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## 950-2022

Report








### Accept the Progress Reports on the Natural Hazard Mitigation Plan for 2020, 2021, and 2022

Accepted

The City of Portland participates in FEMA's Community Rating System (CRS), which rewards communities for taking action beyond the minimum standards required by the National Flood Insurance Program (NFIP). Communities are rated Class 1-10 (with 1 being the highest) based on an accounting of activities that reduce FEMA's risk. Our current Class 5 rating provides a 25% discount on flood insurance for property owners. Portland's rating is higher than 90% of the 570 communities enrolled in FEMA's CRS Program. Portland's Class 5 rating saves the community about \$300K in insurance premiums every year. About 60% of those receiving the discount are located in lower income neighborhoods.

As part of the CRS implementation, the City receives credit for the Mitigation Action Plan. To continue receiving this credit, the City reports annually to FEMA on the implementation of the Plan. The annual progress reports for 2020, 2021 and 2022 are attached to this memo for City Council consideration and acceptance. These reports are prepared by BES – the CRS Coordinator for the City – and submitted to FEMA as part of the CRS Recertification process.

#### Documents and Exhibits

-  [Memo - Mitigation Action Plan – Community Rating System Annual Progress Reports](#) (250.56 Kb)
-  [Community Rating System Annual Progress Report 2022](#) (151.56 Kb)
-  [Community Rating System Annual Progress Report 2021](#) (194.51 Kb)
-  [Community Rating System Annual Progress Report 2020](#) (186.21 Kb)
-  [Attachment to 2021 report](#) (144.8 Kb)
-  [Attachment to 2020 report](#) (143.11 Kb)
-  [Additional attachment to 2020 report](#) (89.8 Kb)

Introduced by

[Mayor Ted Wheeler](#)

Bureau

[Emergency Management](#)

Contact

**Jonna Papaefthimiou**

Chief Resilience Officer

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Requested Agenda Type

Time Certain

Date and Time Information

**Requested Council Date**

November 9, 2022

**Requested Start Time**

3:30 pm

**Time Requested**

1 hour (2 of 3)

## Impact Statement

### Purpose of Proposed Legislation and Background Information

Accepting reports on implementation of the Natural Hazard Mitigation Plan is an administrative requirement of the Community Rating System (CRS). The CRS is a federal program that provides discounted flood insurance to residents of jurisdictions that participate in the CRS program, based on the rating that the jurisdiction achieves. This item is being presented immediately following the adoption of the new Natural Hazard Mitigation Plan for the City. It should take a very short amount of time.

### Financial and Budgetary Impacts

None.

### Community Impacts and Community Involvement

Adopting these reports supports the City's efforts to achieve a Community Rating System (CRS) score of 5. A score of 5 means Portland homeowners are entitled to a 25% discount on flood insurance; this is a significant benefit to low-income homeowners.

Another element of the CRS is public education of residents in floodplains. Information about outreach efforts are included in the implementation reports.

### 100% Renewable Goal

Not applicable.

### Budget Office Financial Impact Analysis

No fiscal impact.

## Agenda Items

### 950 Time Certain in [November 9, 2022 Council Agenda](#)

Accepted

Motion to accepted the report: Moved by Mapps and seconded by Ryan.

Commissioner Mingus Mapps Yea

Commissioner Carmen Rubio Yea

Commissioner Dan Ryan Yea

Commissioner Jo Ann Hardesty Absent

Mayor Ted Wheeler Yea

**CRS Activity 510  
Annual Progress Report on Implementation of Credited Plan**

**Which Plan is this for (use separate templates for each credited Plan):**

**Floodplain Management Plan (Hazard Mitigation Plan)**

**Repetitive Loss Area Analysis**

**Floodplain Species Plan**

**Substantial Damage Plan**

**Name of Community:** City of Portland, OR (410283)

**Date this Annual Progress Report was prepared (not the date of adoption of the credited Plan):** October 10, 2022

**Name of Plan:** Natural Hazard Mitigation Plan (NHMP)/Mitigation Action Plan

**Date of Adoption of Plan:** November 2, 2022 (Pending)

**5 Year CRS Expiration Date:** August 31, 2024

**1. How can a copy of the credited Plan be obtained:**

<https://www.portland.gov/pbem/map-2021>.

This plan was approved by FEMA in July 2022 and is pending City of Portland Council approval/adoption in November 2022. Please note the above link has three files:

✓ The NHMP

✓ NHMP Appendix

✓ Mitigation Action Strategy Spreadsheet

**2. Describe how *this annual progress report* (not the credited Plan) was prepared and how it was submitted to the governing body, released to the media, and made available to the public:**

This progress report was put together by the CRS Coordinator because of the timing of the preparation of the new NHMP and the submittal of the 2022 CRS Recertification

report. The annual progress report will be submitted for adoption to the City Council of Portland in November 2022.

**3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:**

Because of the misalignment of the timing of the new NHMP approval process and CRS annual recertification progress report to FEMA, the NHMP steering committee is just starting their annual action item report-outs. Some of the items that were transitioned from the previous NHMP to the newly approved NHMP continue to be implemented.

**4. Discuss why any objectives were not reached or why implementation is behind schedule:**

We are carrying out many of the action items identified in the new NHMP, but do not yet have an itemized status update because of the misalignment of the submittal of the NHMP and the annual CRS progress report.

**5. What are the recommendations for new projects or revised recommendations?**

There are not yet any new recommendations because the NHMP was approved in July 2022.

## CRS Activity 510

### Progress Report on Implementation of Credited Plan

<b>Date this Report was Prepared:</b>	October 28, 2021
<b>Name of Community:</b>	City of Portland, OR (410283)
<b>Name of Plan:</b>	The Mitigation Action Plan
<b>Date of Adoption of Plan:</b>	November 2016
<b>5 Year CRS Expiration Date:</b>	August 31, 2024

#### 1. How can a copy of the original plan or area analysis report be obtained:

The Mitigation Action Plan (2016), its executive summary, and supporting materials can be downloaded from this public webpage:

[www.portlandoregon.gov/pbem/67578](http://www.portlandoregon.gov/pbem/67578).

#### 2. Describe how this evaluation report was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

A review of the 2016 Mitigation Action Plan (MAP) was undertaken by the Bureau of Environmental Services in October 2021. Updates and detailed information were solicited from lead City staff on action items listed in the Mitigation Action Strategy. Reported information was compiled and documented in a spreadsheet (see attached).

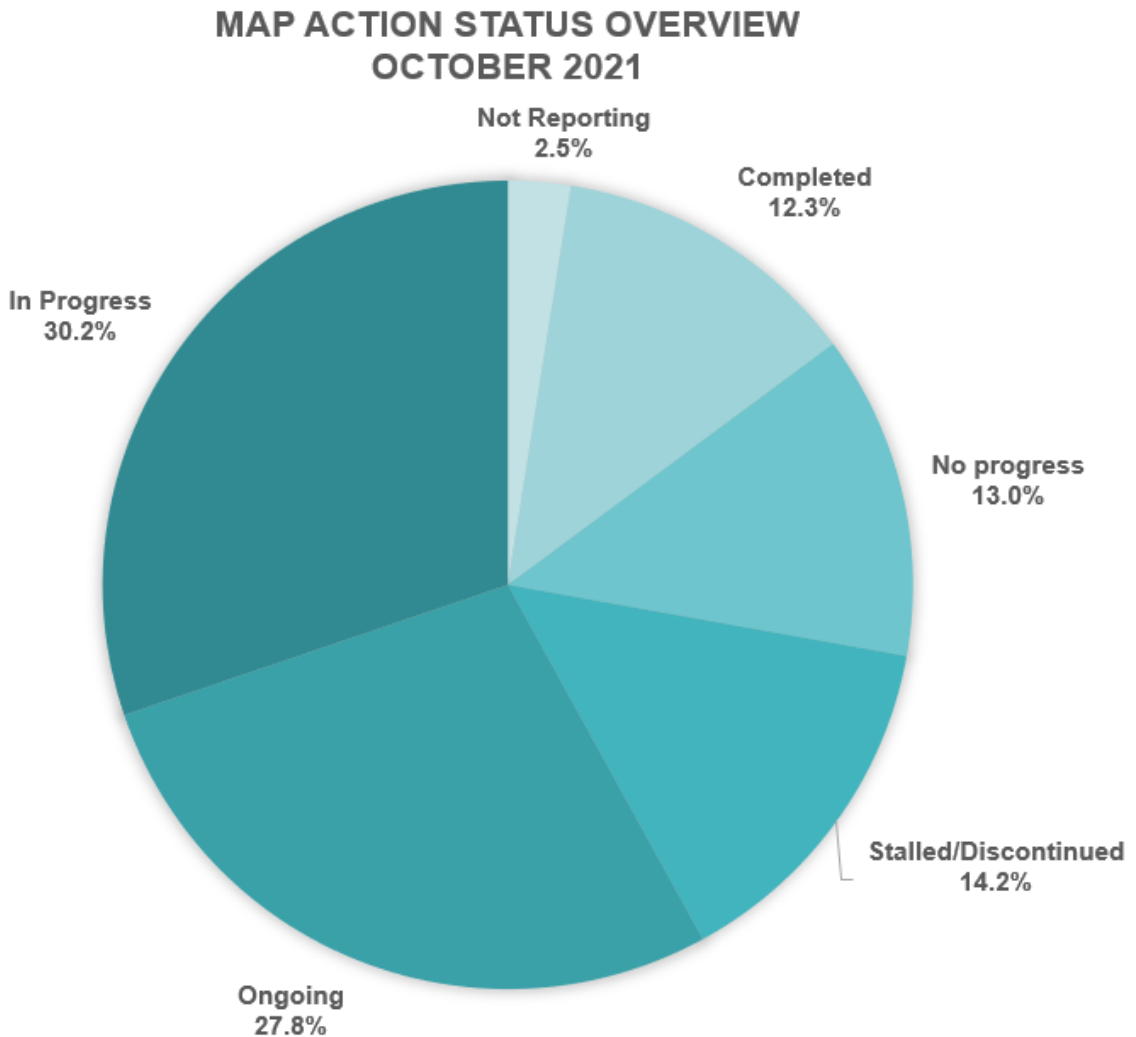
The City of Portland's five-year update to the MAP is currently underway and is expected to be completed in the next six months. This 2021 MAP annual report will be submitted to Portland City Council (governing body) in early 2022 and released to the media as part of the five-year update of the Mitigation Action Plan. Sharing the report with City Council as part of the broader plan update process is important because the report provides context on past accomplishments, as well as ongoing and incomplete efforts that should be carried forward into the next plan. We believe that sharing this information as part of the plan update process would be more meaningful, and also garner more attention, than if the report were submitted as a standalone consent agenda item. A report on 2016 MAP progress will also be linked in social media or a press release when the updated MAP is released.

The extreme heat wave, wildfire, smoke, and winter storm events Portland has experienced over the past year have heightened public awareness of natural hazard risks, and generated interest in both the City and County natural hazard

mitigation plans. The plans have been referenced by the media (e.g. [www.wweek.com/news/city/2021/07/14/this-is-the-hottest-place-in-portland/](http://www.wweek.com/news/city/2021/07/14/this-is-the-hottest-place-in-portland/)) and there may be greater than usual media interest in the MAP update process.

**3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:**

Of the 162 action items included in the strategy, twelve percent have been completed, fifty-eight percent are either ongoing or underway, and about thirty percent are stalled or not reporting. The following graph provides an overview of implementation status.



Please see the attached spreadsheet, “510 Portland MAP 2021 annual report,” which describes the status of each individual action item, as well as lists answers to the following questions:

- What was accomplished since the last status report?
- What obstacles or problems did the action encounter?
- If uncompleted (in progress, stalled), what were the barriers to implementation (e.g. lack of funding or support, staff availability, etc.)?
- If uncompleted, should the action be included in the updated mitigation plan? Why or why not?
- If completed, did the action have intended results? Did it achieve its goals? What factors contributed to its success?
- Other comments?

**4. Discuss why any objectives were not reached or why implementation is behind schedule:**

Please see the attached spreadsheet, “510 Portland MAP 2021 annual report,” which describes why particular action item objectives were not reached or implementation is behind schedule.

Many of the action items that made no progress or are stalled are lacking adequate staff or funding to carry forward. A handful met with political obstacles or stakeholder opposition. The Mitigation Action Strategy includes a mix of funded and unfunded actions, actions that are resourced and those that are aspirational. This integrated approach demonstrates the City’s material commitments to reducing risk, as well as its commitment to growing resiliency efforts. In addition, many actions are ongoing, long-term programmatic commitments (e.g. managing invasive species on public land to reduce wildfire risk). Because the City takes this aspirational and long-term approach, it should be expected that only a portion of projects will be completed in any given year.

**5. What are the recommendations for new projects or revised recommendations?**

No new projects were put forward this year for inclusion in the 2016-2021 plan because the City is currently in the process of identifying new action items for inclusion in the forthcoming updated plan. The report makes recommendations for revising and carrying forward many incomplete or ongoing action items into the next plan.

**Attachments:**

510 Portland MAP 2021 annual report spreadsheet

Number	Action Description	Lead Agency	Hazards Addressed	Reporting Contact	Status - 10/2021	What was accomplished since the last status report (1/2021)?	What obstacles or problems did the action encounter?	If uncompleted (in progress, stalled), what were the barriers to implementation? (e.g. lack of funding or support, staff availability, etc.)	If uncompleted, should the action be included in the updated mitigation plan? Why or why not?	If completed, did the action have intended results? Did it achieve its goals? What factors contributed to its success?	Other Comments
BDS-1	Increase the responsiveness of the emergency permitting procedures for post-hazard event periods through development of procedural plan that considers equity implications.	Bureau of Development Services	All Hazards	Anne Castleton	Ongoing/stalled	BDS has made progress on the equity side (there is a team who work with specific vulnerable populations. We've also interviewed 4+ EQ-prone cities to determine that none of them have an expedited, post-emergency permitting plan.	bandwidth of staff, no examples to learn from	bandwidth of staff, no examples to learn from, no funding to hire dedicated emergency planner	Yes - is will be critical for resiliency and recovery from a catastrophic event that compromises bldgs.		
BDS-2	Enforce codes relating to wildfire, earthquake, flood, and landslide, including Portland City Code (PCC) 24.51 (fire-safe materials), PCC 24.85 (seismic upgrades), PCC 24.50 (local flood hazard mitigation), and develop a publicly accessible landslide code guide in plain language to assist developers in complying with landslide-related building codes.	Bureau of Development Services	Wildfire, Earthquake, Flood, Landslide	Anne Castleton	Complete	Application form for roofing labels was changed to prevent roofing URM's. A slope stability guide was finalized, published, and made available on the BDS website					
BDS-3	Develop an ordinance requiring a covenant to be recorded on the deed for new development in the FEMA special flood hazard area to ensure that space below the base flood elevation (BFE) is not converted to habitable space.	Bureau of Development Services	Flood	Anne Castleton	In progress	BDS is working with BPS on proposed changes to Title 33 and Title 24.50 including a non-conversion agreement for residential and non-residential development. It will require that a non-conversion agreement must be recorded against the deed and must require that work will not be performed to convert or alter what has been constructed and approved such that it is no longer in conformance with the applicable requirements of the chapter. This includes converting spaces below the flood protection elevation into habitable spaces					
BDS-4	Encourage and expand personal, family, and business preparedness plans and programs.	Bureau of Development Services	All Hazards	Anne Castleton	Ongoing/in progress	Active Shooter training, personal preparedness competition, presentations,					
BDS-5	Make information about floodplain zones available to residents when applying for permits.	Bureau of Development Services	Flood	Anne Castleton	complete	Public can do a property search on Portland Maps, BDS has FEMA maps loaded in					
BDS-6	Implement recommendations from the City's Unreinforced Masonry (URM) Work Group.	Bureau of Development Services	Earthquake	Anne Castleton	stalled	more community outreach, new committees, no political will to move this forward					
BDS-7	Continue to coordinate with Multnomah County Drainage District (MCDD) to review permit applications for development near levees; if a permit is requested for development within the "levee review area", submit the application to MCDD to review and if necessary work with developer to revise plans to meet United States Army Corps of Engineers (USACE) requirements for development on or near federal levees.	Bureau of Development Services	Dam Failure, Flood	Anne Castleton	In progress	A process was established with MCDD and it is working relatively smoothly according to Mindy Weimer (the MCDD contact). MCDD is working to finalize an interagency agreement with the City bureaus to formalize the review arrangement and give it the force of law on the development side					
BDS-8	Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.	Bureau of Development Services	Flood	Anne Castleton	Ongoing	BDS continues its support of this program					
BES-1	Continue to implement actions in the 2005 Portland Watershed Management Plan.	Bureau of Environmental Services	Erosion, Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This plan describes the approach the city uses to evaluate watershed conditions and implement projects to improve watershed health. It continues to provide the framework for many bureau programs and projects.	No major obstacles.	This is an ongoing action as the plan provides a framework for the bureau's watershed work. COVID-19 and other emergencies temporarily slowed some of the work in mid-2020.	As written, this is an ongoing action that is hard to measure. Recommend the action be reframed or removed in the plan update.	N/A	N/A
BES-2	Engage with the electric utilities to negotiate prioritizing the return of power to treatment plants (Tryon Creek and Columbia Boulevard), collection system active controls and pump stations.	Bureau of Environmental Services	Earthquake	Nishant Parulekar, Kate Carone	Complete	The action was completed prior to the previous status report.	N/A	N/A	N/A	Yes	N/A
BES-3	Complete the BES Resiliency Plan to identify vulnerabilities in the sanitary and combined sewer collection system.	Bureau of Environmental Services	Earthquake	Nishant Parulekar, Kate Carone	Completed	The BES Resiliency Master Plan was completed in March 2019. In March 2020 a Resiliency Team was staffed and began implementing plan recommendations	The plan took longer than expected to complete due to staffing changes.	N/A	N/A	The plan was completed as intended and is serving as a roadmap for building bureau resiliency to seismic and climate change risks. Partnerships were integral to successfully completing the plan	N/A
BES-4	Continue BES' land acquisition program to protect or enhance water quality, hydrology and habitat. Consider the presence of floodplain and steep slopes in the program's criteria. When properties are purchased, remove structures and place deed restrictions to limit to open space uses, to protect them as natural resource areas or other green infrastructure in perpetuity.	Bureau of Environmental Services	All Hazards	Nishant Parulekar, Kate Carone	Ongoing	Approximately 34 acres have been purchased under BES' land acquisition program since the last report.	Property owners in areas of interest not always interested in selling and/or BES can't get to agreement on purchase price.	This is an ongoing activity.	This is an ongoing action and should be included but reframed in the updated plan. Recommend combining it with action item BES-6.	N/A	More than 250 acres have been purchased, protected and restored in the Johnson Creek watershed alone since the Willing Seller Acquisition Program began in the late 1990's. Most purchased properties were located in the floodplain.
BES-5	Develop permitting and policy tools to offset impacts of floodplain development with mitigation on sites that increase flood storage and enhance ecological functions, consistent with new floodplain regulations	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	City adopted South Reach Plan, which for the first time allows offsite mitigation banking for development in the floodplain in one section of the city, and increased the mitigation requirements. A citywide approach will be	Coordinating with other mitigation drivers including Portland Harbor Superfund cleanup effort, and negotiating with private property owners over mitigation sites	The City is making good progress on this action, it just isn't yet complete.	Yes, it should be included, and is expected to be complete in 2023.	N/A	N/A
BES-6	Continue to fund the Johnson Creek Willing Seller Program to reduce the risks of flooding, while improving natural floodplain conditions in the watershed.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Johnson Creek Willing Seller Program has continued to be funded to purchase properties in the floodplain, over \$1.4M in this reporting period.	Property owners in areas of interest not always interested in selling and/or BES can't get to agreement on purchase price.	This is an ongoing activity.	This is an ongoing action and should be included but reframed in the updated plan. Recommend combining it with action item BES-4.	N/A	More than 250 acres have been purchased, protected and restored in the Johnson Creek watershed alone since the Willing Seller Acquisition Program began in the late 1990's. Most purchased properties were located in the floodplain.
BES-7	Continue to partner with United States Geological Survey (USGS) to maintain and improve river and stream gauges in the Portland metropolitan area.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	We finalized a new 5-year contract (2019-2024) with USGS and others to continue to co-fund gages on the Willamette, Johnson Creek, Tryon Creek, Fanno Creek, and even added a gage on Crystal Springs Creek	No major obstacles.	N/A	This is an ongoing action and should be included but rewritten to have a discrete ending/goal.	N/A	N/A



BES-8	Continue to provide publicly accessible information on landscaping techniques that reduce water run-off.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	This work continues to be ongoing through signage at project sites throughout the city, BES website, printed materials, events, grants, and especially through partnerships with watershed councils and soil and water conservation districts.	Physical distancing during 2020 in response to COVID-19 drastically reduced in-person outreach and information sharing by BES and partners who help deliver these messages.	This is an ongoing action. The cancelling of in-person events in 2020 was a barrier to sharing these messages with some populations, but other forms of outreach did continue.	This is an ongoing action and should be included but reframed in the updated plan to have concrete goals.	N/A	N/A
BES-9	Design and conduct a study to determine the effectiveness of maintenance agreements that require homeowners associations to manage vegetation in open space tracts when new land divisions are approved.	Bureau of Environmental Services	Wildfire	Nishant Parulekar, Kate Carone	Stalled	A group was convened to discuss feasibility of this project. There was general interest, but the project was set aside primarily due to lack of staff capacity. There is potential for this to move forward in the future, but not in the immediate term.	There were several challenges. First, the impacts of the problem are dispersed among several city entities and external partners, and didn't feel as urgent as other work. Second, solutions would need to be very collaborative, and logistics of organizing and staffing was beyond anyone's ability to take on.	Staff availability was primary barrier, with funding for consultant and partner work a secondary factor.	Recommend omitting this from the updated plan. There isn't capacity at this time and the problem is more of an O&M issue than a hazard-centered issue.	N/A	N/A
BES-10	Update the Stormwater Management Manual on a regular basis to incorporate best management practices, address development-related issues and work effectively with natural hydrologic conditions.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Complete	The SWMM is updated on a regular basis. Completed the most recent SWMM update in 12/2020.	No major obstacles.	N/A	The most recent version of the manual, published in December 2020, is complete. BES updates this manual regularly. The action could continue to be included in the plan, but the utility of that inclusion should be considered during the NHMP update.	The stormwater management manual provides standards for development so it will be months to years before we will be able to observe facilities designed to these standards in operation. So far, the manual has been received well by users because of improvements to language clarity and technical guidance.	N/A
BES-11	Investigate design approaches for effectively managing stormwater in landslide-prone areas.	Bureau of Environmental Services	Landslide	Nishant Parulekar, Kate Carone	In progress	Through Risk Assessment work, BES collaborated closely with landslide experts from OR DOGAMI, PSU and BDS. We were able to identify areas where landslide risks exist and where those risks overlap with areas where BES' stormwater systems are deficient, or where we lack service, system or runoff if not otherwise managed. As part of the Resiliency Master Plan, BES identified pipe materials that are more resilient to landslides.	No major obstacles.	BES has identified where there is greater risk, and mitigation options for piped stormwater systems. Bureau staff are still struggling with integration across systems and understanding how to incorporate mitigating landslides into their work. We tend to remain in a narrow focus of "system" still with little understanding of how to deal with or acknowledge risks either being imposed on our system of focus or unintended risks created by our work in our system. We may need more education and better understanding of these issues for staff that are making these decisions to move forward with looking at the broader view of integration.	Consider reframing action to address underlying issues of education, standards and integration of thinking across systems to be better prepared for infrastructure rehab and development in landslide prone areas.	N/A	N/A
BES-12	Continue the City's vegetation management, public education programs, and partnerships with watershed councils and the soil and water conservation districts to prevent erosion along streams and rivers.	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	Ongoing. BES has continued to restore and manage riparian zones on BES-owned property. BES has continued to fund all local watershed councils, which work with private property owners to restore riparian areas. BES Clean River Rewards education program did field programs with more than 4,000 students.	The COVID-19 emergency briefly slowed down field work in mid-2020 and halted in-person education programs.	This is an ongoing activity that could always benefit from additional staff capacity.	This is a collection of ongoing activities. Framing of this action should be reconsidered to make it more measurable and material to hazard mitigation.	N/A	N/A
BES-13	Continue to implement projects that retain native vegetation, increase vegetation diversity and increase the complexity of the vegetation strata (having at least three vegetation strata: herbs, shrubs, trees).	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	Planting of 56,403 native tree and shrub seedlings in BES-owned natural areas, and initiation of habitat enhancement work on 57 new acres of natural area in 2019 and 2020.	No major obstacles.	This is an ongoing action.	This is an ongoing action that should be reframed to make discrete from BES-19.	N/A	N/A
BES-14	Continue to implement City restoration projects that increase large wood and root wads, which soften the effect of wave action on shorelines as well as provide habitat for migrating salmonids.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Oaks Bottom restoration project was completed, reopening and restoring 75 acres of wetland habitat for migrating salmon and other wildlife. The Luther Road Phase II project was also completed, adding large wood and root wads along 2,000 feet of Johnson Creek.	These floodplain restoration projects were complex, expensive, and required extensive partnerships to accomplish. Both projects had significant logistical construction challenges and disrupted transportation on a major transportation trail.	This is an ongoing activity.	This is an ongoing activity. Consideration should be given to whether individual projects should be listed as opposed to lumped in one action item.	The two projects completed during the reporting period are being monitored closely and are exceeding design expectations.	N/A
BES-15	Support Early Detection and Rapid Response to control invasive plant and insect populations that threaten forest infrastructure.	Bureau of Environmental Services	Landslide, Wildfire	Nishant Parulekar, Kate Carone	Ongoing	The city is managing 13 species for eradication, one species for containment, and closely watching five additional species.	No major obstacles.	This is an ongoing action. Additional funding would expand the extent of this work, but work is proceeding as planned.	Recommend retention of this action. Consider expanding to include control of invasive species populations.	N/A	N/A
BES-16	Explore options to acquire rights of first refusal (ROFR) for properties that become non-conforming uses in the floodplain due to changing regulations. Right of first refusal would be exercised when properties are substantially damaged by a flood event. Consider establishing an acquisition fund for these properties that amortizes the cost of acquisition over decades.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Stalled	Have done some initial analysis and identified a residential area that would be a good candidate for this tool if it were developed. Acquisition would be good fit for BRIC funding.	Lacks momentum due to competing priorities within the organization.	The project lacks a champion in our organization.	Yes, consider including some version of this action in the next plan update.	N/A	N/A
BES-17	Complete the Stormwater System Plan, including strategies to reduce risks related to runoff in areas at risk of natural hazards.	Bureau of Environmental Services	Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This effort is described as completion of the plan but this is a long term, ongoing, continuous planning process, in which we will identify high risk areas and prioritize them for further detailed study to develop appropriate projects, programs, and policies to reduce risk related to stormwater. The first version of the SWSP Risk Assessment identified areas of risk where stormwater is not likely being managed.	Through the planning process, we shifted approach from producing a standalone plan to a set of tools and criteria for categorizing and prioritizing risk. Additional action beyond the risk assessment didn't happen. Our next priorities are to develop and refine our risk assessment process to better define risks.	Policy will likely come out of the process of examining solutions to the risks identified. Implementation or development of risk mitigation strategies has also stalled due to lack of resources, COVID and recent bureau reorganization.	Something related to this action should be considered for inclusion in the updated plan. It will require a conversation within the Bureau to agree on where the policies should be identified and where policy could/should be developed or	N/A	N/A
BES-18	Continue to implement green infrastructure projects and natural area restoration projects identified in BES' watershed management plans and system plans.	Bureau of Environmental Services	Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This is ongoing work. Many projects under various programs have been completed including green street construction, tree planting, culvert replacements and floodplain restoration.	Building equity considerations into green infrastructure planning and implementation is underway.	This is ongoing work. The COVID-19 temporarily slowed work in mid-2020.	This is a collection of ongoing activities. Framing of this action should be reconsidered to make it more measurable and material to hazard	N/A	N/A
BES-19	Partner with community groups and residents to plant trees and revegetate natural areas and open spaces to improve local hydrology and stormwater management and to promote resiliency of and equitable benefits provided by the urban forest.	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	The BES Tree Program worked with community groups and property owners to plant 3,909 street trees and 1,966 private property trees in 2019 and 2020.	COVID has resulted in some changes to work schedules and management practices, but has not generally impeded progress on projects. No other significant obstacles.	N/A	This is an ongoing action that should be reframed to make discrete from BES-13.	N/A	While numerous management actions have been implemented, most habitat manipulation projects are not "complete"
BES-20	Support Multnomah County Drainage District (MCDD) in their continued calibration and update of hydraulic models for conveyance and internal flood impacts to the four floodplains managed by MCDD #1.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	Completed 75% of the work as part of Master Drainage Plan development. Pen2 Master Drainage Plan is complete; MCDD Master Drainage Plan is complete; Pen1 Master Drainage Plan is in progress, and should be complete by the end of the fiscal year.	N/A	The drainage districts have dramatically modernized their processes over the last five years. Building that capacity and securing funding has taken time.	It is expected that this action will be complete before the next NHMP update is finalized, so recommend not to include.	N/A	This work is expected to be complete by summer 2022.
BES-21	Provide technical assistance to support Multnomah County Drainage District in conducting flooding impact studies from levee failure and develop a risk assessment using the updated general building stock, critical facility and demographic information developed for the hazard mitigation plan.	Bureau of Environmental Services	Flood, Dam Failure	Nishant Parulekar, Kate Carone	Complete	This was done as part of the broader Levee Ready Columbia effort. DOGAMI was contracted to do the work and it was completed by 2019.	The project required creative funding through partnerships.	N/A	N/A	The results of this project went above and beyond expectations. As a result, a strong regional coalition was formed that is carrying this work forward.	N/A
BES-22	Work with the Federal Emergency Management Agency (FEMA) to remap all City of Portland streams to identify changes in peak flows and flood extents due to climate change.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	We are currently working with USACE for Willamette and Columbia River remapping of flood risk. Initial analysis of Johnson Creek flood risk was stalled but is restarting.	Other higher priority areas within the country that have greater risk or less accurate existing mapping stalled our ability to begin Willamette and Columbia remapping.	Funding and staff capacity	The action should be included in the updated plan.	N/A	N/A
BES-23	Where feasible, cost effective and supported both publicly and politically, restore the natural and beneficial floodplain functions of appropriate floodplains within the City. For this action, appropriate means a floodplain that has been identified through a master plan or study certified by a qualified agency.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Oaks Bottom restoration project was completed, reopening and restoring 75 acres of wetland habitat for migrating salmon and other wildlife. The Luther Road Phase II project was also completed, adding large wood and root wads along 2,000 feet of Johnson Creek.	This floodplain restoration project was complex, expensive, and required extensive partnerships to accomplish. There were significant logistical construction challenges and construction disrupted transportation on a major transportation trail.	This is an ongoing activity.	This is an ongoing activity. Consideration should be given to whether individual projects should be listed as opposed to lumped in one action item.	The project completed during the reporting period is being monitored closely and is functioning even better than expected.	N/A

BPS-1	Promote and fund energy independence projects in low-income neighborhoods and communities.	Bureau of Planning and Sustainability	All Hazards / Earthquake	Andria Jacob	Stalled	The R2P2 group came up with a prioritization of sites for solar + storage based on the BEECN program and well as the mass shelter program from Mult Co. Several options were investigated with little success. There is a lack of funding and no real understanding of how important battery back up storage could be. Lots of education needed.	The obstacles are largely resource-related. BPS staff time is less available to coordinate R2P2. Leadership has not prioritized this and for real progress to be made, it needs to become more than just my personal passion project. We also were not able to cultivate champions at the facilities where these would be installed (i.e. the mass shelters) and the installations themselves are expensive, with no clear funding source.		For updated plan, we should have one action related to energy resilience (solar + storage.) I think it's really important work, but it should not be 3 separate items. I'd be happy to workshop those into a single action for the update.		
BPS-10	Develop an emergency service plan for solid waste removal in multifamily properties after a disaster event.	Bureau of Planning and Sustainability	All hazards / Earthquake	Peter Chism-Winfield	Stalled	No formal plan submitted since 2014. BPS provided feedback to PBEM plan listed on website.	Not sure, was unable to recover this information because of staff turnover.	Stalled, staff turnover and no reallocation of resources.	Yes		Metro has begun the process of gathering information to restart disaster preparedness. They are looking to hire a coordinator and begin formal planning meetings in July 2021. BPS staff is involved with this current effort.
BPS-11	Develop recommended policies, regulations and/or landscape options for areas at risk from wildfires.	Bureau of Planning and Sustainability	Wildfire	Peter Chism-Winfield	In progress	The report back for BPS-19 is adequate for BPS-11 as its focus is the same project. The Ezone Map Correction Project is currently at the Planning and Sustainability Commission with anticipate recommendation in spring 2021. City Council hearings are planned for fall 2021, with a desired implementation in early 2022.	COVID-19 postponed wetland determinations for one year. This stalled the entire project.	The bulk of the work is staff being on private properties to verify the location of natural resource features. All site visit work was delayed with none occurring March – June 2020 due to COVID-19. While site visits could resume in June 2020, the season had passed for perform wetland determinations. Wetland determinations require water to be present and are only performed in the wet season. Thus wetland determinations were postponed for a full year.			
BPS-12	When possible, build mitigation and resiliency education into bureau public events and outreach (e.g., neighborhood meetings, Fix-It Fairs).	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger, Sallie Edmunds	Completed (but work is ongoing)	Through a partnership with PBEM and the NET program, staff and NET volunteers table and present a workshop at each of three Fix-It Fairs every year. Since October 2018, we have tabled six events, gave six in-person presentations, and about 3,500 people have attended each fair. PBEM and NET has a large and visible presence, and is a popular exhibitor. We have also continued this effort through the pandemic, combined with a personal/community resilience element care of Civic Life.	Just needed to establish and institutionalize the relationship.		Yes. There's obviously a desire for hazard resilience-related information and resources in the community. The more avenues people have to access these things, the more successful they will be. The Fix-It Fair provides kind of a one-stop shop for information and resources on City programs, so it captures Portlanders interested in all sorts of things – many of whom don't COME for the resilience resources, but are happy to have them when they're there.		
BPS-13	Develop incentives and regulations that promote, encourage and/or require seismic retrofits of private property (such as multi-family, masonry structures). This action needs high-level support from City Council and Office of Government Relations (OGR).	Bureau of Planning and Sustainability	Earthquake	Troy Doss	Completed						
BPS-14	Identify ways to encourage, promote or require U.S. Resiliency Council Certification for new public buildings. This action needs high-level support from City Council and Office of Government Relations (OGR).	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Should not be a BPS item as they involve political decisions that the City Council would need to take on and be a lead on.					
BPS-15	Prioritize retrofitting of structures along emergency transportation routes.	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Should not be a BPS item as they involve political decisions that the City Council would need to take on and be a lead on.					
BPS-16	Use updated floodplain data and maps, including potential climate change scenarios, to inform City and County land use, transportation, and other infrastructure planning processes.	Bureau of Planning and Sustainability	Flood, Severe Weather	Jeff Caudill	In progress	This is something that will be completed as a part of a multi-year effort to update floodplain regulations and incorporate new flood maps as they become available. BPS updated floodplain regulations for the southern portion of the Willamette River as a part of the River Plan / South Reach, which was adopted in December 2020. This effort incorporated guidance from the FEMA National Flood Insurance Program (NFIP) Biological Opinion for Oregon. Similar updates are currently underway for other portions of the city.	Updated mapping of floodplains by Federal agencies, including FEMA and the Army Corps of Engineers, to incorporate climate change has taken longer than expected but efforts are underway. As those updated maps are made available, the City will incorporate them into its regulatory maps and regulations will be updated to address newly-identified floodplain areas.	The City has been expecting to take an approximately 5-year, phased approach to the update of floodplain regulations. Individual phases take time to address. BPS is in the middle of this work now.	This action should remain in the updated mitigation action plan. This is important work for reducing flood risk for those that live and work in the city's floodplains and will contribute significantly to the City's ongoing efforts to restore habitat for the endangered and threatened salmon and steelhead species that utilize Portland's rivers and streams.		
BPS-17	Encourage or require private property owners and developers to limit or reduce impervious area at citywide, watershed, site-specific and district scales.	Bureau of Planning and Sustainability	Flood / Severe weather	Mindy Brooks	No progress	There was no specific progress made. However, the Residential Infill Project did retain limits on development area while allowing additional units. Morgan Tracy (BPS) is			I have long wanted to do a project that put impervious surface limits in the hills where there is landslide hazard		This item is not a specific project, but rather a goal that can get incorporated
BPS-18	Provide safety training for day laborers, protect workers' rights, and collaborate with Voz to provide a safe place to locate day laborer services to encourage employment of local day laborers for post-disaster reconstruction and recovery. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All Hazards	Alisa Kane, Jonna Papaefthimiou	Stalled	No progress has been made	A difficult project due to lack of resources, time, and the inability to build a cohesive curriculum	The language in the plan below is for more than just a training. The conversation was about the City creating more formal connections with Voz so that when disaster hit they were ready to mobilize. As it says below, it would take a good	Yes as we could potentially broaden the scope of the project to more than just training/education		
BPS-19	Update the environmental overlay zone, codes and maps to reflect best available science and the location and extent of risks associated with natural hazards in Portland	Bureau of Planning and Sustainability	All Hazards	Daniel Soebbing	In progress	The Ezone Map Correction Project completed work at the Planning and Sustainability Commission in September 2021. City Council hearings are planned for early 2022, with a desired implementation of July 2022.	COVID-19 postponed wetland determinations for one year.	The bulk of the work is staff being on private properties to verify the location of natural resource features. All site visit work was delayed with none occurring March – June 2020 due to COVID-19. While site visits could resume in June			
BPS-2	Plan for solar + battery storage systems, which can serve as mini power-supply stations or provide residents the ability to shelter in place after any electricity supply-disrupting event, at varying scales (project, neighborhood and district) and locations (critical City facilities, low-income housing, community gathering spots).	Bureau of Planning and Sustainability	All Hazards / Earthquake	Andria Jacob	Stalled						
BPS-3	Encourage solar + battery storage demonstration projects at critical City facilities, in low-income neighborhoods and in other strategic locations.	Bureau of Planning and Sustainability	All hazards / Earthquake	Andria Jacob	In progress	Fire Station 1 solar + storage went live at the end of 2019! The big success story is Fire Station 1; PF&R has some great drone footage and story-telling about this project.					
BPS-4	Explore ability to waive System Development Charge (SDC) for change of use if money will be spent on seismic retrofit.	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Action is a political decision that the City Council would need to taken on and be the lead on					
BPS-5	Adopt Portland's Comprehensive Plan to address Citywide policies, land use improvements and mapping changes related to natural hazards. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger	Completed						

BPS-6	Support Comprehensive Plan policies and projects that relate to resilience, climate change and natural hazard mitigation, response, adaptation and recovery. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger	Completed						
BPS-7	Support 2015 Climate Action Plan and Climate Change Preparedness Strategy actions that relate to adaptation planning and natural hazard mitigation actions.	Bureau of Planning and Sustainability	All hazards	Sallie Edmunds	Completed	South Reach JEFF: Developed and adopted the River Plan/South Reach, which established a new vision for the area, applied new regulations that respond to climate change, better protect natural resources and reduce flood risk, and included an action plan that identified a number of actions by the City and community partners needed to achieve the 20-year vision. Tree Code JEFF: The City recently completed a minor update of the Tree Code. Removed three of the four existing industrial and commercial zone exemptions. This will increase the number of properties in the city that must meet Tree Code requirements for tree preservation and planting.	South Reach JEFF: No significant obstacles (other than COVID-19 delaying the process a bit). Tree Code JEFF: The need to ensure adequate land capacity for industrial land did not allow for the removal of the exemption for the Heavy Industrial (IH) zone.			South Reach JEFF: The River Plan/South Reach achieved its goals through addressing a variety of issues within the planning area, including climate change preparation, environmental protection and restoration, expanding access to water- and land-based recreation access and improving neighborhood connections to the river. Generally, there was broad support from the community for the proposed changes. Tree Code JEFF: The amendments will result in increased tree canopy in commercial and industrial zones. There was huge public support for the amendments but legal constraints resulted in adoption of a narrower set of amendments.	
BPS-8	Consider natural hazard mitigation in the development of the River Plan.	Bureau of Planning and Sustainability	All hazards / Flood		Not Reporting						
BPS-9	Develop an emergency resumption of service plan for solid waste removal after a disaster event.	Bureau of Planning and Sustainability	All hazards / Earthquake	Peter Chism-Winfield	Stalled	BPS COOP was updated in 2019 with contact information for staff involved.	Not sure, was unable to recover this information because of staff turnover.	Stalled, staff turnover and no reallocation of resources.	Yes		
CAMG-1	Advocate for bureaus to consider seismic and landslide risk when developing capital improvement plans, including plans to replace water and sewer infrastructure.	City Asset Managers Group	Earthquake, Landslide	Jonna Papaefthimiou	In progress (almost completed)	Policy completed and intended to be presented to Council this spring - almost done.					
CAMG-2	Use NHMP critical facilities risk assessment data to establish mitigation priorities for city assets.	City Asset Managers Group	All Hazards	Jonna Papaefthimiou	See previous.						
CAMG-3	Ensure that every Bureau has inventoried critical assets and reviewed critical infrastructure vulnerability and has identified a 50-year plan to strengthen, retrofit, relocate or otherwise increase resiliency. Consider ways to promote city-wide collaboration.	City Asset Managers Group	Earthquake	Jonna Papaefthimiou	In progress... slowly	CAMG and DRRAG are both moving in this direction but its a group process and progress is incremental.					
OEHR-1	Prior to and during implementation, review all actions for negative externalities and to ensure vulnerable populations are protected from displacement or other disproportionate burdens.	Office of Equity and Human Rights	All Hazards	Nickole Cheron	Completed	This action was to review the plan and did not include follow-up reviews of any subsequent updates.	None			This action was to review the initial plan to ensure it was compliant with Civil Rights Laws and inclusive of the communities those laws protect. To my knowledge there have been no complaints on the plan or the actions from the plan.	
OMF-1	Participate in Oregon Solutions project to recertify Multnomah County Drainage District (MCDD) levees.	Office of Management and Finance	Flood	Nancy Hendrickson	Completed	The OS project is over and was completed as written in the plan. It is now called Levee ready columbia--15 partners (Cities, County Metro Port). A regional partnership. This partnership has contributed money and worked with the legislature to get money to get an IFA (infrastructure loan)--The city backed one and a county another to do an assessment of the levees that needed to be done for recertification--this looked at hazard mitigation climate change etc. This is an active partnership. This team managed to get legislation passed at the state level to consolidate the four drainage districts into one. It happened quickly, there is now a 3-5 year process that is					
OMF-2	Partner with agencies to develop an emergency operations center on the west side of the Willamette River. This action needs high-level support from City Council.	Office of Management and Finance	All Hazards	Aaron Beck	Stalled	Development of the Sears site into a west side emergency operations center is temporarily paused pending continued work on a citywide Long-Range Facilities Master Plan. No work has been accomplished since the last report.	Continued work on developing a master plan were also stalled pending site assessment for use by Fire Bureau.	Barriers are primarily the lack of funding to complete the next phases of a Long-Range Facilities Master Plan.		The action should continue to be included in the plan because the City must use the site consistent with the deed where the federal government transferred the property to the City for primarily emergency preparedness and response use, otherwise the property will revert back to the federal government. There is definitely bureau interest in the property - but not enough to commit scarce bureau resources.	N/A
PBEM-1	Continue to engage and inform the public about hazards, including through a "disaster survivor" storytelling event and through postcard mailers sent to every household in Portland with easy-to-understand and graphic-heavy information about hazards and actionable instructions on how to be prepared. Include information about how to register for Public Alerts with all outreach efforts.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Project discontinued	Content was completed in partnership with community groups, but we decided it was a better use of resources to distribute in partnership with community groups rather than mail to everyone.	We just got smarter about equity - reaching "everyone" is no longer the goal.	See previous	No	It would not have and that's why we didn't do it.	
PBEM-10	Work with Office of Neighborhood Involvement (ONI) Disability Program Coordinator to promote participation in the Additional Needs Registry through the Public Alerts system.	Portland Bureau of Emergency Management	All Hazards	Dan Douthit	Ongoing/Stalled	The Additional Needs Registry (ANR) is fully integrated into the PublicAlerts.org sign-up process for Multnomah County/Portland. Overall PublicAlerts promotion has occurred over the past two years, but not specific to the ANR.	It is unclear whether or not the ANR will be continued. Discussions are underway on the alert and warning systems used by the City and the best way to reach the community in an emergency.	The Office of Neighborhood Involvement (now known as the Office of Community and Civic Life) is not necessarily in a position to provide leadership to the ANR. This could impact the future of the program.		Consider dropping PBEM-10. I'm not certain the Civic Life office is in a position to continue leading this item, and PBEM does not necessarily have the capacity to take it on. I recommend the stakeholders involved convene a meeting and consider the future of the capability. There are other options to explore other than maintaining the registry.	
PBEM-11	Support Bureau of Development Services (BDS) in implementing recommendations from the City's Unreinforced Masonry (URM) Seismic Retrofit Project, including promoting and supporting policies for mandatory retrofits of URM buildings. This action needs high-level support from City Council and Office of Government Relations (OGR).	Portland Bureau of Emergency Management	Earthquake	jonna Papaefthimiou	Project discontinued		Zero	Massive opposition from building owners; lack of political will	See previous	No. Nobody wants to touch this.	
PBEM-12	Audit PBEM's suite of plans to evaluate whether plans meet the needs of people with disabilities, people with language barriers, and other access and functional needs populations. Develop a transition plan to update all plans.	Portland Bureau of Emergency Management	All Hazards	jonna Papaefthimiou	In progress (incremental)	Haven't updated any plans since Sarah left	Lack of time / resources	See previous	Yes; still needed		

PBEM-13	Expand ATC-20 damage assessment trainings and certifications to non-city employees to increase pool of qualified post-earthquake building inspectors, including through advertisements to registered Minority, Women-Owned, and Emerging Small Business (MWESB) architecture and structural engineering firms.	Portland Bureau of Emergency Management	All Hazards	Katy Wolf	Stalled	We trained 109 non-City students since 10/2018, offering 2 courses in Nov 2018, and 1 course in Dec 2019.	Did not share widely due to the lack of state program guidance providing inspector deputization authority to non-jurisdictional staff. Ran out of federal UASI grant funds to offer courses. Lack of certified local teachers that can teach the course for free.	Lack of state damage assessment program guidance. COVID-19 interruptions to City and emergency management priorities.	I would say no, because it's a lower priority than meeting more basic goals for damage assessment, which there is already a good plan for – Anne Castleton's grant project.	PBEM passed this responsibility over to the Bureau of Development Services emergency manager Anne Castleton, in 2019. However, as of yesterday her position has been laid off. Those responsibilities have been absorbed by her manager. It is likely that until they rehire the emergency manager position, this program will not make progress. I would recommend that we close this item out, if possible. Its not likely we'll achieve this goal in the next 2-3 years.
PBEM-14	Support Multnomah County Levee District (MCDD) and Levee Ready Columbia in risk assessment and flood response planning efforts.	Portland Bureau of Emergency Management	Flood	jonna Papaefthimiou	No progress	Not engaged	None - just not needed		No	
PBEM-15	Continue to involve the public in updating the MAP, including by establishing a standing committee with community representation to oversee progress reporting and implementation of MAP action items, and oversee annual updates to the MAP. Perform outreach consistent with the MAP Community Engagement Strategy, and ensure reports are written in plain, accessible language.	Portland Bureau of Emergency Management	All Hazards	jonna Papaefthimiou	Stalled	Zero	Staff person left; resolution 37328 made it harder to form advisory groups; unclear whether this is still a good strategy from equity standpoint.	See previous	Uncertain. Seek public feedback.	
PBEM-16	Maintain and promote registration in Public Alerts system, including registration in languages other than English, and improve accessibility of the online interface for languages other than English. Integrate into other public outreach activities.	Portland Bureau of Emergency Management	All Hazards	Dan Douthit	Ongoing	PublicAlerts registration in languages other than English exists as a capability. Some outreach has occurred through local media and community connectors to promote registration by non-English speakers.	Ongoing discussions about how the City and County use alert and warning systems could impact how urgent messages reach non-English speakers.	The COVID-19 pandemic has limited PBEM's ability to make progress on this initiative.	Keep PBEM-16 with caveats and/or potential changes. The City and County need to have a conversation on the best way to issue alerts. Emerging technologies have the potential to shift how we do this.	
PBEM-17	Hire a permanent Continuity of Operations (COOP) Planner to support city bureaus with COOP plan updates and set aside a percentage of time to work with key social services organizations such as food banks and homeless shelters to develop Continuity of Operations Plans.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed	Position filled and functioning	Zero			We are still struggling to "sell" COOP planning to non-profits, but we're in it for the long term so we have time.
PBEM-18	Expand Neighborhood Emergency Team (NET) trainings to include teachers and principals and include information about non-structural retrofits in classrooms.	Portland Bureau of Emergency Management	All Hazards	Jeremy Van Keuren	Project discontinued	We have dropped actively pursuing PBEM-18.				
PBEM-19	Advocate for implementation of Critical Energy Infrastructure (CEI) Hub Risk Assessment recommendations, including establishment of Critical Energy Infrastructure (CEI) Hub Disaster Resilience Workgroup.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Project discontinued (in favor of new strategies)	Initiated study on CEI hub in partnership with MultCo; working on legislative strategies to address risks.	Owner-operators totally disengaged.	See previous	Adopt new strategies instead.	
PBEM-2	Expand the Neighborhood Emergency Team (NET) program into every neighborhood in Portland and expand beyond the neighborhood structure to non-geographic and cultural communities (e.g. immigrant and refugee communities, disability community organizations), and work with Community Engagement Liaisons to provide trainings in languages other than English.	Portland Bureau of Emergency Management	All Hazards	Jeremy Van Keuren	Ongoing	In 2020 we graduated the first Spanish-speaking NET class, in partnership with Verde. The class included 20 trainees. We're preparing to enter a partnership with Rosewood Initiative to set up a class of 50 in historically underserved neighborhoods of East Portland.	Language translation is, naturally, an obstacle. With the immigrant community, we've had obstacles around being able to complete criminal background checks (which is customarily a requirement of our program). As we are a government program, it's important for us to consider that some of the folks we want to serve don't trust the government generally. So, it's been absolutely necessary for us to take the time and attention required to cultivate genuine working relationships and trust with community based organizations we wish to work with.	This is a project that will never reach "completion"...these are goals we'll work on for as long as the program exists.	Yes for PBEM-2. The reason is that it is an ongoing goal and program of NET; it is not a project (a project, by definition, has a beginning and an end).	It's just a little too soon to say what the outcomes will be (or if we'll meet our intended outcome). This is a "long game", after all. We're hoping to mobilize the Spanish-speaking team to assist with vaccine distribution, but that's not yet confirmed.
PBEM-20	Develop a post-disaster recovery plan to guide post-disaster redevelopment that considers hazard exposure and relocation of critical infrastructure outside of high-hazard areas, prioritizes the restoration of natural systems to limit future hazard impacts, and includes whole-community recovery strategies to reduce the potential for involuntary displacement.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	In progress (incremental)	DRRAG continues to meet; little progress on plan.	Lack of time / resources	Also unclear about who should lead this and what the scope should be... made it hard to get going.	DRRAG needs to decide.	
PBEM-21	Increase the City's capacity to establish post-earthquake communication nodes throughout the city after a major earthquake, including through expansion of training and additional communications equipment cache placements for the Basic Earthquake Emergency Communication Nodes (BEECN) program.	Portland Bureau of Emergency Management	All Hazards	Ernest Jones	In progress/ongoing	101 volunteers added to the BEECN roster, 6 BEECN caches deployed (storage spots found), and over 15 BEECN trainings conducted	Finding suitable storage places for BEECN caches remains a significant challenge; but progress continues to be made. Achieving the goal of 500+ volunteers continues to progress; getting the attention of potential volunteers is difficult, especially in historically underserved neighborhoods.	Suitable storage space for BEECN caches is a complicated conundrum that will continue to be a challenge (when two spots are found for BEECN caches, a different spot becomes unavailable and the cache has to find another spot). Finding new ways to reach potential volunteers also takes significant time, especially in historically underserved neighborhoods	I believe the objectives are still sound and worthy of continuing in order to help make Portland a disaster resilient community	
PBEM-22	Develop a Transportation Recovery Plan.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed					
PBEM-23	Develop an emergency communications plan to distribute emergency messages to immigrant and refugee communities in language-appropriate and culturally appropriate ways.	Portland Bureau of Emergency Management	All Hazards	Regina Ingabire	Ongoing	we have developed an intentional and authentic relationships with Community Based Organizations (CBOs) who are embedded in communities, know their culture and language. Through these relationships, we will be able to share and distribute emergency messages to refugee and immigrants' communities. Also, recently, we created a partnership with the Portland Public Schools (PPS) which will allow us to share any emergency or life threatening information to multi-cultural and multilingual communities at least in 7 languages.	the pandemic has slowed and stalled our ongoing community building efforts.	the pandemic has slowed and stalled our ongoing community building efforts.	Its ongoing effort and should be included in the updated mitigation plan.	
PBEM-24	Through a public process with key stakeholders, create an inventory of fossil fuel facilities and infrastructure in Portland that includes characteristics related to seismic safety such as date of construction, construction type, and whether seismic upgrades have been made. This action requires high-level support from City Council.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed	We have a report that was developed but without participation of owner-operators. The next phase of this inventory and assessment is underway.	See previous			
PBEM-3	Expand PBEM's capacity to provide community trainings and partner with the Office of Neighborhood Involvement (ONI), Diversity in Civic Leadership (DCL) program, Community Engagement Liaisons, and Multnomah County programs, as well as Non-Governmental Organizations and community-based programs to connect under-resourced and underserved communities with disaster preparedness, home safety, emergency response, and other training opportunities.	Portland Bureau of Emergency Management	All Hazards	Regina Ingabire	Ongoing	I can say that we have created a Community Resilience Workbook in consultation with Community Based Organizations and this workbook has been used to training our partners including the staff at the Civic Life, Multnomah County community advocates and several community based organizations that served historically underserved communities.	So far, the COVID -19 pandemic has slowed or stalled our community engagement plans.	the COVID -19 pandemic continue to be a challenge to fully achieve these goals.	Why or why not? Yes, the action should be included in the updated mitigation plan to continue building relationships with partners post the pandemic period.	
PBEM-4	Advocate in regional debris planning process for consideration of equity and environmental justice implications of temporary debris storage sites.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Stalled	Regional debris planning stalled	None from City side; unknown on regional side.	See previous	No	
PBEM-5	Support Multnomah County in developing a robust, inclusive, and equitable sheltering plan.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed	Multnomah County completed high quality plan.	None		Yes	
PBEM-6	Support public school districts in developing a prioritization strategy for seismic strengthening of existing schools to facilitate rapid re-opening of schools.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Project discontinued	PPS is not working on this any more. City abandoned URM project.	Lack of resources on PPS side, lack of political will on City side.	See previous	No	

PBEM-7	Remain informed about inter-agency volcano coordination planning to communicate and understand agency roles and capabilities and potential sheltering needs for evacuees.	Portland Bureau of Emergency Management	Volcano	Dan Douthit	Ongoing	Nothing accomplished since 10/2018.	No obstacles or problems. I continue to monitor this issue as new information becomes available.		Keep PBEM-7. It's easy to participate in coordination meetings if any movement occurs on this item. (Dan)		
PBEM-8	Coordinate with owners and operators of key communications infrastructure (i.e. internet and telecom) located in unreinforced masonry (URM) buildings or buildings not designed for the purpose of housing this infrastructure; assess risks to these assets, and develop a strategy that identifies alternatives and funding sources for implementing seismic strengthening projects.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Stalled	Zero	Owner/operators not interested	Lack of political will / not a priority.	No		
PBEM-9	Update risk assessment information about landslides and develop new NHMP action items based on updated 2017-2018 Department of Geology and Mineral Industries (DOGAMI) landslide data and recommendations.	Portland Bureau of Emergency Management	Landslide	Jonna Papaefthimiou	No progress	Zero	Lack of time / resources	See previous	Yes		
PBOT-1	Perform risk assessment of bridges; use findings to develop and prioritize mitigation projects. Ensure equity tools are used in project prioritization.	Portland Bureau of Transportation	Earthquake	Steve Townsen, Cameron Glasgow	Completed	Seismic assessment and prioritization of bridge inventory was completed.	None	N/A	This was already complete. However, there are recommended mitigation projects that need to be pursued. So YES on moving forward to implementation phase in the plan. Wording of the specific objective will change since we are on the implementation portion	N/A	The recommended mitigation projects will now need to be incorporated into planning documents for the potential funding.
PBOT-2	Identify transportation routes likely to be impacted by landslides and identify potential alternate routes based on most likely scenarios. Communicate potential alternate routes with the public, highlighting the fact that routes may change during actual events. Ensure access to this information to those with limited English proficiency, and including seniors and those with disabilities.	Portland Bureau of Transportation	Landslide	Steve Townsen, Cameron Glasgow	Stalled	No progress.	There appear to be too many variables and possible outcomes to complete this task in a meaningful way. When a landslide occurs, traffic control will be placed and site-specific detours will be put in place.	N/A	No	N/A	This mitigation goal will not be completed.
PBOT-3	Design and build facility for PBOT Maintenance Operations that can operate as a Bureau Incident Command Post following a large earthquake. Move existing road clearing equipment to a facility that is not subject to freeway ramp collapse. Engage local community groups, especially communities of color, in design phase and ensure Minority, Women Owned Emerging Small Business (MWESB) contracting meets or exceeds aspirational goals.	Portland Bureau of Transportation	Earthquake	Corey Maciulewicz	Stalled	An initial Master Site Plan was completed (costs identified to be too high).	Costs too high. The City then put a freeze on all Master City Plan work across all bureaus to ensure a citywide review before any single bureau moved forward with plans.	Cost too high. Lack of City approval to move forward doing any more work to lower costs in a modified design.	No, although we still need to look at moving vehicles and equipment out from underneath earthquake-susceptible bridges. This is a difficult one to solve without a new facility, but we can potentially parse out some of our operations to other facilities as they become available.	N/A	This mitigation goal will not be completed.
PBOT-4	Perform drainage assessment and mitigate problem areas of right of way where frequent washouts occur during heavy rains.	Portland Bureau of Transportation	Severe weather	Rich Grant	In Progress	BES engineering staff have evaluated a few areas of concern.	Staffing time to evaluate all areas.	N/A	yes	N/A	
PBOT-5	Continue to convene city landslide group after each major landslide occurrence (including large single landslides or multiple concurrent landslides) to evaluate the city's response and develop lessons learned.	Portland Bureau of Transportation	Landslide	Cameron Glasgow	Ongoing	City continues to convene Landslide Committee during rainy season.	None	N/A	yes		City-developed electronic landslide reporting application for use by bureau landslide coordinators was successfully deployed this year.
PBOT-6	Complete PBOT Transportation Resiliency Plan to identify and prioritize vulnerabilities in the transportation system.	Portland Bureau of Transportation	All Hazards	Courtney Duke	In Progress	Director's Team has ok'd developing a Resiliency plan this calendar year	None.		Yes - this one is in progress for competition by 30 June by a designated team within PBOT and actively being worked March - June 2021.		
PF&R-1	Adopt the national "Fire Danger Rating System" and install the signs at key points in the City.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	In Progress	PF&R and Portland Parks have identified the number and best locations for these signs to be placed. After last year's wildfire season, there is significant public interest in these signs being provided.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	Barrier to implementation was primarily a complete change of chief officer staffing on C shift. Administrative duties are being reassigned and this is included and should be moving forward again shortly. The public education team is now also participating in this project.			
PF&R-2	Convene a standing wildland interface fire technical group to plan for and address wildland urban interface (WUI) hazards.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	This group last met in the fall of 2020 and recognized significant work that needed to be addressed and undertaken in the near term (short to mitem). The significant Oregon wildfire season of 2020 elevated public interest and 3 WUI neighborhoods are going through the Firewise process now with the Fire Marshal's office Public Education team.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	Barrier to implementation was primarily a complete change of chief officer staffing on C shift. Administrative duties are being reassigned and this is included and should be moving forward again shortly. The public education team is now also participating in this project.			
PF&R-3	Act upon all Mitigation Actions outlined in the Wildfire Gap Analysis Report.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	In progress	Significant progress has been made in the WUI Firewise community education. The 2020 Oregon wildfire season elevated the public's awareness of this risk and willingness to embrace the program. The Fuels Mitigation grant and the Firewise program in Linnton were both positive outcomes of the initial efforts.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	COVID 19 Significantly impacted progress. This will gain more traction once again through the coming year.			
PF&R-4	Inventory critical PF&R assets and review critical PF&R infrastructure vulnerability and identify a 50-year plan to strengthen, retrofit, relocate or otherwise increase resiliency.	Portland Fire & Rescue	Earthquake	Louisa Jones, Steve Bregman	Ongoing	The solar and battery storage systems have been installed at the identified locations.	Logistics efforts had to be re-directed to COVID supply, cleaning, and maintenance of all front-line facilities in 2020 which drew significant time and resources away from planning and evaluation for a 50-year facility strengthening program.	While just now being recognized, funding will be a significant barrier going forward after the economic impact of COVID.			
PF&R-5	Require defensible spaces and water turrets around structures in wildfire risk areas	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	These systems are tested inspected and serviced on an annual basis.	Occasionally maintenance issues arise, but otherwise these systems are an integral and important part of wildfire protection for forested interface locations.	None			
PF&R-6	Partner with the Forest Park Conservancy and individual land owners to develop a fire risk reduction plan for Forest Park.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	Despite COVID, the Fire Marshal's Public Education Team has worked to progress the Linnton community towards their neighborhood firewise certification. They have enrolled and initiated efforts in multiple additional communities.	The biggest limitations at this point are time and personnel. This program has quickly gained community support and interest.	This is a time-intensive and recurring process that will continually require maintenance and on-going education.			
PF&R-7	Continue to engage and train Neighborhood Emergency Team (NET) volunteers to assist with mitigation, response and recovery efforts post disaster. Ensure training takes place in ADA-accessible fire stations, Neighborhood Emergency Teams (NETs) perform outreach activities to underrepresented groups.	Portland Fire & Rescue	All Hazards	Louisa Jones, Steve Bregman	Ongoing	PF&R is extremely supportive of this program and intends to remain active as adjunct training and event coordinators.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	PF&R will be working with PBEM staff to identify specific needs moving forward for PF&R to support.			
PF&R-8	Ensure that Additional Needs Registry Data is appropriately utilized and ensure that emergency responders are aware of locations of disabled Portlanders.	Portland Fire & Rescue	All Hazards		Not reporting						
PF&R-9	Perform non-structural assessments and mitigation activities (e.g. anchor bookcases to the wall).	Portland Fire & Rescue	Earthquake		Not reporting						

PP&R-1	Consider known natural hazards on Portland Parks & Recreation (PP&R) owned or managed properties when developing future plans for these properties, to ensure future plans do not adversely alter or modify these hazards.	Portland Parks & Recreation	All Hazards	Katie Dunham	Ongoing	Parks Master Plans include an assessment of known natural hazards as applicable. : This is something we do whenever we develop a site Master Plan	N/A	N/A	Yes, this action should continue to be included as an ongoing goal	N/A	
PP&R-2	Consistent with PP&R management practices and standard operating procedures, allocate funding for management of vegetated natural areas with high wildfire danger, including public and private properties.	Portland Parks & Recreation	Wildfire	Katie Dunham	Ongoing	We allocate funding as available and apply for grants as necessary to assist with management of vegetated natural areas with high wildfire danger. We have a need for additional funding and support for this work.			Yes, this is something we continue to strive to do and would like to use the NHMAP to assist us in getting additional funding and resources to do this work.		
PP&R-3	Conduct systematic reviews of Portland's large, publicly owned, wildland tracts regarding fire safety and ecological health to ensure informed land management decisions.	Portland Parks & Recreation	Wildfire		Not reporting						
PWB-1	Continue to assess the vulnerability of the water system to seismic events and work toward hardening the backbone system.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	Seismic Implementation Plan completed in June 2018, Backbone Isolation Plan completed 2019.	Seismic Implementation Plan completed in June 2018, Backbone Isolation Plan completed 2018/19.	Planning is ongoing and comprehensive	Yes, planning continues	N/A	N/A
PWB-10	Partner with University of Washington to participate in the testing of the Earthquake Early Warning System.	Portland Water Bureau	Earthquake	Kim Anderson	Stalled	Currently planning installation of sensors at Washington Park; sensors installed in Watershed 7/2018.	Installation of sensors at Washington Park and Groundwater discussed. Some existing sensors in Watershed could also be utilized. If City/PBEM will participate, WB will either assist with planned locations, or cancel WB project.	Lack of time or follow-up	Yes, but as part of City-wide PBEM planning; remove lead status from PWB. No for PWB - Lack dedicated staff with time and decision making capacity. Suggest we assist PBEM with City-wide effort.	N/A	N/A
PWB-11	Coordinate with electrical utilities on tree fall mitigation measures to prevent impacts to Bull Run watershed supply.	Portland Water Bureau	Severe Weather	Kim Anderson	Ongoing	ResPro working with PGE, USFS to identify danger limbs/trees for removal or trimming.	ResPro working with PGE, USFS to identify danger limbs/trees for removal or trimming.	This is ongoing	N/A	N/A	N/A
PWB-12	Continue to work in a co-management role with the Oregon Department of Forestry, US Forest Service and local fire departments to respond to and recover from fires in and near the Bull Run watershed.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	ResPro works with these agencies	ResPro works with these agencies regularly; this is ongoing	This is ongoing	Yes, ongoing and necessary	N/A	N/A
PWB-13	Continue to assess the potential impacts of climate change on wildfire in the Bull Run watershed.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	Engaged in collaborative research with regional research institutions on the FireEarth project to assess post-fire erosion and climate change fire risks.	We have a dedicated analyst continuing to study and make recommendations of climate change on the Watershed. Included as part of the Supply System Master Plan, and ongoing.	This is ongoing	Yes, the need is ongoing	N/A	Included as part of ongoing Bull Run Watershed Protection and climate change analysis.
PWB-14	Continue to monitor forest health surveys completed by federal and state agency partners for the Bull Run watershed.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	No Known Action Currently Planned 1/21	ResPro monitors forest health ongoing, including review of USFS reports	Ongoing	N/A	N/A	N/A
PWB-15	Update the Bull Run wildfire evacuation plan.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	Draft still in review as of 1/21	Draft still in review as of 9/11/18	Regularly reviewed	Yes, ongoing. This is updated regularly; 2020 fire season was extreme, need to plan for climate change impacts	N/A	N/A
PWB-16	Identify and prioritize culvert improvements in the Bull Run watershed to manage streamflow and stormwater runoff and reduce risks to water quality and infrastructure.	Portland Water Bureau	Flood	Kim Anderson	Ongoing	Hamilton Creek currently in Design. Culverts in the watershed are inspected and evaluated for risk and are incorporated into the Bull Run Roads Plan.	In-town culvert replacements occur with BES. FY 2018-19 Planning for culvert replacement at Hamilton Creek, work scheduled for summer 2021 2022. SW 45th at Fanno Creek culvert replacement scheduled for fall 2021. Forest Park and Leif Erickson Dr culvert expected replacement in 2021. 2 culverts removed at Catkin Marsh in 2017. Culvert cleaning and maintenance in the watershed is ongoing.	Ongoing	Yes, future planning will occur	N/A	N/A
PWB-17	Continue to assess the potential impacts of climate change on flooding in the Bull Run watershed.	Portland Water Bureau	Flood	Kim Anderson	Ongoing	Included as part of the Supply System Master Plan, and ongoing. Included as part of ongoing climate resiliency program work. Engaged in collaborative research with Portland State University to assess climate model projections for extreme storm events over Bull Run and potential impacts on flooding and turbidity.	Included as part of the Supply System Master Plan, and ongoing	Ongoing	Yes, this need is ongoing and developing	N/A	N/A
PWB-18	Continue to assess the potential impacts of climate change associated with drought in the Bull Run watershed.	Portland Water Bureau	Drought	Kim Anderson	Ongoing	Included as part of the Supply System Master Plan, and ongoing climate resiliency program work. Completed an analysis for the Supply System Master Plan on future water supply availability that incorporated climate model projections of future drought and water supply stress.	Included as part of the Supply System Master Plan, and ongoing	Ongoing	Yes, ongoing	N/A	N/A
PWB-19	Perform seismic/dynamic analysis of Bull Run watershed bridges.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planning to begin in FY 2022-23 (PWB Seismic Implementation Plan)	Planning to begin in FY 2022-23 (PWB Seismic Implementation Plan)	Future Planning	Yes, ongoing	N/A	N/A
PWB-2	Install remote operating valves to isolate existing river crossings.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan	Planned for future	Yes, planning will occur in the future	N/A	N/A
PWB-20	Continue to implement with the USFS the Portland Water Bureau (PWB) transportation system management plan for emergency and fire access in Bull Run Watershed.	Portland Water Bureau	Wildfire	Kim Anderson	in progress	Reviewed as part of annual Bull Run Roads Plan.	Reviewed as part of annual Bull Run Roads Plan.	None	Reviewed	N/A	N/A
PWB-21	Continue to partner with electrical utilities to ensure continuity of electrical service to the City and the Columbia South Shore Well field during power outages	Portland Water Bureau	All Hazards	Kim Anderson	in progress	Discussion with PGE occurred 11/20; more specific needs should be communicated	Exercised 11/12/2020 with PGE and local partners, "Black Sky" Workshop. Collaborated with PGE and had guest speakers. Discussions will continue on electric service expectations and needs.	None	Yes, in progress, not stalled	N/A	N/A
PWB-22	Collaborate with Multnomah County Drainage District and Port of Portland to assess flooding impacts from levee failure, quantify risks, and identify potential mitigation strategies.	Portland Water Bureau	Flood	Kim Anderson	In progress	Coordination meeting with MCDD July 2018; participation in MCDD full-scale exercise 9/25/18	Coordination meeting with MCDD July 2018; participation in MCDD full-scale exercise 9/25/18; need to coordinate/contact MCDD in 2021.	None	Yes. Need to establish regular check-ins with MCDD	N/A	N/A
PWB-23	Make seismic improvements to Columbia South Shore well field and groundwater pump station	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2029-2043 in the PWB Seismic Implementation Plan	Planned for FY 2029-2043 in the PWB Seismic Implementation Plan	Future Planning	Yes, planned for future implementation	N/A	N/A
PWB-24	Install backup transformer(s) at Groundwater Pump Stations to reduce vulnerability to power outage.	Portland Water Bureau	All Hazards	Kim Anderson	stalled	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	This recommendation is not the right solution, need to consider other options	No. This recommendation is not the right solution, need to consider other options	N/A	N/A



PWB-25	Investigate well treatment options to increase existing well capacity.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study completed July 2018, no action planned at this time.	Follow-up study not completed, implementation memo and recommendations will be developed following completion of the study.	This planning scheduled for 2023/24	Yes. Study and recommendations will be planned in future.	N/A	N/A
PWB-26	Investigate hypochlorite generation at ground water pump station to reduce or eliminate the need for out of area deliveries.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning in FY 20/21	Future planning project, projected schedule for study to be developed in 2021. This will be part of a Groundwater Treatment Study.	None	Yes, will be planned in future.	N/A	N/A
PWB-27	Continue to research ways to balance the needs between fire flow requirements and water quality requirements.	Portland Water Bureau	Wildfire	Kim Anderson	Complete	No Known Action Currently Planned 1/21	Planning memo completed 9/20	None	Yes. Planning memo draft completed in the Fall 2020. Recommendations and training will follow.	N/A	N/A
PWB-28	Coordinate with Fleet and PBOT Maintenance Operations to ensure adequate reserves of diesel fuel and gasoline to support extended operations.	Portland Water Bureau	All Hazards	Kim Anderson	stalled	No Known Action Currently Planned 1/21	No Known Action Currently Planned 10/21	Not sure this is correct solution for fuel	No, not sure this is the right solution for fuel planning. Need to consult with Fleet and PBOT. And plan region-wide.	N/A	N/A
PWB-29	Work with other City bureaus to investigate potential for pre-disaster agreements to provide fuel, shelter, food, water, and sanitary facilities, materials, supplies, equipment, and specialty contractors for City response.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning in FY 2023-2024	Planning in FY 2023-2024. Completed one Mutual Aid Agreement in 2020 - PNEMA - with PBOT taking lead.	Future Planning	Yes, plans for future. This is both a PWB need, and a City-wide emergency planning need.	N/A	N/A
PWB-3	Install isolation valves where distribution system is tied in to backbone.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan. Planning a project identified to complete a long-term plan for isolating the backbone water system. The work that has been completed is an emergency plan that gives a starting point, but does not get into the details of looking at all the backbone valve connections to the distribution system. There is not currently a schedule for this work.	Planned for future	Yes, planning will occur in the future	N/A	N/A
PWB-30	Partner with Multnomah County, Metro, Portland Public Schools (PPS), adjacent school districts, and Portland Parks and Recreation (PP&R) to develop a sheltering plan for city responders and their families.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21; Multnomah County has a sheltering plan for public. Suggest EMSC and PBEM assist to start this process.	None	Yes, need more planning help. Agreement with PBOT to house staff at Interstate. Need to explore this more, have a champion to spearhead this. EMSC PBEM?	N/A	Agreement with PBOT to house staff at Interstate. Need to explore this more, have a champion to spearhead this. EMSC PBEM?
PWB-31	Investigate availability, capacity, contracting and delivery of portable water treatment plants	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Regional planning study on Emergency Water Distribution underway - completion TBD	Planning study on Emergency Water Distribution underway - completion TBD; Internal planning memo completed 3/19. WB Operations designed and built one water treatment trailer in 2020. Will wait for RDPO project for recommendations.	N/A	Yes. Regional study needed for regional effort	N/A	N/A
PWB-32	Investigate availability and use of food-grade quality tank trucks for distribution of water following emergencies.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study on Emergency Water Distribution underway - completion TBD; plans for alternate tank trucks will be considered.	Planning study on Emergency Water Distribution underway - completion TBD; internal planning memo completed 3/19. WB Operations designed and built one water treatment trailer in 2020. Will wait for RDPO project for recommendations.	N/A	Yes. Regional study needed for regional effort	N/A	N/A
PWB-33	Determine number, locations and types of Emergency Water Distribution Systems, and provide location information to the public.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study on Emergency Water Distribution underway - completion TBD; plans for alternate tank trucks will be considered.	Planning study on Emergency Water Distribution underway, completion TBD; plans for locations of water distribution will be discussed. Multnomah County Health Dept will open emergency shelters, thisto plan with partners for this regional plan. Will wait for RDPO project for recommendations.	N/A	Yes. Regional study needed for regional effort	N/A	N/A
PWB-34	Investigate and implement use of Integrated Public Alert and Warning System (IPAWS) / Wireless Emergency Alerts (WEA) systems to send alerts from specific cell towers to cell phones for those in specific locations affected by an event.	Portland Water Bureau	All Hazards	Kim Anderson	Completed	PBEM provides this service. There is no need to investigate additional services.	PBEM has WEA and IPAWS capabilities. There is no need to investigate additional services.	None	No. While we could use more training, we rely on PBEM to send alerts.	N/A	Currently in use by PBEM. WB partners with PBEM for alerting.
PWB-35	Develop measures to rapidly isolate damaged portions of the water conveyance system (most of Vernon 270, Washington Park 229 and Tabor 270) to minimize water loss and preserve storage	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning began in FY 20/21 (PWB Seismic Implementation Plan). Now in implementation phase, 10/2021	Planning began in FY 20/21 (PWB Seismic Implementation Plan). Now in implementation phase, 10/2021	N/A	Yes, implementation of plan recommendations under way as of 10/2021	N/A	N/A
PWB-36	Further study the feasibility of seismic valve installation at strategic locations to protect water supply & storage.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	Planning to begin in FY 2020-21	On the list of future Planning projects, projected schedule for study to be developed Spring, 21.	N/A	Yes, future planning will occur	N/A	N/A
PWB-37	Participate with PBOT, Multnomah County, Oregon Department of Transportation (ODOT), Metro, Clackamas County and USFS in an in depth risk assessment of the bridges to develop and prioritize mitigation projects to ensure connectivity after an event.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Transportation study underway - RDPO and PBOT	N/A	Yes. Regional emergency transportation routes project currently underway. Will assess bridge detail and recommendations, and plan from there.	N/A	N/A
PWB-38	Coordinate with Multnomah County, Clackamas County, Metro, Oregon Department of Transportation (ODOT) and PBOT to ensure road system access to critical facilities including Interstate, Lusted Hill, Headworks, Sandy River Station, pump stations, and tank/reservoir sites.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	Transportation study underway - RDPO and PBOT; however PWB was not consulted or included in study participation. Have requested PWB be included 1/28/21.	N/A	Yes. Also need to ensure WB locations are included in emergency routes, in the current regional planning study.	N/A	N/A
PWB-39	Revise current emergency response plans based on recommendations from the Water Bureau Seismic Study.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 26/27 (PWB Seismic Implementation Plan)	Planning to begin in FY 26/27 (PWB Seismic Implementation Plan)	Future Planning	Yes, additional future planning will occur.	N/A	Short term items have been completed. Future planning will occur.
PWB-4	Seismically upgrade water pump stations.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2030-2036 in the PWB Seismic Implementation Plan	Planned for FY 2030-2036 in the PWB Seismic Implementation Plan	Planned for future	Yes, planning will occur in the future	N/A	N/A
PWB-40	Continue to support research of best available science and data for space weather and potential impacts to the City of Portland, and where possible take steps to increase resilience of city infrastructure to space weather events.	Portland Water Bureau	Space Weather	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 10/21	N/A	Yes. Need more scientific data on this topic, and consult with Water Quality on impacts.	N/A	N/A

PWB-41	Develop main replacement program with earthquake resistant pipe (Kubota ERDIP or US-Pipe TR-EXTREME) in areas of high permanent ground deformation	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planning currently underway to be complete in FY 18/19	Planning FY 19/20 and 20/21. - 2019 – finalized guidelines that can be used to determine if a pipe should be replaced with ERDIP based on GIS map layers for predicted ground deformation and movement. - 2020 and on-going, developing Seismic Design Standards and Specifications for PWB, as well as developer and inter-agency projects. - First Developer installation of ERDIP completed in late 2020 at the Amazon site. - Additional ERDIP projects in early design including PWB frontage improvements for Amazon, new waterline as part of the NW Broadway (old downtown USPS site) project, as well as 12" main replacement on Hayden Island. - Anticipate including ERDIP as part of regular crew replacement starting in potentially 2022/23.	N/A	Yes, this is in planning phase, and will continue to progress.	N/A	Several projects have occurred, as listed. Future planning includes replacement with ERDIP as soon as 2022/23.
PWB-42	Support the creation of a City of Portland Seismic Resiliency Officer position under PBEM to drive citywide resiliency efforts. This action needs high-level support from City Council.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21; we do support this position but have not heard that it was created.	N/A	Yes. Support this but have not heard that position has been created.	N/A	N/A
PWB-43	Coordinate with Commissioner's Office and Office of Government Relations (OGR) to elevate seismic retrofit funding for water infrastructure to a high priority on the City's legislative agenda. This action needs high-level support from City Council and Office of Government Relations (OGR).	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Yes. Need to assign policy group to pursue this.	N/A	N/A
PWB-44	Collaborate with other city bureaus to encourage and expand personal, family and business preparedness plans and programs.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	PBEM offering Personal/Home Preparedness courses to City employees. No Other Known Action Currently Planned 1/21	Collaborated with BDS, BES, PBOT to provide Steve Eberlein preparedness webinar. PBEM offering Personal/Home Preparedness courses to City employees. We supplied each employee with an emergency kit in 2018.	Ongoing	Yes, City-wide, region-wide need. PWB is not necessarily lead for this item.	Ongoing	We collaborate and partner with other bureaus and PBEM to bring Preparedness presentations to staff. Currently planning monthly Preparedness presentations.
PWB-45	Develop a West-side emergency operations and staging facility for field crews.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	Planning begins in FY 2026-27 (PWB Seismic Implementation Plan)	Planning begins in FY 2026-27 (PWB Seismic Implementation Plan) Current EM Scoping Team is considering this. 1/21.	N/A	Yes, future planning will occur	N/A	N/A
PWB-46	Develop a staging plan for stockpiling water system repair materials in strategic locations.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning begins in FY 2025-26 (PWB Seismic Implementation Plan)	Planning begins in FY 2025-26 (PWB Seismic Implementation Plan); this is also being considered during 2019-2024 Strategic Planning; EM Scoping 1/21	Future Planning	Yes, future planning will occur	N/A	N/A
PWB-47	Continue to conduct ongoing emergency response training for all Portland Water Bureau (PWB) employees.	Portland Water Bureau	All Hazards	Kim Anderson	Ongoing	Courses offered in 2018. Personal Employee Emergency Kits deployed 9/2018.	Courses offered in 2018; EOC Orientation and DAT Training. Currently planning virtual learning curriculum for 2021/22	Ongoing	Yes, future planning will occur	N/A	N/A
PWB-48	Purchase additional vacuum excavator to facilitate access to water system for maintenance and repairs.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Not sure at this time.	N/A	N/A
PWB-49	Establish relationships with out-of-state utilities for future Emergency Management Assistance Compact (EMAC) agreements.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 19/20 (PWB Seismic Implementation Plan)	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan); developed close working relationship with Seattle Public Utilities, Tacoma, Yakima and Bend OR water utilities. Currently on the ORWARN Board.	None	Yes, some in place with WA utilities; need to plan for more.	N/A	N/A
PWB-5	Continue to monitor dam safety at Mt. Tabor and Washington Park reservoirs.	Portland Water Bureau	Dam Failure	Kim Anderson	Ongoing	Monitored regularly, 2018 and ongoing	Monitored regularly, ongoing	None	Yes, ongoing. Critical for safety.	N/A	This is ongoing, drills successful.
PWB-50	Establish and document PWB reporting standards for both temporary protective measures and permanent repairs in compliance with Federal Emergency Management Agency (FEMA) guidelines.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan)	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan) FEMA reimbursement analysis currently underway as of 10/2021.	N/A	Yes. Current memo for FEMA reimbursement forms and process under way 10/21	N/A	N/A
PWB-51	Train PWB responders to understand and follow protocols for Federal Emergency Management Agency (FEMA) reporting.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	No Known Action Currently Planned 1/21	FEMA reimbursement study/analysis currently underway as of 10/2021. Recommendations will follow, then training.	N/A	Yes. Current memo for FEMA reimbursement forms and process under way 10/21. Training will follow.	N/A	N/A
PWB-52	Upgrade trestles that carry Conduits 2 and 3 of the water delivery system.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Additional projects on Conduit 3 in 5-yr CIP - 2 Trestles on Conduit 2 to be completed FY 2019-20.	Additional projects on Conduit 3 in 5-yr CIP - 2 Trestles on Conduit 2 completed FY 2019-20.	Future Planning	Yes. Planning in progress	N/A	N/A
PWB-53	Create redundancy in the water delivery system by burying Conduit 3 under the Sandy River.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unsure at this time.	N/A	N/A
PWB-54	Continue to mitigate Portland's water supply infrastructure and the Bull Run Watershed from landside hazards; incorporate landslide hazard reduction techniques into infrastructure projects.	Portland Water Bureau	Landslide	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Washington Park Reservoir Improvement Project includes landslide mitigation and slope stabilization. Construction currently under way, 10/2021.	N/A	Yes. Some landslide mitigation occurring at WA Park	N/A	N/A
PWB-55	Seismically harden Groundwater Transmission Main.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2033-2038 in the PWB Seismic Implementation Plan	Planned for FY 2033-2038 in the PWB Seismic Implementation Plan	Future Planning	Planned for future	N/A	N/A
PWB-56	Seismically harden conduits from Headworks (or future Filtration Facility) to Powell Butte.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planning to begin in FY 2018/19 (PWB Seismic Implementation Plan)	Future planning to be completed	Current and Future Planning	Yes. Planning occurring in 2021	N/A	N/A
PWB-57	Mitigate landslide hazards for the conduits within the Bull Run watershed.	Portland Water Bureau	Landslide	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Yes. Planning in future.	N/A	N/A
PWB-58	Make seismic improvements at Headworks.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	N/A	N/A
PWB-59	Make seismic improvements at Lusted Hill Treatment Facility.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	N/A	N/A
PWB-6	Seismically upgrade water storage tanks.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	Planned for FY 2036-2055 in the PWB Seismic Implementation Plan	Planned for FY 2036-2055 in the PWB Seismic Implementation Plan, however Greenleaf Tank 3 Design has started.	Planned for future	Yes. One has been started, others planned for the future.	N/A	N/A
PWB-60	Install remote monitoring sensors and alarms at Bull Run dams to provide an early detection of dam movement or change.	Portland Water Bureau	Dam Failure	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Yes, future planning will occur	N/A	N/A
PWB-61	Continue to monitor Bull Run Dams 1 and 2 for seismic risk, floods and landslides	Portland Water Bureau	All Hazards	Kim Anderson	Ongoing	Dams are monitored and inspected regularly; this is ongoing	Dams are monitored and inspected regularly; this is ongoing	Ongoing	Yes. Dams are monitored regularly.	N/A	N/A
PWB-62	Replace Cast Iron piping with seismically resilient pipe material.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	As pipes are repaired, they are replaced with seismically resilient pipe; this is ongoing.	As pipes are repaired, they are replaced with seismically resilient pipe; this is ongoing.	Ongoing and Future Planning	Yes. This occurs at failure and repair, and will be planned in future.	N/A	N/A



PWB-63	Establish a pre-disaster inter-bureau agreement with Office of Management and Finance (OMF) - Fleet and PBOT Maintenance Operations to assign personnel, equipment, and resources to work in coordination with Portland Water Bureau (PWB) response.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Yes. Suggest this agreement coincide with staff sheltering planning. OMF, BTS PBEM and EMSC could assist.	N/A	N/A
PWB-64	Coordinate with FEMA on results of updated flood-plain mapping on Willamette River for impacts to Portland Water Bureau (PWB) facilities.	Portland Water Bureau	Flood	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Yes. We need to strategize, need a point person for this.	N/A	N/A
PWB-7	Plan, design and construct new Willamette River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Design currently underway, planned completion in FY 22/23	Design completed, construction began in July 2021.	Design phase takes time	Yes, continue. This is under way.	N/A	N/A
PWB-8	Plan, design and construct second new Willamette River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2037-2038 in the PWB Seismic Implementation Plan	Planned for FY 2037-2038 in the PWB Seismic Implementation Plan	Planned for future	Yes, planning will occur in the future	N/A	N/A
PWB-9	Plan, design and construct replacement for St. John's River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2022-2028 in the PWB Seismic Implementation Plan	Planned for FY 2022-2028 in the PWB Seismic Implementation Plan; this schedule may move out 2 years or more	Planned for future	Yes, planning will occur in the future	N/A	Yes, still relevant

## CRS Activity 510

### Progress Report on Implementation of Credited Plan

**Date this Report was Prepared:** August 3, 2021  
**Name of Community:** City of Portland, OR (410283)  
**Name of Plan:** The Mitigation Action Plan  
**Date of Adoption of Plan:** November 2016  
**5 Year CRS Expiration Date:** August 31, 2024

#### 1. How can a copy of the original plan or area analysis report be obtained:

The Mitigation Action Plan (2016), its executive summary, and supporting materials can be downloaded from this public webpage:

[www.portlandoregon.gov/pbem/67578](http://www.portlandoregon.gov/pbem/67578).

#### 2. Describe how this evaluation report was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

An annual review of the 2016 Mitigation Action Plan (MAP) was undertaken by the Portland Bureau of Emergency Management in January-March 2021. Updates and detailed information were solicited from lead City staff on each of the 162 action items listed in the Mitigation Action Strategy. Reported information was collected and documented in a spreadsheet, which was then made available for public download from the City of Portland's webpage, [www.portland.gov/sites/default/files/2021/2016mapstrategystatusreports.xlsx](http://www.portland.gov/sites/default/files/2021/2016mapstrategystatusreports.xlsx).

A summary evaluation of the complete report was compiled and presented to the MAP Steering Committee in April 2021 to help inform the five-year MAP update. The summary evaluation was subsequently made available for public download from the City's webpage, [www.portland.gov/sites/default/files/2021/2016mapstrategysummaryeval.pdf](http://www.portland.gov/sites/default/files/2021/2016mapstrategysummaryeval.pdf).

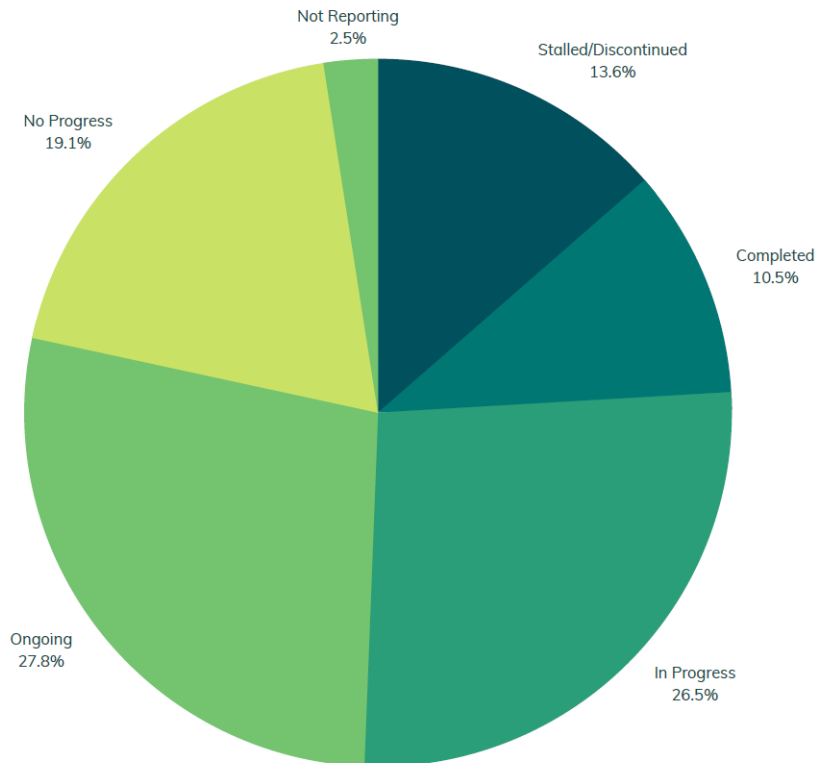
The City of Portland's five-year update to the MAP is currently underway and is expected to be completed by the end of 2021. The 2020 annual report will be submitted to Portland City Council (governing body) and released to the media in fall 2021 as part of the five-year update of the Mitigation Action Plan. Sharing the report with City Council as part of the broader plan update process is important because the report provides context on past accomplishments, as well as ongoing and incomplete efforts that should be carried forward into the next plan. We believe that sharing this information as part of the plan update process would

be more meaningful, and also garner more attention, than if the report were submitted as a standalone consent agenda item. The report will also be included in a press release when the updated MAP is released.

The extreme heat wave, wildfire, smoke, and winter storm events Portland has experienced over the past year have heightened public awareness of natural hazard risks, and generated interest in both the City and County natural hazard mitigation plans. The plans have been referenced by the media (e.g. [www.wweek.com/news/city/2021/07/14/this-is-the-hottest-place-in-portland/](http://www.wweek.com/news/city/2021/07/14/this-is-the-hottest-place-in-portland/)) and there may be greater than usual media interest in the MAP update process.

**3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:**

Of the 162 action items included in the strategy, approximately ten percent have been completed, more than half are either ongoing or underway, and about a third are stalled. The following graph provides an overview of implementation status.



Please see the attached spreadsheet, “510 Portland MAP 2020 annual report,” which describes the status of each individual action item, as well as lists answers to the following questions:

- What was accomplished since the last status report?
- What obstacles or problems did the action encounter?
- If uncompleted (in progress, stalled), what were the barriers to implementation (e.g. lack of funding or support, staff availability, etc.)?
- If uncompleted, should the action be included in the updated mitigation plan? Why or why not?
- If completed, did the action have intended results? Did it achieve its goals? What factors contributed to its success?
- Other comments?

**4. Discuss why any objectives were not reached or why implementation is behind schedule:**

Please see the attached spreadsheet, “510 Portland MAP 2020 annual report,” which describes why particular action item objectives were not reached or implementation is behind schedule.

Many of the action items that made no progress or are stalled are lacking adequate staff or funding to carry forward. A handful met with political obstacles or stakeholder opposition. The Mitigation Action Strategy includes a mix of funded and unfunded actions, actions that are resourced and those that are aspirational. This integrated approach demonstrates the City’s material commitments to reducing risk, as well as its commitment to growing resiliency efforts. In addition, many actions are ongoing, long-term programmatic commitments (e.g. managing invasive species on public land to reduce wildfire risk). Because the City takes this aspirational and long-term approach, it should be expected that only a portion of projects will be completed in any given year.

**5. What are the recommendations for new projects or revised recommendations?**

No new projects were put forward for inclusion in the 2016-2021 plan because the City is currently in the process of identifying new action items for inclusion in the forthcoming updated plan. The report makes recommendations for revising and carrying forward many action items into the next plan.

**Attachments:**

510 Portland MAP 2020 annual report

510 Portland MAP 2020 Summary Evaluation

Number	Action Description	Lead Agency	Hazards Addressed	Reporting Contact	Status - 2/2021	What was accomplished since the last status report (10/2018)?	What obstacles or problems did the action encounter?	If uncompleted (in progress, stalled), what were the barriers to implementation? (e.g. lack of funding or support, staff availability, etc.)	If uncompleted, should the action be included in the updated mitigation plan? Why or why not?	If completed, did the action have intended results? Did it achieve its goals? What factors contributed to its success?	Other Comments
PBEM-1	Continue to engage and inform the public about hazards, including through a "disaster survivor" storytelling event and through postcard mailers sent to every household in Portland with easy-to-understand and graphic-heavy information about hazards and actionable instructions on how to be prepared. Include information about how to register for Public Alerts with all outreach efforts.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Project discontinued	Content was completed in partnership with community groups, but we decided it was a better use of resources to distribute in partnership with community groups rather than mail to everyone.	We just got smarter about equity - reaching "everyone" is no longer the goal.	See previous	No	It would not have and that's why we didn't do it.	
PBEM-2	Expand the Neighborhood Emergency Team (NET) program into every neighborhood in Portland and expand beyond the neighborhood structure to non-geographic and cultural communities (e.g. immigrant and refugee communities, disability community organizations), and work with Community Engagement Liaisons to provide trainings in languages other than English.	Portland Bureau of Emergency Management	All Hazards	Jeremy Van Keuren	Ongoing	In 2020 we graduated the first Spanish-speaking NET class, in partnership with Verde. The class included 20 trainees. We're preparing to enter a partnership with Rosewood Initiative to set up a class of 50 in historically underserved neighborhoods of East Portland.	Language translation is, naturally, an obstacle. With the immigrant community, we've had obstacles around being able to complete criminal background checks (which is customarily a requirement of our program). As we are a government program, it's important for us to consider that some of the folks we want to serve don't trust the government generally. So, it's been absolutely necessary for us to take the time and attention required to cultivate genuine working relationships and trust with community based organizations we wish to work with.	This is a project that will never reach "completion"...these are goals we'll work on for as long as the program exists.	Yes for PBEM-2. The reason is that it is an ongoing goal and program of NET; it is not a project (a project, by definition, has a beginning and an end).	It's just a little too soon to say what the outcomes will be (or if we'll meet our intended outcome). This is a "long game", after all. We're hoping to mobilize the Spanish-speaking team to assist with vaccine distribution, but that's not yet confirmed.	
PBEM-3	Expand PBEM's capacity to provide community trainings and partner with the Office of Neighborhood Involvement (ONI), Diversity in Civic Leadership (DCL) program, Community Engagement Liaisons, and Multnomah County programs, as well as Non-Governmental Organizations and community-based programs to connect under-resourced and underserved communities with disaster preparedness, home safety, emergency response, and other training opportunities.	Portland Bureau of Emergency Management	All Hazards	Regina Ingabire	Ongoing	I can say that we have created a Community Resilience Workbook in consultation with Community Based Organizations and this workbook has been used to training our partners including the staff at the Civic Life, Multnomah County community advocates and several community based organizations that served historically underserved communities.	So far, the COVID -19 pandemic has slowed or stalled our community engagement plans.	the COVID -19 pandemic continue to be a challenge to fully achieve these goals.	Why or why not? Yes, the action should be included in the updated mitigation plan to continue building relationships with partners post the pandemic period.		
PBEM-4	Advocate in regional debris planning process for consideration of equity and environmental justice implications of temporary debris storage sites.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Stalled	Regional debris planning stalled	None from City side; unknown on regional side.	See previous	No		
PBEM-5	Support Multnomah County in developing a robust, inclusive, and equitable sheltering plan.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed	Multnomah County completed high quality plan.	None			Yes	
PBEM-6	Support public school districts in developing a prioritization strategy for seismic strengthening of existing schools to facilitate rapid re-opening of schools.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Project discontinued	PPS is not working on this any more. City abandoned URM project.	Lack of resources on PPS side, lack of political will on City side.	See previous	No		
PBEM-7	Remain informed about inter-agency volcano coordination planning to communicate and understand agency roles and capabilities and potential sheltering needs for evacuees.	Portland Bureau of Emergency Management	Volcano	Dan Douthit	Ongoing	Nothing accomplished since 10/2018.	No obstacles or problems. I continue to monitor this issue as new information becomes available.		Keep PBEM-7. It's easy to participate in coordination meetings if any movement occurs on this item. (Dan)		
PBEM-8	Coordinate with owners and operators of key communications infrastructure (i.e. internet and telecom) located in unreinforced masonry (URM) buildings or buildings not designed for the purpose of housing this infrastructure; assess risks to these assets, and develop a strategy that identifies alternatives and funding sources for implementing seismic strengthening projects.	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Stalled	Zero	Owner/operators not interested	Lack of political will / not a priority.	No		
PBEM-9	Update risk assessment information about landslides and develop new NHMP action items based on updated 2017-2018 Department of Geology and Mineral Industries (DOGAMI) landslide data and recommendations.	Portland Bureau of Emergency Management	Landslide	Jonna Papaefthimiou	No progress	Zero	Lack of time / resources	See previous	Yes		
PBEM-10	Work with Office of Neighborhood Involvement (ONI) Disability Program Coordinator to promote participation in the Additional Needs Registry through the Public Alerts system.	Portland Bureau of Emergency Management	All Hazards	Dan Douthit	Ongoing/Stalled	The Additional Needs Registry (ANR) is fully integrated into the PublicAlerts.org sign-up process for Multnomah County/Portland. Overall PublicAlerts promotion has occurred over the past two years, but not specific to the ANR.	It is unclear whether or not the ANR will be continued. Discussions are underway on the alert and warning systems used by the City and the best way to reach the community in an emergency.	The Office of Neighborhood Involvement (now known as the Office of Community and Civic Life) is not necessarily in a position to provide leadership to the ANR. This could impact the future of the program.	Consider dropping PBEM-10. I'm not certain the Civic Life office is in a position to continue leading this item, and PBEM does not necessarily have the capacity to take it on. I recommend the stakeholders involved convene a meeting and consider the future of the capability. There are other options to explore other than maintaining the registry.		
PBEM-11	Support Bureau of Development Services (BDS) in implementing recommendations from the City's Unreinforced Masonry (URM) Seismic Retrofit Project, including promoting and supporting policies for mandatory retrofits of URM buildings. This action needs high-level support from City Council and Office of Government Relations (OGR).	Portland Bureau of Emergency Management	Earthquake	Jonna Papaefthimiou	Project discontinued	Zero	Massive opposition from building owners; lack of political will	See previous	No. Nobody wants to touch this.		
PBEM-12	Audit PBEM's suite of plans to evaluate whether plans meet the needs of people with disabilities, people with language barriers, and other access and functional needs populations. Develop a transition plan to update all plans.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	In progress (incremental)	Haven't updated any plans since Sarah left	Lack of time / resources	See previous	Yes; still needed		
PBEM-13	Expand ATC-20 damage assessment trainings and certifications to non-city employees to increase pool of qualified post-earthquake building inspectors, including through advertisements to registered Minority, Women-Owned, and Emerging Small Business (MWESB) architecture and structural engineering firms.	Portland Bureau of Emergency Management	All Hazards	Katy Wolf	Stalled	We trained 109 non-City students since 10/2018, offering 2 courses in Nov 2018, and 1 course in Dec 2019.	Did not share widely due to the lack of state program guidance providing inspector deputization authority to non-jurisdictional staff. Ran out of federal UASI grant funds to offer courses. Lack of certified local teachers that can teach the course for free.	Lack of state damage assessment program guidance. COVID-19 interruptions to City and emergency management priorities.	I would say no, because it's a lower priority than meeting more basic goals for damage assessment, which there is already a good plan for - Anne Castleton's grant project.	PBEM passed this responsibility over to the Bureau of Development Services emergency manager Anne Castleton, in 2019. However, as of yesterday her position has been laid off. Those responsibilities have been absorbed by her manager. It is likely that until they rehire the emergency manager position, this program will not make progress. I would recommend that we close this item out, if possible. Its not likely we'll achieve this goal in the next 2-3 years.	
PBEM-14	Support Multnomah County Levee District (MCLD) and Levee Ready Columbia in risk assessment and flood response	Portland Bureau of Emergency Management	Flood	Jonna Papaefthimiou	No progress	Not engaged	None - just not needed		No		

PBEM-15	Continue to involve the public in updating the MAP, including by establishing a standing committee with community representation to oversee progress reporting and implementation of MAP action items, and oversee annual updates to the MAP. Perform outreach consistent with the MAP Community Engagement Strategy, and ensure reports are written in plain, accessible language.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Stalled	Zero	Staff person left; resolution 37328 made it harder to form advisory groups; unclear whether this is still a good strategy from equity standpoint.	See previous	Uncertain. Seek public feedback.
PBEM-16	Maintain and promote registration in Public Alerts system, including registration in languages other than English, and improve accessibility of the online interface for languages other than English. Integrate into other public outreach activities.	Portland Bureau of Emergency Management	All Hazards	Dan Douthit	Ongoing	PublicAlerts registration in languages other than English exists as a capability. Some outreach has occurred through local media and community connectors to promote registration by non-English speakers.	Ongoing discussions about how the City and County use alert and warning systems could impact how urgent messages reach non-English speakers.	The COVID-19 pandemic has limited PBEM's ability to make progress on this initiative.	Keep PBEM-16 with caveats and/or potential changes. The City and County need to have a conversation on the best way to issue alerts. Emerging technologies have the potential to shift how we do this.
PBEM-17	Hire a permanent Continuity of Operations (COOP) Planner to support city bureaus with COOP plan updates and set aside a percentage of time to work with key social services organizations such as food banks and homeless shelters to develop Continuity of Operations Plans.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed	Position filled and functioning	Zero		We are still struggling to "sell" COOP planning to non-profits, but we're in it for the long term so we have time.
PBEM-18	Expand Neighborhood Emergency Team (NET) trainings to include teachers and principals and include information about non-structural retrofits in classrooms.	Portland Bureau of Emergency Management	All Hazards	Jeremy Van Keuren	Project discontinued	We have dropped actively pursuing PBEM-18.			
PBEM-19	Advocate for implementation of Critical Energy Infrastructure (CEI) Hub Risk Assessment recommendations, including establishment of Critical Energy Infrastructure (CEI) Hub Disaster Resilience Workgroup.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Project discontinued (in favor of new strategies)	Initiated study on CEI hub in partnership with MultCo; working on legislative strategies to address risks.	Owner-operators totally disengaged.	See previous	Adopt new strategies instead.
PBEM-20	Develop a post-disaster recovery plan to guide post-disaster redevelopment that considers hazard exposure and relocation of critical infrastructure outside of high-hazard areas, prioritizes the restoration of natural systems to limit future hazard impacts, and includes whole-community recovery strategies to reduce the potential for involuntary displacement.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	In progress (incremental)	DRRAG continues to meet; little progress on plan.	Lack of time / resources	Also unclear about who should lead this and what the scope should be... made it hard to get going.	DRRAG needs to decide.
PBEM-21	Increase the City's capacity to establish post-earthquake communication nodes throughout the city after a major earthquake, including through expansion of training and additional communications equipment cache placements for the Basic Earthquake Emergency Communication Nodes (BEECN) program.	Portland Bureau of Emergency Management	All Hazards	Ernest Jones	In progress/ongoing	101 volunteers added to the BEECN roster, 6 BEECN caches deployed (storage spots found), and over 15 BEECN trainings conducted	Finding suitable storage places for BEECN caches remains a significant challenge; but progress continues to be made. Achieving the goal of 500+ volunteers continues to progress; getting the attention of potential volunteers is difficult, especially in historically underserved neighborhoods.	Suitable storage space for BEECN caches is a complicated conundrum that will continue to be a challenge (when two spots are found for BEECN caches, a different spot becomes unavailable and the cache has to find another spot). Finding new ways to reach potential volunteers also takes significant time, especially in historically underserved neighborhoods	I believe the objectives are still sound and worthy of continuing in order to help make Portland a disaster resilient community
PBEM-22	Develop a Transportation Recovery Plan.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed				
PBEM-23	Develop an emergency communications plan to distribute emergency messages to immigrant and refugee communities in language-appropriate and culturally appropriate ways.	Portland Bureau of Emergency Management	All Hazards	Regina Ingabire	Ongoing	we have developed an intentional and authentic relationships with Community Based Organizations (CBOs) who are embedded in communities, know their culture and language. Through these relationships, we will be able to share and distribute emergency messages to refugee and immigrants' communities. Also, recently, we created a partnership with the Portland Public Schools (PPS) which will allow us to share any emergency or life threatening information to multi-cultural and multilingual communities at least in 7 languages.	the pandemic has slowed and stalled our ongoing community building efforts.	the pandemic has slowed and stalled our ongoing community building efforts.	Its ongoing effort and should be included in the updated mitigation plan.
PBEM-24	Through a public process with key stakeholders, create an inventory of fossil fuel facilities and infrastructure in Portland that includes characteristics related to seismic safety such as date of construction, construction type, and whether seismic upgrades have been made. This action requires high-level support from City Council.	Portland Bureau of Emergency Management	All Hazards	Jonna Papaefthimiou	Completed (mostly)	We have a report that was developed but without participation of owner-operators... so, mostly complete.	See previous		
PP&R-1	Consider known natural hazards on Portland Parks & Recreation (PP&R) owned or managed properties when developing future plans for these properties, to ensure future plans do not adversely alter or modify these hazards.	Portland Parks & Recreation	All Hazards	Katie Dunham	Ongoing	Parks Master Plans include an assessment of known natural hazards as applicable. : This is something we do whenever we develop a site Master Plan	N/A	N/A	Yes, this action should continue to be included as an ongoing goal
PP&R-2	Consistent with PP&R management practices and standard operating procedures, allocate funding for management of vegetated natural areas with high wildfire danger, including public and private properties.	Portland Parks & Recreation	Wildfire	Katie Dunham	Ongoing	We allocate funding as available and apply for grants as necessary to assist with management of vegetated natural areas with high wildfire danger. We have a need for additional funding and support for this work.			Yes, this is something we continue to strive to do and would like to use the NHMAP to assist us in getting additional funding and resources to do this work.
PP&R-3	Conduct systematic reviews of Portland's large, publicly owned, wildland tracts regarding fire safety and ecological health to ensure informed land management decisions.	Portland Parks & Recreation	Wildfire		Not reporting				
PF&R-1	Adopt the national "Fire Danger Rating System" and install the signs at key points in the City.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	In Progress	PF&R and Portland Parks have identified the number and best locations for these signs to be placed. After last year's wildfire season, there is significant public interest in these signs being provided.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	Barrier to implementation was primarily a complete change of chief officer staffing on C shift. Administrative duties are being reassigned and this is included and should be moving forward again shortly. The public education team is now also participating in this project.	
PF&R-2	Convene a standing wildland interface fire technical group to plan for and address wildland urban interface (WUI) hazards.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	This group last met in the fall of 2020 and recognized significant work that needed to be addressed and undertaken in the near term (short to mitem). The significant Oregon wildfire season of 2020 elevated public interest and 3 WUI neighborhoods are going through the Firewise process now with the Fire Marshal's office Public Education team.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	Barrier to implementation was primarily a complete change of chief officer staffing on C shift. Administrative duties are being reassigned and this is included and should be moving forward again shortly. The public education team is now also participating in this project.	
PF&R-3	Act upon all Mitigation Actions outlined in the Wildfire Gap Analysis Report.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	In progress	Significant progress has been made in the WUI Firewise community education. The 2020 Oregon wildfire season elevated the public's awareness of this risk and willingness to embrace the program. The Fuels Mitigation grant and the Firewise program in Linnton were both positive outcomes of the initial efforts.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	COVID 19 Significantly impacted progress. This will gain more traction once again through the coming year.	

PF&R-4	Inventory critical PF&R assets and review critical PF&R infrastructure vulnerability and identify a 50-year plan to strengthen, retrofit, relocate or otherwise increase resiliency.	Portland Fire & Rescue	Earthquake	Louisa Jones, Steve Bregman	Ongoing	The solar and battery storage systems have been installed at the identified locations.	Logistics efforts had to be re-directed to COVID supply, cleaning, and maintenance of all front-line facilities in 2020 which drew significant time and resources away from planning and evaluation for a 50-year facility strengthening program.	While just now being recognized, funding will be a significant barrier going forward after the economic impact of COVID.		
PF&R-5	Require defensible spaces and water turrets around structures in wildfire risk areas	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	These systems are tested inspected and serviced on an annual basis.	Occasionally maintenance issues arise, but otherwise these systems are an integral and important part of wildfire protection for forested interface locations.	None		
PF&R-6	Partner with the Forest Park Conservancy and individual land owners to develop a fire risk reduction plan for Forest Park.	Portland Fire & Rescue	Wildfire	Louisa Jones, Steve Bregman	Ongoing	Despite COVID, the Fire Marshal's Public Education Team has worked to progress the Linnton community towards their neighborhood firewise certification. They have enrolled and initiated efforts in multiple additional communities.	The biggest limitations at this point are time and personnel. This program has quickly gained community support and interest.	This is a time-intensive and recurring process that will continually require maintenance and on-going education.		
PF&R-7	Continue to engage and train Neighborhood Emergency Team (NET) volunteers to assist with mitigation, response and recovery efforts post disaster. Ensure training takes place in ADA-accessible fire stations, Neighborhood Emergency Teams (NETs) perform outreach activities to underrepresented groups.	Portland Fire & Rescue	All Hazards	Louisa Jones, Steve Bregman	Ongoing	PF&R is extremely supportive of this program and intends to remain active as adjunct training and event coordinators.	COVID 19 and a significant wildfire season drew time and personnel away from this project.	PF&R will be working with PBEM staff to identify specific needs moving forward for PF&R to support.		
PF&R-8	Ensure that Additional Needs Registry Data is appropriately utilized and ensure that emergency responders are aware of locations of disabled Portlanders.	Portland Fire & Rescue	All Hazards		Not reporting					
PF&R-9	Perform non-structural assessments and mitigation activities (e.g. anchor bookcases to the wall).	Portland Fire & Rescue	Earthquake		Not reporting					
BPS-1	Promote and fund energy independence projects in low-income neighborhoods and communities.	Bureau of Planning and Sustainability	All Hazards / Earthquake	Andria Jacob	Stalled	The R2P2 group came up with a prioritization of sites for solar + storage based on the BEECN program and well as the mass shelter program from Mult Co. Several options were investigated with little success. There is a lack of funding and no real understanding of how important battery back up storage could be. Lots of education needed.	The obstacles are largely resource-related. BPS staff time is less available to coordinate R2P2. Leadership has not prioritized this and for real progress to be made, it needs to become more than just my personal passion project. We also were not able to cultivate champions at the facilities where these would be installed (i.e. the mass shelters) and the installations themselves are expensive, with no clear funding source.	For updated plan, we should have one action related to energy resilience (solar + storage.) I think it's really important work, but it should not be 3 separate items. I'd be happy to workshop those into a single action for the update.		
BPS-2	Plan for solar + battery storage systems, which can serve as mini power-supply stations or provide residents the ability to shelter in place after any electricity supply-disrupting event, at varying scales (project, neighborhood and district) and locations (critical City facilities, low-income housing, community gathering spots).	Bureau of Planning and Sustainability	All Hazards / Earthquake	Andria Jacob	Stalled					
BPS-3	Encourage solar + battery storage demonstration projects at critical City facilities, in low-income neighborhoods and in other strategic locations.	Bureau of Planning and Sustainability	All hazards / Earthquake	Andria Jacob	In progress	Fire Station 1 solar + storage went live at the end of 2019! The big success story is Fire Station 1; PF&R has some great drone footage and story-telling about this project.				
BPS-4	Explore ability to waive System Development Charge (SDC) for change of use if money will be spent on seismic retrofit.	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Action is a political decision that the City Council would need to taken on and be the lead on				
BPS-5	Adopt Portland's Comprehensive Plan to address Citywide policies, land use improvements and mapping changes related to natural hazards. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger	Completed					
BPS-6	Support Comprehensive Plan policies and projects that relate to resilience, climate change and natural hazard mitigation, response, adaptation and recovery. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger	Completed					
BPS-7	Support 2015 Climate Action Plan and Climate Change Preparedness Strategy actions that relate to adaptation planning and natural hazard mitigation actions.	Bureau of Planning and Sustainability	All hazards	Sallie Edmunds	Completed	South Reach JEFF: Developed and adopted the River Plan/South Reach, which established a new vision for the area, applied new regulations that respond to climate change, better protect natural resources and reduce flood risk, and included an action plan that identified a number of actions by the City and community partners needed to achieve the 20-year vision. Tree Code JEFF: The City recently completed a minor update of the Tree Code. Removed three of the four existing industrial and commercial zone exemptions. This will increase the number of properties in the city that must meet Tree Code requirements for tree preservation and planting.	South Reach JEFF: No significant obstacles (other than COVID-19 delaying the process a bit). Tree Code JEFF: The need to ensure adequate land capacity for industrial land did not allow for the removal of the exemption for the Heavy Industrial (IH) zone.	South Reach JEFF: The River Plan/South Reach achieved its goals through addressing a variety of issues within the planning area, including climate change preparation, environmental protection and restoration, expanding access to water- and land-based recreation access and improving neighborhood connections to the river. Generally, there was broad support from the community for the proposed changes. Tree Code JEFF: The amendments will result in increased tree canopy in commercial and industrial zones. There was huge public support for the amendments but legal constraints resulted in adoption of a narrower set of amendments.		
BPS-8	Consider natural hazard mitigation in the development of the River Plan.	Bureau of Planning and Sustainability	All hazards / Flood		Not Reporting					
BPS-9	Develop an emergency resumption of service plan for solid waste removal after a disaster event.	Bureau of Planning and Sustainability	All hazards / Earthquake	Peter Chism-Winfield	Stalled	BPS COOP was updated in 2019 with contact information for staff involved.	Not sure, was unable to recover this information because of staff turnover.	Stalled, staff turnover and no reallocation of resources.	Yes	
BPS-10	Develop an emergency service plan for solid waste removal in multifamily properties after a disaster event.	Bureau of Planning and Sustainability	All hazards / Earthquake	Peter Chism-Winfield	Stalled	No formal plan submitted since 2014. BPS provided feedback to PBEM plan listed on website.	Not sure, was unable to recover this information because of staff turnover.	Stalled, staff turnover and no reallocation of resources.	Yes	Metro has begun the process of gathering information to restart disaster preparedness. They are looking to hire a coordinator and begin formal planning meetings in July 2021. BPS staff is involved with this current effort.
BPS-11	Develop recommended policies, regulations and/or landscape options for areas at risk from wildfires.	Bureau of Planning and Sustainability	Wildfire	Peter Chism-Winfield	In progress	The report back for BPS-19 is adequate for BPS-11 as its focus is the same project. The Ezone Map Correction Project is currently at the Planning and Sustainability Commission with anticipate recommendation in spring 2021. City Council hearings are planned for fall 2021, with a desired implementation in early 2022.	COVID-19 postponed wetland determinations for one year. This stalled the entire project.	The bulk of the work is staff being on private properties to verify the location of natural resource features. All site visit work was delayed with none occurring March – June 2020 due to COVID-19. While site visits could resume in June 2020, the season had passed for perform wetland determinations. Wetland determinations require water to be present and are only performed in the wet season. Thus wetland determinations were postponed for a full year.		



BPS-12	When possible, build mitigation and resiliency education into bureau public events and outreach (e.g., neighborhood meetings, Fix-it Fairs).	Bureau of Planning and Sustainability	All hazards	Kathryn Hartinger, Sallie Edmunds	Completed (but work is ongoing)	Through a partnership with PBEM and the NET program, staff and NET volunteers table and present a workshop at each of three Fix-It Fairs every year. Since October 2018, we have tabled six events, gave six in-person presentations, and about 3,500 people have attended each fair. PBEM and NET has a large and visible presence, and is a popular exhibitor. We have also continued this effort through the pandemic, combined with a personal/community resilience element care of Civic Life.	Just needed to establish and institutionalize the relationship.		Yes. There's obviously a desire for hazard resilience-related information and resources in the community. The more avenues people have to access these things, the more successful they will be. The Fix-It Fair provides kind of a one-stop shop for information and resources on City programs, so it captures Portlanders interested in all sorts of things – many of whom don't COME for the resilience resources, but are happy to have them when they're there.		
BPS-13	Develop incentives and regulations that promote, encourage and/or require seismic retrofits of private property (such as multi-family, masonry structures). This action needs high-level support from City Council and Office of Government Relations (OGR).	Bureau of Planning and Sustainability	Earthquake	Troy Doss	Completed						
BPS-14	Identify ways to encourage, promote or require U.S. Resiliency Council Certification for new public buildings. This action needs high-level support from City Council and Office of Government Relations (OGR).	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Should not be a BPS item as they involve political decisions that the City Council would need to take on and be a lead on.					
BPS-15	Prioritize retrofitting of structures along emergency transportation routes.	Bureau of Planning and Sustainability	Earthquake	Troy Doss	No progress	Should not be a BPS item as they involve political decisions that the City Council would need to take on and be a lead on.					
BPS-16	Use updated floodplain data and maps, including potential climate change scenarios, to inform City and County land use, transportation, and other infrastructure planning processes.	Bureau of Planning and Sustainability	Flood, Severe Weather	Jeff Caudill	In progress	This is something that will be completed as a part of a multi-year effort to update floodplain regulations and incorporate new flood maps as they become available. BPS updated floodplain regulations for the southern portion of the Willamette River as a part of the River Plan / South Reach, which was adopted in December 2020. This effort incorporated guidance from the FEMA National Flood Insurance Program (NFIP) Biological Opinion for Oregon. Similar updates are currently underway for other portions of the city.	Updated mapping of floodplains by Federal agencies, including FEMA and the Army Corps of Engineers, to incorporate climate change has taken longer than expected but efforts are underway. As those updated maps are made available, the City will incorporate them into its regulatory maps and regulations will be updated to address newly-identified floodplain areas.	The City has been expecting to take an approximately 5-year, phased approach to the update of floodplain regulations. Individual phases take time to address. BPS is in the middle of this work now.	This action should remain in the updated mitigation action plan. This is important work for reducing flood risk for those that live and work in the city's floodplains and will contribute significantly to the City's ongoing efforts to restore habitat for the endangered and threatened salmon and steelhead species that utilize Portland's rivers and streams.		
BPS-17	Encourage or require private property owners and developers to limit or reduce impervious area at citywide, watershed, site-specific and district scales.	Bureau of Planning and Sustainability	Flood / Severe weather	Mindy Brooks	No progress	There was no specific progress made. However, the Residential Infill Project did retain limits on development area while allowing additional units. Morgan Tracy (BPS) is the project lead on RIP and could provide more specifics about how they increased allow housing units without increasing impervious surface.			I have long wanted to do a project that put impervious surface limits in the hills where there is landslide hazard and stormwater management constraints. This would be a specific project. However, it is not in our work plan or in our future work plan. We are tapped out for many years in terms of upcoming projects resources and funding. We could change BPS-17 to read "Adopt impervious surface limits in areas of Portland that are subject to landslide hazards and where there are stormwater management constraints." That is more actionable.		
BPS-18	Provide safety training for day laborers, protect workers' rights, and collaborate with Voz to provide a safe place to locate day laborer services to encourage employment of local day laborers for post-disaster reconstruction and recovery. This action needs high-level support from City Council.	Bureau of Planning and Sustainability	All Hazards	Alisa Kane, Jonna Papaefthimiou	Stalled	No progress has been made	A difficult project due to lack of resources, time, and the inability to build a cohesive curriculum	The language in the plan below is for more than just a training. The conversation was about the City creating more formal connections with Voz so that when disaster hit they were ready to mobilize. As it says below, it would take a good deal of Council support for it to move forward. My guess is that it was determined that it was not enough of a BPS related topic to press in Council	Yes as we could potentially broaden the scope of the project to more than just training/education		
BPS-19	Update the environmental overlay zone, codes and maps to reflect best available science and the location and extent of risks associated with natural hazards in Portland	Bureau of Planning and Sustainability	All Hazards	Mindy Brooks	In progress	The Ezone Map Correction Project is currently at the Planning and Sustainability Commission with anticipate recommendation in spring 2021. City Council hearings are planned for fall 2021, with a desired implementation in early 2022.	COVID-19 postponed wetland determinations for one year.	The bulk of the work is staff being on private properties to verify the location of natural resource features. All site visit work was delayed with none occurring March – June 2020 due to COVID-19. While site visits could resume in June 2020, the season had passed for perform wetland determinations. Wetland determinations require water to be present and are only performed in the wet season. Thus wetland determinations were postponed for a full year.			
PWB-1	Continue to assess the vulnerability of the water system to seismic events and work toward hardening the backbone system.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	Seismic Implementation Plan completed in June 2018, Backbone Isolation Plan completed 2019.	Seismic Implementation Plan completed in June 2018, Backbone Isolation Plan completed 2018/19.	Planning is ongoing and comprehensive	N/A	Yes, planning continues	N/A
PWB-2	Install remote operating valves to isolate existing river crossings.	Portland Water Bureau	Earthquake	Kim Anderson	in planning	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan	Planned for future	N/A	Yes, planning will occur in the future	N/A
PWB-3	Install isolation valves where distribution system is tied in to backbone.	Portland Water Bureau	All Hazards	Kim Anderson	In planning	No Known Action Currently Planned 1/21	Planned for FY 2024-2029 in the PWB Seismic Implementation Plan. Planning a project identified to complete a long-term plan for isolating the backbone water system. The work that has been completed is an emergency plan that gives a starting point, but does not get into the details of looking at all the backbone valve connections to the distribution system. There is not currently a schedule for this work.	Planned for future	N/A	Yes, planning will occur in the future	N/A
PWB-4	Seismically upgrade water pump stations.	Portland Water Bureau	Earthquake	Kim Anderson	In planning	Planned for FY 2030-2036 in the PWB Seismic Implementation Plan	Planned for FY 2030-2036 in the PWB Seismic Implementation Plan	Planned for future	Not yet planned	Yes, planning will occur in the future	N/A
PWB-5	Continue to monitor dam safety at Mt. Tabor and Washington Park reservoirs.	Portland Water Bureau	Dam Failure	Kim Anderson	Ongoing	Monitored regularly, 2018 and ongoing	Monitored regularly, ongoing	None	Ongoing	Yes, this remains important for safety	This is ongoing, drills successful.
PWB-6	Seismically upgrade water storage tanks.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	Planned for FY 2036-2055 in the PWB Seismic Implementation Plan	Planned for FY 2036-2055 in the PWB Seismic Implementation Plan, however Greenleaf Tank 3 Design has started.	Planned for future	One has been started, others planned	Yes, continues to be a need	N/A
PWB-7	Plan, design and construct new Willamette River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Design currently underway, planned completion in FY 22/23	Design being advanced, construction anticipated to start by end of 2021.	Design phase takes time	This is under way	Yes, important project	N/A
PWB-8	Plan, design and construct second new Willamette River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In planning	Planned for FY 2037-2038 in the PWB Seismic Implementation Plan	Planned for FY 2037-2038 in the PWB Seismic Implementation Plan	Planned for future	Not yet planned	Yes, still relevant	N/A



PWB-9	Plan, design and construct replacement for St. John's River Crossing.	Portland Water Bureau	Earthquake	Kim Anderson	In planning	Planned for FY 2022-2028 in the PWB Seismic Implementation Plan	Planned for FY 2022-2028 in the PWB Seismic Implementation Plan; this schedule may move out 2 years or more	Planned for future	Not yet planned	Yes, still relevant	N/A
PWB-10	Partner with University of Washington to participate in the testing of the Earthquake Early Warning System.	Portland Water Bureau	Earthquake	Kim Anderson	In planning	Currently planning installation of sensors at Washington Park; sensors installed in Watershed 7/2018.	Currently planning installation of sensors at Washington Park and Groundwater; sensors installed in Watershed 7/2018.	Lack of time or follow-up	Dedicated staff with time and decision making capability	Yes, but establish deadlines and potentially assign intern	N/A
PWB-11	Coordinate with electrical utilities on tree fall mitigation measures to prevent impacts to Bull Run watershed supply. Continue to work in a co-management role with the Oregon Department of Forestry, US Forest Service and local fire departments to respond to and recover from fires in and near the Bull Run watershed.	Portland Water Bureau	Severe Weather	Kim Anderson	Ongoing	ResPro working with PGE, USFS to identify danger limbs/trees for removal or trimming.	ResPro working with PGE, USFS to identify danger limbs/trees for removal or trimming.	This is ongoing	N/A	Yes, ongoing and necessary	N/A
PWB-12		Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	ResPro works with these agencies	ResPro works with these agencies regularly; this is ongoing	This is ongoing	N/A	Yes, ongoing and necessary	N/A
PWB-13	Continue to assess the potential impacts of climate change on wildfire in the Bull Run watershed.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	Engaged in collaborative research with regional research institutions on the FireEarth project to assess post-fire erosion and climate change fire risks.	We have a dedicated analyst continuing to study and make recommendations of climate change on the Watershed. Included as part of the Supply System Master Plan, and ongoing.	This is ongoing	Yes, the need is ongoing	Yes, recommendations in progress	Included as part of ongoing Bull Run Watershed Protection and climate change analysis.
PWB-14	Continue to monitor forest health surveys completed by federal and state agency partners for the Bull Run watershed.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	No Known Action Currently Planned 1/21	ResPro monitors forest health ongoing, including review of USFS reports	Ongoing	N/A	Yes, this is ongoing and necessary	N/A
PWB-15	Update the Bull Run wildfire evacuation plan.	Portland Water Bureau	Wildfire	Kim Anderson	Ongoing	Draft still in review as of 1/21	Draft still in review as of 9/11/18	Regularly reviewed	This is updated regularly; 2020 fire season was extreme, need to plan for climate change impacts	Yes, critical	N/A
PWB-16	Identify and prioritize culvert improvements in the Bull Run watershed to manage streamflow and stormwater runoff and reduce risks to water quality and infrastructure.	Portland Water Bureau	Flood	Kim Anderson	Ongoing	Hamilton Creek currently in Design. Culverts in the watershed are inspected and evaluated for risk and are incorporated into the Bull Run Roads Plan.	In-town culvert replacements occur with BES. FY 2018-19 Planning for culvert replacement at Hamilton Creek, work scheduled for summer 2021 2022. SW 45th at Fanno Creek culvert replacement scheduled for fall 2021. Forest Park and Leif Erickson Dr culvert expected replacement in 2021. 2 culverts removed at Catkin Marsh in 2017. Culvert cleaning and maintenance in the watershed is ongoing.	Ongoing	Future projects planned	Yes, ongoing and future plans	N/A
PWB-17	Continue to assess the potential impacts of climate change on flooding in the Bull Run watershed.	Portland Water Bureau	Flood	Kim Anderson	Ongoing	Included as part of the Supply System Master Plan, and ongoing. Included as part of ongoing climate resiliency program work. Engaged in collaborative research with Portland State University to assess climate model projections for extreme storm events over Bull Run and potential impacts on flooding and turbidity.	Included as part of the Supply System Master Plan, and ongoing	Ongoing	Yes, this need is ongoing and developing	Yes, this need is ongoing and developing	N/A
PWB-18	Continue to assess the potential impacts of climate change associated with drought in the Bull Run watershed.	Portland Water Bureau	Drought	Kim Anderson	Ongoing	Included as part of the Supply System Master Plan, and ongoing climate resiliency program work. Completed an analysis for the Supply System Master Plan on future water supply availability that incorporated climate model projections of future drought and water supply stress.	Included as part of the Supply System Master Plan, and ongoing	Ongoing	N/A	Yes, this need is ongoing and developing	N/A
PWB-19	Perform seismic/dynamic analysis of Bull Run watershed bridges.	Portland Water Bureau	Earthquake	Kim Anderson	in planning	Planning to begin in FY 2022-23 (PWB Seismic Implementation Plan)	Planning to begin in FY 2022-23 (PWB Seismic Implementation Plan)	Future Planning	N/A	Yes, for future	N/A
PWB-20	Continue to implement with the USFS the Portland Water Bureau (PWB) transportation system management plan for emergency and fire access in Bull Run Watershed.	Portland Water Bureau	Wildfire	Kim Anderson	in progress	Reviewed as part of annual Bull Run Roads Plan.	Reviewed as part of annual Bull Run Roads Plan.	None	Reviewed	Yes, with regional partners	N/A
PWB-21	Continue to partner with electrical utilities to ensure continuity of electrical service to the City and the Columbia South Shore Well field during power outages	Portland Water Bureau	All Hazards	Kim Anderson	in progress	Discussion with PGE occurred 11/20; more specific needs should be communicated	Exercised 11/12/2020 with PGE and local partners, "Black Sky" Workshop. Collaborated with PGE and had guest speakers. Discussions will continue on electric service expectations and needs.	None	In progress, not stalled	Yes, prioritizing GW is essential	N/A
PWB-22	Collaborate with Multnomah County Drainage District and Port of Portland to assess flooding impacts from levee failure, quantify risks, and identify potential mitigation strategies.	Portland Water Bureau	Flood	Kim Anderson	In progress	Coordination meeting with MCDD July 2018; participation in MCDD full-scale exercise 9/25/18	Coordination meeting with MCDD July 2018; participation in MCDD full-scale exercise 9/25/18; need to coordinate/contact MCDD in 2021.	None	Need to establish regular check-ins with MCDD	Yes, still relevant	N/A
PWB-23	Make seismic improvements to Columbia South Shore well field and groundwater pump station	Portland Water Bureau	Earthquake	Kim Anderson	In planning	Planned for FY 2029-2043 in the PWB Seismic Implementation Plan	Planned for FY 2029-2043 in the PWB Seismic Implementation Plan	Future Planning	N/A	Yes, planned for future implementation	N/A
PWB-24	Install backup transformer(s) at Groundwater Pump Stations to reduce vulnerability to power outage.	Portland Water Bureau	All Hazards	Kim Anderson	stalled	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	This recommendation is not the right solution, need to consider other options	This recommendation is not the right solution, need to consider other options	No, this recommendation will not work for this.	N/A
PWB-25	Investigate well treatment options to increase existing well capacity.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study completed July 2018, no action planned at this time.	Follow-up study completed 2020, implementation memo for recommendation currently in progress.	None	Implementation recommendations being developed	Yes, planning in development	N/A
PWB-26	Investigate hypochlorite generation at ground water pump station to reduce or eliminate the need for out of area deliveries.	Portland Water Bureau	All Hazards	Kim Anderson	In planning	Planning in FY 20/21	Future planning project, projected schedule for study to be developed Spring 2021.	None	N/A	Yes, currently in planning	N/A
PWB-27	Continue to research ways to balance the needs between fire flow requirements and water quality requirements.	Portland Water Bureau	Wildfire	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Planning memo completed 9/20	None	Planning memo completed in the Fall 2020	Yes, still needed	N/A
PWB-28	Coordinate with Fleet and PBOT Maintenance Operations to ensure adequate reserves of diesel fuel and gasoline to support extended operations.	Portland Water Bureau	All Hazards	Kim Anderson	stalled	No Known Action Currently Planned 1/21	No Known Action Currently Planned 2/21	Not sure this is correct solution for fuel	Fuel planning needs to be done region wide	No, not sure this is the right solution for fuel planning. Need to consult with Fleet and PBOT.	N/A
PWB-29	Work with other City bureaus to investigate potential for pre-disaster agreements to provide fuel, shelter, food, water, and sanitary facilities, materials, supplies, equipment, and specialty contractors for City response.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning in FY 2023-2024	Planning in FY 2023-2024. Completed one Mutual Aid Agreement in 2020 - PNEMA - with PBOT taking lead.	Future Planning	N/A	Yes, plans for future	N/A
PWB-30	Partner with Multnomah County, Metro, Portland Public Schools (PPS), adjacent school districts, and Portland Parks and Recreation (PP&R) to develop a sheltering plan for city responders and their families.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21; Multnomah County has a sheltering plan for public. Suggest EMSC and PBEM assist to start this process.	None	Agreement with PBOT to house staff at Interstate. Need to explore this more, have a champion to spearhead this. EMSC PBEM?	Yes, need more planning help; recommend PBEM and EMSC discuss this.	Agreement with PBOT to house staff at Interstate. Need to explore this more, have a champion to spearhead this. EMSC PBEM?
PWB-31	Investigate availability, capacity, contracting and delivery of portable water treatment plants	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Regional planning study on Emergency Water Distribution underway - completion TBD	Planning study on Emergency Water Distribution underway - completion planned for FY 21/22 - UASI, Consortium. Planning memo completed 3/19, Ops group working to implement.	N/A	Regional study needed for regional effort	Yes, regional need	N/A
PWB-32	Investigate availability and use of food-grade quality tank trucks for distribution of water following emergencies.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study on Emergency Water Distribution underway - completion TBD; plans for alternate tank trucks will be considered.	Planning study on Emergency Water Distribution underway - completion planned for FY 20/21; Planning memo completed 3/19, Ops group working to implement.	N/A	Regional study needed for regional effort	Yes, regional need	N/A
PWB-33	Determine number, locations and types of Emergency Water Distribution Systems, and provide location information to the public.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning study on Emergency Water Distribution underway - completion TBD; plans for alternate tank trucks will be considered.	Planning study on Emergency Water Distribution underway - completion planned for FY 20/21; Planning memo completed 3/19, Ops group working to implement.	N/A	Regional study needed for regional effort	Yes, regional need	N/A
PWB-34	Investigate and implement use of Integrated Public Alert and Warning System (IPAWS) / Wireless Emergency Alerts (WEA) systems to send alerts from specific cell towers to cell phones for those in specific locations affected by an event.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	No Known Action Currently Planned 1/21	PBEM has WEA and IPAWS capabilities	None	N/A	Yes, could use more training, and more people willing to train.	Currently in use by PBEM. WB partners with PBEM for alerting.

PWB-35	Develop measures to rapidly isolate damaged portions of the water conveyance system (most of Vernon 270, Washington Park 229 and Tabor 270) to minimize water loss and preserve storage	Portland Water Bureau	All Hazards	Kim Anderson	no progress	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan)	On the list of future Planning projects, projected schedule for study to be developed Spring, 21.	N/A	Future planning, Spring 2021	Yes, in planning this year	N/A
PWB-36	Further study the feasibility of seismic valve installation at strategic locations to protect water supply & storage.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	Planning to begin in FY 2020-21	On the list of future Planning projects, projected schedule for study to be developed Spring, 21.	N/A	Future planning, Spring 2021	Yes, in planning this year	N/A
PWB-37	Participate with PBOT, Multnomah County, Oregon Department of Transportation (ODOT), Metro, Clackamas County and USFS in an in depth risk assessment of the bridges to develop and prioritize mitigation projects to ensure connectivity after an event.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Transportation study underway - RDPO and PBOT	N/A	Regional emergency transportation routes project currently underway.	Yes, if regional study does not reveal bridge detail needed.	N/A
PWB-38	Coordinate with Multnomah County, Clackamas County, Metro, Oregon Department of Transportation (ODOT) and PBOT to ensure road system access to critical facilities including Interstate, Lusted Hill, Headworks, Sandy River Station, pump stations, and tank/reservoir sites.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	Transportation study underway - RDPO and PBOT; however PWB was not consulted or included in study participation. Have requested PWB be included 1/28/21.	N/A	Need to ask that WB locations be included in emergency routes, in the current regional planning study.	Yes, and ensure that WB locations are included in emergency routes, in the current regional planning study.	N/A
PWB-39	Revise current emergency response plans based on recommendations from the Water Bureau Seismic Study.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 26/27 (PWB Seismic Implementation Plan)	Planning to begin in FY 26/27 (PWB Seismic Implementation Plan)	Future Planning	N/A	Yes, needed	Short term items have been completed. Future planning will occur.
PWB-40	Continue to support research of best available science and data for space weather and potential impacts to the City of Portland, and where possible take steps to increase resilience of city infrastructure to space weather events.	Portland Water Bureau	Space Weather	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Need more scientific data on this topic, and consult with Water Quality on impacts.	Yes, this is developing science	N/A
PWB-41	Develop main replacement program with earthquake resistant pipe (Kubota ERDIP or US-Pipe TR-EXTREME) in areas of high permanent ground deformation	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planning currently underway to be complete in FY 18/19	<ul style="list-style-type: none"> <li>Planning FY 19/20 and 20/21.</li> <li>- 2019 – finalized guidelines that can be used to determine if a pipe should be replaced with ERDIP based on GIS map layers for predicted ground deformation and movement.</li> <li>- 2020 and on-going, developing Seismic Design Standards and Specifications for PWB, as well as developer and inter-agency projects.</li> <li>- First Developer installation of ERDIP completed in late 2020 at the Amazon site.</li> <li>- Additional ERDIP projects in early design including PWB frontage improvements for Amazon, new waterline as part of the NW Broadway (old downtown USPS site) project, as well as 12' main replacement on Hayden Island.</li> <li>- Anticipate including ERDIP as part of regular crew replacement starting in potentially 2022/23.</li> </ul>	N/A	N/A	N/A	Several projects have occurred, as listed. Future planning includes replacement with ERDIP as soon as 2022/23.
PWB-42	Support the creation of a City of Portland Seismic Resiliency Officer position under PBEM to drive citywide resiliency efforts. This action needs high-level support from City Council.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21; we do support this position but have not heard that it was created.	N/A	Support this but have not heard that position has been created.	N/A	N/A
PWB-43	Coordinate with Commissioner's Office and Office of Government Relations (OGR) to elevate seismic retrofit funding for water infrastructure to a high priority on the City's legislative agenda. This action needs high-level support from City Council and Office of Government Relations (OGR).	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Need to assign policy group to pursue this.	N/A	N/A
PWB-44	Collaborate with other city bureaus to encourage and expand personal, family and business preparedness plans and programs.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	PBEM offering Personal/Home Preparedness courses to City employees. No Other Known Action Currently Planned 1/21	Collaborated with BDS, BES, PBOT to provide Steve Eberlein preparedness webinar. PBEM offering Personal/Home Preparedness courses to City employees. We supplied each employee with an emergency kit in 2018.	Ongoing	N/A	Ongoing	We collaborate and partner with other bureaus and PBEM to bring Preparedness presentations to staff. Currently planning monthly Preparedness presentations.
PWB-45	Develop a West-side emergency operations and staging facility for field crews.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	Planning begins in FY 2026-27 (PWB Seismic Implementation Plan)	Planning begins in FY 2026-27 (PWB Seismic Implementation Plan) Current EM Scoping Team is considering this, 1/21.	N/A	N/A	N/A	N/A
PWB-46	Develop a staging plan for stockpiling water system repair materials in strategic locations.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning begins in FY 2025-26 (PWB Seismic Implementation Plan)	Planning begins in FY 2025-26 (PWB Seismic Implementation Plan); this is also being considered during 2019-2024 Strategic Planning; EM Scoping 1/21	N/A	N/A	N/A	N/A
PWB-47	Continue to conduct ongoing emergency response training for all Portland Water Bureau (PWB) employees.	Portland Water Bureau	All Hazards	Kim Anderson	Ongoing	Courses offered in 2018. Personal Employee Emergency Kits deployed 9/2018.	Courses offered in 2018; EOC Orientation and DAT Training. Currently planning virtual learning curriculum for 2021/22	Ongoing	N/A	N/A	N/A
PWB-48	Purchase additional vacuum excavator to facilitate access to water system for maintenance and repairs.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	N/A	N/A	N/A
PWB-49	Establish relationships with out-of-state utilities for future Emergency Management Assistance Compact (EMAC) agreements.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 19/20 (PWB Seismic Implementation Plan)	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan); developed close working relationship with Seattle Public Utilities, Tacoma, Yakima and Bend OR water utilities. Currently on the ORWARN Board.	None	Some in place with WA utilities; need to plan for more.	N/A	N/A
PWB-50	Establish and document PWB reporting standards for both temporary protective measures and permanent repairs in compliance with Federal Emergency Management Agency (FEMA) guidelines.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan)	Planning to begin in FY 20/21 (PWB Seismic Implementation Plan) FEMA reimbursement analysis currently underway as of 1/2021.	N/A	Current memo for FEMA reimbursement forms and process under way 2/21	N/A	N/A
PWB-51	Train PWB responders to understand and follow protocols for Federal Emergency Management Agency (FEMA) reporting.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	No Known Action Currently Planned 1/21	FEMA reimbursement study/analysis currently underway as of 1/2021. Training will follow.	N/A	Training will follow completed memo and forms	N/A	N/A
PWB-52	Upgrade trestles that carry Conduits 2 and 3 of the water delivery system.	Portland Water Bureau	All Hazards	Kim Anderson	In progress	Additional projects on Conduit 3 in 5-yr CIP - 2 Trestles on Conduit 2 to be completed FY 2019-20.	Additional projects on Conduit 3 in 5-yr CIP - 2 Trestles on Conduit 2 completed FY 2019-20.	Future Planning	Planning in progress	N/A	N/A
PWB-53	Create redundancy in the water delivery system by burying Conduit 3 under the Sandy River.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	N/A	N/A	N/A
PWB-54	Continue to mitigate Portland's water supply infrastructure and the Bull Run Watershed from landslide hazards; incorporate landslide hazard reduction techniques into infrastructure projects.	Portland Water Bureau	Landslide	Kim Anderson	In progress	No Known Action Currently Planned 1/21	Washington Park Reservoir Improvement Project includes landslide mitigation and slope stabilization. Construction currently under way, 1/2021.	N/A	Some landslide mitigation occurring at WA Park	N/A	N/A
PWB-55	Seismically harden Groundwater Transmission Main.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planned for FY 2033-2038 in the PWB Seismic Implementation Plan	Planned for FY 2033-2038 in the PWB Seismic Implementation Plan	Future Planning	Planned for future	N/A	N/A
PWB-56	Seismically harden conduits from Headworks to Powell Butte.	Portland Water Bureau	Earthquake	Kim Anderson	In progress	Planning to begin in FY 2018/19 (PWB Seismic Implementation Plan)	Planning to be completed 3/21	Current Planning	Planning occurring 3/21	Yes, planning occurring 2021	N/A
PWB-57	Mitigate landslide hazards for the conduits within the Bull Run watershed.	Portland Water Bureau	Landslide	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	Yes, future planning	N/A
PWB-58	Make seismic improvements at Headworks.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	Yes, future planning	N/A
PWB-59	Make seismic improvements at Lusted Hill Treatment Facility.	Portland Water Bureau	Earthquake	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	Yes, future planning	N/A

PWB-60	Install remote monitoring sensors and alarms at Bull Run dams to provide an early detection of dam movement or change.	Portland Water Bureau	Dam Failure	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Unknown at this time.	Yes, future planning	N/A	
PWB-61	Continue to monitor Bull Run Dams 1 and 2 for seismic risk, floods and landslides	Portland Water Bureau	All Hazards	Kim Anderson	Ongoing	Dams are monitored and inspected regularly; this is ongoing	Dams are monitored and inspected regularly; this is ongoing	Ongoing	Dams are monitored regularly, no issues.	Yes, ongoing need	N/A	
PWB-62	Replace Cast Iron piping with seismically resilient pipe material.	Portland Water Bureau	Earthquake	Kim Anderson	Ongoing	As pipes are repaired, they are replaced with seismically resilient pipe; this is ongoing.	As pipes are repaired, they are replaced with seismically resilient pipe; this is ongoing.	Ongoing	N/A	Yes, ongoing need	N/A	
PWB-63	Establish a pre-disaster inter-bureau agreement with Office of Management and Finance (OMF) - Fleet and PBOT Maintenance Operations to assign personnel, equipment, and resources to work in coordination with Portland Water Bureau (PWB) response.	Portland Water Bureau	All Hazards	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Suggest this agreement coincide with staff sheltering planning. PBEM and EMSC could assist.	Yes, future planning	N/A	
PWB-64	Coordinate with FEMA on results of updated flood-plain mapping on Willamette River for impacts to Portland Water Bureau (PWB) facilities.	Portland Water Bureau	Flood	Kim Anderson	no progress	No Known Action Currently Planned 1/21	No Known Action Currently Planned 1/21	N/A	Need a point person for this; recent flood planning improved city insurance rates.	Yes, still needed	N/A	
OMF-1	Participate in Oregon Solutions project to recertify Multnomah County Drainage District (MCDD) levees.	Office of Management and Finance	Flood	Nancy Hendrickson	Completed	The OS project is over and was completed as written in the plan. It is now called Levee ready columbia--15 partners (Cities, County Metro Port). A regional partnership. This partnership has contributed money and worked with the legislature to get money to get an IFA (infrastructure loan)--The city backed one and a county another to do an assessment of the levees that needed to be done for recertification--this looked at hazard mitigation climate change etc. This is an active partnership. This team managed to get legislation passed at the state level to consolidate the four drainage districts into one. It happened quickly, there is now a 3-5 year process that is						
OMF-2	Partner with agencies to develop an emergency operations center on the west side of the Willamette River. This action needs high-level support from City Council.	Office of Management and Finance	All Hazards	Aaron Beck	Stalled	Development of the Sears site into a west side emergency operations center is temporarily paused pending continued work on a citywide Long-Range Facilities Master Plan. No work has been accomplished since the last report.	Continued work on developing a master plan were also stalled pending site assessment for use by Fire Bureau.	Barriers are primarily the lack of funding to complete the next phases of a Long-Range Facilities Master Plan.	The action should continue to be included in the plan because the City must use the site consistent with the deed where the federal government transferred the property to the City for primarily emergency preparedness and response use, otherwise the property will revert back to the federal government. There is definitely bureau interest in the property - but not enough to commit scarce bureau resources.			N/A
PBOT-1	Perform risk assessment of bridges; use findings to develop and prioritize mitigation projects. Ensure equity tools are used in project prioritization.	Portland Bureau of Transportation	Earthquake	Steve Townsen, Cameron Glasgow	Completed	Seismic assessment and prioritization of bridge inventory was completed.	None	N/A	This was already complete. However, there are recommended mitigation projects that need to be pursued. So YES on moving forward to implementation phase in the plan. Wording of the specific objective will change since we are on the implementation portion			The recommended mitigation projects will now need to be incorporated into planning documents for the potential funding.
PBOT-2	Identify transportation routes likely to be impacted by landslides and identify potential alternate routes based on most likely scenarios. Communicate potential alternate routes with the public, highlighting the fact that routes may change during actual events. Ensure access to this information to those with limited English proficiency, and including seniors and those with disabilities.	Portland Bureau of Transportation	Landslide	Steve Townsen, Cameron Glasgow	Stalled	No progress.	There appear to be too many variables and possible outcomes to complete this task in a meaningful way. When a landslide occurs, traffic control will be placed and site-specific detours will be put in place.	N/A	No	N/A	This mitigation goal will not be completed.	
PBOT-3	Design and build facility for PBOT Maintenance Operations that can operate as a Bureau Incident Command Post following a large earthquake. Move existing road clearing equipment to a facility that is not subject to freeway ramp collapse. Engage local community groups, especially communities of color, in design phase and ensure Minority, Women Owned Emerging Small Business (MWESB) contracting meets or exceeds aspirational goals.	Portland Bureau of Transportation	Earthquake	Corey Maciulewicz	Stalled	An initial Master Site Plan was completed (costs identified to be too high).	Costs too high. The City then put a freeze on all Master City Plan work across all bureaus to ensure a citywide review before any single bureau moved forward with plans.	Cost too high. Lack of City approval to move forward doing any more work to lower costs in a modified design.	No, although we still need to look at moving vehicles and equipment out from underneath earthquake-susceptible bridges. This is a difficult one to solve without a new facility, but we can potentially parse out some of our operations to other facilities as they become available.			This mitigation goal will not be completed.
PBOT-4	Perform drainage assessment and mitigate problem areas of right of way where frequent washouts occur during heavy rains.	Portland Bureau of Transportation	Severe weather	Rich Grant	In Progress	BES engineering staff have evaluated a few areas of concern.	Staffing time to evaluate all areas.	N/A	yes	N/A		
PBOT-5	Continue to convene city landslide group after each major landslide occurrence (including large single landslides or multiple concurrent landslides) to evaluate the city's response and develop lessons learned.	Portland Bureau of Transportation	Landslide	Cameron Glasgow	Ongoing	City continues to convene Landslide Committee during rainy season.	None	N/A	yes		City-developed electronic landslide reporting application for use by bureau landslide coordinators was successfully deployed this year.	
PBOT-6	Complete PBOT Transportation Resiliency Plan to identify and prioritize vulnerabilities in the transportation system.	Portland Bureau of Transportation	All Hazards	Courtney Duke	In Progress	Director's Team has ok'd developing a Resiliency plan this calendar year	None.		Yes - this one is in progress for competition by 30 June by a designated team within PBOT and actively being worked March - June 2021.			
BES-1	Continue to implement actions in the 2005 Portland Watershed Management Plan.	Bureau of Environmental Services	Erosion, Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This plan describes the approach the city uses to evaluate watershed conditions and implement projects to improve watershed health. It continues to provide the framework for many bureau programs and projects.	No major obstacles.	This is an ongoing action as the plan provides a framework for the bureau's watershed work. COVID-19 and other emergencies temporarily slowed some of the work in mid-2020.	As written, this is an ongoing action that is hard to measure. Recommend the action be reframed or removed in the plan update.			N/A
BES-2	Engage with the electric utilities to negotiate prioritizing the return of power to treatment plants (Tryon Creek and Columbia Boulevard), collection system active controls and pump stations.	Bureau of Environmental Services	Earthquake	Nishant Parulekar, Kate Carone	Complete	The action was completed prior to the previous status report.	N/A	N/A	N/A	Yes	N/A	
BES-3	Complete the BES Resiliency Plan to identify vulnerabilities in the sanitary and combined sewer collection system.	Bureau of Environmental Services	Earthquake	Nishant Parulekar, Kate Carone	Completed	The BES Resiliency Master Plan was completed in March 2019. In March 2020 a Resiliency Team was staffed and began implementing plan recommendations	The plan took longer than expected to complete due to staffing changes.	N/A	N/A		The plan was completed as intended and is serving as a roadmap for building bureau resiliency to seismic and climate change risks. Partnerships were integral to successfully completing the plan.	

BES-4	Continue BES' land acquisition program to protect or enhance water quality, hydrology and habitat. Consider the presence of floodplain and steep slopes in the program's criteria. When properties are purchased, remove structures and place deed restrictions to limit to open space uses, to protect them as natural resource areas or other green infrastructure in perpetuity.	Bureau of Environmental Services	All Hazards	Nishant Parulekar, Kate Carone	Ongoing	Approximately 34 acres have been purchased under BES' land acquisition program since the last report.	Property owners in areas of interest not always interested in selling and/or BES can't get to agreement on purchase price.	This is an ongoing activity.	This is an ongoing action and should be included but reframed in the updated plan. Recommend combining it with action item BES-6.	N/A	More than 250 acres have been purchased, protected and restored in the Johnson Creek watershed alone since the Willing Seller Acquisition Program began in the late 1990's. Most purchased properties were located in the floodplain.
BES-5	Develop permitting and policy tools to offset impacts of floodplain development with mitigation on sites that increase flood storage and enhance ecological functions, consistent with new floodplain regulations.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	City adopted South Reach Plan, which for the first time allows offsite mitigation banking for development in the floodplain in one section of the city, and increased the mitigation requirements. A citywide approach will be codified by 2023 as part of FEMA BiOp compliance and approval for initial mitigation bank will be tied to it.	Coordinating with other mitigation drivers including Portland Harbor Superfund cleanup effort, and negotiating with private property owners over mitigation sites.	The City is making good progress on this action, it just isn't yet complete.	Yes, it should be included, and is expected to be complete in 2023.	N/A	N/A
BES-6	Continue to fund the Johnson Creek Willing Seller Program to reduce the risks of flooding, while improving natural floodplain conditions in the watershed.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Johnson Creek Willing Seller Program has continued to be funded to purchase properties in the floodplain, over \$1.4M in this reporting period.	Property owners in areas of interest not always interested in selling and/or BES can't get to agreement on purchase price.	This is an ongoing activity.	This is an ongoing action and should be included but reframed in the updated plan. Recommend combining it with action item BES-4.	N/A	More than 250 acres have been purchased, protected and restored in the Johnson Creek watershed alone since the Willing Seller Acquisition Program began in the late 1990's. Most purchased properties were located in the floodplain.
BES-7	Continue to partner with United States Geological Survey (USGS) to maintain and improve river and stream gauges in the Portland metropolitan area.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	We finalized a new 5-year contract (2019-2024) with USGS and others to continue to co-fund gages on the Willamette, Johnson Creek, Tryon Creek, Fanno Creek, and even added a gage on Crystal Springs Creek	No major obstacles.	N/A	This is an ongoing action and should be included but rewritten to have a discrete ending/goal.	N/A	N/A
BES-8	Continue to provide publicly accessible information on landscaping techniques that reduce water run-off.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	This work continues to be ongoing through signage at project sites throughout the city, BES website, printed materials, events, grants, and especially through partnerships with watershed councils and soil and water conservation districts.	Physical distancing during 2020 in response to COVID-19 drastically reduced in-person outreach and information sharing by BES and partners who help deliver these messages.	This is an ongoing action. The cancelling of in-person events in 2020 was a barrier to sharing these messages with some populations, but other forms of outreach did continue.	This is an onling action and should be included but reframed in the updated plan to have concrete goals.	N/A	N/A
BES-9	Design and conduct a study to determine the effectiveness of maintenance agreements that require homeowners associations to manage vegetation in open space tracts when new land divisions are approved.	Bureau of Environmental Services	Wildfire	Nishant Parulekar, Kate Carone	Stalled	A group was convened to discuss feasibility of this project. There was general interest, but the project was set aside primarily due to lack of staff capacity. There is potential for this to move forward in the future, but not in the immediate term.	There were several challenges. First, the impacts of the problem are dispersed among several city entities and external partners, and didn't feel as urgent as other work. Second, solutions would need to be very collaborative, and logistics of organizing and staffing was beyond anyone's ability to take on.	Staff availability was primary barrier, with funding for consultant and partner work a secondary factor.	Recommend omitting this from the updated plan. There isn't capacity at this time and the problem is more of an O&M issue than a hazard-centered issue.	N/A	N/A
BES-10	Update the Stormwater Management Manual on a regular basis to incorporate best management practices, address development-related issues and work effectively with natural hydrologic conditions.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Complete	The SWMM is updated on a regular basis. Completed the most recent SWMM update in 12/2020.	No major obstacles.	N/A	The most recent version of the manual, published in December 2020, is complete. BES updates this manual regularly. The action could continue to be included in the plan, but the utility of that inclusion should be considered during the NHMP update.	The stormwater management manual provides standards for development so it will be months to years before we will be able to observe facilities designed to these standards in operation. So far, the manual has been received well by users because of improvements to language clarity and technical guidance.	N/A
BES-11	Investigate design approaches for effectively managing stormwater in landslide-prone areas.	Bureau of Environmental Services	Landslide	Nishant Parulekar, Kate Carone	In progress	Through Risk Assessment work, BES collaborated closely with landslide experts from OR DOGAMI, PSU and BDS. We were able to identify areas where landslide risks exist and where those risks overlap with areas where BES' stormwater systems are deficient, or where we lack service, system or runoff if not otherwise managed. As part of the Resiliency Master Plan, BES identified pipe materials that are more resilient to landslides.	No major obstacles.	BES has identified where there is greater risk, and mitigation options for piped stormwater systems. Bureau staff are still struggling with integration across systems and understanding how to incorporate mitigating landslides into their work. We tend to remain in a narrow focus of "system" still with little understanding of how to deal with or acknowledge risks either being imposed on our system of focus or unintended risks created by our work in our system. We may need more education and better understanding of these issues for staff that are making these decisions to move forward with looking at the broader view of integration.	Consider reframing action to address underlying issues of education, standards and integration of thinking across systems to be better prepared for infrastructure rehab and development in landslide prone areas.	N/A	N/A
BES-12	Continue the City's vegetation management, public education programs, and partnerships with watershed councils and the soil and water conservation districts to prevent erosion along streams and rivers.	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	Ongoing. BES has continued to restore and manage riparian zones on BES-owned property. BES has continued to fund all local watershed councils, which work with private property owners to restore riparian areas. BES Clean River Rewards education program did field programs with more than 4,000 students.	The COVID-19 emergency briefly slowed down field work in mid-2020 and halted in-person education programs.	This is an ongoing activity that could always benefit from additional staff capacity.	This is a collection of ongoing activities. Framing of this action should be reconsidered to make it more measurable and material to hazard mitigation.	N/A	N/A
BES-13	Continue to implement projects that retain native vegetation, increase vegetation diversity and increase the complexity of the vegetation strata (having at least three vegetation strata: herbs, shrubs, trees).	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	Planting of 56,403 native tree and shrub seedlings in BES-owned natural areas, and initiation of habitat enhancement work on 57 new acres of natural area in 2019 and 2020.	No major obstacles.	This an ongoing action.	This is an ongoing action that should be reframed to make discrete from BES-19.	N/A	N/A
BES-14	Continue to implement City restoration projects that increase large wood and root wads, which soften the effect of wave action on shorelines as well as provide habitat for migrating salmonids.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Oaks Bottom restoration project was completed, reopening and restoring 75 acres of wetland habitat for migrating salmon and other wildlife. The Luther Road Phase II project was also completed, adding large wood and root wads along 2,000 feet of Johnson Creek.	These floodplain restoration projects were complex, expensive, and required extensive partnerships to accomplish. Both projects had significant logistical construction challenges and disrupted transportation on a major transportation trail.	This is an ongoing activity.	This is an ongoing activity. Consideration should be given to whether individual projects should be listed as opposed to lumped in one action item.	The two projects completed during the reporting period are being monitored closely and are exceeding design expectations.	N/A
BES-15	Support Early Detection and Rapid Response to control invasive plant and insect populations that threaten forest infrastructure.	Bureau of Environmental Services	Landslide, Wildfire	Nishant Parulekar, Kate Carone	Ongoing	The city is managing 13 species for eradication, one species for containment, and closely watching five additional species.	No major obstacles.	This is an ongoing action. Additional funding would expand the extent of this work, but work is proceeding as planned.	Recommend retention of this action. Consider expanding to include control of invasive species populations.	N/A	N/A
BES-16	Explore options to acquire rights of first refusal (ROFR) for properties that become non-conforming uses in the floodplain due to changing regulations. Right of first refusal would be exercised when properties are substantially damaged by a flood event. Consider establishing an acquisition fund for these properties that amortizes the cost of acquisition over decades.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Stalled	Have done some initial analysis and identified a residential area that would be a good candidate for this tool if it were developed. Acquisition would be good fit for BRIC funding.	Lacks momentum due to competing priorities within the organization.	The project lacks a champion in our organization.	Yes, consider including some version of this action in the next plan update.	N/A	N/A



BES-17	Complete the Stormwater System Plan, including strategies to reduce risks related to runoff in areas at risk of natural hazards.	Bureau of Environmental Services	Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This effort is described as completion of the plan but this is a long term, ongoing, continuous planning process, in which we will identify high risk areas and prioritize them for further detailed study to develop appropriate projects, programs, and policies to reduce risk related to stormwater. The first version of the SWSP Risk Assessment identified areas of risk where stormwater is not likely being managed effectively in landslide prone areas that could effect natural systems. While there were no definitive policies to come out of that work, we have been using that data to inform planning processes. As our program continues to mature, more detailed risk data will be developed based on field collected data and more advanced remote sensing processes. As the risk data informs the planning process in IP, policies will likely begin to be formed around mitigation practices and potential new or enhanced regulatory policy for new and redevelopment.	Through the planning process, we shifted approach from producing a standalone plan to a set of tools and criteria for categorizing and prioritizing risk. Additional action beyond the risk assessment didn't happen. Our next priorities are to develop and refine our risk assessment process to better define risks.	Policy will likely come out of the process of examining solutions to the risks identified. Implementation or development of risk mitigation strategies has also stalled due to lack of resources, COVID and recent bureau reorganization.	Something related to this action should be considered for inclusion in the updated plan. It will require a conversation within the Bureau to agree on where the policies should be identified and where policy could/should be developed or generated.	N/A	N/A
BES-18	Continue to implement green infrastructure projects and natural area restoration projects identified in BES' watershed management plans and system plans.	Bureau of Environmental Services	Landslide, Flood	Nishant Parulekar, Kate Carone	Ongoing	This is ongoing work. Many projects under various programs have been completed including green street construction, tree planting, culvert replacements and floodplain restoration.	Building equity considerations into green infrastructure planning and implementation is underway.	This is ongoing work. The COVID-19 temporarily slowed work in mid-2020.	This is a collection of ongoing activities. Framing of this action should be reconsidered to make it more measurable and material to hazard mitigation.	N/A	N/A
BES-19	Partner with community groups and residents to plant trees and revegetate natural areas and open spaces to improve local hydrology and stormwater management and to promote resiliency of and equitable benefits provided by the urban forest.	Bureau of Environmental Services	Flood, Landslide	Nishant Parulekar, Kate Carone	Ongoing	The BES Tree Program worked with community groups and property owners to plant 3,909 street trees and 1,966 private property trees in 2019 and 2020.	COVID has resulted in some changes to work schedules and management practices, but has not generally impeded progress on projects. No other significant obstacles.	N/A	This is an ongoing action that should be reframed to make discrete from BES-13.	N/A	While numerous management actions have been implemented, most habitat manipulation projects are not "complete" and will take years of establishment to begin to provide the most benefit.
BES-20	Support Multnomah County Drainage District (MCDD) in their continued calibration and update of hydraulic models for conveyance and internal flood impacts to the four floodplains managed by MCDD #1.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	Completed 75% of the work as part of Master Drainage Plan development.	N/A	The drainage districts have dramatically modernized their processes over the last five years. Building that capacity and securing funding has taken time.	It is expected that this action will be complete before the next NHMP update is finalized, so recommend not to include.	N/A	This work is expected to be complete by summer 2022.
BES-21	Provide technical assistance to support Multnomah County Drainage District in conducting flooding impact studies from levee failure and develop a risk assessment using the updated general building stock, critical facility and demographic information developed for the hazard mitigation plan.	Bureau of Environmental Services	Flood, Dam Failure	Nishant Parulekar, Kate Carone	Complete	This was done as part of the broader Levee Ready Columbia effort. DOGAMI was contracted to do the work and it was completed by 2019.	The project required creative funding through partnerships.	N/A	N/A	The results of this project went above and beyond expectations. As a result, a strong regional coalition was formed that is carrying this work forward.	N/A
BES-22	Work with the Federal Emergency Management Agency (FEMA) to remap all City of Portland streams to identify changes in peak flows and flood extents due to climate change.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	In progress	We are currently working with USACE for Willamette and Columbia River remapping of flood risk. Initial analysis of Johnson Creek flood risk was stalled but is restarting.	Other higher priority areas within the country that have greater risk or less accurate existing mapping stalled our ability to begin Willamette and Columbia remapping.	Funding and staff capacity	The action should be included in the updated plan.	N/A	N/A
BES-23	Where feasible, cost effective and supported both publicly and politically, restore the natural and beneficial floodplain functions of appropriate floodplains within the City. For this action, appropriate means a floodplain that has been identified through a master plan or study certified by a qualified agency.	Bureau of Environmental Services	Flood	Nishant Parulekar, Kate Carone	Ongoing	The Oaks Bottom restoration project was completed, reopening and restoring 75 acres of wetland habitat for migrating salmon and other wildlife. The Luther Road Phase II project was also completed, adding large wood and root wads along 2,000 feet of Johnson Creek.	This floodplain restoration project was complex, expensive, and required extensive partnerships to accomplish. There were significant logistical construction challenges and construction disrupted transportation on a major transportation trail.	This is an ongoing activity.	The project completed during the reporting period is being monitored closely and is functioning even better than expected.	N/A	N/A
BDS-1	Increase the responsiveness of the emergency permitting procedures for post-hazard event periods through development of procedural plan that considers equity implications.	Bureau of Development Services	All Hazards	Anne Castleton	ongoing/stalled	BDS has made progress on the equity side (there is a team who work with specific vulnerable populations. We've also interviewed 4+ EQ-prone cities to determine that none of them have an expedited, post-emergency permitting plan.	bandwidth of staff, no examples to learn from	bandwidth of staff, no examples to learn from, no funding to hire dedicated emergency planner	Yes - is will be critical for resiliency and recovery from a catastrophic event that compromises bldgs.		
BDS-2	Enforce codes relating to wildfire, earthquake, flood, and landslide, including Portland City Code (PCC) 24.51 (fire-safe materials), PCC 24.85 (seismic upgrades), PCC 24.50 (local flood hazard mitigation), and develop a publicly accessible landslide code guide in plain language to assist developers in complying with landslide-related building codes.	Bureau of Development Services	Wildfire, Earthquake, Flood, Landslide	Anne Castleton	In progress	Application form for roofing labels was changed to prevent roofing URMs. A slope stability guide was finalized, published, and made available on the BDS website					
BDS-3	Develop an ordinance requiring a covenant to be recorded on the deed for new development in the FEMA special flood hazard area to ensure that space below the base flood elevation (BFE) is not converted to habitable space.	Bureau of Development Services	Flood	Anne Castleton	In progress	We are discussing changes to Title 24.50 with BPS as part of the FEMA Biop. Plan to meet with Ross Caron to start process w/ BDS Code and Policy Team.					
BDS-4	Encourage and expand personal, family, and business preparedness plans and programs.	Bureau of Development Services	All Hazards	Anne Castleton	Ongoing/in progress	Active Shooter training, personal preparedness competition, presentations,					
BDS-5	Make information about floodplain zones available to residents when applying for permits.	Bureau of Development Services	Flood	Anne Castleton	complete	Public can do a property search on Portland Maps, BDS has FEMA maps loaded in					
BDS-6	Implement recommendations from the City's Unreinforced Masonry (URM) Work Group.	Bureau of Development Services	Earthquake	Anne Castleton	stalled	more community outreach, new committees, no political will to move this forward					
BDS-7	Continue to coordinate with Multnomah County Drainage District (MCDD) to review permit applications for development near levees; if a permit is requested for development within the "levee review area", submit the application to MCDD to review and if necessary work with developer to revise plans to meet United States Army Corps of Engineers (USACE) requirements for development on or near federal levees.	Bureau of Development Services	Dam Failure, Flood	Anne Castleton	In progress	a process was established with MCDD and it was working. Need to check in with MCDD / Mindy Weimer to see if things continued well after Amanda 7 update.					
BDS-8	Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.	Bureau of Development Services	Flood	Anne Castleton	Ongoing	BDS continues its support of this program					
CAMG-1	Advocate for bureaus to consider seismic and landslide risk when developing capital improvement plans, including plans to replace water and sewer infrastructure.	City Asset Managers Group	Earthquake, Landslide	Jonna Papaefthimiou	In progress (almost completed)	Policy completed and intended to be presented to Council this spring - almost done.					
CAMG-2	Use NHMP critical facilities risk assessment data to establish mitigation priorities for city assets.	City Asset Managers Group	All Hazards	Jonna Papaefthimiou	See previous.						

CAMG-3  
 Ensure that every Bureau has inventoried critical assets and reviewed critical infrastructure vulnerability and has identified a 50-year plan to strengthen, retrofit, relocate or otherwise increase resiliency. Consider ways to promote city-wide collaboration.

City Asset Managers Group

Earthquake	Jonna Papaefthimiou	In progress... slowly
All Hazards	Nickole Cheron	Completed

CAMG and DRRAG are both moving in this direction but its a group process and progress is incremental.

OEHR-1  
 Prior to and during implementation, review all actions for negative externalities and to ensure vulnerable populations are protected from displacement or other disproportionate burdens.

Office of Equity and Human Rights

This action was to review the plan and did not include follow-up reviews of any subsequent updates.

None

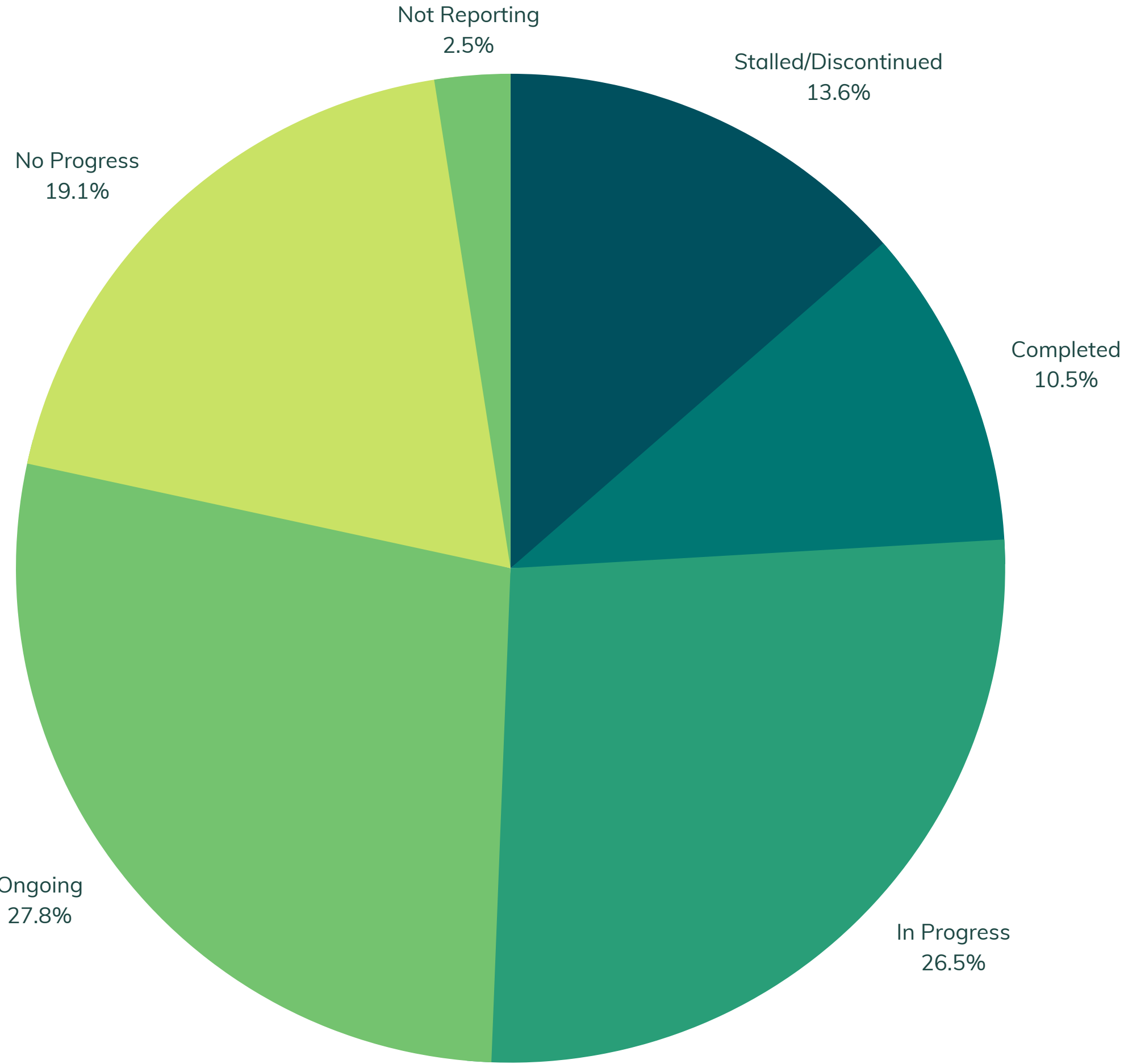
This action was to review the initial plan to ensure it was compliant with Civil Rights Laws and inclusive of the communities those laws protect. To my knowledge there have been no complaints on the plan or the actions from the plan.

# MAP Steering Committee

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Meeting 4  
April 19, 2021

# Action Status Breakdown





# Progress So Far

- Substantial progress for actions related to flooding: South Reach Plan, Johnson Creek Program, Oaks Bottom Restoration Project, BES Tree Program, Levee Ready Columbia (MCDD).
- Some progress in community building/engagement actions: distribution of emergency messaging, community resilience workbook, public education, NET, Fix-It Fairs.
- Several PWB actions are in planning for the Seismic Implementation Plan.
- Stalled progress for Portland Public Schools, URM Projects, Voz, solar + storage battery.

# Takeaways & Suggestions

Stakeholder opposition, lack of political will, or low staff capacity/resources have caused projects to stall or be discontinued.



Create criteria to determine priority projects and consider implementation plan for actions.

Multiple cross-bureau projects with unstandardized language/terms and overlap.



Consolidate similar or overlapping projects.

Actions are grouped by lead agency.



Convey the actions differently by grouping them under an overarching goal or by hazard.

Actions are worded with passive language.



Exclude passive language by reframing actions to be more active and measurable.

Community Engagement is progressing incrementally. There is interest in education/training but a lack of trust from non-white communities.



Reassess equity standpoint to determine culturally appropriate outreach and trust building strategies.

Irregular equity evaluations of actions.



Consider how we can ensure these actions still meet those standards of equity and produce equitable outcomes.

# Questions to Consider

- How do we develop actions that can get community/stakeholder support, can obtain political backing, and can receive adequate funding?
- How do we reframe actions in a way that gives them meaning but does not disqualify them from receiving funding (distinct yet broad)?
- How do we ensure actions produce equitable outcomes?