

Chapter 4 PLANNING PROCESS

In This Chapter

The Oregon NHMP Planning Process is divided into three sections: (a) Introduction, (b) Developing the 2020 Plan, and (c) Maintaining the 2020 Plan.

1. **Introduction:** States the purpose of this chapter.
2. **Developing the 2020 Plan:** Describes the participants and details the 2020 Plan development process. Demonstrates how the 2020 Oregon NHMP is integrated with other State, regional, and federal initiatives. Includes a table identifying changes from the 2015 Plan.
3. **Maintaining the 2020 Plan:** Analyzes the efficacy of the method and schedule for monitoring, evaluating, and updating the 2015 Oregon NHMP and establishes a method and schedule for monitoring, evaluating, and updating the 2020 Oregon NHMP. Summarizes how mitigation measures and project closeouts will be monitored. Identifies a system for reviewing progress toward achieving Plan goals and mitigation actions. Describes how the mitigation action tables are used to show whether mitigation actions in the 2015 Oregon NHMP were implemented as planned.

4.1 Introduction

44 CFR §201.4(b), Planning process. An effective planning process is essential in developing and maintaining a good plan. The mitigation planning process should include coordination with other State agencies, appropriate Federal agencies, interested groups, and be integrated to the extent possible with other ongoing State planning efforts as well as other FEMA mitigation programs and initiatives.

The Disaster Mitigation Act of 2000 (44 CFR 201) had required that states update their multi-hazard mitigation plans every 3 years to maintain eligibility for federal disaster assistance. Effective May 27, 2014, amendments to 44 CFR 201 changed the state mitigation planning update cycle from 3 to 5 years. Oregon first completed a Natural Hazards Mitigation Plan (Oregon NHMP or Plan) in 1992 with subsequent updates occurring in 2000, 2004, 2006, 2009, 2012, 2015, and now 2020. The purpose of this chapter is threefold:

- To describe the process used to develop the 2020 Oregon NHMP,
- To describe the process to be used for tracking progress on mitigation activity and goal achievement during the life of the 2020 Plan, and
- To describe the method and schedule for monitoring, evaluating, and updating the 2020 Plan.

4.2 Developing the 2020 Plan

Requirement 44 CFR §201.4(c), Plan content. To be effective the plan must include the following elements:

Requirement 44 CFR §201.4(c)(1) Description of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.

The purpose of this section is to describe the process used to develop the 2020 Oregon NHMP. Key meetings, participants, decision points, interagency coordination, and public outreach efforts are described. In addition, other state and federal planning efforts with which the 2020 Plan is integrated are identified, as are the sections of the 2015 Plan that were revised.

4.2.1 Participants and Coordination

The State Interagency Hazard Mitigation Team (IHMT)

Prior to the spring of 1996, what is today the State IHMT was an informal group of state agencies whose representatives met on an ad hoc basis following Presidentially declared disasters. On March 4, 1997, in response to the floods and landslides of the autumn and winter of 1996-1997, Governor Kitzhaber directed OEM to make the State Interagency Hazard Mitigation Team a permanent body with regular meetings. The State Hazard Mitigation Officer, housed in OEM, chairs the State IHMT. Today the State IHMT meets quarterly to understand losses arising from natural hazards; to recommend and coordinate strategies to mitigate loss of life, property, and natural resources; and to maintain the Oregon NHMP.

State IHMT member agencies:

- Business Oregon — Infrastructure Finance Authority
- Oregon Climate Change Research Institute and Oregon Climate Service
- Oregon Department of Administrative Services — Chief Financial Office
- Oregon Department of Administrative Services — Enterprise Asset Management
- Oregon Department of Administrative Services — Geospatial Enterprise Office
- Oregon Department of Agriculture
- Oregon Department of Consumer and Business Services — Building Codes Division
- Oregon Department of Consumer and Business Services — Division of Financial Regulation
- Oregon Department of Energy
- Oregon Department of Environmental Quality
- Oregon Department of Fish and Wildlife
- Oregon Department of Forestry
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Land Conservation and Development
- Oregon Department of State Lands
- Oregon Department of Transportation
- Oregon Health Authority — Health, Security, Prevention, and Response Program
- Oregon Health Authority — Public Health Division
- Oregon Military Department — Office of Emergency Management
- Oregon Parks and Recreation Department — Stewardship Division

- Oregon Parks and Recreation Department – Heritage Programs Division
- Oregon Public Utility Commission
- Oregon State Police — Office of State Fire Marshal
- Oregon Water Resources Department
- Oregon Water Resources Department – Dam Safety Program
- Oregon Watershed Enhancement Board
- University of Oregon — Emergency Management and Continuity
- University of Oregon — Oregon Partnership for Disaster Resilience

State IHMT meetings are open to the public, and representatives from non-state IHMT agencies and organizations are added as needed. Representatives of several interested federal agencies (including FEMA) are invited to participate. In particular, the Army Corps of Engineers sponsors the Silver Jackets which is an officially recognized sub-committee of the State IHMT. Each IHMT meeting includes a standing agenda item for topics related to the Oregon NHMP.

State IHMT agencies provided staff and other resources to accomplish the update. State IHMT agency Hazard Leads are listed in **Table 4-1**.-DLCD managed and facilitated the update process with oversight from the State IHMT, guidance from FEMA, and in close cooperation with OEM and the State Hazard Mitigation Officer, and DOGAMI. Other state agencies also contributed substantively and substantially to the update.

Table 4-1. State IHMT Hazard Lead Agencies

Hazard	Lead Agency	Support Agency
Climate Change	Oregon Climate Change Research Institute	Department of Land Conservation and Development
Coastal Hazards	Department of Geology and Mineral Industries	Department of Geology and Mineral Industries
Droughts	Oregon Water Resources Department	Oregon Climate Change Research Institute
Earthquakes	Department of Geology and Mineral Industries	Oregon Office of Emergency Management
Extreme Heat	Oregon Climate Change Research Institute	Oregon Health Authority
Floods □ Dam Safety	Department of Geology and Mineral Industries Oregon Water Resources Department Dam Safety Program	Department of Land Conservation and Development
Landslides	Department of Geology and Mineral Industries	Department of Geology and Mineral Industries
Tsunamis	Department of Geology and Mineral Industries	Department of Geology and Mineral Industries
Volcanoes	Department of Geology and Mineral Industries	Department of Geology and Mineral Industries
Wildfires	Oregon Department of Forestry	Oregon Department of Forestry Oregon State Police, Office of the Fire Marshal
Windstorms	Oregon Public Utility Commission	Oregon Climate Change Resource Institute
Winter Storms	Oregon Department of Land Conservation and Development	Oregon Climate Change Research Institute

Source: DLCD

While not an exhaustive recitation of all the contributions by all who participated, the following provides some highlights of the coordination, cooperation, and collaboration that resulted in the 2020 Oregon NHMP.

The hazard characterizations and probability and vulnerability assessments were reviewed and revised by subject matter experts (SMEs) from State IHMT agencies and the Oregon Climate Change Research

Institute (OCCRI). The coastal hazards, earthquakes, landslides, tsunamis, and volcanic hazards chapters were all reviewed and updated by DOGAMI. The flood hazard chapter was reviewed and updated collaboratively by DOGAMI and DLCD. The new Dam Safety portion of the flood hazard chapter was authored by OWRD. OCCRI and OWRD collaboratively reviewed and updated the drought chapter. OCCRI authored the new extreme heat chapter and OHA contributed context, the public health perspective, and additional content. ODF reviewed and updated the wildfire chapter. OPUC and OCCRI both reviewed and updated windstorms chapter. The winter storms chapter was reviewed and updated by DLCD and OCCRI.

The probability analyses in particular were approached differently for this update to facilitate incorporation into the 2020 risk assessment methodology. ODF provided the wildfire probability analysis for the 2020 risk assessment and the wildfire hazard data that DOGAMI used to perform the wildfire exposure analysis. DLCD provided the CDC's social vulnerability index that was used for one element of vulnerability in the 2020 risk assessment.

Information about state-owned and leased buildings and critical/essential facilities as well as impacts of hazard events on them was provided by DAS. The former was analyzed for potential loss and reported by DOGAMI; the latter was analyzed by DLCD for additional vulnerability information. DOGAMI and DLCD established a list of local critical facility types that DOGAMI located and analyzed for potential loss. These analyses were used together with the Center for Disease Control's social vulnerability index to as the vulnerability element of the 2020 risk assessment methodology.

OPRD performed an exposure analysis of archaeological resources with respect to coastal erosion, earthquakes, floods, and landslides; technical difficulties precluded analysis with respect to tsunamis, volcanic hazards, and wildfires. These are the first analyses of exposure of cultural and historic resources to natural hazards to be included in the Oregon NHMP.

OCCRI updated the Introduction to Climate Change section that it debuted in the 2015 Oregon NHMP and in addition to the contributions previously described, lent expertise in the areas of climate (Community Profiles), coastal hazards, drought, extreme heat, floods, wildfires, windstorms, and winter storms – all hazards influenced by climate change. OHA contributed to the extreme heat chapter and to questions of extreme heat impacts, for the first time bringing the public health perspective to the Oregon NHMP.

ODOT provided information about seismic lifelines and climate change impacts to transportation infrastructure. The Local Capability Assessment, Coordination of Local Mitigation Planning, and Funding sections were reviewed and revised by OEM and DLCD using information provided by their own and other agencies. The Regional Profiles were updated by DLCD, with particular attention to and enhanced analysis of the demographic, economic, and built environment sections. Housing is addressed in the demographic and built environment sections. Goals and mitigation actions were reviewed, evaluated, revised, and prioritized by State IHMT agency representatives.

The State applied for and received a FEMA High Hazard Potential Dams grant to undertake risk assessments and related work concerning state-regulated dams. The grant required that high hazard potential dams be addressed the same way the eleven recognized natural hazards are addressed. As the State has not to date considered dam safety a natural hazard, and as it is primarily associated with flood hazards, the State has met this requirement by incorporating dam safety into the state and regional flood hazard risk assessment sections and into other relevant chapters of the Oregon NHMP. The Dam

Safety risk assessments mimic the structure of the eleven state-recognized natural hazard risk assessments, effectively treating it as a twelfth natural hazard, but without a discrete chapter.

The Oregon Dam Safety Program (DSP) is housed in the Oregon Water Resources Department (OWRD). OWRD-DSP participated in the 2020 Oregon NHMP update as lead author of the sections related to dams, providing expertise, data, studies, and other information on Oregon's dams. Data used for these sections included the National Inventory of Dams and the State dam safety database and files, including design and inspection documentation and history. OWRD-DSP also participated in development, review, and prioritization of mitigation goals and actions.

The Silver Jackets, a U.S. Army Corps of Engineers program is implemented in Oregon as a sub-committee of the State IHMT. It brings together a number of federal and State agencies and has been instrumental in moving flood hazard mitigation forward during this update cycle. This is an active, successful, ongoing forum for federal and State collaboration and coordination.

A new initiative during this period is the establishment of another officially recognized sub-committee of the IHMT, the Oregon Landslide Risk Reduction Team (OLRRT) led by DOGAMI. The OLRRT facilitates collaboration between the many entities with a role in reducing landslide risk in Oregon – state and federal agencies, university researchers, cities, counties, private consultants, and others – to protect natural resources and water quality, land use, transportation, and public safety.

During the 2015 Oregon NHMP update, DLCD found that the state does not have a system to track changes in land use over time, and began an initiative to develop one. With funding from DAS-GEO, one of the state's Framework Implementation Teams, comprising GIS staff and users across all levels of government who develop datasets to an adopted standard and share and maintain them, launched a pilot. The Team found that there was broad support and need for this information, but the result was that the methodology tested did not work well for both urban and rural areas. Two years later, a second pilot was funded through the same program, and this time the tested methodology had a more promising outcome. DAS-GEO provided a third grant which is currently funding development of a land use GIS layer that can be used with other Framework GIS data to analyze land use for a wide variety of use cases, not least of which is Oregon NHMP updates. This work builds on what we have learned from the first two pilots and implements the project statewide. We are hoping that this effort will be successful in establishing an initial, baseline GIS land use layer and that we will have the means to update it and identify changes to land use for the 2025 Oregon NHMP.

4.2.2 The Planning Process

The primary focus of this plan update was to improve the risk assessment by developing a single methodology to assess risk across all hazards statewide and use the results to inform and guide mitigation goals and actions. The goal was to connect hazard and vulnerability assessments to describe risk in a way that would identify the where and on which hazards the state should focus its mitigation efforts. During the 2015 Plan update process, the IHMT working with the University of Oregon Infographics Lab had developed such a concept methodology, but several attempts to fund development were unsuccessful. Therefore, to move forward the State needed to identify a simpler methodology that would be able to be implemented with a limited budget. A fair amount of time and effort was spent during the early part of the update process on researching and discussing what could be done. A full description of the 2020 Risk Assessment methodology pilot is located in [Section 2.1.2](#).

Another focus of the 2020 update was to coordinate with the simultaneous update of Oregon's 2010 Climate Change Adaptation Framework (CCAF) and integrate the two documents to the extent possible. Both efforts were led by DLCD, facilitating coordination. Similar to the Oregon NHMP update, the CCAF update was a collaborative effort by a large number of state agencies. In fact, all but a few state agencies participating in both efforts were the same, and some staff were assigned to both projects. The Oregon Climate Change Research Institute was involved in both efforts, and sponsored a workshop in August 2019 to ensure that both projects had the same access to the same best available science. Due to the organic nature of the planning process and the project's political sensitivity, the original vision for the updated CCAF has been modified several times over the course of the project and the project schedules have diverged. Therefore, the CCAF is not yet ready for full integration with the Oregon NHMP. The Oregon NHMP does include a goal addressing climate change adaptation and several mitigation actions from the CCAF, and the current review draft is provided in Appendix [9.1.23](#). The State's intention is still to integrate the two documents when the CCAF update is complete.

Another benefit of the coordination with the CCAF update is the incorporation of an equity lens in the Oregon NHMP goals. Governor Brown has brought the issue of equity to the fore, and all state agencies are working to incorporate it into their work. OHA's Climate and Health Program staff, who also contributed to the Oregon NHMP, led the equity work for the CCAF update. This link further underscores the relationship between the CCAF and the NHMP and has nourished the working relationships among DLCD's SMEs and OHA's.

Further, social vulnerability is central to OHA's public health work, including that of the Climate and Health Program. Social vulnerability is also a core element of vulnerability to natural hazards. The IHMT's interest in social vulnerability was addressed in the 2020 risk assessment for the first time. The University of South Carolina is the national leader in social vulnerability research and has developed a social vulnerability index. The Centers for Disease Control has used the University's work to develop its own index. Both are based on the Census Bureau's data. OHA uses the CDC's index. Therefore, in the spirit of coordination, integration, and collaboration, DLCD chose to use the CDC's index in the 2020 risk assessment. This will facilitate interagency coordination around issues of social vulnerability and equity.

During the 2015 Plan update, DLCD engaged staff at OEM and OPRD who were working on historic and cultural resource issues and invited their participation in the Oregon NHMP update. At the time, both agencies were actively engaged in and had requested additional funding for advancing mitigation of potential damage to cultural and historic resources. Together they penned a vision for the program located in the section of the 2015 Oregon NHMP entitled "Future Enhancements." The funding was not received and both staff moved on. OEM determined not to continue that position, but OWRD has, and has taken on the leadership role. For the 2020 update, DLCD approached not only that staff, but also the historic preservation lead and a staff archaeologist to try to incorporate historic and archaeological resources into the risk assessment. The result was that the first exposure analyses for these resources was performed for this update.

The 2020 Oregon NHMP update officially began with DLCD presenting the project, timeline, and next steps at the IHMT meeting of October 2017. During the 2015 Plan update, DLCD not only discovered issues with the risk assessment methodology, but also heard participants' ideas about changing the hazards that are addressed in the Plan and how they are addressed, potentially emphasizing some hazards over others. In November 2017, DLCD followed up with a survey to find out where the IHMT members stood on these issues and how willing or able they were to engage in the effort to develop a

new risk assessment methodology. Meetings in January and February 2018 culminated in these decisions presented at the April 2018 IHMT meeting:

- **Dust Storms** would be dropped from the Plan as it has been well addressed largely through implementation of best practices in land tilling techniques. While dust storms still do occur and do result in fatalities, they are far fewer and are no longer considered a major hazard. In addition, there is very little data available about dust storms with which to develop a risk analysis or mitigation goals and actions.
- **Extreme Heat** would be added to the Plan. As temperatures, drought and wildfire are increasingly experienced across the state, and several local governments have included it in their plans, the participants felt it was time to include extreme heat in the State Plan.
- **Climate Change** would not be included as a discrete hazard in the 2020 Plan, but would be addressed as an influence on other hazards. As concern about climate change is rising, data is evolving, and the state is experiencing changes in the frequency, duration, and intensity of coastal hazards, droughts, floods, wildfires, windstorms, and winter storms, the participants felt that it was important to address how climate change affects the presentation of these hazards across the state.
- **Dam Failure** would be addressed as a type of flood hazard, but not in great detail as it is not a natural hazard.
- **Channel Migration** would also be discussed as a type of flood hazard. The State has developed data about channel migration susceptibility statewide, but the participants felt that there was not yet enough information to treat it as a separate hazard. As the state develops more information about channel migration, this decision will be revisited.
- **Other Hazards.** Radon, sea level rise, ocean acidification, high surf, extreme cold, and air quality were other natural hazards considered for treatment as discrete hazards in the Plan, but ultimately determined to be best addressed under other hazards, addressed outside of the NHMP, or not addressed.
- **Prioritizing Hazards.** Emphasizing or prioritizing some hazards over others was fraught with questions and tabled for further, future discussion.

The State Resilience Officer assisted DLCD by sponsoring a meeting for the directors of the IHMT state agencies. The purpose of the meeting was to explain the 2020 Oregon NHMP update – its purpose and benefits, the work required, and the timeline – and to gain their support by assigning staff and budgeting for participation in the update. The meeting was held at the end of June 2018, good timing in the state’s biennial budget process. The State Resilience Officer, OEM and DLCD leadership, management, and staff all presented and participated in the discussion. It appeared to have been a successful meeting. DLCD reported on it at the IHMT’s July meeting.

Over the next number of months, DLCD spent time researching options for a new risk assessment methodology. Finally settling on a very simple method, DLCD approached DOGAMI for assistance with the necessary analyses (including the loss estimation which would be used in the vulnerability part of the method). DOGAMI is equipped to do hazard analyses for geologic hazards: coastal erosion, earthquakes, floods, landslides, tsunamis, and volcanic hazards. Using wildfire data provided by ODF DOGAMI is able to perform the same analyses for wildfire hazards. Because we do not have mapped hazard areas or sufficient data for drought, extreme heat, windstorms, or winter storms, the method was not able to be used to evaluate them. However, at the end of the process, we did add a qualitative assessment of these four hazards to see how it might affect the risk assessment overall.

Also during this time, DLCD presented about the 2020 Oregon NHMP update at a meeting of the Intergovernmental Cultural Resource Council in November 2018. DLCD's agency representative to the Tribes Cultural Resource Cluster and the Government to Government Natural Resources Working Group presented on it to those groups at meetings in February 2019.

Due to administrative issues, DOGAMI was unable to engage when approached for several months. Other participants were also very busy and it was difficult to schedule large meetings to address elements of the plan together. DLCD determined that it would be best to work with participants individually. As could be expected, some were more available and engaged than others and we moved forward slowly in gathering the data and information needed for the portions of the plan outside of the risk assessment and mitigation goals and actions. DOGAMI did provide a data sharing platform to facilitate the update and participants were given access and the materials they needed to provide assistance in their areas of expertise. This worked very well.

DOGAMI was finally able to engage at what would normally have been the final months of the process. This meant that all the risk assessment work and dependent mitigation goals and action reviews and prioritization had to be accomplished very quickly. At the same time, the state suffered several disasters that were severe enough to warrant Presidential declarations and usurped participants' ability to engage and produce documentation. One of these Presidential declarations was for the novel coronavirus pandemic. In the middle of March 2020 all executive branch offices closed and staff pivoted to working from home and using electronic meeting platforms to conduct business. All of this greatly strained the plan update process and timeline.

The state and regional risk assessment sections of the 2020 Oregon NHMP were posted for public review on DLCD's website in June 2020. During the public review period, the IHMT participated in an online survey to review, revise, and prioritize mitigation goals and actions. Results are discussed in Section [3.3.1](#). Following that, the mitigation strategy was posted for public review on DLCD's website in July 2020. DLCD advertised both public comment periods far and wide using a variety of tools. DLCD sent emails to the planning and emergency management directors of our neighboring states, Washington, Idaho, and California. DLCD emailed Oregon emergency managers including those of the nine federally recognized tribes in Oregon, county commissioners and judges. The Association of Oregon Counties notified county planning directors. DLCD also emailed the CCAF update participants, IHMT members and interested parties, the Resilience Mitigation Advisory Committee led by the State Resilience Officer, and other staff engaged in hazard-related internal efforts. DLCD notified the Silver Jackets and requested their review. DLCD also sent notices via listservs maintained of people interested in natural hazards issues including the Plan update and floodplain managers. In addition, the League of Oregon Cities notified city mayors and planning directors, and included notice of the comment periods in their weekly newsletters that reach over 6,500 people. Letters were mailed to the nine federally recognized tribes in Oregon, advising them of opportunity to consult with DLCD. DLCD received a number of comments, each of which has received a response. Comment and response matrices are included in Appendix [9.3.1](#) and Appendix [9.3.2](#), respectively.

In reviewing these drafts, FEMA alerted DLCD to an oversight: mitigation actions were not evaluated against the required criteria of cost-effectiveness, environmental soundness, and technical feasibility. Because the mitigation actions held over from the 2015 Plan had been evaluated according to these criteria, only the new, priority actions were subjected to this review by IHMT members in a second online survey. Results are noted in Section [3.3.1](#).

In the summer of 2019, DLCD became aware that OWRD was applying for FEMA’s High Hazard Potential Dams grant and toward the end of the summer more aware of the fact that a Dam Safety chapter would be required to be included in the 2020 Oregon NHMP. This was a new, unanticipated workload and the NHMP requirements, their breadth and depth, were new to OWRD Dam Safety Program staff. Also the deadline for incorporating the new work into the Oregon NHMP was about a week prior to the deadline for completing the NHMP update. During the summer of 2020, FEMA determined that incorporating the dam safety material into the still current 2015 Oregon NHMP would meet the grant requirement, and we chose to pursue that avenue. Dam Safety Program staff rose to the challenge, developing the data, information, and mapping necessary for the plan; developing mitigation goals and actions pertinent to dam safety; participating in the review and revision of mitigation goals and actions; assisting with answers to FEMA’s and the public’s comments pertaining to dam safety in the risk assessment and mitigation strategy sections; and being generally responsive to DLCD’s questions and requests.

Another issue that affected the 2020 Plan update was FEMA’s decision that the 2020 Oregon NHMP would not be approved as an enhanced plan. Whether the Plan would still be submitted as an enhanced plan was an open question until toward the end of the planning process when it was determined that it would be submitted as a standard plan. This eased the pressure a bit by eliminating some requirements. However, this was balanced by the need to develop the Dam Safety section in the 2020 Oregon NHMP and have it incorporated into the 2015 NHMP prior to the NHMP update deadline.

With tremendous patience, understanding, and flexibility, FEMA worked with DLCD and OEM to complete the plan update in a timely manner.

4.2.3 Revisions to the 2015 Oregon Natural Hazards Mitigation Plan

Table 4-2. Revisions to the 2015 Oregon Natural Hazards Mitigation Plan

2015	2020	Explanation
Chapter 1: Introduction to the Plan	Chapter 1: Introduction to the Plan	Reviewed and revised. Enhanced Plan section explains that Chapter 5, Enhanced Plan is retained in placeholder status since Oregon intends to regain enhanced plan status during the life of the 2020 Oregon NHMP.
Chapter 2: Risk Assessment	Chapter 2: Risk Assessment	
2.1 Introduction	2.1 Introduction	Expanded to include seven sections that have been reviewed and revised from the 2015 Plan: <ul style="list-style-type: none"> • Overview; • 2020 Risk Assessment Methodology; • Social Vulnerability; • Introduction to Climate Change; • State-Owned/Leased Facilities, State Critical Facilities, and Local Critical Facilities Potential Loss Assessment; • Seismic Transportation Lifeline Vulnerabilities; • Cultural Resources

2015	2020	Explanation
2.2 State Risk Assessment 2.2.1 Oregon Hazards 2.2.2 Oregon Vulnerabilities 2.2.3 Future Enhancements to the State Risk Assessment	2.2 State Risk Assessment 2.2.1 Coastal Hazards 2.2.2 Droughts 2.2.3 Earthquakes 2.2.4 Extreme Heat 2.2.5 Floods 2.2.6 Landslides 2.2.7 Tsunamis 2.2.8 Volcanoes 2.2.9 Wildfires 2.2.10 Windstorms 2.2.11 Winter Storms	The 2015 sections on hazards and vulnerabilities have been brought together and another section called “Risk” has been added. The content of the Future Enhancements section has been reviewed, updated, included in other sections, or deleted. A new section on Dam Safety has been added to the Flood Chapter. Dust Storms has been dropped. Extreme Heat has been added. Information on climate change influences on hazards has been updated. Information on exposure of historic resources has been added. Information on exposure of archaeological resources has been added. Information on social vulnerability has been added.
2.3 Regional Risk Assessments	2.3 Regional Risk Assessments	These sections have been reorganized in parallel to the State Risk Assessment chapters with sections on hazards, vulnerability, and risk. New sections on Dam Safety have been added to the Flood sections. Similarly vulnerability information has been added parallel to the state risk assessment.
Chapter 3: Mitigation Strategy	Chapter 3: Mitigation Strategy	All sections have been reviewed and updated. Several new mitigation goals have been added. Many new mitigation actions have been added. Mitigation action tables have been reorganized according to hazard to reflect the results of the 2020 risk assessment. Added Dam Safety goals, actions, capability.
Chapter 4: Planning Process Chapter 5: Enhanced Plan	Chapter 4: Planning Process	All sections have been reviewed and updated The 2020 Plan is being submitted as a standard plan. Therefore, the content of the Enhanced Plan chapter has been removed. A placeholder has been retained as the State intends to earn enhanced plan status again prior to the 2025 update.
Chapter 6: Acronyms and Abbreviations	Chapter 6: Acronyms and Abbreviations	Acronyms and abbreviations have been reviewed and updated as necessary.
Chapter 7: Glossary	Chapter 7: Glossary	The Glossary has been reviewed and updated as necessary.
Chapter 8: References	Chapter 8: References	References have been updated as necessary.
Chapter 9: Appendices	Chapter 9: Appendices	Appendices have been reviewed and updated as necessary.

Source: DLCD

4.3 Maintaining the Plan

Requirement 44 CFR §201.4(c), Plan content. To be effective the plan must include the following elements:

Requirement 44 CFR §201.4(c)(5)(i-iii), A Plan Maintenance Process that includes: (i) An established method and schedule for monitoring, evaluating, and updating the plan; (ii) A system for monitoring implementation of mitigation measures and project closeouts; and (iii) A system for reviewing progress on achieving goals as well as activities and projects identified in the Mitigation Strategy.

The purpose of this section is to describe procedures for maintaining the Oregon NHMP. Plan maintenance involves monitoring progress in achieving mitigation actions and Plan goals as well as monitoring, evaluating, and updating the Oregon NHMP itself.

The procedures described in this section are informed by analyses of previous Plan maintenance methods and schedules and the State's current and projected capabilities. Because this Plan and the State's capabilities are ever-evolving, the systems and processes described herein are subject to change. The information collected and documented through the Plan maintenance process will serve as the basis for the next Plan update. The process of updating the Plan provides the state with an opportunity to review its progress in achieving mitigation goals and chart its course for the next mitigation planning cycle.

4.3.1 Analysis of the 2015 Plan Maintenance Process

The Oregon NHMP was last updated and formally adopted by Governor Brown on July 1, 2015 and approved by FEMA on September 24, 2015. The plan monitoring process set forth in the 2015 Plan was followed in general, but not in full. As with all planning processes, circumstances change or do not unfold as anticipated and adjustments are made.

DLCD established a system by which IHMT members would use a detailed reporting form to report on progress on mitigation actions as well as on hazard events, mitigation successes, other new and exciting mitigation activities, and other data required for the plan update either quarterly, semi-annually, or annually as they individually chose. Most chose to report annually. The detailed reporting form provided all the information and guidance one would need to fill it out, and it was meant to be tailored by each respondent to their own areas of mitigation expertise and activity. However, the reporting form turned out to be overwhelming instead of helpful, and getting it completed with the appropriate level of detail and clarity became a workload in itself for DLCD. Nevertheless, DLCD collected the information to the best of everyone's ability, and produced an annual report covering the year 2015. The annual report was provided to FEMA at the July consultation meeting and very well received. DLCD continued to collect information on the detailed reporting forms over the next two years, but it seemed to become more difficult over time. While data was collected, DLCD never produced annual reports covering the years 2016 and 2017. This method also proved not to be useful as a way to funnel the collected data into the plan to keep it updated. It will be necessary to change the approach for 2020 Oregon NHMP maintenance.

The vision for the 2020 plan update was that it would focus on improving the risk assessment such that it could drive the mitigation goals and actions, and much less effort would be expended on updating the remainder of the Plan. In the end much more effort than anticipated was spent updating the remainder of the Plan. The 2015 Plan was also reorganized for 2020, to make a clear connection between the

hazard and vulnerability assessments and showing how together they result in an assessment of risk. See Section [4.2.3](#) for details. Whether mitigation actions were implemented as anticipated is indicated by their status on [Table 3-5](#), Mitigation Action Status. 2015 actions that appear on the 2020 *Priority* table have not yet been accomplished. Those in the *Ongoing* table are being implemented. Those that are done, not being done, replaced or covered by another action appear on the *Removed* table with the reason for removal. [Table 3-6](#) shows the disposition of the 2015 mitigation actions in the 2020 Plan. Section [3.3.2](#) discusses the changes in mitigation action priorities from 2015 to 2020.

In 2020, Oregon will lose enhanced plan status. Therefore, the 2020 Plan is being submitted as a standard plan. Oregon intends to make the changes necessary to regain enhanced plan status as quickly as possible.

4.3.2 Monitoring, Evaluating, and Updating the 2020 Plan

4.3.2.1 Monitoring the 2020 Plan

DLCD will work with the State Hazard Mitigation Officer to conduct plan monitoring activities during and associated with each quarterly meeting of the IHMT. An expectation for IHMT members to participate in quarterly plan monitoring will be established. Plan monitoring activities will be guided by the mitigation goals and other evaluation criteria in Section [4.3.2.2](#). DLCD will update the 2020 Plan after each IHMT meeting with the information gleaned through that quarter's monitoring activities and IHMT members will review the changes for accuracy. In this way the 2020 Oregon NHMP will become a living document, and the effort needed to perform the 5-year update will be reduced.

Further, at a regular quarterly meeting as soon as feasible following a declared disaster event in Oregon, the State IHMT will discuss the event in the context of the Oregon NHMP and provide any necessary direction for updating the Plan. OEM will document this discussion as usual in IHMT meeting minutes and following the meeting DLCD will make any directed plan revisions.

4.3.2.2 Evaluating the 2020 Plan

DLCD will manage and facilitate the plan update process, beginning with review and evaluation of the 2020 Oregon NHMP. The 2020 Plan's mitigation goals will serve as the benchmarks for evaluating the Plan, and the following more specific criteria will be assessed as well:

- Accuracy and utility of the State and Regional Risk Assessments in the context of any Presidentially declared or Governor-declared disasters that may have occurred during the update cycle;
- Progress in applying the lessons learned from the 2020 risk assessment methodology to enhance it further for 2025 or fund an altogether new and better methodology;
- Progress in developing data for currently data-poor hazards or deciding to and how to de-emphasize planning for them or deciding not to plan for them;
- Continued progress in developing data statewide for the data-richer hazards and for channel migration;
- Progress in developing vulnerability data and making choices about the most important vulnerability indicators for the state overall and for the various regions or individual counties;
- Progress toward completion of mitigation actions;

- Progress toward refining the mitigation actions to more clearly address the greatest hazards and vulnerabilities statewide and establish the foundation for eligibility for project funding under FEMA grant programs;
- Progress in coordinating State and local mitigation planning;
- Progress in coordinating FEMA Region X's Risk MAP and State mitigation planning priorities, in particular working toward seamless coordination of funding and the timing of the funding for the State to produce multi-hazard risk assessments as the foundation for new local NHMPs and NHMP updates;
- Progress in solidifying continued funding for OCCRI to produce Future Projection Reports for new local NHMPs and NHMP updates;
- Progress in building local government capacity to develop and update NHMPs and CWPPs; integrate them with each other and with comprehensive or strategic and other plans; implement those plans; track changes in development; and develop project applications.
- Progress in tracking changes in development at the state level;
- Progress in mitigating flood hazards, particularly for repetitive and severe repetitive loss properties;
- Progress in assessing risk of high hazard potential dams and mitigating potential loss of life, property, and state and local critical/essential facilities;
- Progress in diversifying funding sources;
- Progress in building state capacity to a level that:
 - allows the State to regain and easily retain enhanced plan status;
 - supports the State's current cutting-edge approach to and work in natural hazards mitigation;
 - supports a comprehensive statewide natural hazards mitigation program; and
 - supports integration of natural hazards mitigation into other state programs and initiatives;
 - supports the state in coordinating state with local mitigation planning;
 - provides reliable funding to state agencies to participate in the IHMT and Oregon NHMP monitoring, evaluation, and update activities and to participate in coordination, cooperation, collaboration and integration activities with related state programs and initiatives; and
 - provides reliable funding to state agencies and local governments for mitigation planning; capacity building activities; leveraging federal funding programs; and filling gaps in federal funding programs.

Results of the evaluation will be documented and serve as the basis for updating the Plan.

4.3.2.3 Updating the 2020 Plan

DLCD will manage the update of the 2015 Oregon NHMP for 2020. The process will begin ideally with the first, but may begin with the second IHMT meeting following FEMA approval of the 2020 Oregon NHMP. The information from the plan maintenance activity at and associated with the IHMT meeting will be used to update the Plan, beginning to turn it into a living document.

About two-and-a-half years before the 2025 update is due, DLCD will compare the status of the Plan against its 2020 baseline and present the results and alternative approaches and a recommendation for how to proceed with the update to the State IHMT. Once the approach is agreed upon, DLCD will develop a scope of work and timeline, present it to the State IHMT for review and approval, and then discuss the approved scope and timeline with FEMA Region X.

IHMT members will be expected to participate in the update according to their expertise and roles in natural hazards mitigation. Subject matter experts and skilled technical professionals will again be called upon to take the lead on hazard chapters and other elements of the plan, such as vulnerabilities and GIS analyses, and provide other resources as required.

During the 2015 update process, the suite of natural hazards the State is addressing in its NHMP was questioned. The State IHMT also became aware of substantial differences in the amount and availability of data and technical expertise for certain hazards. During the 2020 update the State IHMT re-evaluated the established suite of hazards, considered including other hazards, and decided not to address dust storms any longer, but to address extreme heat. During the 2025 update, the IHMT will have a similar conversation and determine if any changes to the suite of hazards addressed is necessary. During the life of the 2020 Plan, the IHMT will consider whether and if so, how to prioritize the final suite of hazards to address data and expertise availability issues and make optimum use of resources. The decisions on which hazards to address and to what extent (or whether to not address some) will have a profound effect on the approach to and scope of work for the 2025 Oregon NHMP update.

Other issues that would affect 2025 plan update approach and scope of work include:

- The extent of progress on enhancing the 2020 risk assessment or funding and implementing a more sophisticated risk assessment methodology;
- The availability of new or updated hazard, probability, and vulnerability data;
- The extent of progress on enhancing state and local natural hazards mitigation planning and coordination; and
- Any new requirements included in FEMA’s revised state NHMP guidance currently being updated.

One goal of the 2020 plan maintenance process is to transform the Oregon NHMP into a living document, updated by DLCD after each IHMT meeting, but also available for IHMT members to update during its life, while maintaining a static version for public use. If that goal is achieved and implemented effectively, it would lessen the burden of the 2025 update.

4.3.2.4 Monitoring Mitigation Actions and Project Closeouts

Progress on state mitigation actions will be monitored through the IHMT’s quarterly maintenance activities. DLCD coordinate with OEM and will lead the monitoring activities. Progress of “Priority” mitigation actions will be noted; completed actions or those that will not be completed will be deleted from the “Priority” list and entered on the “Removed” list with a brief explanation. Progress of “Ongoing” mitigation actions will be noted. Mitigation action monitoring over the life of the 2015 Plan was attempted through data gathering for annual reports, but was not met with the same degree of success across all IHMT member agencies. Mitigation status was ascertained for each mitigation action during the 2020 plan update process. Undertaking quarterly maintenance activities at IHMT meetings will not be a foolproof method of obtaining 100% of the necessary data or 100% participation – additional follow-up will be necessary – but the group dynamic holds more possibility of success and fosters coordination and collaboration.

In addition, OEM will continue systematically monitoring the implementation of FEMA-funded mitigation actions and projects for which it is the grantee at both state and local levels using required sub-grantee

quarterly reporting; telephone and e-mail communications; and project site visits as required. Successful project implementation requires open communication between the grantee and sub-grantee to ensure schedules, budget, and deliverable requirements are met. While project closeouts have always been conducted on site allowing the grantee and sub-grantee to certify completion of the project activity (performance component) and that all eligible expenses have been submitted, reviewed for eligibility and reimbursed (financial component), during the novel coronavirus pandemic and perhaps afterward, these meetings will necessarily take place virtually. OEM documents project closeout by summary performance and financial reports making sure the sub-grantee is aware of documentation retention requirements, audit requirements and maintenance schedule (if required) to ensure the performance of the mitigation over the life of the project. The State Hazard Mitigation Officer is responsible for reporting this information to the State IHMT for projects funded by the Hazard Mitigation Grant, Pre-Disaster Mitigation and Flood Mitigation Assistance programs.

Outside of the traditional FEMA mitigation grant programs, state and local governments identify and often implement mitigation actions and projects using their own capabilities and resources. At the local level, this may include the development and adoption of local ordinances and regulations that have a hazard mitigation component; mitigation codes and standards as part of ongoing transportation and public works programs; hazard-related components of local comprehensive land use plans; and so forth. While it may not be possible to track and report on every mitigation accomplishment in local mitigation plans, communities will see the positive cumulative impacts of these efforts in reduced disaster losses. The state encourages the seamless integration of mitigation activities into the planning efforts and day-to-day operations of state and local government programs.