



# State of Oregon

## Risk Mapping, Assessment, and Planning (Risk MAP) Program

### STATE STRATEGY

Fiscal Year 2024

Prepared by: Oregon Department of Emergency Management

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FEMA



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# Executive Summary

This State Risk MAP Strategy has been developed by Oregon's Risk MAP Coordinator in cooperation with FEMA Region 10. The purpose of the State Strategy is to provide a current snapshot of the status of community flood hazard information throughout the state, along with a summary and plan for future needs and priorities throughout Oregon.

This document has been organized into several parts to simplify and streamline the development process, and to improve the accessibility and usability for the Risk MAP Coordinators, Federal Emergency Management Agency (FEMA), and external users.

- **Part 1 (Introduction)** provides background information on the Risk MAP program, Risk MAP processes, and purpose of the State Strategy.
- **Part 2 (State Risk MAP Status)** provides a status of digital flood hazard information, ongoing Risk MAP projects, and recent activities/highlights throughout the state.
- **Part 3 (State Risk MAP Priorities)** provides an overview of the identified needs and priorities identified within the state.
- **Part 4 (Community Engagement Plan)** provides an overview of the role of the Risk MAP Coordinator, community outreach & engagement strategy, and implementation plan for Risk MAP program activities in the State of Oregon.
- **Part 5 (Resources)** provides a description of statewide resources available for mitigation activities, including key points-of-contact (POCs).

# Version History

This Risk MAP State Strategy was prepared by the Oregon Department of Emergency Management (ODEM) for FEMA under Cooperating Technical Partners (CTP) grant number EMS-2022-CA-00018. The primary purpose of this grant is to support Risk MAP community engagement, program management, and coordination activities throughout the State of Oregon.

The development and annual maintenance of this State Strategy is one key deliverable of the Risk MAP coordination activity funded by the CTP Program.

**Table 1. Version History of the Oregon State Strategy**

Version #	Version Date	Purpose	Author
1	2/2/2024	Annual Update	Oregon Department of Emergency Management (ODEM)

# 1. Introduction

This State Risk MAP Strategy (also referred to as the “Business Plan”) is an annual requirement and formal deliverable for all Risk MAP coordination projects funded by FEMA Region 10 through the Risk MAP CTP Program.

## 1.1. Risk MAP Program

FEMA’s Risk MAP Program stands for Risk Mapping, Assessment, and Planning.

The overall vision for Risk MAP is to deliver quality data that increases public awareness of natural hazards, leads to mitigation and resiliency actions that reduce risk to life and property, and supports a safer future for communities through effective partnerships. The main goal is to increase local resilience by providing communities with hazard information and tools they can use to strengthen their ability to make informed decisions about reducing risk. A cornerstone of Risk MAP is the collaborative partnerships developed to increase community resilience to natural hazard risks.

The intent for Risk MAP is to combine flood hazard mapping, risk assessment tools, and hazard mitigation planning into one seamless program. FEMA’s overall vision through Risk MAP is to work collectively with state, local, and tribal entities to deliver quality data that increases public awareness and leads to action that reduces risk to life and property.



**Figure 2. Risk MAP Vision**

Risk MAP strengthens the ability of communities to make informed local decisions about reducing risk. The Risk MAP program includes collaboration with Federal, State, and local stakeholders in communities across the nation to identify, assess, communicate, and mitigate risks. The program aims to address gaps in flood hazard data, provide an enhanced digital platform for the information that is produced, and align risk analysis programs to enhance decision-making. Risk MAP works in conjunction with other FEMA initiatives and supports the NFIP in efforts to encourage communities to become risk aware and resilient.

**Table 2. Risk MAP Objectives and Program Functions**

Risk MAP Objectives	Program Functions
Establish <b>natural hazard data</b> that are accessible to authorities and the public.	Update natural hazard data for risk assessment and floodplain management. Provide accessible data resources for relevant hazard data.
Raise <b>public awareness</b> about natural hazard risks.	Outreach with communities about Risk MAP and hazard mitigation. Develop information resources that are accessible to communities.
Lead and support local communities to engage in <b>hazard planning</b> .	Provide opportunities for communities to explore hazard mitigation strategies and funding sources to protect their areas. Promote sustainable activities that reduce or eliminate natural hazard risks to life and property.
Build <b>cooperative relationships</b> and communication strategies to support hazard identification and mitigation.	Align Risk MAP program activities. Develop collaborative relationships to enhance communities' decision-making capabilities and resilience.

## 1.2. Risk MAP and the National Flood Insurance Program (NFIP)

FEMA’s flood hazard maps are an essential tool for flood hazard communication, mitigation, and implementation of the National Flood Insurance Program (NFIP) within the United States. These maps are used an estimated 20 million times annually in the private and public sectors. The State of Oregon and its local governments rely on FEMA flood hazard maps to regulate floodplain development and mitigate flood losses. The flood hazard maps that have been produced by FEMA currently serve 260 tribal, county, and city governments throughout the state.

FEMA’s efforts to provide flood hazard maps to inform the nation’s understanding about flood risk have evolved significantly over two decades. From 2002-2008, the FEMA Map Modernization (“Map Mod”) effort began to transform much of the nation’s previously existing flood hazard paper map inventory to digital technology, while also making some updates to underlying engineering data. As part of an effort to build on Map Mod and enhance the use, value, and accuracy of flood hazard mapping and related data, FEMA started the Risk Mapping, Assessment and Planning (Risk MAP) Program in 2008-2009.

Risk MAP represented a philosophical and tactical shift in how FEMA delivers information necessary for flood and other natural hazard mitigation. The focus shifted from digitizing maps to development of a detailed evaluation of community flood hazard data needs, improved data quality, and expanded data availability. While the earlier mapping efforts took 1-2 years and had little interaction with the community under study, the typical Risk MAP process can now take 4-6 years (or more), with extensive communication and technical assistance provided to the community. Additionally, the Risk MAP approach provides a more holistic approach that examines all hazards impacting the community, and can also provide new data, risk assessments, and tools that can be integrated into community plans and ongoing efforts to increase community resilience and mitigation planning.

The Risk MAP approach requires an extensive level of engagement, knowledge, and coordination with individual communities engaged in a Risk MAP study. To accomplish this, FEMA funds a state-based “Risk MAP Coordinator” for each of the states within FEMA Region 10 (AK, ID, OR, WA).

For FY2023-25, the Risk MAP activities for the State of Oregon are being coordinated by Oregon Department of Emergency Management (ODEM) with sponsorship and (funding from FEMA’s Risk MAP CTP grant program.

### 1.3. Risk MAP Process

The FEMA Risk MAP process focuses on three primary components:

- **Mapping:** Flood Insurance Rate Maps (FIRM) and Flood Insurance Studies (FIS)
- **Assessment:** Hazard risk assessment and modeling
- **Planning:** Hazard mitigation plan (HMP) integration and resilience strategy planning

The multi-year Risk MAP process can provide a suite of services—ranging from public outreach, trainings, technical assistance, grant assistance, and mapping—to support community priorities that address vulnerabilities to natural hazards, utilizing Federal and State resources. Example outcomes of this process can include an updated FIRM/FIS, along with multi-hazard maps, risk assessments, public outreach and communication products, and a variety of resilience planning activities such as workshops, trainings, and technical assistance for hazard mitigation.

An overview graphic of the Risk MAP process is provided in Figure 2. This process graphic illustrates the major phases of the multi-year Risk MAP process, which are described in detail in Section 4.4.

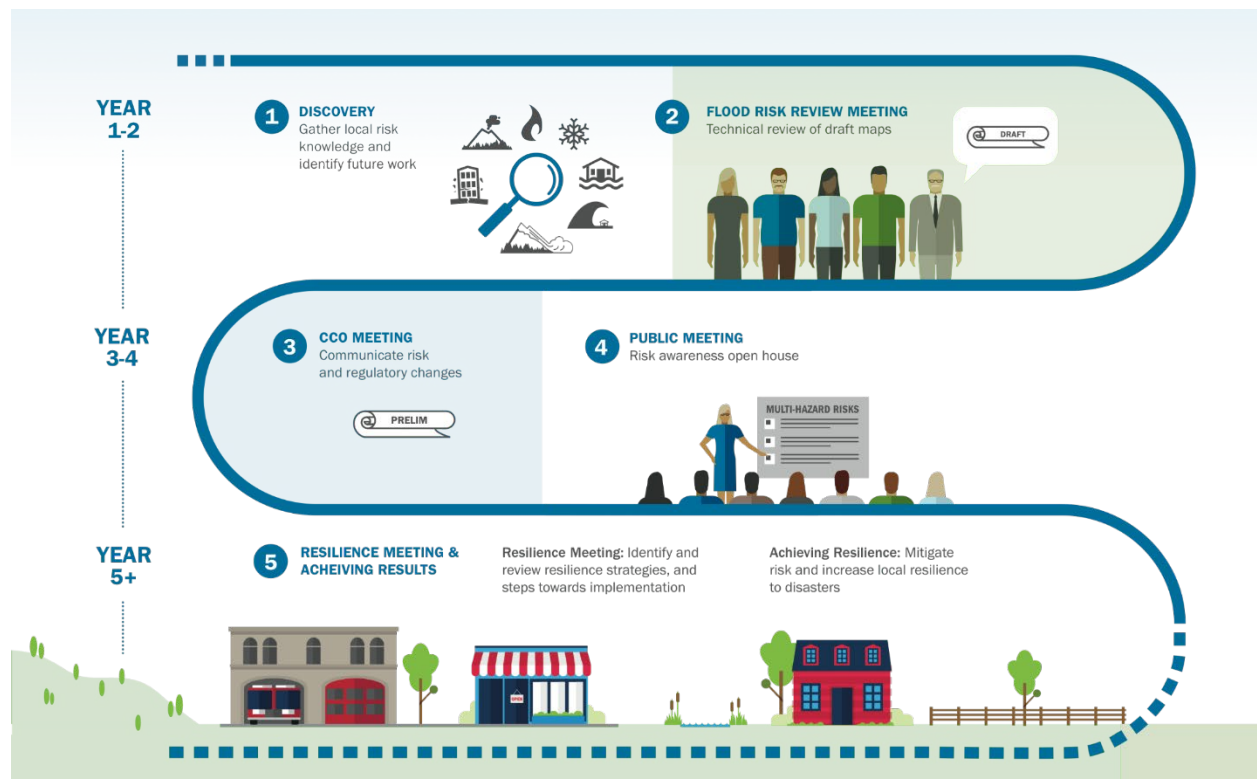


Figure 2. Risk MAP Process

## **1.4. Purpose of the Risk MAP State Strategy**

The purpose of this State Strategy is to provide a current overview of the status of flood hazard information for communities throughout the State of Oregon, along with a summary and plan for future Risk MAP needs and priorities throughout the state.



## 2. Risk MAP Status in the State of Oregon

### 2.1. Status of digital flood hazard data

Digital flood hazard data is the foundation of Risk MAP, enabling a suite of risk analysis tools and products that can help communities to better understand their exposure to natural hazards, facilitate public awareness and communications, and help to identify and prioritize mitigation opportunities.

In Oregon, there are a total of 24 out of 36 counties/boroughs/communities that currently have access to digital flood hazard data. The official source of FEMA’s effective flood hazard information is the [National Flood Hazard Layer \(NFHL\)](#) and digital products (if available) may be viewed online through the [NFHL Viewer](#).

As of January 2024, there are many Oregon counties/boroughs/communities that do **not** have access to FEMA digital flood hazard information through the NFHL. The current list of communities that do not have access to digital effective flood hazard maps (also referred to as “paper map inventory”) are provided below.

**Table 3. Status of Flood Hazard Data in the State of Oregon**

Name	Status
Baker County	Unmodernized (paper map)
Gilliam County	Unmodernized ( <i>Update in progress</i> )
Grant County	Unmodernized Partial update
Hood River County	Unmodernized ( <i>Update in progress</i> )
Jefferson County	Unmodernized
Klamath County	Unmodernized
Lake County	Unmodernized
Malheur County	Unmodernized
Sherman County	Unmodernized ( <i>Update in progress</i> )
Union County	Unmodernized
Wallowa County	Unmodernized
Wasco County	Unmodernized ( <i>Update in progress</i> )
Wheeler County	Unmodernized

## 2.2. Age of effective flood hazard data

In the State of Oregon, there are a total of 83 NFIP counties/boroughs/communities with effective flood hazard data that is older than 20 years. For an overview of the age of current effective flood maps in Oregon counties, see Table 4.

**Table 4. Age of Effective Mapping in the State of Oregon (oldest to most recent)**

Name	Effective Date
Harney County	2022
Douglas County	2021
Grant County	2021
Lane County	2020
Lincoln County	2019
Marion County	2019
Multnomah County	2019
Clackamas County	2019
Coos County	2018
Curry County	2018
Washington County	2018
Tillamook County	2018
Clatsop County	2018
Jackson County	2018
Benton County	2016
Linn County	2016
Crook County	2012
Columbia County	2010
Umatilla County	2010
Yamhill County	2010
Josephine County	2009

Name	Effective Date
Morrow County	2007
Deschutes County	2007
Polk County	2006
Union County	1996
Lake County	1989
Jefferson County	1989
Wheeler County	1989
Baker County	1988
Wallowa County	1988
Malheur County	1986
Klamath County	1984
Gilliam County	1984
Hood River County	1984
Sherman County	1984
Wasco County	1984

### 2.3. Current Risk MAP Projects

Oregon currently has multiple ongoing Risk MAP projects in various stages of completion (see Table 5). The ongoing projects listed below are expected to produce new and/or updated flood hazard mapping in the future.

**Table 5. Status of Risk MAP projects in the State of Oregon (as of January 2024)**

Project Area	Project Status
Baker County	Active/ongoing
Benton County	Active/ongoing
Clatsop County (coastal)	Active/ongoing
Gilliam County	Active/ongoing
Grant County	Active/ongoing

Project Area	Project Status
Harney County	Completed ( <i>Effective date: February 8, 2024</i> )
Hood River County	Active/ongoing
Klamath County	Completed ( <i>Effective date: November 7, 2024</i> )
Lane County	Active/ongoing
Sherman County	Active/ongoing
Umatilla County	Active/ongoing
Wasco County	Active/ongoing

For a detailed status of any ongoing Risk MAP projects, please refer to [Oregon Department of Emergency Management: Risk MAP](#), which serves as the Oregon Risk MAP Project hub. This site provides a single platform for numerous statewide Risk MAP resources including project viewers, GIS data downloads, and project documents.

For further details on any of the flood studies above, users may also refer to the FEMA Region 10 Risk MAP [Project Status Portfolio](#).

## 2.4. Risk MAP Highlights for 2023

Oregon’s Risk MAP program reached many communities throughout the state in 2023. Several Risk MAP projects had flood map update milestones and the program overall saw increased attention, visibility, and community contacts with the hiring of a Risk MAP Coordinator.

- February - Gilliam County held a kick-off meeting for a Risk MAP project to analyze Base Level Engineering (BLE), an assessment of the area’s flood risk using LiDAR and current engineering methods.
- May - Wasco County held two Public Open House meetings to discuss draft flood maps with the community.
- July - Grant County received BLE study results for the Upper John Day watershed. Oregon hired a new Risk MAP Coordinator.
- September - Sherman County held a public open house to discuss draft flood maps with the community. Lane County’s Siuslaw Watershed project released draft maps.

### 3. Oregon Risk MAP Priorities

Risk MAP strategic planning considers numerous factors such as topographic data availability, digital map availability, and community interest/need. The planning process attempts to efficiently sequence potential projects through development and maintenance of a consistent strategy.

#### 3.1. Risk MAP Prioritization Process

Overall risk and mitigation priorities throughout the state, including county and Tribal interest in updating local flood maps, will guide decisions to start new Risk MAP projects in Oregon. The goal is to identify communities and areas where a detailed flood map analysis would benefit the community and guide hazard mitigation efforts to help reduce the impact of a natural disaster in the area. In Oregon, natural hazards with the highest danger to human life and statewide infrastructure include wildfire, earthquakes, tsunamis, and floods.

ODEM collaborates with local communities to prioritize Risk MAP projects and flood map updates throughout counties and Tribal areas. Additional factors guide outreach efforts with new communities, including state priorities, community needs and local interest in participation, social vulnerability, LiDAR (topographic) data availability, hazard mitigation plan status, and age or format of natural hazard risk data.

#### 3.2. Risk MAP Priorities

In prioritizing outreach for Risk MAP projects in Oregon, factors such as data modernization needs and local engagement in natural hazard mitigation are considered. There are nine counties in Oregon that do not have modernized flood maps. These areas are working with flood hazard data that is over 30 years old, though there may be local efforts to identify and mitigate flood risks with Letters of Map Revision (LOMRs). Areas of the state that have access to new LiDAR data, an interest in updating their maps, and older data informing their flood planning strategies are a priority for Risk MAP projects.

A high-level ranked summary of the highest (“top 10”) priority area recommendations for FY2025 is provided in Table 6.

**Table 6. Oregon Risk MAP Priorities for FY24**

Rank	County/Watershed	Notes
1	Wallowa County	Unmodernized flood maps. New LiDAR collection in the area.
2	Union County	Unmodernized flood maps. New LiDAR collection in the area.
3	Jackson County	Partially modernized flood map. New LiDAR collection in the area. <i>New Risk MAP project kickoff (Discovery) planned for 2024.</i>
4	Lane County	Partially updated flood map – modernization underway. Risk MAP projects in progress.
5	Umatilla County	Modernized flood map (2010). New LiDAR collection in the area, <i>Current flood map update in progress; limited scope (Umatilla River and McKay Creek only).</i>
6	Gilliam County	Unmodernized flood maps. <i>Risk MAP project in progress.</i>
7	Wasco County	Unmodernized flood maps. <i>Risk MAP project in progress.</i>

Rank	County/Watershed	Notes
8	Hood River County	Unmodernized flood maps. <i>Risk MAP project in progress.</i>
9	Morrow County	Modernized flood map (2007). New LiDAR collection in the area.
10	Malheur County	Unmodernized flood maps.

### 3.3. State Challenges, Needs, and Considerations

Flooding is the most common, costly, and predictable natural hazard in the United States. In Oregon, riverine floods are a major hazard, especially during the winter rains, or when heavy spring rains and snowmelt overflow water systems in populated areas. Coastal floods are also a major risk. Oregon’s mountain ranges are one reason for the wide range of flood types; floods west of the Cascades tend to be large-scale events, while eastern Oregon typically experiences more localized, intensive events.

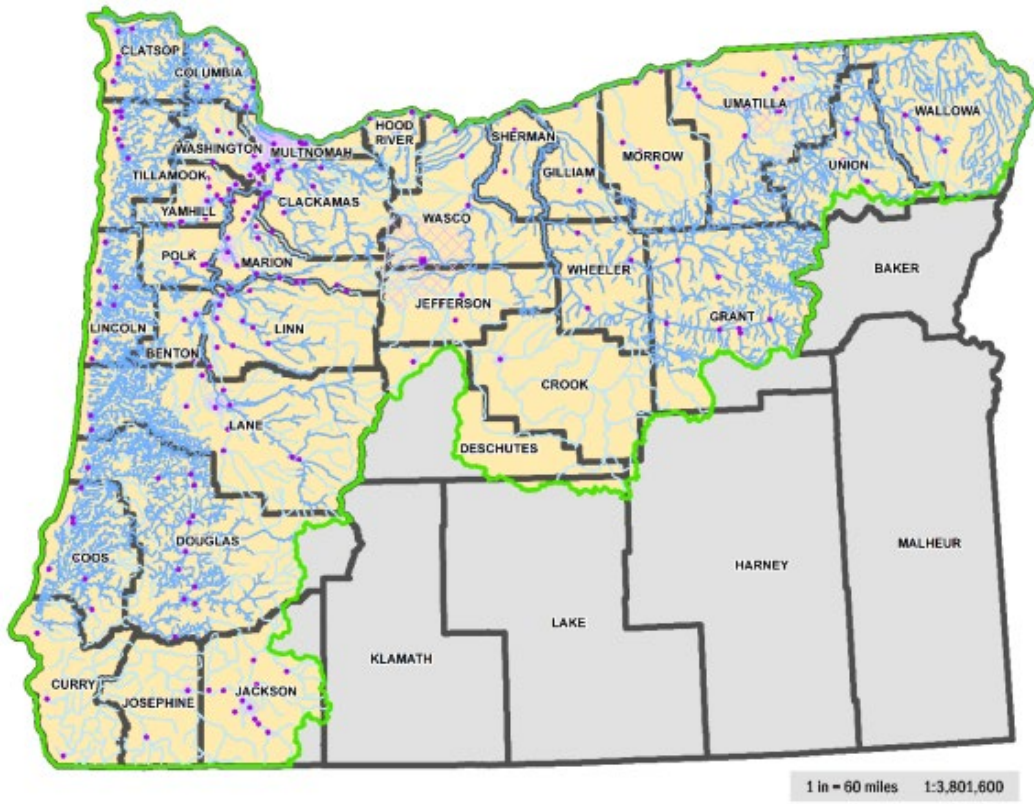
Climate change will bring a greater risk of both flooding and drought in Oregon, as a growing number of extreme precipitation events and atmospheric rivers will impact watersheds throughout the state. Wildfires are growing in intensity and frequency, which also raises flood risk. After a wildfire, the burned ground repels rainwater. This increases the risk of flooding and debris flows for several years following a major fire. Intense storms in burned areas can cause severe flooding and landslides, which threatens drinking water supply, degrades aquatic habitat, and can suffocate fish.

Floods in Oregon have caused millions of dollars in damages to homes and businesses. Building code guidelines and participation requirements for the [National Flood Insurance Program](#) (NFIP) help communities make informed decisions about development in flood hazard areas. Almost all cities and counties in Oregon that are subject to flooding participate in the NFIP, which is coordinated through Oregon’s Department of Land Conservation and Development (DLCD).

The DLCD is also helping to coordinate Oregon’s response to the National Oceanic and Atmospheric Administration (NOAA) Fisheries Biological Opinion (BiOp), which is mandated by the Endangered Species Act (ESA). NOAA Fisheries determined that development in the floodplain is reducing the waterways and wetland habitat available to salmon in Oregon. This jeopardizes 15 salmon and steelhead species, eulachon, and Southern Resident killer whales. To avoid harm to these species, NOAA Fisheries recommended that FEMA take the following actions:

- Improve floodplain mapping so hazards are clear.
- Limit future development in areas of high flood hazard (i.e., floodways, channel migration zones).
- Require developers to mitigate floodplain losses by restoring floodplains elsewhere.

It is not yet known how the BiOp mandate will affect communities' urban growth and development plans, or how it will affect the administration of the NFIP program in Oregon. FEMA is preparing an Environmental Impact Statement (EIS) to implement the BiOp. A draft of this plan was released in October 2021, and FEMA will publish a draft EIS in the Summer of 2024 with an open comment period. In addition, FEMA is developing draft technical guidance to be published with the draft EIS. After these documents are published, FEMA anticipates robust public outreach and engagement, with a variety of meetings and feedback mechanisms for interested individuals, staff, and decision-makers to attend. A map of the BiOp action area is below (Figure 3).



**Figure 3. Oregon NFIP BiOp Action Area**

## 4. Community Engagement Plan

Overall risk and mitigation priorities throughout the state, including county and Tribal interest in updating local flood maps, will help guide decisions about where to start new Risk MAP projects in Oregon. The goal is to identify communities and areas where a detailed flood map analysis would benefit the community and guide hazard mitigation efforts to help reduce the impact of a natural disaster in the area. In Oregon, the natural hazards that pose the highest danger to human life and statewide infrastructure include wildfire, earthquakes, and floods.

Through the Risk MAP Coordinator, ODEM will collaborate with local communities to prioritize Risk MAP projects and flood map updates throughout counties and Tribal areas. Additional factors guide outreach efforts with new communities, including state priorities, community needs and local interest in participation, social vulnerability, LiDAR availability, hazard mitigation plan status, and age or format of natural hazard risk data.

### 4.1. Role of the Risk MAP Coordinator

Oregon's Risk MAP Coordinator provides a critical role for Region 10 Risk MAP communications. This position serves as liaison between various federal, state, Tribal, and local entities; establishing and cultivating community connections; and representing the FEMA Risk MAP Program and ODEM throughout the state. Along with providing important inputs on the statewide Risk MAP priorities, the Risk MAP Coordinator also assists in the identification of future natural hazard mitigation needs for Oregon's communities and provides connectivity and insights for a variety of resilience opportunities throughout the state.

### 4.2. Key Partners and Stakeholders

Some of the key partners and stakeholders for Oregon's Risk MAP Program include:

- [Oregon Department of Land Conservation and Development](#) (DLCD)
- [Oregon Department of Emergency Management](#) (ODEM)
- [Oregon Department of Geology and Mineral Industries](#) (DOGAMI)
- [Oregon Partnership for Disaster Resilience](#) (OPDR)
- [Oregon Silver Jackets](#)
- [Oregon Water Resources Department](#) (OWRD)
- [U.S. Army Corps of Engineers](#) (USACE)

### 4.3. Outreach Plan

The Risk MAP Coordinator has a long-term goal of reaching every county and Tribal entity in Oregon to raise awareness about the Risk MAP program. The effort and level of engagement for potential communications may vary by region, local interest in Risk MAP, current Risk MAP project status, and local flood risk.

Planned activities for 2024 include:

- Developing and maintaining webpages of Risk MAP resources available through ODEM's website.
- Holding listening sessions with emergency managers, city planners, floodplain managers, and other engaged local representatives to learn about local natural hazards. These sessions



will also be a time to inform communities and raise awareness about the Risk MAP program and resources to help hazard identification, mitigation, and recovery practices in the region.

- Promoting FEMA and ODEM trainings to increase awareness about grant opportunities through ODEM and other federal, state, and private partners.
- Workshops and trainings to build grant application and management skills to increase the likelihood of receiving funding in counties that have historically struggled to commit financial resources to major projects.
- Supporting and/or facilitating Risk MAP and other community meetings.
- Maintaining awareness of other partner capabilities and interests throughout the state, through representation on Oregon Silver Jackets and other interagency groups and activities.

#### **4.4. Risk MAP Implementation Strategy**

Oregon’s Risk MAP Implementation Strategy is to coordinate and cultivate partnerships to reach the goals of the Risk MAP Program. Partnership opportunities exist when similar goals, objectives and/or policies are shared by stakeholders with the authority to take action. Each agency involved in a partnership does so by voluntarily investing staff time to work toward developing the collaborative relationship. These relationships increase the probability of project success, accumulate collective power, and stimulate innovative solutions. A commitment by Risk MAP stakeholders to cooperate in cross-functional and interdisciplinary teams greatly increases the success of projects. These partnerships are the overarching means to deploy a successful Risk MAP program.

To build and cultivate partnerships, Oregon’s Risk MAP Coordinator will:

- Identify a list of potential and current partnerships;
- Contact the individuals on this list;
- Establish expectations and objectives;
- Participate in meetings and engage with partners; and
- Maintain long-term, multi-year partnerships through collaboration and information sharing

If partnerships are established and stakeholders commit to achieving community resilience through their various technical fields of expertise, the Risk MAP Coordinator will coordinate the Risk MAP process (outlined below) and other supplemental Risk MAP support. Risk MAP partnerships accomplish milestones, including scope development, study kick-off meeting, draft maps release, map adoption process, mitigation planning, etc. These partnerships will increase efficiency in government through transparency and making actionable recommendations for how best to expend public funds that reduce risk and maximize public benefit.

#### **1. DISCOVERY**

Discovery focuses on understanding a community’s existing capacity and constraints regarding natural hazard mapping, analysis and planning to identify potential project needs. FEMA seeks the input and perspectives of the people who will eventually use the Risk MAP products—cities, counties, tribes, and states— to combine local insight with the latest technology and science. The desired results are data-based products that guide risk-informed decision-making for a safer, stronger community.

FEMA, ODEM, and their partners have products and trainings to support local mitigation efforts. Discovery can begin to discuss this support and identify what tools and products align with a community’s priorities. These may include:

- Data collection, mapping and risk analysis (e.g., LiDAR collection, BLE, updated flood maps, and/or other natural hazard assessments)
- Technical assistance (e.g., information on federal funding opportunities, mitigation technical assistance, grant application support and hazard mitigation planning assistance)
- Training and outreach (e.g., staff training and developing multi-hazard outreach materials tailored to the community's needs)

Discovery is a two-way exchange of information. Ultimately, community knowledge, interests and priorities inform the output of the potential Risk MAP projects and initiatives. The outcome of Discovery is a decision between a community and FEMA about how and if to move forward with a map update, along with other possible risk reduction projects. Activities during the Discovery phase include:

- Information Exchange: A webinar for communities to learn about Risk MAP and the Discovery process, how FEMA selected a community for Discovery, and a review of the community's risks and mitigation efforts.
- Discovery Meeting: A time to understand how Risk MAP complements mitigation efforts. This meeting discusses various tools and resources available from FEMA and other federal and state partners, identifies priority areas for potential Risk MAP project scoping, and works with local, state, and federal agencies.
- Discovery Report: A write-up that includes summaries of the conversations held, project requests, mitigation priorities and data needs identified throughout the Discovery process.

### **Discovery and Hazard Mitigation Planning**

A community updates their Hazard Mitigation Plan (HMP) every five years. An HMP can be supported by the Risk MAP program via new data and analysis, technical support, and through meetings such as Discovery. To best align the Discovery and HMP processes, FEMA tailors' conversations to meet communities where they are in the HMP process.

### **Flood Study Scoping and Kickoff**

Outcomes from Discovery may result in further discussions about scoping, funding, roles, and ultimately, initiating analysis. After Discovery, FEMA will set up a meeting to review priority projects and match them with available funding. FEMA will recommend a scope but will refine priorities based on community input and will work to secure funding for project priorities.

Communities chosen for a Risk MAP project are given a summary of the project history, an overview of the project scope, a timeline for the project phases, and a list of partners. The meeting provides an opportunity to set expectations on roles and responsibilities between FEMA and project area communities.

When flood risk project begins, FEMA and mapping partners conduct analysis and data development. This phase depends on when funding is procured, timing of survey collection, and alignment with other third-party data. Quarterly reports keep communities up to date on progress.

## **2. FLOOD RISK REVIEW MEETING**

During the Flood Risk Review (FRR) meeting, community officials are provided an opportunity to review draft flood hazard areas, water surface elevations, significant changes from the previous products, and mitigation opportunities for newly identified hazards. Communities are given a review

period to identify areas of concern that may need additional refinements to flood mapping analysis. Following the FRR, FEMA and their contractors will consider revisions based on the provided data.

The goal of a FRR meeting is to provide a first look at flood hazard delineations and flood elevations. This information may support and enrich the strategies within the local community to reduce their risk to natural hazards in advance of the formal preliminary rollout.

The FRR Meeting allows for conversation between FEMA and local staff on an updated understanding of the local flood hazard risk. This early dialogue gives communities time to provide feedback on initial floodplain mapping, prepare for future outreach needs, and identify mitigation needs. FEMA recommends that a variety of staff participate. The FRR can include the floodplain administrator, emergency management staff, planners, public works, engineers, GIS staff, community development and building officials, parks and recreation staff, and transportation staff.

FEMA will support development of hosting draft flood hazard data on online web viewers, provide a site-specific change assessment from effective mapping, and identify areas of significant change. Products are intended to provide increased transparency on changes in advance of a public rollout, build support for local stakeholders to engage elected officials and property owners, and identify potential mitigation opportunities.

### **3. CONSULTATION COORDINATION OFFICER (CCO) MEETING**

The Consultation Coordination Officer (CCO) Meeting occurs after the preliminary Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) have been distributed. The CCO Meeting provides an avenue to review preliminary products, build upon discussions from prior phases, and facilitates planning for future due process and adoption stages. This meeting strives to achieve the following:

- Help communities understand their role in reviewing and adopting the regulatory products.
- Discuss community requirements, due process phases, map adoption and public outreach opportunities.
- Introduce flood risk products such as water surface elevation and flood depth grids, online viewers, and assessments that add context to proposed mapping changes and impacts.
- Provide connectivity to broader resilience initiatives including leveraging new flood risk products to support mitigation planning, quantitative risk assessments, and integration opportunities with other natural hazards.

FEMA will provide a summary of the mapping approach for those that were unable to attend prior phases with a high-level overview of study methodologies and identification of any changes to floodplain mapping that resulted from community input at the FRR Meeting.

### **4. PUBLIC ENGAGEMENT**

If communities identify a need for outreach at the CCO Meeting, FEMA and state partners can hold a Public Open House. The Open House allows for direct conversations about changing flood risk with the public, prompts property owners to talk about their risk, and provides time for community members to meet with subject matter experts.

The appeal/comment period will be explained. The public can provide comments for basic corrections or propose flood hazard changes by submitting technical data. FEMA can provide story

maps and community official briefing packets to show preliminary flood hazard data online. Local officials can use these tools to communicate flood risk to property owners.

An Open House is a great time to connect and engage with community officials and FEMA representatives to better understand local flood risk and what resources are available from the State, FEMA, and other partners to reduce risk.

## 5. RESILIENCE

The Resilience Workshop is an in-person FEMA Risk MAP touchpoint. It brings together local agencies to network and learn about available mitigation and resilience resources. The term “resilience” is how a community contributes to its social, economic, and overall well-being—striving to become stronger by identifying risks, protecting against potential impacts, and providing a means to recover effectively after a disaster.

The workshop should reflect what the community values: individual and family well-being, safe homes and neighborhoods, financial protection, etc. Resilience is unique to each community. FEMA works with communities to integrate Risk MAP outcomes, such as best available hazard data, into their existing planning mechanisms. This will help communities to prepare for and act on their risk.

- **If updating floodmaps:** A Resilience Workshop can support a flood map update. If the community wants to discuss mitigation projects that could reduce local flood risk, a Resilience Workshop can be a place to share funding sources and inter-agency networking to implement mitigation action.
- **If natural hazard data is available:** A Resilience Workshop can identify available natural hazard data and the ways this data can strengthen and inform mitigation planning. A Resilience Workshop can also identify gaps in natural hazard data and find ways FEMA and state resources can fill those gaps. If the community uses natural hazard data in other plans, a Resilience Workshop can provide resources, best practices, and technical assistance to support and strengthen those efforts.
- **If the community has an expired HMP:** A Resilience Meeting is a chance for local partners to connect, share information and collaborate. This group often includes the same staff members and state agencies that participate in hazard mitigation planning, including those that develop multi-hazard risk assessments. Convening this group can kickstart a plan update and support conversations about the HMP, including available funding opportunities.
- **If the community has adopted an HMP:** For recently finished or updated HMPs, a Resilience Workshop can support communities as they prioritize mitigation projects, seek funding, and form inter-agency networks that support community resilience. The Resilience Meeting lets partners share new multi-hazard risk assessment data. This information can be integrated into the HMP during annual plan maintenance and the five-year update process.

The discussions held at the workshop can help develop strategies and tools to support mitigation planning and future actions. A Resilience Report will be provided that summarizes the workshop outcomes. This will keep future mitigation momentum going.

## 5. Resources

The following resources are developed and maintained by the State Risk MAP Coordinator.

### 5.1. Risk MAP website

A state-specific Risk MAP website has been developed for Oregon to support public awareness of Risk MAP projects and resources. The website is located at: [Oregon Risk MAP](#)

### 5.2. Resource Guide

A Resource Guide is being developed for the State of Oregon to support community information needs and POCs for the following information. The Resource Guide is part of Oregon's public Risk MAP website and may be freely shared with communities and partners upon request:

- [Partner List](#) (State and Federal Risk MAP Partners)
- [Funding Opportunities](#)
- [Training Opportunities](#)
- [Community Support and Technical Assistance](#)

### 5.3. Stakeholders and Subject Matter Experts (SME)

A list of Stakeholders and Subject Matter Experts (SMEs) has been developed for the State of Oregon and delivered to FEMA for internal informational needs. The document provides a reference list of key responsibilities, activities, and areas of expertise for various key stakeholders, organizations, and programs throughout the state. The Stakeholder List may be shared with other partners upon request.

### 5.4. Risk MAP Point-of-Contact

The State Risk MAP Coordinator is the primary contact to direct initial inquiries regarding Risk MAP projects and products throughout Oregon. The Risk MAP Coordinator serves as a principal liaison with the Risk Analysis Branch (RAB) within FEMA to communicate and advance flood and multi-hazard analysis, mapping needs, and risk reduction strategies.

The designated Risk MAP Coordinator for the State of Oregon is:

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## Acronyms

BiOp	Biological Opinion
BLE	Base Level Engineering
CCO	Consultation Coordination Officer
CTP	Cooperating Technical Partner
DLCD	Department of Land Conservation and Development
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FRR	Flood Risk Review
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
HMP	Hazard Mitigation Plan
ODEM	Oregon Department of Emergency Management
RAB	Risk Analysis Branch
Risk MAP	Risk Mapping, Assessment, and Planning
SME	Subject Matter Expert