

HOW TO IMPLEMENT GOAL 7: AREAS SUBJECT TO NATURAL HAZARDS TO MAKE YOUR COMMUNITY MORE RESILIENT!



OREGON

Department of Land Conservation & Development

This guidance was developed by the Oregon Department of Land Conservation & Development (DLCD) to address natural hazards and increase community resilience through land use planning (comprehensive plan and implementation provisions).

Oregon's coastal communities are at risk to many natural hazards: floods, landslides, winter storms, earthquakes, and tsunamis. New data and mapping products from the Federal Emergency Management Agency (FEMA), the Oregon Department of Geology and Mineral Industries (DOGAMI), and others has increased our knowledge of and ability to plan for many of these hazards. Local level planning is essential to moving community resilience forward. The Department of Land Conservation and Development (DLCD) works with communities to implement Goal 7 by providing assistance in addressing new hazard data and incorporating it into local land use plans, programs, and policies, with the goal of reducing community risk. In addition to comprehensive plans and zoning codes,

stormwater management plans, erosion control plans, transportation plans, and emergency operations plans all provide additional avenues a community can update or develop to reduce risk to natural hazards.

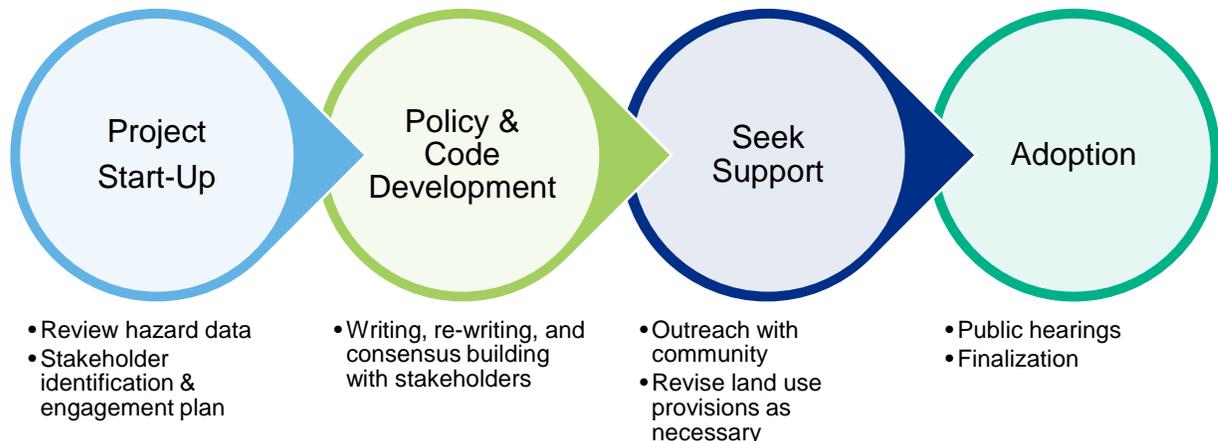
ALL-HAZARDS INTEGRATION PROJECT



Many local cities and counties in Oregon have recently or will soon complete updates to their Natural Hazard Mitigation Plans (NHMP). An all-hazards comprehensive plan and development code update project is a great way to put land use related mitigation actions from NHMPs into practice.

What follows are the steps that a jurisdiction might carry out to update their land use planning program with new hazards information and regulations. Timelines, scope, and budgets may vary depending on the community and the types of natural hazards being addressed.

General process to update local natural hazards land use elements



STEP 1: PROJECT START UP

Timeline: 1-4 months

HAZARD DATA REVIEW

A typical first step is to locate and review all credible and relevant hazard data as a base for determining what hazards will be addressed in the planning effort. A community may decide to address multiple hazards at once or only one hazard at a time, depending on the information available and community priorities. Depending on the community and timeline, flood hazard updates may warrant a separate process, since flood maps have specific regulatory and public input requirements from FEMA.

STAKEHOLDER ENGAGEMENT PLANNING

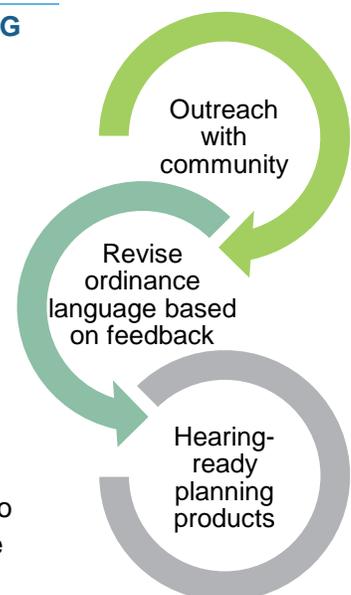
An important key to the success of these types of projects is a strong local champion(s) to shepherd the process from start to finish. Another important part of project start-up is to establish the stakeholders who will give input throughout the project at different levels and how they will be engaged. A community may decide to have a combination of the following groups:

- **Project Management Team (PMT):** A small work group meant to provide technical input on land use policies and code provisions. The PMT can be made up of planning staff, the planning commission, public works, emergency management staff or volunteers, or other staff or community members with technical expertise.
- **Project Advisory Committee (PAC):** A broader community perspective to provide additional review during certain phases of the project and to help gather public support for regulatory changes. A jurisdiction may consider business leaders, neighborhood associations, CERT teams, or other leadership and community representatives as part of this group. It is important to have an elected official involved in at least one of these project groups.

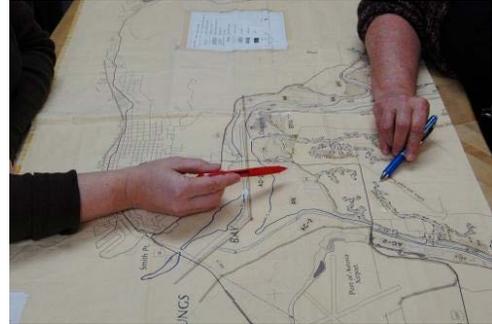
STEP 2: COMPREHENSIVE PLAN POLICY AND IMPLEMENTING CODE DEVELOPMENT

Timeline: 6-12 months

During the next phase of the project, the local planning staff, with help from DLCD, will draft comprehensive plan and ordinance language to address the identified natural hazards. Model zoning codes, technical experts, case studies, and natural hazard planning resources (such as the jurisdiction's Natural Hazard Mitigation Plan) guide development of the proposed regulations. Policies and code language are reviewed, edited, and re-written through a collaborative process as necessary until consensus is reached on finalized products to bring to public hearings. Stakeholder review and engagement from the PMT and PAC on these drafts should follow the plan developed in Step 1 to ensure their concerns and feedback are addressed and incorporated in the development code. This may be accomplished through open houses, work sessions, surveys, and website postings (see also Step 3).



Development in hazardous areas is discouraged or restricted under Goal 7 (and Goals 17 and 18 for coastal jurisdictions). However, it is possible to build relatively safely in some hazardous areas if proper precautions are taken. Natural hazard inventories are typically identified through map products developed by DOGAMI or other state agencies. In developing the code updates, several tactics may be explored by the PMT. One typical requirement is a site investigation, conducted to identify and assess the risks associated with a particular site. The report may include safeguard measures to the siting and design of the proposed development, such as setbacks, moveable foundations, or drainage improvements. This site investigation is then reviewed by the local decision-maker(s) for approval, approval with conditions, or denial. See the Coos County case study (included in this document) for more examples of code updates adopted to address development in areas subject to natural hazards.



STEP 3: SEEK SUPPORT

Timeline: 2-6 months

This phases of the project can be highly variable in form and length. This depends on the community and the amount of public outreach needed to obtain buy-in and trust for the new map products and updated development code provisions. Outreach may include:

- Workshops with the planning commission and elected body;
- Advertising draft ordinances and maps for public review;
- Hosting community meetings with natural hazard experts to explain the new data.

The end goal of this process is to have hearing-ready planning documents, including maps, to be supported by the planning commission and elected body (city council or board of county commissioners) through the public hearing process.

STEP 4: ADOPTION PROCESS

Timeline: 2-8 months (or longer)

Local planning staff will lead the adoption process. This may include preparing staff reports, hearing notices, mailings, and notifications to DLCD; facilitating land use amendments through the planning commission and city council or board of county commissioners; and all other work necessary for local adoption. Required [landowner notifications](#) are important to plan for, as they may be expensive and generate questions from citizens. Depending on the hazards being addressed through this process, new maps and regulations may affect a large number of residents. DLCD staff can provide technical assistance throughout this process in the form of maps, mailing lists, process support, and template language.

The local adoption process can be a difficult and time consuming part of a project like this, especially if a jurisdiction is considering regulating development in a hazard area for the first time. However, if the planning commission, elected body, and larger community are involved in the code development

process ahead of public hearings (Steps 2 and 3), the adoption process can be much more straightforward.

It is important to remain adaptive and responsive throughout the process, which may include re-working proposed regulations or holding additional meetings with community members to examine the data and what the changes will mean for them. Trust and buy-in from the community and elected leaders are critical components to achieving the end goal of a more resilient community.

GENERAL PROJECT GUIDANCE



ROLES

DLCD can provide assistance to jurisdictions in many ways. In some cases, DLCD staff has taken on the role of contract manager and hires a consultant or the local jurisdiction to complete the land use work, providing input on the deliverables, while in other cases DLCD staff played a significant role in developing and delivering land use products. Or DLCD can complete a discrete task as part of the overall project or process. The role of the agency depends on what the jurisdiction wants or needs. Typically, with federal or state funding, cost-share is required for the grant. Either DLCD, the local jurisdiction, or both can provide that match through in-kind efforts.

PLAN AMENDMENT PROCESS

Updating a land use program to address natural hazards requires development of new policy and is therefore a legislative land use decision. This type of decision is formally called a “post-acknowledgement plan amendment” (PAPA) and is adopted by the governing body. There are at least two hearings – one in front of the planning commission and the other before the city council or board of county commissioners.

CONTACT INFORMATION

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FUNDING

Funding sources to consider to address natural hazards through land use planning:

- [DLCD Technical Assistance Grants](#)
- FEMA Programs:
 - [Risk MAP](#)
 - [Pre-Disaster Mitigation](#)
 - [Hazard Mitigation Grant Program \(post-disaster funding\)](#)
 - [Flood Mitigation Assistance \(flood planning only\)](#)
- Local funding, such as capital improvement funds, service fees, general funds, levies, and local grants

HAZARD-SPECIFIC RESOURCES

- [Preparing for a Cascadia Subduction Zone Tsunami: A Land Use Guide for Oregon Coastal Communities](#)
- [Preparing for Landslide Hazards: A Land Use Guide for Oregon Communities](#)
- [DOGAMI Tsunami Clearinghouse](#)
- [DOGAMI HazVu](#)
- [Oregon Wildfire Risk Explorer](#)
- [Statewide Landslide Information Database for Oregon \(SLIDO\)](#)
- [DOGAMI Publications Center](#)



DLCD and Coos County planning staff recently completed a project to integrate new hazards data into their land use planning program. The project began in October of 2016 and was completed in September of 2019. Funding for this project came from a FEMA Risk MAP program grant that provided funding for County planning staff to interpret data and write land use policies and codes with technical assistance from DLCD.

COOS COUNTY CODE EXAMPLES

Coos County focused on five hazards for their planning updates: tsunami, liquefaction (earthquake-related), landslide, coastal erosion, and wildfire. See below of examples of how they addressed new development in these hazard areas. An online viewer was also developed for the County that houses all the natural hazard data they use for implementing their adopted regulations:

<https://www.coastalatlantlas.net/coos-all-hazards/>.

Landslides, liquefaction, and coastal erosion:

All three of these hazards are considered geologic hazards and are streamlined into a single development application process, called the Geologic Assessment Review. This type of review requires a conditional use application. Except for activities identified as exempt, any new development or substantial improvement in an area subject to these identified hazards shall require a Geologic Assessment Review, which includes the submission of an engineering geologic report. These reports must be completed by a certified engineering geologist and be consistent with the "Guideline for Preparing Engineering Geologic Reports," 2nd Edition, 5/30/2014, published by the Oregon Board of Geologist Examiners.

Wildfire:

In areas identified as high or moderate wildfire risk, new development and substantial improvements are required to meet minimum fire protection standards, such as onsite water supply, vegetation safety breaks, and fire resistant building materials.

Tsunami:

The county adopted a tsunami hazard overlay zone that focuses on three main tactics:

- 1) Prohibit the development of certain new critical and special occupancy facilities, such as hospitals, police and fire stations, schools, and large gathering facilities in a specified tsunami inundation zone. This is to allow those facilities and services to function post-event.
- 2) Require new land divisions within the specified tsunami inundation zone to include evacuation improvements in their overall development design, such as route signs, educational materials, or pedestrian pathways. This is to help ensure evacuation success to the maximum possible extent.
- 3) Provide an optional flexible permit process which would allow a development proposal to modify underlying code standards (such as density requirements or setbacks) in order to achieve higher degrees of risk reduction than is required, similar in concept to a planned development.