproportionately harmed?

Equity Objectives

When implementing any *Climate Action Plan* actions, a combination of the following equity objectives should be achieved. The Climate Equity Implementation Guide (companion document) provides a framework for evaluating actions in relation to these objectives.

Equity Objectives

- Know the community to understand the opportunity

Different communities (i.e., geographic, racial, socio-economic class) experience different outcomes, and what works for one group will not work for everyone. This is due to cultural factors and existing disparities. Understanding underserved and under-represented communities is essential to foster greater understanding and informed decision-making in a manner that will maximize benefits, and minimize burdens for those communities.

Why is this important?

What does this look like in practice?

- Research on community history and current events including interviews, community mapping, or review of documentation.
- Demographic analysis of the experience of under-served and underrepresented communities to understand current and historic trends.
- Assessment of vulnerability to socio-economic and environmental factors (involuntary displacement/gentrification, hazard risk, etc.).
- Familiarity with government initiatives and community reports, such as plans or investment strategies to understand cumulative impacts and/or collaborative opportunities of policy.

- Be accessible to diverse communities

Government programs and policies have historically been designed for a dominant culture, which can inhibit successful participation by other cultural communities. Programs and policies need to be designed with a culturally responsive and community needs or community assets-based approach.

- Use people-friendly and culturally responsive strategies such as translated materials, childcare and food.
- Partner with and support cultural liaisons.
- Coordinate administrative processes to simplify community interaction.
- Adapt program delivery to meet a community where it is.

- Resource communities to build their capacity

Investing in impacted communities and youth through education, staff support and financial resources increases the startup and long-term independence of community-driven solutions.

- Training and education, especially popular education workshops facilitated by community members in community gathering places.
- Technical assistance based on community need and priorities.
- Avoid duplication of community initiatives.
- Funding community-based initiatives.

- Build effective partnerships

Effective partnerships and collaborations are essential to achieve equitable outcomes. Built on trust and accountability, they should also openly acknowledge and work to balance inherent power dynamics. They require clear and purposeful roles, consistency and honest communication to mutually respect and build power.

- Clarify roles and expectations at the start
- Institutionalize representation from impacted communities in decision-making and processes leading to decisions.
- Staff trained on power, privilege and institutional racism and bias
- Transparent and proactive communication to impacted communities.

- Equitably distribute costs and benefits

Though programs and policies may attempt to deliver benefits equally, the impact across individuals and communities may not be equitable based on the cumulative experience of current and past inequitable policies and investments. If this context is not considered, such policies and programs may do more harm than good. Therefore, programs and policies must be implemented in progressive ways and mitigate costs/burdens for communities of color and low-income populations to reduce disparity.

- Use demographic data to target progressive action.
- Avoid income-blind assessments and goals.
- Redistribute revenue from taxes or fees toward the direct benefit of impacted communities.
- Create subsidies or waivers based on need.
- Adjust fee scales based on need
- Integrate impact criteria for communities of color and low-income communities in decision-making

- Create opportunities for community wealth building

Public projects have the potential to ensure economic development opportunities are shared across the entire community. Good jobs and local businesses are critical to the regional economy and essential for individuals to develop wealth and assets. In addition, infrastructure investment will impact the value of physical investments like homes. Strategies that address climate change and equitable economic opportunity can be important regional economic drivers that bring everyone into the solution for carbon reductions.

- Creation of jobs or internships, with attention paid to family wages and healthcare.
- Business startup support or financing opportunities.
- Attention to workforce practices; not just diversity in contracting and hiring, but also fair payment practices and retention.
- Use of community benefit agreements.

Equitable Impacts

PURPOSE

PEOPLE

Who is positively and negatively affected (by this issue) and how?

How are people differently situated in terms of the barriers they experience?

Are people traumatized/retraumatized by your issue/decision area?

Consider physical, spiritual, emotional and contextual effects

PLACE

How are you/your issue or decision accounting for people's emotional and physical safety, and their need to be productive and feel valued?

How are you considering environmental impacts as well as environmental justice?

How are public resources and investments distributed geographically?

ISSUE/ DECISION

PROCESS

How are we meaningfully including or excluding people (communities of color) who are affected?

What policies, processes and social relationships contribute to the exclusion of communities most affected by inequities?

Are there empowering processes at every human touchpoint?

What processes are traumatizing and how do we improve them?

POWER

What are the barriers to doing equity and racial justice work?

What are the benefits and burdens that communities experience with this issue?

Who is accountable?

What is your decision-making structure?

How is the current issue, policy, or program shifting power dynamics to better integrate voices and priorities of communities of color?

Equity and Empowerment Lens



Multnomah
County

Office of Diversity and Equity

Revised March 24, 2014

Purpose Towards Racial Equity

In a purpose-driven system, all partners at all levels align around transformative values, relationships and goals moving towards racial equity, integrating an emphasis on doing less harm and supporting actions that heal and transform.

Defining An Individual's Purpose:

- ⇒ What is my purpose towards achieving racial equity?
- ⇒ What gets in the way of maintaining my purpose towards racial equity?
- ⇒ What do I need to maintain my purpose?
- ⇒ Purpose towards racial equity is also further clarified by our positions in the hierarchy.
 1. If you are a manager or other type of leader with positional authority, how can you further clarify your purpose so that you are leveraging the power you have?
 2. If you are at a lower level in the organization, what do you need from leadership in order to feel valued and a key contributor to the organizational purpose?
 3. How does your role and your purpose influence and align with?

Defining An Institution's Purpose:

- ⇒ What is our institution's purpose towards racial equity?
- ⇒ How are we clearly defining that purpose, and where and how do we communicate that?
- ⇒ How can we ensure that our purpose is integrated into our policies, procedures, and practices?
- ⇒ How can we give our employees a greater sense of meaning in what they do around racial equity, so they feel more enthusiastic and hopeful about their work?
- ⇒ In what practical ways can our institution add more value around racial equity and do less harm?
- ⇒ Is racial equity the central theme in your recruitment and retention efforts?
- ⇒ Do you have the right people around you to achieve your purpose? If not, how can you move towards this reality?
- ⇒ How do you ensure individuals work together with leaders to align to the institution's purpose towards racial equity?

Actions Ideas for Review and Discussion
Multnomah County Hazard Mitigation Strategy Workshop, Oct. 1, 2015

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
1	Education and Awareness Programs	All-Hazard	Health and Social Services, Housing	Develop a hazard mitigation public outreach strategy that leverages opportunities to pair hazard risk awareness and mitigation options with other ongoing community outreach programs - particularly those focused on disaster preparedness but also including health, permitting, or other related opportunities. Mitigation outreach should include information on which hazards the community is vulnerable to and clear info on the impacts to be expected as well as mitigation options specific to the hazard impacts and any available funding opportunities, e.g. structural and non-structural seismic mitigation options, firewise home and landscaping modifications, landslide mitigation, hazardous tree pruning, flood mitigation, etc. The HMP Steering Committee can guide which educational materials and risk data are included in the outreach programs. The strategy should be inclusive of all socioeconomic groups and culturally appropriate.	HMP Steering Committee, RDPO Citizen Corps Workgroup, MC Health, MC Human Services, Oregon Office on Disability and Health	Revised from Action #3, 14, 68, 79, 98, 109, 116 and Gresham ST1.3, ST4.2, LT4.5, and CAP 15F, 16B, 17C, MC Vulnerable Populations Assessment Report (2012)
2	Local Plans and Regulations	All-Hazard	All	Assist local planning offices in Integrating hazard risk assessments into comprehensive plan (Goal 7 requirements) and development code updates. Maintain a list of plan policies and codes that address hazards in the Hazard Mitigation Plan. Document how hazard considerations are included in pre-application/permitting processes and other interactions with property owners and developers.	MCEM, HMP Steering Committee	Action #13, 20, 64, 84, 107, CAP 15F
3	Local Plans and Regulations	All-Hazard	Economic, Housing	Work cross-jurisdiction to draft a post-disaster recovery ordinance that includes temporary building moratoria for consideration by elected bodies. This will enable time for requiring, encouraging, or funding mitigation projects after a disaster. Consistent moratoria criteria across jurisdictions will reduce confusion post-disaster and encourage responsible rebuilding.	All jurisdictions, HMP Steering Committee	
4	Local Plans and Regulations	All-Hazard	Infrastructure	Integrate hazard risk assessments with jurisdiction/agency continuity of operations requirements to identify mitigation priorities, e.g. facilities that house critical functions and are at risk should be prioritized for mitigation/retrofit/ alternative projects within each agencies' Capital Improvements Program. Consideration should be given to life safety vs. occupiable vs. operational. Document what has already been mitigated and make info easily assessable. The list of mitigation needs can also be used after a disaster to include mitigation during recovery/repair activities.	All	Revised from Action #15, 19, 42, 48, 59, 70, 78, 83, 91, 108 and Gresham LT1.8

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
5	Local Plans and Regulations	All-Hazard	Infrastructure	Explore and document in the plan how hazard mitigation is considered in the early design process for public facility and infrastructure projects. Explore opportunities to show co-benefits of sustainable and resilient building practices.	MCEM, HMP Steering Committee	Consistent with CAP 14A, 16D
6	Planning Process and Analysis	All-Hazard	All	Develop Community Executive Summaries that explain the relevant portions of the Hazard Mitigation Plan to elected officials and members of that community. Provide annual progress report updates to the Community Summaries.	HMP Steering Committee	Revises Gresham ST4.1
7	Planning Process and Analysis	All-Hazard	All	Establish process to support applications to FEMA Hazard Mitigation Assistance grants and Oregon Seismic Rehabilitation Grant Program annually.	HMP Steering Committee	Revises Action # 4, 18, 36, 69, 82, 112 and Gresham ST4.3
8	Planning Process and Analysis	All-Hazard	All	Assess resources needed for plan implementation and develop capacity options for consideration by participating jurisdictions to pool resources. Develop a cross-jurisdictional team to work on analysis, stakeholder coordination, and grant writing. Partner with state, regional, and academic organizations to coordinate projects related to risk analysis and reduction. Seek opportunities to coordinate planning processes of related plans with similar update cycles, e.g. HMP, CWPP, Climate Action Plan.	HMP Steering Committee	Gresham ST5.1, CAP 20C, 20J, 20N
9	Planning Process and Analysis	All-Hazard	Economic	Seek business alliances and other private sector representation in the mitigation planning process. Once more business stakeholder representation has been developed, work together to develop a hazard mitigation business outreach strategy that leverages business organizations and existing programs.	HMP Steering Committee	Action #16, 80 and Gresham ST3.1
10	Planning Process and Analysis	All-Hazard	Health and Social Services	Explore ability to work with other related projects (e.g. Climate Action, EOP) to create an Equity Working Group that can contribute to plan updates, provide input on proposed actions, and evaluate implementation. If not feasible, invite stakeholders of under-represented communities to participate on Steering Committee.	MCEM, MC Office of Diversity and Equity	Consistent with CAP 16C, 20A and MC Vulnerable Populations Assessment Report (2012)
11	Planning Process and Analysis	All-Hazard	Health and Social Services	Integrate social vulnerability data into the hazard risk assessment and use this to inform decisions on mitigation priorities.	MCEM, HMP Steering Committee	Consistent with CAP 14B

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
12	Planning Process and Analysis	All-Hazard	Natural and Cultural Resources	Add historic resource inventories to risk assessments.	MCEM, MC Dept. of Community Services, Cities' planning dept.	
13	Planning Process and Analysis	Earthquake	All	Participate in RDPO/DOGAMI regional HAZUS risk assessment for Earthquake. Provide local data where available.	HMP Steering Committee	Action # 40
14	Planning Process and Analysis	Earthquake	Economic, Housing	Determine a practical method to track buildings that are brought up to current seismic codes due to retrofit or permit requirement. This information can be included in future risk assessments to provide more accuracy. The public would also benefit from knowing what the seismic status is of buildings they occupy or visit.	HMP Steering Committee	Revised from #2, 67, 97; public input (6/4/15)
15	Planning Process and Analysis	Earthquake	Infrastructure	Only the County-owned Willamette River crossings and state-owned bridges have been assessed for seismic risk. Other bridges throughout the county should be assessed and prioritized for mitigation similar to the ODOT Seismic Plus report.	MC Dept. of Community Services	Revised from Action #41
16	Planning Process and Analysis	Earthquake	Infrastructure	Many agencies within the county have begun to analyze facility-specific seismic risk, e.g. MC, Port of Portland. County stakeholders should prioritize critical facilities/infrastructure, gather seismic risk data where available (structural and non-structural), prioritize risk assessments where there are gaps, and begin to develop a funding strategy for mitigation of the most critical facilities. Document what has already been mitigated and make info easily assessable. The list of mitigation needs can also be used after a disaster to include mitigation during recovery/repair activities.	All jurisdictions, Port of Portland, Trimet, MCDD, utilities, water districts	Revised from Action # 1, 5, 34, 37, 66, 69, 96 and Gresham LT1.8
17	Structure and Infrastructure Projects	Earthquake	Economic	Assist in determining method and provider for seismic retrofit audit to add to Building Ready Multnomah Program (CPACE)	HMP Steering Committee, MC, PDC	
18	Structure and Infrastructure Projects	Earthquake	Housing	Develop strategy for funding sources to continue and expand Portland's Homeowner Seismic Retrofit project to additional jurisdictions.	HMP Steering Committee	
19	Structure and Infrastructure Projects	Earthquake	Infrastructure	Perform seismic upgrades to suspended wastewater conveyance pipelines (i.e. roadway crossings, pipe bridges, etc.)	Wastewater districts	Gresham LT2.7

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
20	Local Plans and Regulations	Earthquake, Landslide	Economic, Housing	Research the feasibility of requiring disclosure of landslide and liquefaction hazards (ex. CA Natural Hazards Disclosure).	MC Dept. of Community Services, Troutdale, Gresham, Wood Village, Fairview	
21	Education and Awareness Programs	Flood	All	Install high water mark signs to educate public about flooding potential in targeted locations.	MCDD	Action # 44
22	Local Plans and Regulations	Flood	All	Participate in the RiskMap project to update flood maps for the Lower Columbia-Sandy Watershed and Gresham scheduled for 2015-2016. Encourage inclusion of climate considerations in new mapping.	Fairview, Gresham, Troutdale, MC, MCDD	Consistent with CAP 15A
23	Local Plans and Regulations	Flood	Economic, Housing	Determine if participation in the NFIP Community Rating System is within the local government's current capacity to pursue and estimate if the number of policyholders that would receive insurance discounts is cost effective for the program costs.	Fairview, Gresham, MC	Gresham ST4.3
24	Planning Process and Analysis	Flood	All	Continue participation in Levee Ready Columbia, particularly in review of risk assessments and discussions of appropriate level of protection. Encourage inclusion of climate considerations.	MC, Fairview, Gresham, Troutdale	Action #6, 45, 71, CAP 15A
25	Planning Process and Analysis	Flood	Economic, Housing, Infrastructure	Identify target areas for flood mitigation projects. Are there any high-risk/repetitive risk problem areas that should be studied in more detail or that specific mitigation projects should be developed and grants pursued for, e.g. land acquisition, home elevation, business floodproofing, floodplain restoration, stormwater infrastructure. Consider if there are areas that are at risk to multiple hazards that could be targeted for increased cost benefit, e.g. flood + landslide + liquefaction + lahar.	HMP Steering Committee	Revises Actions #8, 10, 43, 46, 47 and Gresham LT 2.6 and CAP 13D
26	Planning Process and Analysis	Flood	Housing	Determine if a detailed study of channel migration of the Sandy River similar to one Clackamas County commissioned is needed to better guide land development regulation in the Sandy River floodplain.	Community Services, Troutdale	

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
27	Structure and Infrastructure Projects	Flood	Infrastructure	Assess how stormwater management planning and projects should be addressed in this plan. Explore if a stormwater subcommittee would be beneficial or if each jurisdiction will individually track stormwater projects through master plans and capital improvement plans. Consider if mitigation grants should be pursued in funding stormwater projects. Consider opportunities to manage stormwater naturally and prepare for increased stormwater runoff from climate change.	HMP Steering Committee	Revises Actions #7, 11, 49, 50, 73, 74, 103, 104 and Gresham LT 1.5, 1.6, 1.7, CAP 15B
28	Structure and Infrastructure Projects	Flood	Infrastructure	Flood-proof wastewater manholes and pipelines within the 100-year floodplain	Wastewater districts	Gresham LT2.5, FEMA Best Practice
29	Planning Process and Analysis	Human-caused	All	Integrate Human-caused and Technological Hazard Identification and Risk Assessment report (anticipated completion Oct. 2015) into the Plan and develop actions to address vulnerabilities identified.	MCEM, all stakeholders	
30	Planning Process and Analysis	Landslide	Economic, Housing, Infrastructure	Participate in DOGAMI landslide analysis meetings and use results to identify development and infrastructure at risk. Develop and prioritize mitigation projects based on new data. Incorporate new data into comprehensive plans and development codes.	All jurisdictions, utilities, water districts	Revised from Action # 12, 51, 52, 53, 54, 55, 75, 76, 105, 106 and Gresham ST1.2, LT1.4, CAP 15F
31	Local Plans and Regulations	Severe Weather	Health and Social Services, Natural and Cultural Resources	Collaborate with the Climate Action Plan Committee and City of Portland to decrease the urban heat island effect, especially in areas with populations most vulnerable to heat, through strategies such as revegetation, tree preservation planting and maintenance, depaving and porous pavement, green infrastructure like bioswales and ecoroofs and site development performance standards.	Gresham, Fairview, Wood Village, Troutdale, MC Health	CAP 14A, FEMA Best Practice
32	Planning Process and Analysis	Severe Weather	All	Use new guidance on planning drought-ready communities to develop a focused planning project on drought mitigation planning and outreach.	HMP Steering Committee, CWPP Committee, Climate Action Plan Committee, Water Utilities	Consistent with CAP 14G, 14I

Idea ID	Action Type	Hazard	Community System	Action Idea	Suggested Organization Participation	Carry over and Consistency Notes
33	Structure and Infrastructure Projects	Severe Weather	Infrastructure	Determine what actions are needed for reducing power disruptions from severe weather and who is responsible, e.g. tree-trimming, undergrounding power lines, public education on hazardous trees, etc. Develop actions for this plan that go beyond normal maintenance responsibilities of any organization.	PGE, Pacific Power, All jurisdictions	Actions # 29, 32, 33, 57, 58, 60, 92, 94, 95, 124, 122
34	Local Plans and Regulations	Volcano	Economic, Housing, Infrastructure	Explore the feasibility of limiting critical facilities and/or high density facilities in the lahar zone (ex. Pierce County, WA) and if disclosure of lahar hazard can included in the permitting processes. (ex. Orting, WA)	MC Dept. of Community Services, Troutdale, Wood Village, Fairview, Gresham	
35	Education and Awareness Programs	Wildfire	Housing; Economic	Provide educational materials, presentations, and demonstration projects on defensible space and wildfire mitigation techniques to Communities at Risk	MCEM, Fire District 14, Gresham Fire	Summarizes CWPP actions #2, 3, 10, 13, 25, 28, 29, Gresham ST4.4
36	Natural Systems Protection	Wildfire	Natural and Cultural Resources; Housing; Economic	Develop and maintain a prioritized list of potential fuels reduction projects in high-risk areas including fuel reduction prescriptions and cost estimates. Conduct outreach to community/property owners for priority projects to get buy-in for reduction projects. Seek funding for priority projects with community support.	CWPP Committee, Local Fire Agencies	Summarizes CWPP actions # 19, 20, and 16
37	Planning Process and Analysis	Wildfire	All	Establish the CWPP Committee as a subcommittee of the Hazard Mitigation Steering Committee and work on integrating these two planning efforts to reduce duplication while still meeting each program's requirements.	MCEM, HMP Steering Committee, CWPP Committee	Action # 65, CAP 14M
38	Planning Process and Analysis	Wildfire	All	Work with local fire agencies to assess the accuracy of the West-wide Wildfire Risk Assessment data and to refine the Wildland Urban Interface areas within Multnomah County. Once refined, develop a strategy for tracking vulnerable properties and identifying appropriate mitigation strategies. Prioritize properties with fire response access limitations.	MCEM, Local Fire Agencies	Revises CWPP actions # 24, 23, 30 and Action # 88, Gresham ST1.2, CAP 14M