| Current Comprehensive Plan Language   | Is the Current Language Obsolete,<br>Outdated, Redundant or still Relevant?   | What is Some Potential Language to Improve/Replace Existing Policy?   | Are there related Vision Goal Statements or Actions or Other City Plan Policies that Should be Incorporated/Added?  | What are Examples of Good Policy<br>Language from Other Cities'<br>Comprehensive Plans?  |
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| Chapter 3 — Natural Hazards Element Element Goal: To prohibit development that would be subject to damage or loss of life from occurring in known areas of natural disasters and hazards without appropriate safeguards.  | Still relevant but outdated. The current chapter only covers the natural disasters of floodplains, earthquake fault lines, landslide prone areas, and areas with weak foundation soils. Updates are especially needed to reflect natural hazards related to climate change. | Consider changing the phrase "known areas of natural disasters" to include areas in which natural disasters are probable or highly likely – a major issue with planning for the effects of climate change is the unprecedented nature of the situation and that these effects cannot be definitively known ahead of time. | Goal Statement Planet 1:  The entire city nurtures a connected canopy of trees planted and stewarded by its residents. Smart and focused development honors and prioritizes lifesustaining natural resources.  Goal Statement Planet 3:  Milwaukie is a model city that produces more energy through renewable sources than it uses. It is a prepared and resilient community, adaptive to the realities of a changing climate.  Priority Action Planet 1.1: Implement city programs, incentives and development code amendments that promote sustainable development and help to better integrate the built environment and natural environment.  Priority Action Planet 3.5: Ensure that the City's infrastructure and facilities can reasonably withstand natural or man-made disasters and that the City can continue to provide services during an emergency event.  Priority Action Planet 3.7: Promote household and neighborhood-level emergency preparedness by expanding the role and capacity of Community Emergency Response Teams (CERTs). | Oregon Natural Hazards Mitigation Plan (2015) Identifies the following hazards & vulnerabilities for the Portland Metro area: droughts, earthquakes, floods, landslides, volcanoes, wildfires, windstorm, winter storms  Hillsboro's Comp Plan Natural Hazards Section addresses emergency preparation and management. Rather than breaking down the sections by natural disaster their sections address the following —  • minimize risk • preparedness • coordination • capacity • hazard mitigation |
| Objective 1 – Floodplain:  To manage identified 100 year floodplains in order to protect their natural function as waterways, and to protect the lives and property of those individuals and concerns currently located within and along the floodplain boundary. | Still relevant.   | Consider updating language to integrate requirements from Title 3 of the Metro Urban Growth Management Functional Plan. Title 3's "Water Quality and Flood Management Areas" include the 1996 flood inundation areas along with the FEMA 100-year floodplain.   |   |  |
| <u>Policy 1</u> : New construction and development will be regulated so that water flow will not be increased. The capacity of the floodplain shall not be reduced by development activities.   | Still relevant.   |   |   | Lake Oswego Comp Plan B-6. Ensure public and private storm water systems are planned, developed, and maintained to prevent flooding, protect water quality, and preserve natural surface   |

## Existing Comprehensive Plan Goal Statements, Objectives, and Policies & Vision Statements - <u>Block 2: Natural Hazards</u>

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|   |   |   |   | water systems to protect aquatic habitat (See also, Surface Water Management policies).  B-7. Reduce flooding by promoting Low Impact Development practices that reduce impervious surfaces and promote infiltration of surface water (See also, Surface Water Management Policies).  |
|   |   |   |   | Tigard Comp Plan Hazards 12. The City shall encourage pervious, and minimize impervious, surfaces to reduce storm water runoff  |
| <u>Policy 2</u> : Construction materials which may be inundated will be of such strength and quality that they will not deteriorate, and they must be able to withstand the pressure and velocity of flowing water.   | Still relevant, although largely covered by the Building Code.              | Potentially group this under a Resiliency section/goal.   |   |   |
| <u>Policy</u> 3: The finished elevations of the lowest floor of buildings and streets will be a minimum of 1.0 foot above the 100-year flood elevation.   | Still relevant.   | Consider whether 1 ft above the 100-year flood elevation is sufficient for potential impacts of climate change.   |   | Tigard Comp Plan Hazards 8. The City shall prohibit any land form alterations or developments in the 100-year floodplain which would result in any rise in elevation of the 100-year floodplain.  |
| <u>Policy 4</u> : Whenever possible, the floodplain will be retained as open space and used for recreation, wildlife areas, or trails. Dedication of lands or public easements within the floodplain is encouraged when indicated by the Recreational Needs Element, and may be required as a condition of development along creeks and rivers or other water bodies or wetlands. | Still relevant.   | Update reference to Recreational Needs Element.   | Goal Statement Planet 2: Milwaukie has free flowing, accessible, pristine waterways that are protected by a robust stormwater treatment system. The Willamette waterfront is easily accessed by the public and offers a wide variety of activities and events that can be enjoyed by all. | Lake Oswego B-5. Improve flood control by protecting, restoring and maintaining the natural systems of floodplains including riparian vegetation, wooded areas and wetlands.  |
| <u>Policy 5</u> : The City will continue to participate in the FEMA Flood Insurance Program and will update its current flood hazard ordinance as necessary to comply with future revisions to that program.  | Still relevant.   | Will need to continue to track changes and requirements for the NFIP.   |   | Lake Oswego Comp Plan B-2. Continue to participate in the National Flood Insurance Program and comply with Federal Emergency Management Agency (FEMA) standards.  |
| Objective 2 – Seismic Conditions:  Regulate the structural integrity of all developments within the City consistent with the provisions of the Uniform Building Code, Earthquake Regulations.   | Still relevant.   | Update with new considerations related to the potential big Cascadia quake.  Consider limiting or precluding essential facilities (e.g., schools, medical facilities, etc.) from locating within areas with high potential seismic risks. |   | Lake Oswego Comp Plan C. Earth Quake Hazard Policies C-1. When siting essential public facilities, evaluate hazard risk and location based on the most recent geologic and seismic studies. C-2. Require compliance with the current edition of the Oregon Structural Specialty Code regarding building design for earthquake resistance. |

## Existing Comprehensive Plan Goal Statements, Objectives, and Policies & Vision Statements - <u>Block 2: Natural Hazards</u>

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|  |   |   |  | Hillsboro Comp Plan. POLICY NH 1.5 Site essential facilities outside of hazard areas. Prohibit the siting of essential facilities in identified natural hazard areas where the risk to public safety cannot be mitigated, unless an essential facility is needed to provide essential emergency response services in a timely manner.  |
| Policy 1: [No policies listed for this Objective.]   |   |   |  | Hillsboro Comp Plan POLICY NH 4.1 Support building retrofits. Promote replacement, retrofitting, and redesign of at-risk buildings. POLICY NH 4.2 Support resilience of public structures. Promote and support a sustained program of capital investment to improve resilience in public structures, especially essential facilities and schools. POLICY NH 2.3 Support structural enhancements. Promote development policies and practices that protect the safety of people in Hillsboro, including retrofitting structures and fortifying vital communication and transportation systems. |
| Objective 3 – Weak Foundation Soils:  To ensure that adequate measures are undertaken to mitigate the structural limitations of soils.   | Still relevant.   |   |  |  |
| Policy 1: When developments are proposed for areas identified as having a severe construction rating (See Map 3), a special report, (completed by a qualified soils engineer or engineering geologist), must accompany the application indicating proposed building techniques to mitigate soil limitations. Examples of appropriate mitigative techniques include:  • Excavating and backfilling where appropriate • Special footing and foundation designs • Special construction techniques such as pilings, etc. | Still relevant. Map 3 (Natural Hazards) needs to be updated.                | Update listed mitigation measures as necessary to reflect current best practices. |  | Lake Oswego Comp Plan. D. Landslides, Erosion, and Unstable Soils Policies D-1. Continue updating Community Development Code maps with the best and most current information to minimize hazards associated with soil erosion, landslides and unstable soils. D-2. Implement regulations, standards and incentives that ensure:  a. Appropriate engineering and site development measures to prevent damage from hazards associated with erosion, landslides and unstable soils; b. Protection and restoration of natural and topographic features such as ridge lines and vegetation        |

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|   |   |   |  | to preserve slope and soil stability; c. Preservation of undisturbed slopes due to severe landslide and erosion hazard; d. Protection of natural resources associated with steep slopes such as stream corridors, trees and other vegetation and wildlife habitat; e. Erosion control measures; and, f. Property owners include erosion and drainage control measures in site planning, during and after development, to prevent increases in surface water runoff, erosion and siltation. D-3. Control erosion through the following measures: a. Minimize the disturbance of existing vegetation. b. Preserve land identified with a potential for high erosion hazard as undisturbed slope, unless appropriate evidence demonstrates that engineering can effectively overcome soil and slope limitations |
| Big Ticket Questions  |   | What is Missing?  |  |  |
| <ul> <li>How should the Seismic Conditions policies be changed/updated as a result of the new <u>Cascadia quake</u> information and predictions?</li> <li>Should we break down the chapter by the type of natural disaster (similar to current format), or something more like Hillsboro's?</li> <li>How do we deal with overlap between Climate Change and Natural Hazards as it relates to topics such as wildfire smoke and flooding?</li> </ul> |   | <ul> <li>Landslide and wildfire hazards</li> <li>Policy language related to climate change and its effects</li> <li>Coordination with and references to Milwaukie's Climate Action Plan</li> <li>Coordination with and references to Clackamas County's Natural Hazard Mitigation Plan         <ul> <li>Ex: Hillsboro Comp Plan. POLICY NH 1.3 Create mitigation plan. Develop and maintain a mitigation plan for natural hazards</li> </ul> </li> <li>Public facilities (?)         <ul> <li>Examples:</li> <li>Tigard Comp Plan - The City shall design and construct public facilities to withstand hazardous events with a priority on hazard protection of public services and facilities that are needed to provide emergency response services.</li> <li>Hillsboro Comp Plan. POLICY WS 2.8 Resiliency. Upgrade existing infrastructure to reduce risk posed by seismic events, climate change, and other hazards.</li> </ul> </li></ul> |  |  |