



City of Lacey's Annex to the Hazards Mitigation Plan for the Thurston Region, 4th Edition

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Adoption of Plan

RESOLUTION 1144

CITY OF LACEY

A RESOLUTION OF THE CITY OF LACEY, WASHINGTON, ADOPTING THE HAZARDS MITIGATION PLAN FOR THE THURSTON REGION AND THE CITY'S ANNEX TO THE HAZARDS MITIGATION PLAN FOR THE THURSTON REGION.

WHEREAS, The Federal Emergency Management Agency (FEMA) describes hazard mitigation planning as the effort to reduce loss of life and property by reducing the impact of disasters; and

WHEREAS, Communities must have a FEMA approved and locally adopted hazard mitigation plan in place and continue to update it every five (5) years to maintain eligibility for federal mitigation assistance programs; and

WHEREAS, The City of Lacey adopted its first Hazard Mitigation Plan in 2003 as part of a multi-jurisdictional hazard mitigation planning process, with the City plan as an Annex to the Hazards Mitigation Plan for the Thurston Region; and

WHEREAS, Led by the Thurston Regional Planning Council (TRPC), multiple jurisdictions in Thurston County developed a multi-jurisdictional hazards mitigation plan which enables communities within a region to join together to prepare a common strategy for the region; and

WHEREAS, in addition to partnering in the multi-jurisdictional plan, Lacey is required to adopt a local plan representing Lacey's unique development patterns and hazard risks; and

WHEREAS, Lacey's annex covers components such as detailing the City's risks for all appropriate hazards, cataloging the City's past, current, and proposed mitigation initiatives, and documenting the City's participation in the National Flood Insurance Program (NFIP); and

WHEREAS, Staff also focused on the need for ongoing public outreach so that the public is aware of both the hazards mitigation plan and of general emergency preparedness activities; and

WHEREAS, The Regional Plan was reviewed by the Washington State Emergency Management Division and TRPC received notice from FEMA of successful completion of the Regional Plan on February 15, 2024; and

WHEREAS, On March 7, 2024, the Washington State Emergency Management Division completed review of Lacey's annex and forwarded it to the Federal Emergency Management Agency (FEMA) for final approval; and

WHEREAS, Adoption of the Regional Plan, Lacey's annex and final approval from

FEMA will ensure the city maintains compliance with federal requirements to receive disaster mitigation funding.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, as follows:

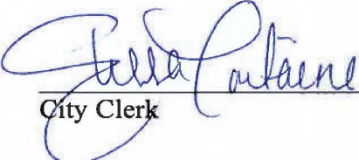
1. The City of Lacey hereby adopts that certain document entitled "*4th Edition Hazards Mitigation Plan for the Thurston Region*" attached hereto as Exhibit A.
2. The City of Lacey hereby adopts that certain document entitled "*The City of Lacey's Annex to the Hazards Mitigation Plan for the Thurston Region, 4th Edition*" attached hereto as Exhibit B.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON, this 19 day of March, 2024.

CITY COUNCIL

BY: 
Mayor

Attest:


City Clerk

Approved as to form:


City Attorney

FEMA Approval

U.S. Department of Homeland Security
FEMA Region 10
130 228th Street, SW
Bothell, WA 98021-8627



FEMA

April 18, 2024

The Honorable Tye Menser
Chair, Board of Thurston County Commissioners
3000 Pacific Avenue, S.E.
Olympia, WA 98501

Dear Chair Menser:

On February 15, 2024, the United States Department of Homeland Security’s Federal Emergency Management Agency (FEMA) Region 10, approved the Thurston County Multi-Jurisdiction Hazard Mitigation Plan as a multi-jurisdictional local plan as outlined in Code of Federal Regulations Title 44 Part 201. This approval provides the below jurisdictions eligibility to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act’s, Hazard Mitigation Assistance grants projects through February 14, 2029, through your state:

City of Olympia	Public Utility District 1	Thurston County
City of Tumwater	City of Lacey	

FEMA individually evaluates all application requests for funding according to the specific eligibility requirements of the applicable program. Though a specific mitigation activity or project identified in the plan may meet the eligibility requirements, it may not automatically receive approval for FEMA funding under any of the programs. Approved mitigation plans may be eligible for points under the National Flood Insurance Program’s Community Rating System. For additional information regarding the Community Rating System, please visit: www.fema.gov/national-flood-insurance-program-community-rating-system or contact your local floodplain manager.

Over the next five years, we encourage your communities to follow the plan’s schedule for monitoring and updating, and to develop further mitigation actions. To continue eligibility, jurisdictions must review, revise as appropriate, and resubmit the plan within five years of the original approval date.

If you have questions regarding your plan’s approval or FEMA’s mitigation grant programs, please contact Kevin Zerbe, State Mitigation Strategist with Washington Emergency Management Division, at (253) 512-7467, who coordinates and administers these efforts for local entities.

Sincerely,

HOLLY A BERGMAN Digitally signed by HOLLY A BERGMAN
Date: 2024.04.18 13:14:25 -07'00'

for Kristen Meyers, Director
Mitigation Division

cc: Tim Cook, Washington Emergency Management Division

www.fema.gov

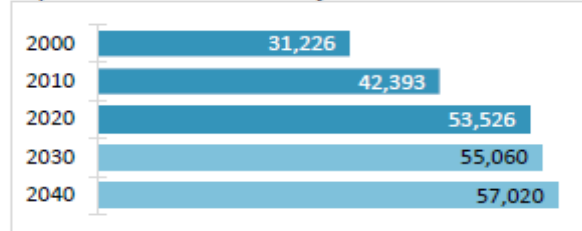
Lacey Statistical Profile

Lacey

2022 Statistical Profile

Demographics

Population – Estimates & Projections



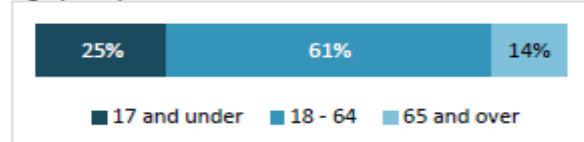
Average Annual Population Growth

2000-2010: 3.1% per year
 2010-2020: 2.4% per year

Language Spoken at Home (2016-2020)*

English Only	82.6%
Spanish	6.0%
Korean	2.3%
Chinese	0.4%
Vietnamese	2.1%
Tagalog	2.0%
Other Language	4.6%
TOTAL	100.0%

Age (2010)



Median Age: 34

Race & Ethnicity (2020)

Race	Percentage
White	64%
Black & African American	6%
American Indian & Alaska Native	1%
Asian	9%
Native Hawaiian & Other Pacific Islander	3%
Other Race	5%
Two or More Races	13%
TOTAL	100%

Ethnicity

Hispanic or Latino	13%
Not Hispanic or Latino	87%
TOTAL	100%

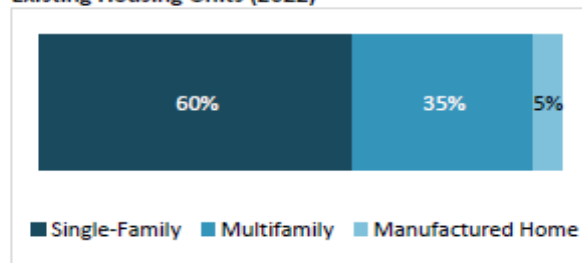
Households & Housing

Households (2020)

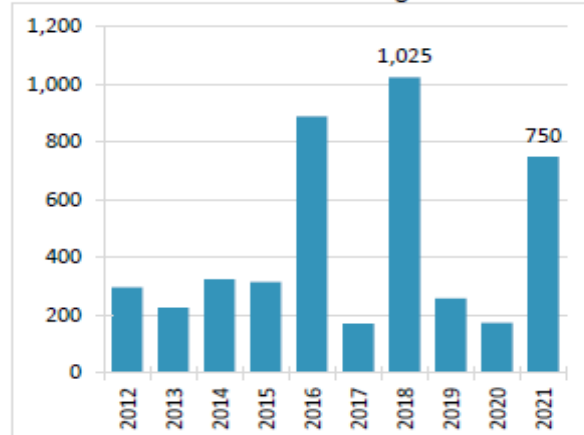
Total Households: 16,949
 Average Household Size: 2.44

Median Home Sale Price (2021): \$464,000

Existing Housing Units (2022)



New Residential Units Issued Building Permits



*Estimates based on survey data and may have a large margin of error.

Updated Nov. 2021

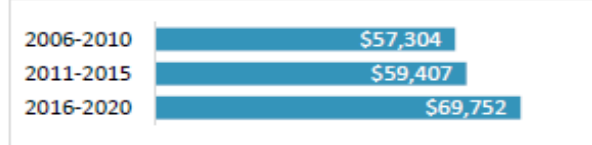
Sourced from Thurston Regional Planning Council

Lacey

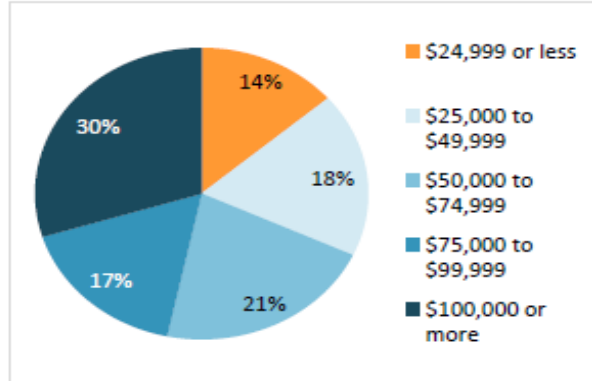
2022 Statistical Profile

Employment & Income

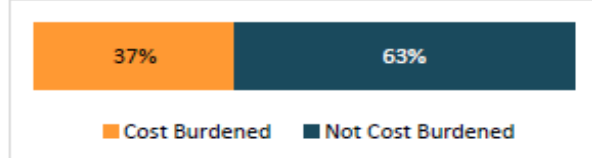
Median Household Income*



Households by Income (2016-2020)*



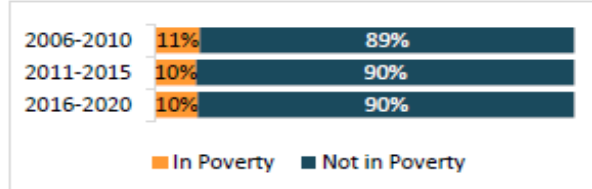
Cost Burdened Households (2016-2020)*



Cost Burdened	7,452
Severely Cost Burdened**	2,994
Not Cost Burdened	12,762
TOTAL Households	20,214

**Severely cost burdened households are a subset of cost burdened households.

Poverty Rate*

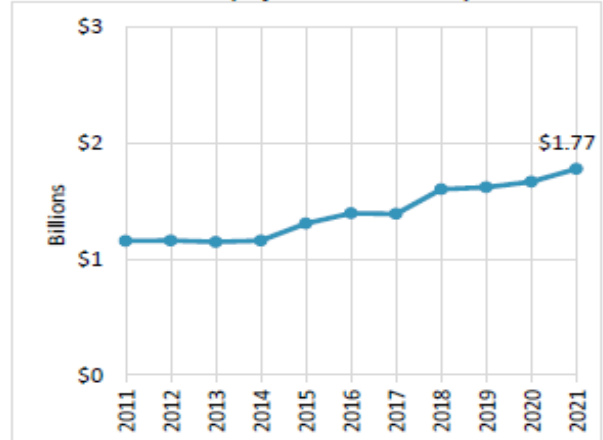


Jobs (2017 Estimate)

Resource, Construction, Utilities	2,550
Manufacturing, Wholesale Trade	1,460
Retail, Accommodation, Food	7,340
Transportation, Warehousing	1,100
Services	13,170
Finance, Insurance, Real Estate	2,990
Government	5,560
Total Jobs**	34,160

**Numbers may not add due to rounding.

Taxable Retail Sales (adjusted for inflation)



LEARN MORE about statistics, trends, analyses and comparisons for Thurston County and its jurisdictions at The Profile: www.trpc.org/theprofile.



Thurston Regional Planning Council
 2411 Chandler Ct SW
 Olympia, WA 98502
info@trpc.org
 Ph: 360-956-7575

*Estimates based on survey data and may have a large margin of error.

Updated Nov. 2021

Sourced from Thurston Regional Planning Council

Introduction

What is a Hazard Mitigation Plan?

The Federal Emergency Management Agency (FEMA) describes hazard mitigation and hazard mitigation planning as the effort to reduce loss of life and property by reducing the impact of disasters. Local governments engage in hazard mitigation planning to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property from future hazard events. Mitigation plans are key to breaking the cycle of disaster damage, reconstruction, and repeated damage.

Developing a hazard mitigation plans enables communities to:

- Increase education and awareness around threats, hazards, and vulnerabilities;
- Build partnerships for risk reduction involving government, organizations, businesses, and the public;
- Identify long-term strategies for risk reduction;
- Identify implementation approaches that focus resources on the greatest risks and vulnerabilities; and
- Communicate priorities to potential sources of funding.

The 2024 update to the Hazards Mitigation Plan (annex) for the City of Lacey is part of the fourth edition of the Hazards Mitigation Plan for the Thurston Region, hereinafter to be referred to as the Regional Plan. The Regional Plan was developed through a multi-jurisdictional process to create a mitigation strategy aimed at reducing the risks from hazards that may impact the region. The first multi-jurisdictional plan for the Thurston Region, which included annexes for 15 communities and special districts, was adopted in 2003, as a response to new federal mitigation planning requirements set forth under The [Robert T. Stafford Disaster Relief and Emergency Assistance Act](#) (Stafford Act) and the Disaster Mitigation Act of 2000. The Stafford Act provides the legal basis for local governments to undertake risk-based approaches to reducing natural hazard risks through mitigation planning. Specifically, the Stafford Act requires local governments to adopt a FEMA-approved hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance.

Federal requirements stipulate that communities must have an approved and adopted plan in place and continue to update hazard mitigation plans every five (5) years in order to maintain eligibility for the following federal mitigation assistance programs:

- **Building Resilient Infrastructure and Communities (BRIC)** – a nationally competitive annual grant program. It provides funding and direct technical support to states, local communities, tribes, and territories for a variety of hazard mitigation and climate resilience project types and programs. In Fiscal Year 2022, FEMA awarded \$3 billion to 46 projects.

- **Flood Mitigation Assistance** – a competitive program that provides funding to states, local communities, federally recognized tribes, and territories. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program.
- **Hazard Mitigation Grant Program (HMGP)** – provides funding to state, local, tribal and territorial governments to develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities. This grant funding is only available to affected states and communities after a presidentially declared disaster.
- **HMGP-Post Fire** – provides post fire assistance to help communities implement hazard mitigation measures after wildfire disasters.
- **Pre-Disaster Mitigation Program** – awards funds to state, local, tribal, and territorial governments to plan for and implement sustainable cost-effective measures to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding from future disasters.

Multi-Jurisdictional Plan for the Thurston Region

Since adoption of the first hazard mitigation plan, the City of Lacey has participated in a multi-jurisdictional planning process with partner jurisdictions and special districts throughout Thurston County. Led by the Thurston Regional Planning Council (TRPC), the Regional Hazard Mitigation Plan provides the regional risk assessment, goals, objectives, and mitigation strategies for the region. A multi-jurisdictional plan enables communities within the region to join together to prepare a common strategy for the region. A multi-jurisdictional plan recognizes the dependence jurisdictions within a region have on one another especially during times of disaster and allows further development of regional partnerships. Although the City of Lacey is a participant in the multi-jurisdictional planning process, all partner jurisdictions are required to review and revise their local plans to reflect changes in development, progress of existing mitigation initiatives, and to identify changes in mitigation priorities. The local planning process also allows the city to assess its local initiatives and strategies, identify strengths and weaknesses in local emergency mitigation planning, and identify new strategies and initiatives designed to protect the community and reduce the impacts of natural and man-made disasters.

Regional Goals and Policies

The Regional Plan identifies goals and policies that together with each jurisdiction’s initiatives drive the development of mitigation strategies. The mitigation strategies in this annex refer back to the goals and policies from the Regional Plan.

**For Goals and Policies refer to the Regional Plan - Chapter 2: Mitigation Strategy – Goals, Policies, and Initiatives*

Plan Development Process

A Hazard Mitigation Planning Development Team represented the City of Lacey at the Regional Hazard Mitigation Planning meetings throughout 2022-2023. Lacey planning team members regularly attended the regional meetings and brought multidisciplinary expertise and insight to the Hazard Mitigation Workgroup discussions. The interdepartmental city team met on several occasions to update the local Annex. The team conducted an internal plan review and evaluated the previous mitigation initiatives. New mitigation initiatives were identified, then scored and prioritized through a Benefit-Cost Review Criteria and Mitigation Prioritization. Staff then updated the 2024 Annex according to current City mitigation priorities and capabilities. The following section identifies the members of the plan development team and the process that was followed in development of this update to the Hazard Mitigation Plan.

Plan Development Team

The following staff served as the City of Lacey's Hazards Mitigation Planning Development Team:

Representative	Title
Ed Andrews	Water Maintenance Supervisor
Carlos Aviles-Ortiz	Building Code Specialist II
Gagan Brar	Civil Engineer
Peter Brooks	Water Resources Manager
Scott Devlin	Public Works Operations Manager
Roger Dickenson	Wastewater Maintenance Supervisor
Bracy DiLeonardo	Benefits Manager
Marcus Hoch	Management Analyst (Public Works)
Scott Johnston	Transportation Maintenance Supervisor
Jim Mack	Police Commander
Brandon McAllister	Civil Engineer
Stefan Schlecht	Senior Maintenance Technician
Hans Shepherd	Senior Planner
Leialani Su'e	Human Resources Director
Ed Taylor	Emergency Management & Safety Coordinator

Plan Development Activities

The following activities supported the development of the City of Lacey's local hazard mitigation planning process:

Date	Location	Activity	Subject
February 28, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Overview of Hazard Mitigation Planning Process. Roles and Responsibilities Schedule.
March 3, 2022	Email	City of Lacey Hazard Mitigation Workgroup member identification	Email sent out to department directors to identify City of Lacey hazard mitigation planning team members.
March 28, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Capability Self-Assessment. Introduction to Public Outreach Strategy. Ideation for Community Survey. Consultant Recruitment Proposals. Cost Share Time Tracking.
March 29, 2022	Virtual/Zoom	Hazard Mitigation Plan Risk Assessment Proposals Review	HMP Consultant Proposal Selection.
April 13, 2022	Virtual/Zoom	City of Lacey Hazard Mitigation Planning Meeting	City of Lacey Annex kick off meeting. Review and answer capability assessment survey.
April 25, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Consultant Recruitment Update. Capability Self-Assessment Results. Draft Public Engagement Strategy. Draft Community Survey. Review.

May 23, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Hazard Mitigation Grant Program Call for Projects. Community Survey Outreach Discussion. Consultant Scope of Work.
June 25, 2022	Polynesian Festival/RAC	Community Survey Outreach	Attended the Polynesian Festival at the Regional Athletic Complex to encourage participation in the Community Hazard Resiliency Survey.
July 6, 2022	Website/Social Media	Community Survey Outreach	Promote hazard resiliency survey on the City of Lacey's website and social media outlets.
July 6, 2022	Lacey City Hall & Lacey Timberland Library	Community Survey Outreach	Place A-boards/posters to the entrances of Lacey City Hall and Lacey Timberland Library to promote the hazard resiliency survey.
July 6, 2022	Email	Community Survey Outreach	Sent survey to all city employees via email.
July 9, 2022	South Sound BBQ/ Huntamer Park	Community Survey Outreach	Attended the South Sound BBQ at Huntamer Park to encourage participation in the Community Hazard Resiliency Survey.
July 15, 2022	Website/Social Media	Community Survey Outreach	Posted video made by TC Media to website and social media promoting hazard resiliency survey.
July 25, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Risk Assessment and Mitigation Strategy. Development Road Map. Data Collection and Coordination. Community Survey Outreach Activities.

August 8, 2022	Email	Sent out to departmental staff to identify critical facilities	Critical facilities data request.
August 31, 2022	Email	Correspondence	Sent final critical facilities list to TRPC.
September 26, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Geologic Hazards. Community Hazard Resiliency Survey Results. Risk Assessment and Data Coordination. Update Hazard Scenarios & Profile Format.
October 20, 2022	Email	Correspondence	Received hazard profiles for jurisdictions to review.
October 24, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Wildfire Hazards & Wildfire Ready Neighbors Program. Risk Assessment Requirements. Plan Goals & Policies part 1.
November 28, 2022	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Flood Hazards & Risk MAP Lakes Study. Goals & Policies part 2. Community Profile & Capability Assessment. Meeting Schedule Update.
January, 23, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Risk Assessment and Hazard Ratings Walkthrough.
February 27, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Risk Assessment Update. Annex Hazard Maps. Online Hazard Mapping Tool. Regional Mitigation Initiatives Part 1. Strengths, Weaknesses, Obstacles, and Opportunities Part 1. Schedule Update.

March 17,2023	Email	Correspondence	Complete and submit SWOO assessment to TRPC.
March 27, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Critical Facilities Risk Analysis & Hazard Risk Rating Results for Special Purpose Districts. SWOO Assessment Results & Application to Mitigation Actions. Jurisdictional Mitigation Ideation Workshop.
April 19, 2023	Lacey City Hall	Meeting	Prepare with risk manager for the hazard mitigation initiative update meeting.
April 24, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Regional Mitigation Initiatives Part 2. Benefit-Cost Review Criteria & Mitigation Prioritization. Process and Meeting Schedule Update.
May 2, 2023	Lacey City Hall	City of Lacey Hazard Mitigation Planning Meeting	Review and update mitigation initiatives.
May 17, 2023	Lacey City Hall	City of Lacey Hazard Mitigation Planning Meeting	Update existing and submit new draft mitigation initiatives.
May 22, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Regional Mitigation Initiatives Benefit-Cost Review Scores & Ranking. Risk Assessment and Planning Process Templates. Public Outreach Strategy. Benefit-Cost Review Criteria & Mitigation Prioritization. Process and Meeting Schedule Update.
June 6, 2023	Lacey City Hall	City of Lacey Hazard Mitigation Planning Meeting	Finalize draft mitigation initiatives.

June 26, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Jurisdictional Mitigation Initiatives Status Reporting. Mitigation Action Community Survey and Outreach Strategy. Schedule Update.
June 28, 2023	Lacey City Hall	City of Lacey Hazard Mitigation Planning Meeting	Benefit-Cost Review Criteria & Mitigation Prioritization of final mitigation initiatives.
July 19, 2023	Lacey City Hall	City of Lacey Hazard Mitigation Planning Meeting	Capability assessment review, discussion workshop.
July 19-September 31, 2023	City of Lacey Interdepartmental	Capability assessments prepared by departments	Department staff prepared capability assessment templates and identified capability gaps.
July 26 – July 31, 2023	Thurston County Fair	Community Survey Outreach	HMP Workgroup members hosted a daily informational table with posters and materials at the Thurston County Fair. Fair goers were encouraged to take the survey.
August 24, 2023	Virtual/Zoom	Meeting	Met with Finance Accounting Manager-discussion about capability assessments.
August 28, 2023	Virtual/Zoom	Thurston County Regional Hazard Mitigation Planning Meeting	Action Plan Regional Mitigation Initiatives Survey Results. Risk Assessment Recap. Model Annex Review and Plan Review Process. Plan Monitoring and Maintenance Strategy.
August 29-31, 2023	Virtual/Zoom	FEMA Training	August Local Mitigation Planning Workshop.

September 23, 2023	Tumwater, Peter G. Schmidt Elementary School	Emergency Preparedness Expo.	Expo used as a way to engage community members and to solicit feedback on mitigation plan during development.
December 28, 2023-January 11, 2024	City of Lacey	Internal review	Submit to workgroup and ELT for review
January 22, 2024-February 5, 2024	Online TRPC website	Public comment period	Submit annex to TRPC for public review/comment
February 8, 2024	Email	State and FEMA Review	Submit Annex to WA State EMD and FEMA
March 19, 2024	City of Lacey	City Council adoption of plan	Present Plan to City Council for Adoption
April 18, 2024	Email	FEMA approval	Received FEMA approval Letter

Public Participation in the Planning Process

The following section describes the opportunities for public involvement in the planning process and also provides the strategy for continuing to engage the public in building community resiliency.

Opportunities for Community Involvement

The City of Lacey is actively involved in the Regional Hazard Mitigation Planning process and works jointly with the regional partners to engage in public input on the regional and jurisdictional Hazard Mitigation Plans. The City solicited public input on the hazard mitigation initiatives by participating in a multi-jurisdiction open house July-August, 2023 that was promoted through various community events to include the South Sound BBQ, Lacey Children’s Day event at Huntamer Park, the Thurston County Fair, and the Thurston County Emergency Management Council’s Emergency Preparedness Expo held in Tumwater at Peter G. Schmidt Elementary which drew in approximately 500 community members. Members of the planning team were on hand at all events to answer questions and explain the hazards associated with the regional areas including associated hazard mitigation initiatives that were proposed to lessen the impact of damages caused by a disaster.

Ongoing Public Participation

In an effort to increase public involvement in the mitigation planning process and to continue the

conversation with the community regarding hazard mitigation and emergency preparedness, ongoing mitigation initiatives are included in the plan designed to specifically increase public involvement and hazard awareness. For example, there is a strategy that staff will prepare materials related to the Hazard Mitigation Plan and general emergency preparedness information for distribution at events such as the Bi-Annual Homeowner Association (HOA) Academy meetings. A mitigation strategy has been identified to develop a 'Pop-Up' hazard mitigation/emergency preparedness display that can be used at regular community events to expand awareness of the Hazard Mitigation Plan and can provide emergency preparedness resources to community members. Some of the events could include, HOA Academy meetings, Lacey Spring Fun Fair, South Sound BBQ Festival, Children's Day at Huntamer Park, and the Thurston County Emergency Preparedness Expo. Other events can be included throughout the year with the intent to provide information to a broad segment of the community. The City hired an Emergency Management & Safety Coordinator in 2018 to effectively manage emergency preparedness activities within the community, which was one of the mitigation initiatives proposed in the previous Annex.

Updates to the Mitigation Plan

In the City of Lacey, the City Manager has oversight and final approving authority for all plan updates. The Human Resources (HR) Department Emergency Management & Safety Coordinator is the point-of-contact for monitoring, evaluation, and updates to the plan, and shares the chair duties for the Emergency Services Committee. The Emergency Management & Safety Coordinator (primary) and the HR Benefits Manager (alternate) serve as the Lacey representative on the Thurston County Emergency Management Council. To ensure regulatory updates to the mitigation plan are met, the City will continue to participate with Thurston County and TRPC for the regular five-year Regional Plan update. The City of Lacey has participated in updates in this manner with the regional partners since the first regional plan was adopted.

In order to monitor the progress of implementation of the mitigation strategies, an annual presentation by the Emergency Services Committee on the status of the plan's mitigation initiatives and activities to promote hazard mitigation planning, will be made to the City Council at a council regular or work session meeting. This will serve as a means to keep the decision makers aware of the plan and its implementation status. This will also place the decision makers in a position of readiness to update the plan as needed. The agendas and notices for these meetings are posted on the City website.

Integration in Plans, Policies, and Planning Mechanisms

Mitigation and preparedness planning are addressed broadly throughout many planning documents adopted by the City. In 2016, the City of Lacey completed a three year update process of the Land Use Element of the Lacey Comprehensive Plan. The intent of the Comprehensive Land Use Plan is to present a clear vision for Lacey's future over the next 20-year period and incorporates a series of elements to provide a consistent policy direction relating to growth and development, transportation, housing parks, open space, and environmentally sensitive and critical areas. While there are general policies throughout the plan that relate to hazard mitigation planning, the Environmental Element of the Lacey Comprehensive Land Use Plan provides the main policy guidance for regulations related to hazard mitigation. The following goals and policies are from the Environmental Element which was most recently revised in 2016:

Comprehensive Land Use Plan – Environmental Element

Resource Lands and Critical Areas

- Goal 1: Development shall protect, conserve, and complement natural resources and environmentally sensitive areas and promote sustainability.
 - Policy A: Development shall be consistent with the Environmental Element, the provisions contained in the Lacey Municipal Code and sustainability goals and objectives contained in the Comprehensive Plan.

Forest Lands

- Goal 2: Achieve and maintain a vibrant, healthy, and diverse urban forest in Lacey and Lacey's urban growth area consisting of both native and non-native landscape components to improve canopy cover and the aesthetic and physical benefits of trees while protecting infrastructure from tree damage.

Critical Areas

- Goal 1: Incorporate a systems perspective into policy, regulatory, and service decisions, recognizing the interrelationship of people, nature, and the economy.
 - Policy C: Continue to preserve and protect significant environmental features including unique wetlands, hillsides, and habitat areas to support wildlife and protect surface and groundwater resources.

Flood Hazard Protection

- Goal 1: Protect Lacey's citizens and property from flood hazards.
 - Policy A: Utilize and amend, when necessary, Lacey's flood hazard protection measures to minimize flood hazard impacts to life and property.

- Policy B: Continue to participate in the National Flood Insurance Program to minimize risk of flood hazard.
- Policy C: Utilize drainage and erosion control standards to respond and mitigate drainage problems.

Geologically Sensitive Areas

- Goal 1: Protect the health and safety of the community and property to avoid the adverse impacts of erosion, landslide, and other geologic hazards.
 - Policy A: Mitigate geological hazards by proper engineering design and modified construction techniques when risk to health and safety are deemed acceptable. When technology cannot reduce risk to acceptable levels, development in geologically sensitive areas shall be avoided.
 - Policy B: Review and refine development regulations and mapping resources for geological sensitive areas as additional resource information becomes available.

Economic Element of the Comprehensive Plan

In addition to the Environmental Element, the City of Lacey Economic Development Element of the Comprehensive Plan has also incorporated resiliency goals and policies recognizing the importance of mitigation and preparedness planning as a means to ensure a thriving economy. If businesses are forced to close due to disaster events, impacts can spread throughout the local economy. The City strives to provide resources to local businesses to ensure that they are successful, including during the aftermath of a disaster.

- Goal 2. Lacey is Business Ready – The economic needs of Lacey’s citizens are met because Lacey is prepared to meet the needs of all of its business customers.
 - Policy F: In the event of a disaster, natural or man-made, Lacey will take positive steps, as soon as possible, to do everything it can to help businesses reopen.

The Shoreline Master Program

The Shoreline Master Program for the City of Lacey provides goals, policies, and the regulatory framework for regulation of development within areas defined as waters of the state per RCW 90.58.020. The shoreline regulations apply to development within 200 feet of the ordinary high-water mark of the shoreline. One of the fundamental goals of the Shoreline Master Program includes the prevention and minimization of flood damage. To that end, regulations within the Shoreline Master Program provide prescriptive building setbacks from the ordinary high watermark. In the City of Lacey, the setbacks help to ensure that building takes place outside of the regulatory flood plain as shown on the Flood Insurance Rate Maps prepared for the community as part of the city’s participation in the National Flood Insurance Program (NFIP).

Integration in Plans, Policies, and Planning Mechanisms

Elements of the City's Comprehensive Plan and the annual budget for the City of Lacey are both used to implement mitigation initiatives specified by this annex. After adoption of the Hazards Mitigation Plan (HMP), the first step will be to seek funding for projects or actions (mitigation initiative) to be integrated into the annual budget process.

During the next planning cycle, the HMP will be included as an element to the City of Lacey Comprehensive Plan (CEMP) to further ensure applicable strategies are integrated into regular planning processes. Several mitigation strategies are also complimentary to objectives for a CEMP. The City of Lacey will be undertaking an update to the CEMP in 2023 and 2024 and will incorporate the applicable strategies into that plan in order to ensure that those strategies are accomplished.

City of Lacey Hazard Risk Assessments

Introduction

This Annex describes how the City of Lacey's risks vary from the entire planning area. Chapters 4.0 through 4.9 of the Regional Plan introduces and addresses the profile of the hazards in the plan. There are nine (9) hazards that the Regional Plan addresses. The risk assessment summarizes the hazards and the risks that pose the greatest threat to Thurston County. The risk assessment includes hazard profiles that describe the hazards, their causes, sources, severity, effects and impacts, probability of occurrence, historical occurrences, geographic extent or delineation, and the portion of the population, assets, and critical facilities potentially exposed to the hazard.

The explanation of the methodologies used to develop the risk assessment can be found in Chapter 4.0 "Risk Assessment Introduction" of the Regional Plan.

This section of the Annex explains the details of risks that are specific to the City of Lacey and its urban growth area. This annex must be reviewed together with the Regional Plan to gain a complete understanding of the hazard risks that can affect the City of Lacey and its residents. Tsunami, sea level rise, and dam failure do not pose a significant risk to the City of Lacey, therefore were not addressed in this annex.

Hazards Impact on Community

The City of Lacey's population has increased from 47,540 at the time of the 2016 census to an estimated 59,430 in 2023. As the city grows, it is important that this growth occurs in appropriate areas located outside of areas of potential natural hazards. Natural hazards that could occur in the City of Lacey would be related to flood events, landslides, and earthquakes, as well as winter storm, heat, and wind events.

The City of Lacey Comprehensive Plan and associated land use and zoning regulations guide growth and development in the City of Lacey. Between 2010 and 2019, an average of 10 acres were developed for every 100 new homes, compared to 14 acres during the previous decade. Not only has less land been consumed for the same number of homes, but less public infrastructure is needed to support the more compact growth. This means fewer miles of roads, stormwater, water, and sewer pipes needed to be built and maintained, and services such as transit become more efficient to provide. Compact growth also leaves more land for parks, open space, and rural uses.

The City continues to see expansion in light industrial development located north of Interstate 5 in the Hawks Prairie area of the City, with several large warehouse and distribution centers coming online in the last few years. Those include Trader Joe's, Whole Foods, Amazon, Uline, Blue Line, NC Machinery, and Tec Equipment. Additionally, construction is currently underway for the new Hogum Bay Town Center containing new commercial mixed uses and proposed multi-family housing.

The City of Lacey adopts and enforces the most current International Building Codes, and does so on a three-year code cycle per requirements of the State of Washington. This process ensures new construction meets the most current requirements for seismic safety and better ensures that Lacey building stock will be constructed to withstand the impacts of earthquakes and related liquefaction. Redevelopment similarly must meet current codes or be retrofitted to meet current code standards.

Further, the Environmental Protection and Resource Conservation Elements of the City of Lacey Comprehensive Plan and Municipal Code provides the policy framework that guides implementation measures for protecting and improving Lacey's natural environment. The topics discussed in this element include: Critical Areas, Geologically Sensitive Areas, Flood Hazard Areas, Habitat Conservation Areas, and the Shoreline Master Program.

Policies and regulations addressing activities located in or near areas of known natural hazard occurrence exist within Lacey Municipal Code – specifically within the following chapters:

- Environmental Policy ([14.24](#))
 - Adopts sections of Chapter 197-11 WAC, as existing or hereinafter amended by reference.
- Shoreline Master Program ([14.26](#))
 - Adopts “City of Lacey Shoreline Master Program, March, 2021”, as existing or hereinafter amended by reference.
- Wetland Protection ([14.28](#))
 - Requires site planning to avoid or minimize damage to wetlands wherever possible, no net loss of wetlands, and activities in or affecting wetlands not threaten public safety, cause nuisances, or destroy or degrade natural wetland functions and values.
- Tree and Vegetation Protection and Preservation ([14.32](#))
 - Implements strategies for the management and protection of urban forest resources pursuant to the goals and policies of the Lacey Urban Forest Management Plan.
- Habitat Conservation Areas Protection ([14.33](#))
 - Requires site planning and habitat management planning to designate and protect the functions and values of habitat conservation areas based on best available scientific information.
- Flood Hazard Prevention ([14.34](#))
 - Adopts policy and regulation restricting development and recurring flood damages within designated flood hazard areas where such development would put life and property at risk.
- Wellhead Protection and Critical Aquifer Recharge Areas ([14.36](#))
 - Protects the public health, safety, and welfare by protecting critical aquifer recharge areas and the city’s water resources that serve as the city’s potable water source.
- Geologically Sensitive Areas Protection ([14.37](#))

- Develops specific requirements for analysis and performance standards related to identification and protection from erosion hazard and landslide hazards.
- Environmentally Sensitive Areas ([16.54](#))
 - Regulate use of designated environmentally critical areas consistent with the intent of the Growth Management Act and the Lacey Environmental Protection and Resources Conservation Plan.

Each of these chapters is intended to meet or exceed the requirements of the Revised Code of Washington and the Code of Federal Regulations.

Vulnerable Populations

Part of a comprehensive risk assessment is an assessment not only of hazards and their impacts on locations but also an assessment of other factors that play a role in community resiliency following disaster. Examining and understanding socioeconomic factors and subpopulations that are unique to a community can help to inform decisions regarding mitigation programs and strategies that will improve the communities' ability to prepare for disaster and to respond after disaster events.

In 2010, the estimated population of Lacey and its Urban Growth Area (UGA) was 75,560 residents. TRPC anticipates our population will increase to around 109,680 individuals by 2040 (a rate of approximately 1% per year). A majority of this increase will be due to internal-migration (moving to a community from another part of the state, region, or country), with the majority of residential growth projected to take place within the UGA over the next twenty years.

This becomes an important factor in emergency planning as the City of Lacey represents the largest incorporated population (59,430) within the region, but it also has the largest UGA population (35,193) within the region for a projected population of 94,623 individuals (Esri 2023). Taken a step further, the City of Lacey is the primary provider of goods and urban services for rural portions of the region including residents of Johnson Point, communities located along the Nisqually River valley, and those areas bounded by Joint Base Lewis McChord (JBLM) lands to the southeast of town.

Recent data suggests strong demographic shifts that show a growing need for varied housing types and smaller housing footprints. These demographic shifts are guided by the aging baby boomer generation and a millennial population still working to enter the housing market. In 2022, 18.47% of the population in Thurston County was 65 years of age and older. By 2030, this number is expected to rise above 21% as all baby boomers will have reached or surpassed the age of 65 (Esri 2023).

The Lacey UGA has a slightly higher diversity index at 68.7% to 67.2% within the incorporated boundaries of the city. Of the UGA population, 62.1% identify as White, 13.9% identify as multiracial, 9.9% identify as Asian, and 5.6% identify as Black. Within the incorporated boundaries of Lacey, 64.1% identify as White, 13.2% identify as multiracial, 8.8% identify as Asian, and 5.7% identify as Black (Esri 2023). Within the City and UGA, 5.4% of the population speaks Spanish (Esri 2019).

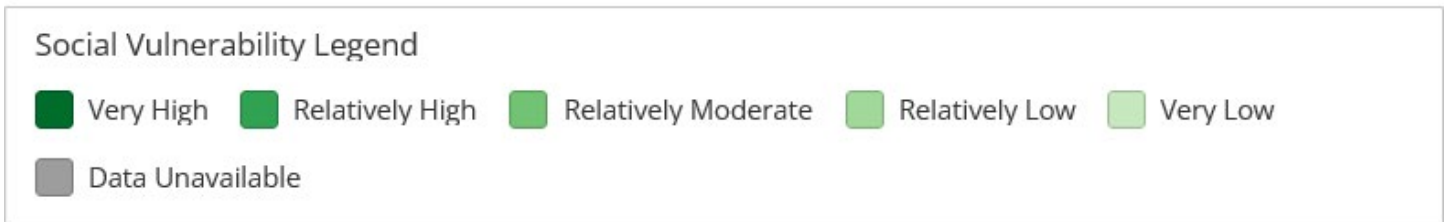
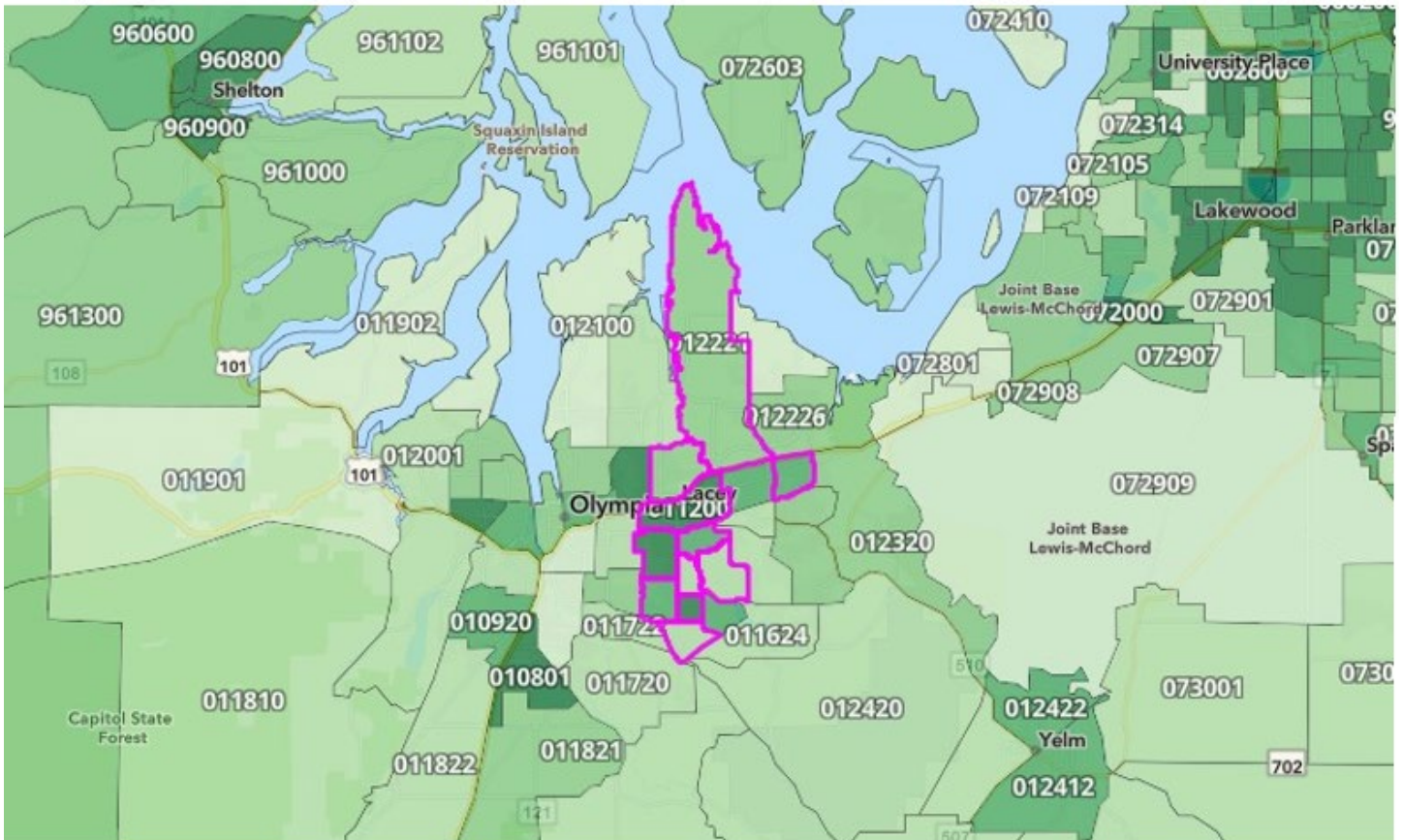
According to the American Community Survey (ACS 2019), 23.2% of households within the City have at least one (1) person with a disability. This number grows to 25.7% within the UGA (Esri 2023).

Social Vulnerability and National Risk Index

Social vulnerability is the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. The FEMA National Risk Index (NRI) is an online tool that illustrates the U.S. communities most at risk for 18 natural hazards. The NRI is intended to help users better understand the natural hazard risk of their communities. The Regional Plan outlines how the NRI calculates its hazard ratings in chapter 4.0. The NRI is broken down into census tracts throughout the U.S., the City of Lacey's census tracts for overall risk, social vulnerability, community resilience, and expected loss due to hazards are shown in the following maps. Also included is the City of Lacey's National Risk Index Scores and Ratings (for all hazards).

Social Vulnerability

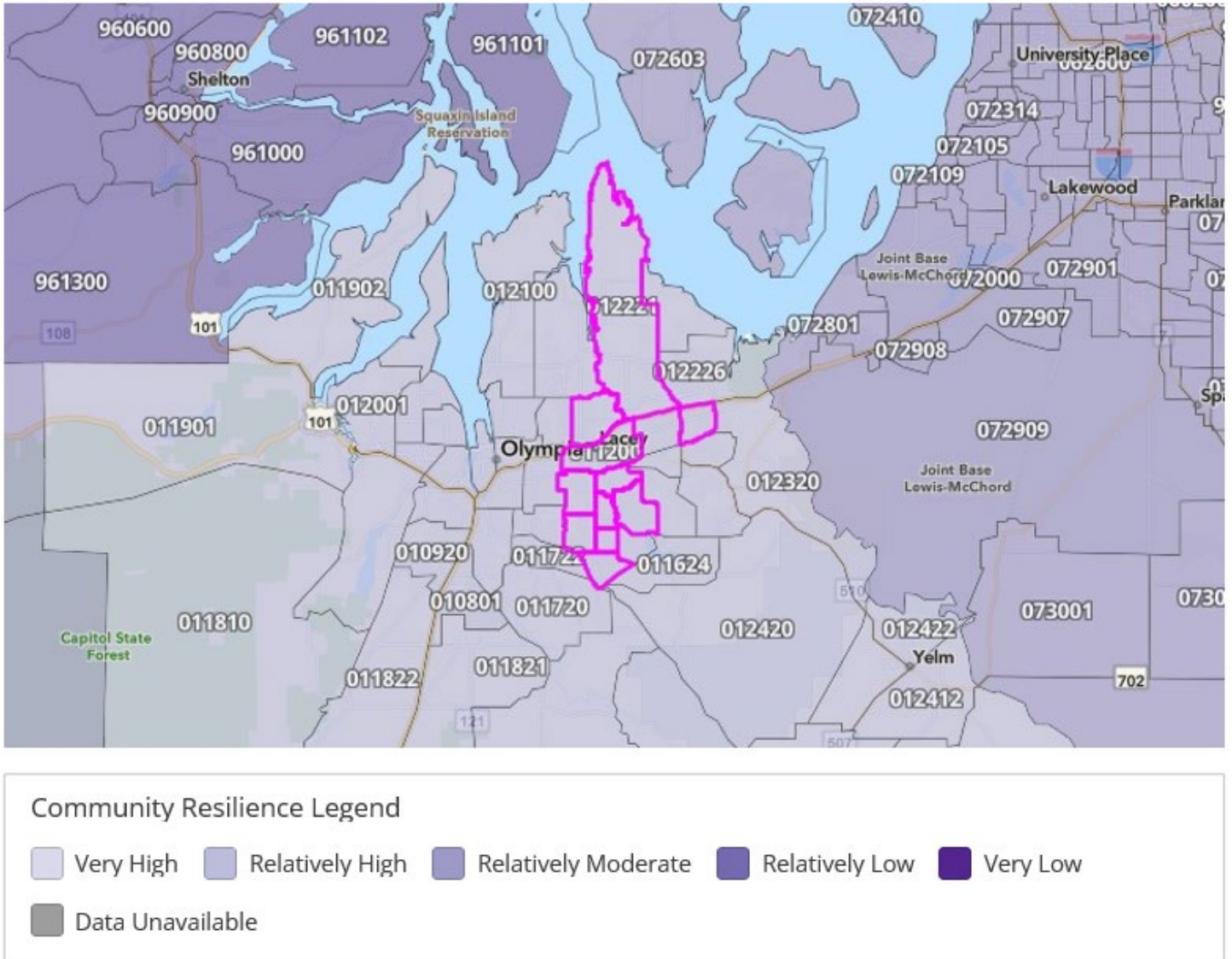
Social Vulnerability measures the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood.



Sourced from Thurston Regional Planning Council

Community Resilience

Community Resilience measures a communities' ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.



Sourced from Thurston Regional Planning Council

City of Lacey’s National Risk Index Scores and Ratings (for all hazards)

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Score
1	Census tract 53067011200	WA	\$4,225,975	Very High	Relatively High	1.54	\$6,528,003	98.64
2	Census tract 53067012224	WA	\$2,091,368	Relatively Moderate	Relatively High	1.09	\$2,280,831	89.44
3	Census tract 53067012221	WA	\$1,891,628	Relatively Moderate	Relatively High	1.06	\$1,997,568	87.1
4	Census tract 53067011626	WA	\$1,342,317	Relatively High	Relatively High	1.37	\$1,840,064	85.61
4	Census tract 53067012330	WA	\$1,398,008	Relatively High	Relatively High	1.31	\$1,836,145	85.58
6	Census tract 53067011410	WA	\$1,428,377	Relatively High	Relatively High	1.26	\$1,800,218	85.18
7	Census tract 53067011421	WA	\$1,704,685	Relatively Low	Relatively High	1.04	\$1,780,354	84.91
8	Census tract 53067011300	WA	\$1,098,291	Very High	Relatively High	1.49	\$1,633,597	83.11
9	Census tract 53067011623	WA	\$1,241,329	Relatively Low	Relatively High	0.95	\$1,181,921	75.31
10	Census tract 53067011625	WA	\$546,356	Very High	Relatively High	1.52	\$831,110	65.05
11	Census tract 53067011422	WA	\$754,227	Relatively Low	Relatively High	0.94	\$710,989	60.08

Sourced from Thurston Regional Planning Council

Earthquake Hazard Risk Assessment

Area of Impact

The issue of earthquake severity for the City of Lacey is not much different than the rest of Thurston Region which is described in great detail in Chapter 4.2 of the Regional Plan: Earthquake Hazard Risk Assessment. Three earthquake scenarios were modeled using the natural hazards GIS modeling tool Hazus to assess vulnerabilities, estimate losses, and characterize earthquake hazard risks for Thurston County:

- A Cascadia Subduction Zone Magnitude 9.3 (megathrust earthquake)
- A Nisqually 7.2 (deep intraplate earthquake)
- A Seattle Fault 7.2 (shallow or crustal faulting earthquake)

Extent

The severity of the hazard affecting the City of Lacey does not differ from the Thurston Region.

Impacts

Depending on the type and depth of the earthquake, ground moisture content, and duration of the shaking, impacts would most likely include failed buildings, bridges, fallen trees, fallen utility poles and other structures which could trap or bury people causing serious injury or death. Damage to infrastructures such as roads, bridges, rail lines, runways, and almost all types of utilities to include water and wastewater transmission lines is certain. Infrastructure failures can result in short and long-term loss of public and private sector services and business. Costs of repairs could be unprecedented and delay the restoration of services.

In a major earthquake of magnitude 6.7 or greater, the City of Lacey is likely to face communication, electricity, motor fuel, natural gas, water, and sewer disruptions. Structural fires are a secondary hazard from earthquake destruction. Individuals and households may be displaced due to damaged homes. A subsequent economic downturn would likely result from major transportation disruptions and loss of revenue from suspended business and services.

Fire fighters, police, public works, and other safety and emergency personnel can quickly become overwhelmed with response and recovery operations. Transportation disruptions will hinder emergency response to remote or hard to reach areas, potentially for a long period of time. Building and structural inspections will become priorities for Community & Economic Development and Public Works personnel which will disrupt their usual day to day operations. The following is a list of freeway overpasses and railroad trestles that would severely limit the City's response efforts if they were damaged or destroyed:

Freeway overpasses	
Chehalis Western Bike Trail	I-5 over Martin Way
Sleater-Kinney	Martin Way
College Street	Carpenter Road
Marvin Rd	Meridian Rd

Railroad overpasses
Rainier Road south of Yelm Highway
Yelm Highway at Train Tracks
Mullen Road at Afflerbaugh overpass

Bike Trail Overpasses
Chehalis bike trail overpass at Pacific
Chehalis bike trail overpass at Yelm Hwy

Based on TRPC’s survey of liquefaction hazards, about 30% of land area within the city limits has a “low to moderate” liquefaction hazard, with the remaining areas within the city rating very low. The areas of “low to moderate” liquefaction hazard may have a higher chance of sustained damage to structures after an earthquake. It should be noted there are two (2) water wells the city owns and maintains that are identified as critical facilities outside of the Lacey City limits, in the Nisqually River basin. This area is rated for “high” liquefaction susceptibility.

Previous incidents

At 10:54 am on February 28, 2001 a magnitude 6.8 earthquake produced strong ground shaking across Washington State. The epicenter was located near Anderson Island north of the Nisqually River Delta. The focus was located nearly 33 miles underground. Thurston County was among the hardest hit counties in the State, with most damages reported in the Olympia and Tumwater areas. Even though it is closer to the epicenter, the City of Lacey did not incur as much reportable damage; however, the asphalt on Afflerbaugh Drive and the parking lot at Animal Services cracked which required repair. Damage to private properties included a few chimneys that fell down and trees that fell over onto houses and/or power lines.

Probability of Occurrence

There is a 40 to 80 percent chance of a large earthquake occurring in Washington State in the next 50 years. As such, this plan assigns all three earthquake scenarios a medium probability of occurrence – all are likely to occur within 100 years.

Changes in Development

Fortunately, due to modern building codes and construction practices, the City of Lacey is not vulnerable to some of the impacts that threaten older communities in the Puget Sound Region. These communities have unreinforced masonry structures such as buildings, walls, chimneys, and facades that are vulnerable to crumbling from ground shaking. The City of Lacey also has fewer areas with soft soils that are subject to liquefaction.

Effects of Climate Change

Earthquake hazards are not expected to be impacted by climate change.

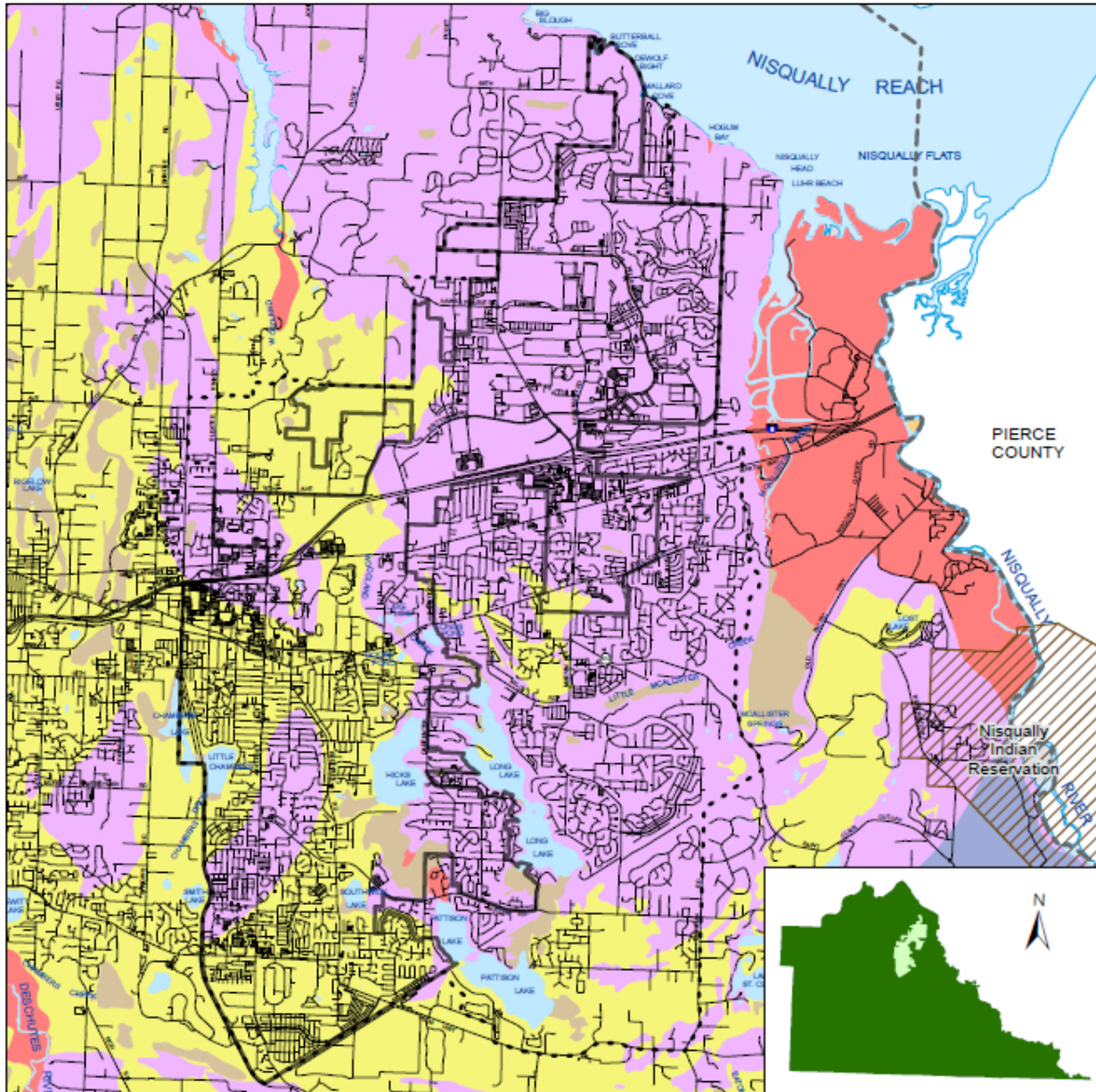
Summary Assessment

Risk Assessment Ratings Calculation suggests a medium probability of occurrence of a damaging earthquake likely to occur within 100 years. The Nisqually quake is a reminder of the region’s vulnerability and as such, the Thurston region has a high-medium risk rating for earthquake hazards. Chapter 4.2 of the Regional Plan has a complete summary of the hazard for the entire region.

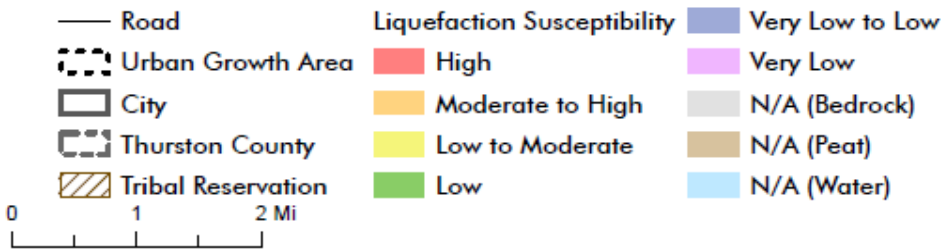
Summary Risk Assessment of Earthquake Hazard for the City of Lacey

Earthquake Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
Cascadia M9.3	Medium	High	High	Medium	High
Nisqually M7.2	Medium	High	High	Low	Medium
Seattle M7.2	Medium	High	High	Low	Medium

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.



City of Lacey Liquefaction Hazard Areas



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Severe Weather Hazard Risk Assessment

Area of Impact

Severe weather events are the most frequent source of natural disasters for the City of Lacey. Since 1965 Thurston County has received 21 federal disaster declarations involving severe weather including hazardous temperatures, hazardous precipitation, and hazardous wind. Severe weather events are the most frequent hazard to occur in the entire region and ranks a medium hazard risk rating for the City of Lacey.

Extent

All areas of Thurston County experience storm activity. The countywide risk assessment for storms and severe weather threats affect the entire planning area uniformly.

Impacts

High winds, heavy rain, heavy snow, freezing rain, tornados, hail, lightning, and extreme temperatures all impact the City of Lacey. Each element poses a threat to impact the city in varying degrees, as summarized below:

- **High Winds/Windstorms:** The City of Lacey is vulnerable to high winds due to climatic conditions. The greatest impact is from falling trees and limbs that can cause widespread power outages and debris management issues. There have historically been few injuries and/or fatalities, but roadways have been blocked, which limits the access of emergency services, and citizens get stranded without power or telephone for days at a time. Damage to both private and public facilities has caused economic hardship and environmental resources have been damaged.
- **Heavy Rain:** The City of Lacey is mostly urban and therefore heavy rains are most impactful when storm drainage systems and associated infiltration ponds become overwhelmed. This is most common in the Fall when leaves and debris clog storm drain grates which can lead to backed up water over roadways and into private properties. Due to the storm water utility fund, city maintenance staff has generally been able to keep the stormwater conveyance system clear and capital improvements have resolved many of the problematic areas prone to localized flooding. Therefore, there have been fewer injuries, a minimal amount of private properties damaged, and fewer environmental resources damaged as a result.
- **Freezing Rain:** Freezing rain can produce debilitating effects in the City of Lacey. As was learned in the 1996 event, utility lines, tree branches, road signs, and traffic signals were brought down or snapped. Roads and other transportation corridors were covered in a sheet of ice, causing emergency services to have limited response capability. Telecommunications and power lines were out for up to a week and local stocks of food and water were beginning to become scarce. The January 2012 winter storm resulted in an emergency declaration due to considerable debris removal and power outages similar to the 1996 event.

- **Heavy Snow:** Blizzard conditions can cause power line, tree limbs, and structures to fail due to the weight of snow load; safe transportation can grind to a halt (reducing or eliminating response capabilities) and create widespread power outages. These resulting conditions can also produce consumer shortages due to the inability of freight carriers to deliver goods. Heavy snowfall is mostly impactful when the city's limited snow removal equipment can't keep roads open for public access and emergency services. This was evidenced during the December 2008 snow events that caused roads to be impassable to inexperienced drivers for many days before city crews and snow plows could get them open.
- **Tornado:** The effects of a tornado can be extremely destructive during a short period of time in a very localized setting. Tornadoes rarely occur in this region.
- **Hail:** The effects of hail can be destructive during a short period of time in a very localized setting.
- **Lightning:** While there are no documented lightning fatalities in Thurston County, multiple lightning events have resulted in some injuries and damage in various locations. Lightning can also cause fires.
- **Extreme Temperatures:** The City of Lacey can experience extreme high temperatures and extreme cold temperature as explained in the Regional Plan in chapter 4.6. These occurrences are similar and do not differ throughout the region. In late June of 2021 the region experienced the effects of a heat dome with temperatures reaching 30° F hotter than the mean temperatures recorded for that time of year.

Previous incidents

The effects of severe storms to the City of Lacey have generally been somewhat less than other parts of the county due to the geographic location of the city away from major rivers and flood plains. The most recent and most damaging events have been a result of wind, rain, and snow storms (May 4, 2017, January 14-23, 2012, December 2008, and December 14, 2006). Within the Thurston County, Lacey was impacted the greatest by the May 4, 2017 wet microburst; a localized column of sinking air within a thunderstorm accompanied by significant precipitation and high winds. During these events, the primary concerns were keeping roadways clear for utility crews, emergency service vehicles, and the general public. The City of Lacey has implemented emergency power supplies (generators) to its facilities in order to minimize-the effects of power outages for supplying water and pumping of wastewater for customers. Pre-event staffing, emergency pre-planning, and preparation have helped mitigate the impacts of storms.

Probability of Occurrence

Chapter 4.6 of the Regional Plan expresses there is a high likelihood that Thurston County, including the City of Lacey, will experience strong storm activity that will impact people, property, and the environment in the next 25 years.

Changes in Development

As the population rises due to higher densities within the city, severe weather hazards will have a greater impact on more individuals including socially vulnerable population.

Effects of Climate Change

The effects of climate change related to Severe Weather Hazard for the City of Lacey are consistent with the explanations expressed in the Regional Plan, Chapter 4.6.

Summary Assessment

There is a high probability of occurrence for severe weather hazards for the Thurston County region, however as the Regional Plan shows the impact to people and buildings are low, impact on economy is medium, which results in severe weather having a medium hazard rating for the City of Lacey.

Summary Risk Assessment of Severe Weather Hazard for City of Lacey

Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
Severe Weather	High	Low	Low	Medium	Medium

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.



● May 4, 2017 Wet Microburst moves through Lacey

● Martin Way & Galaxy Dr NE

Annex: City of Lacey



- Severe damages resulted within the City of Lacey due to the May 4, 2017 Wet Microburst with wind speeds estimated to be at 70MPH.

Flood Hazard Risk Assessment

Area of Impact

Chapter 4.3 of the Regional Plan describes the various types of flooding hazard risks that affect Thurston County, they include riverine flooding, groundwater flooding, tidal flooding, and urban flooding. The City of Lacey has a low risk to all types of flooding as can be seen in the risk assessment tables provided by TRPC in the Regional Plan, Chapter 4.3. The highest probability of flooding for the City of Lacey occurs from ground water and urban flooding.

The City of Lacey owns and maintains two (2) water wells outside of the city limits and urban growth boundary that are located in the Nisqually River basin. They serve the residents in the Nisqually Valley area with drinking water. In the event of a severe flooding these facilities could become flooded and rendered inoperable. Water service to the area would be suspended until flooding recedes and repairs to the system can be made. The "Flood Hazard Areas" map shows the extent of the 500 and 100-year floodplain in Lacey.

Extent

The City of Lacey is mostly at risk of "urban" flooding, which results when stormwater runoff exceeds the capacity of natural or infrastructural drainage systems. There is also a history of elevated lake levels that impact a limited number of private dwellings adjacent to Hick's Lake. Although many hydrologic factors come into play, the lake level is primarily regulated by an outlet pipe that runs through private property which also makes this localized flooding risk an "infrastructure" problem. Riverine, groundwater, and tidal flooding has not historically been a significant problem in the City of Lacey. The severity of localized "urban" flooding is minimal because city utility crews can usually respond to correct the condition on a temporary basis, and then capital improvements can be made to permanently correct the problem.

In 2008 the city annexed an area along Rainier Road that was a historical flooding problem in the county. The flooding is a result of a drainage ditch along the Burlington Northern Santa Fe Railroad grade that becomes overwhelmed under certain rainfall conditions and flows onto Rainier Road, a major North-South transportation corridor for Thurston County residents. In the winter of 2008, three private properties were impacted when the local creek flooded city streets, which then drained into their yards. Modifications to the roadway and ditches were made to protect the three private properties from flooding. Extreme heavy rain events early January 2023 flooded Rainier Road in the area at the Burlington Northern Railroad trestle causing crews to have to close the road. Damage to the roadway was repaired before the road was reopened. The three private properties did not flood and no damages occurred.

Impacts

The risk for floods in the City of Lacey is minor with little or no health safety impact, few properties destroyed and/or damaged, and minimal environmental resources damaged. All but two (2) of the city owned buildings and infrastructure (wells, lift stations, parks, and roads) are located outside of historical or potential flooding hazard zones. Historically, the known impacts of localized urban storm water or groundwater flooding have been seen at homes with basements flooded, inundated septic-drain field systems, and flooded underground utility vaults.

Previous incidents

Flooding events have not presented a significant impact to the city and the delivery of its services to the community. Most flood related services are of an emergency nature, clearing leaf debris off of catch basin grates, pumping water out of overwhelmed storm water ponds, and providing assistance by pumping out flooded basements. Major impacts related to flooding have not been experienced in the City of Lacey to either city buildings or residential structures; there have been few flood claims filed in the city and there are no repetitive loss properties within the city limits.

Probability of Occurrence

Although urban flooding is difficult to predict, the frequency of occurrence is diminishing due to capital improvements and storm water utility maintenance practices. Since the early 1990's, all of the city's untreated storm water outfalls to surface water bodies have been retrofitted with holding ponds and infiltration galleries. The streets and storm water divisions of the Public Works Operations Division also are proactive in keeping catch basins and conveyance pipes clean and free of blockages. All of these management efforts keep the probability of occurrence of localized urban flooding low.

Changes in Development

Flood hazards will need to be mitigated with current stormwater infrastructure system updates as the population, buildings, and infrastructure grows.

Effects of Climate Change

The effects of climate change related to flooding for the City of Lacey are consistent with the explanations expressed in the Regional Plan, Chapter 4.3.

Summary Assessment

There is a Medium-High probability of occurrence of flood hazard risk for the City of Lacey, however as the Regional Plan shows the impact to people, buildings and economy are none-low, which results in Flood Hazard having a Low hazard rating.

Summary of Flood Hazard Risk Assessment for the City of Lacey

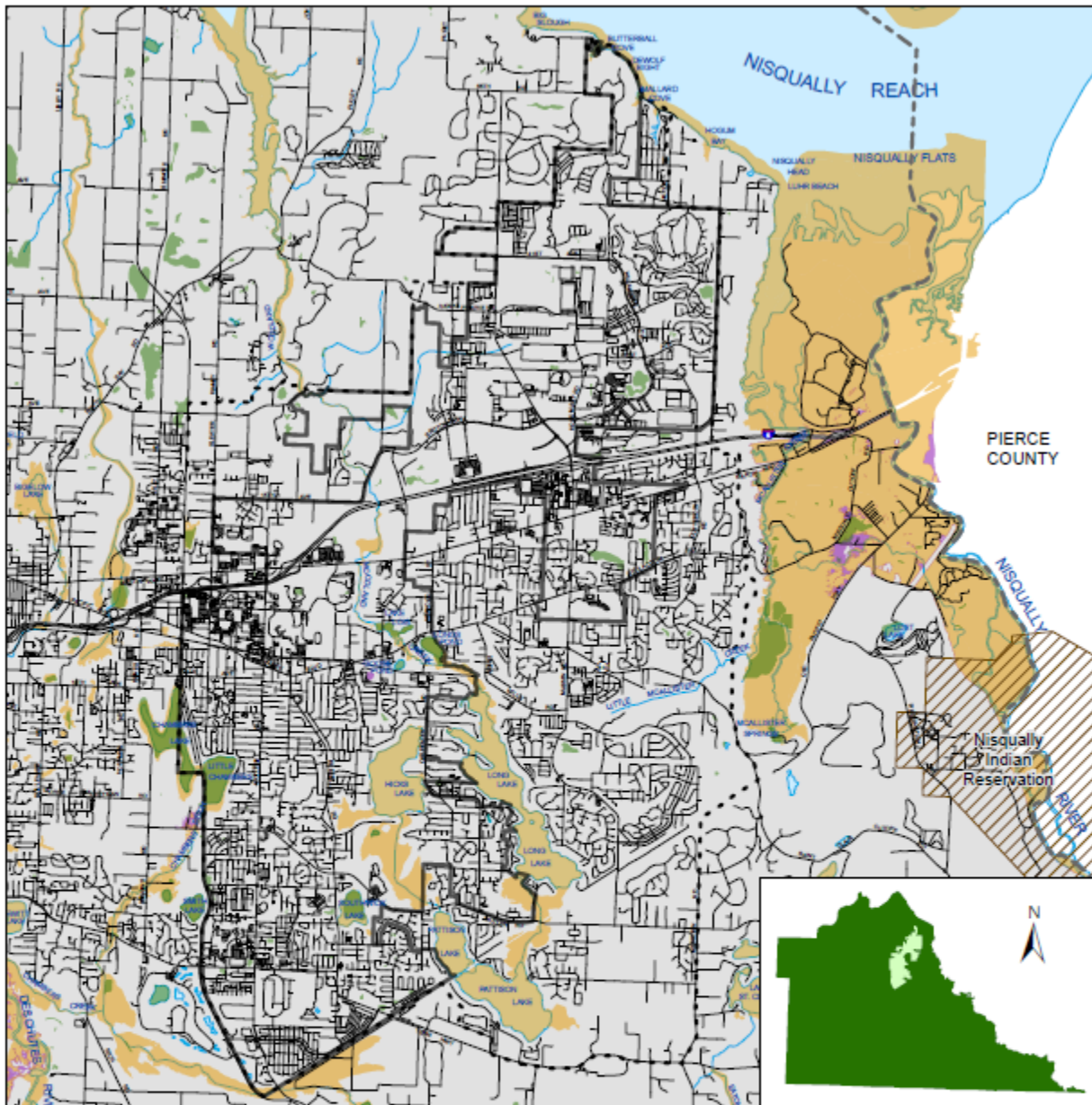
Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
50-100-500-Year Flood	Medium-High	None	None	None	Low
High Groundwater Flood	Medium	Low	Low	Low	Low

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.



*Flood that occurred in the Nisqually River Basin in February 2020. Pictures show the flooding that occurred at the City of Lacey Nisqually wells site and the damage that undermined the water main on Durgin Rd west of the tunnel. This erosion caused the watermain to break.





City of Lacey Flood Hazard Areas

- Road
- - - Urban Growth Area
- ▭ City
- ▭ Thurston County
- ▨ Tribal Reservation
- ▭ High Groundwater Hazard Area
- ▭ 500 Year Floodplain
- ▭ 100 Year Floodplain



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Landslide Hazard Risk Assessment

Area of Impact

For the purposes of this hazard risk assessment, the landslide hazard area is defined as a combination of areas with slopes that are 40 percent or greater (slopes were calculated with LiDAR using GIS) and areas mapped as historic landslide areas by the Washington State Department of Natural Resources. The Lacey Landslide Hazard Area Map shows very little landslide risk inside the city, with a slight increase of landslide risk areas within the city's urban growth boundary. Most of Thurston County's marine shorelines are vulnerable to landslides as shown in the Regional Plan on Map 4.4.1.

Extent

Extreme winter precipitation such as heavy rain or rain following heavy snow produces most landslides. Landslides are movement of rock, soil, or other debris, down a slope. The term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Factors such as erosion, unstable slopes, earthquakes, volcanic eruptions, vibrations, increase of load, hydrologic factors, human activity such as logging or mining, removal of lateral and underlying support, increase of lateral pressures and regional tilting will affect the severity of a landslide. Historically, the known impacts of landslides in the City of Lacey have been minimal.

Impacts

Based on the Risk Assessment ratings (Appendix C of the Regional Plan), of landslide hazards for the city, the impact to people and structures is low. Historically, the known impacts of landslides in the city have been minimal.

Previous incidents

Landslide events have not presented a significant impact to the city or the delivery of its services to the community.

Probability of Occurrence

Based on historical precedent, the incidences of landslides are concurrent with winter storms, flooding and earthquakes. Landslides occur nearly annually, with a high probability of occurrence overall for the region's planning area and for all the planning partners.

Changes in Development

The City of Lacey continues to protect landslide hazard areas pursuant to the City of Lacey Municipal Codes in Title 14, Buildings and Construction, Chapter 14.37 GEOLOGICALLY SENSITIVE AREAS PROTECTION.

Effects of Climate Change

The effects of climate change for the City of Lacey are consistent with the explanations expressed in the Regional Plan, Chapter 4.4.

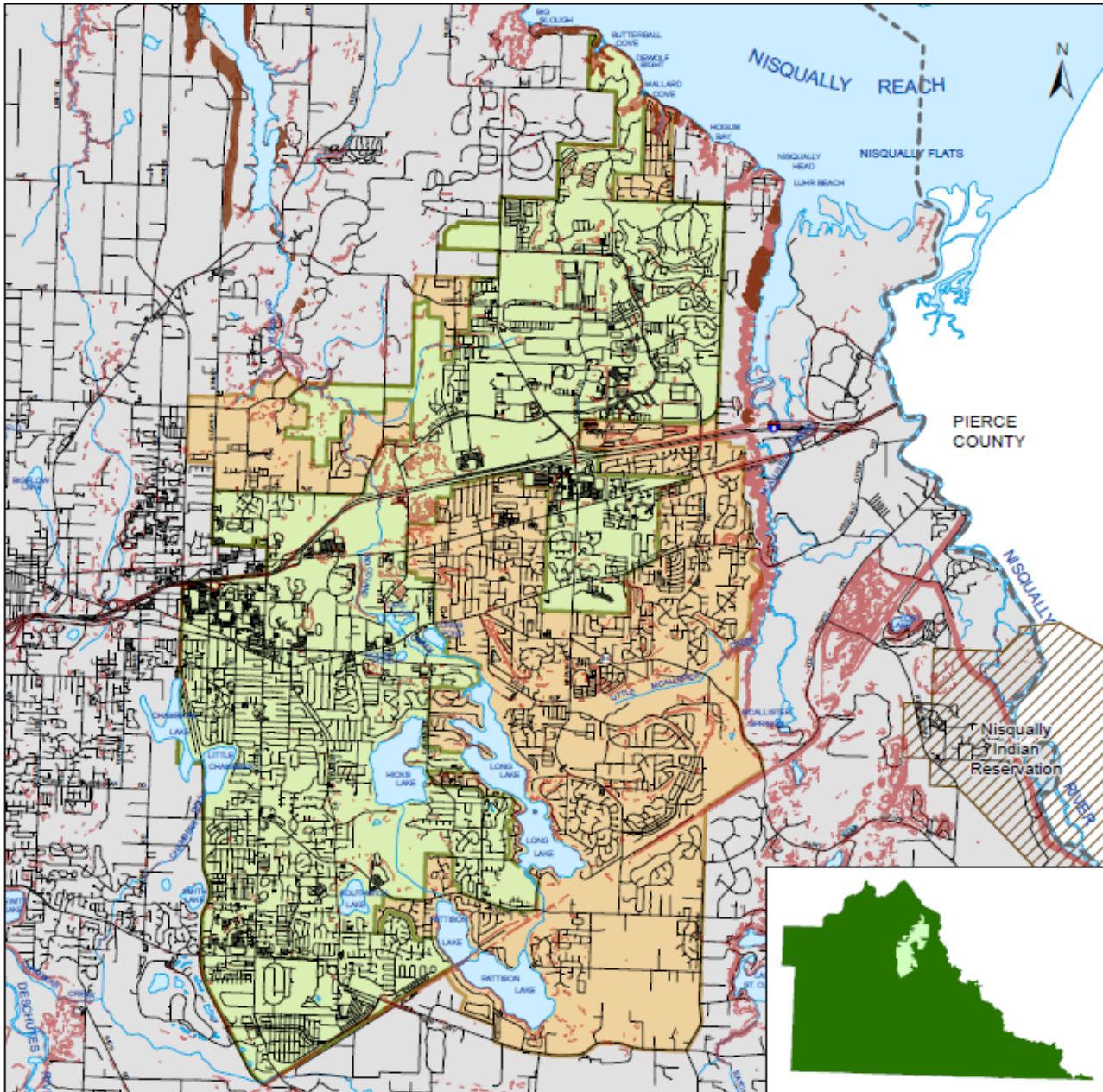
Summary Assessment

There is a High probability of occurrence of landslide hazard risk for the City of Lacey, however as the Regional Plan shows the impact to people, buildings, and economy are low, which results in Landslide Hazard having a Medium hazard rating.

Summary of Landslide Hazard Risk Assessment for the City of Lacey

Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
Landslide	High	Low	Low	Low	Medium

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.



City of Lacey Landslide Hazard Areas

- Mapped Landslide
- Steep Slope (40% or Greater)
- Road
- Tribal Reservation
- City
- Urban Growth Area

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 This map is intended for general planning purposes only. Thurston Regional Planning Council makes no representations as to accuracy or fitness of the information for a particular purpose.



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Wildfire Hazard Risk Assessment

Area of Impact

For the purposes of the wildfire hazard risk analysis, the hazard assessment area is defined as the Washington State Department of Natural Resources (WADNR) wildland-urban interface and intermix mapped areas. Areas mapped as Wildland-Urban Interface (WUI) are located on the periphery of urbanized areas where homes, businesses, and other structures meet wildlands on at least one (1) side. Areas mapped as Wildland-Urban Intermix are located where homes and structures intermingle with wildlands on two (2) or more sides. The City of Lacey has both wildland-intermix and wildland-interface outside of the highly urbanized areas, especially areas to the north of Martin Way which is highlighted in the City of Lacey Wildland Urban Interface map.

Extent

Human behavior, weather, fuel, terrain, and road access influence wildland fire behavior and suppression response activity. Chapter 4.9 of the Regional Plan describes each of these factors that are applicable to the City of Lacey as well as the rest of the region.

Impacts

Wildfire can impact the City of Lacey with damage to private residences, commercial properties, and industrial buildings within the wildland urban interface/intermix. Impacts to people not only come from damaged structures from fire but also from poor air quality. Smoke from wildfires burning outside the Puget Sound lowlands deteriorates Western Washington's air quality. Poor air quality is the most common, widespread, and frequent source of adverse wildfire impacts on individuals and communities in Thurston County.

According to tables 4.9.3 and 4.9.4 of the Regional Plan, 22.3% of Lacey's population reside in the Wildland-Urban interface and 11.4% reside in the Wildland-Urban intermix respectively. Structures that lack adequate defensible spaces from fire-prone vegetative fuels are at greater risk of ignition during a fast-moving fire.

Previous Incidents

There have been no significant wildland fires recorded in the City of Lacey's history.

Probability of Occurrence

Chapter 4.9 of the Regional Plan expresses the City of Lacey has a low probability of a destructive 10-acre wildfire to occur within 25 years and is unlikely within the next 100 years.

Changes in Development

As the population, building, and infrastructure grows within the City of Lacey the Wildfire-Urban Interface/Intermix diminishes, lessening the risks of wildland fire. The city will also be required to adopt and enforce the new International Wildland Urban Interface Building Code for new and substantial development occurring in areas classified as WUI and Intermix. The implementation of the new codes is designed to reduce the structural losses from wildfire.

Effects of Climate Change

The effects of climate change related to wildland fires for the City of Lacey are consistent with the explanations expressed in the Regional Plan, Chapter 4.9.

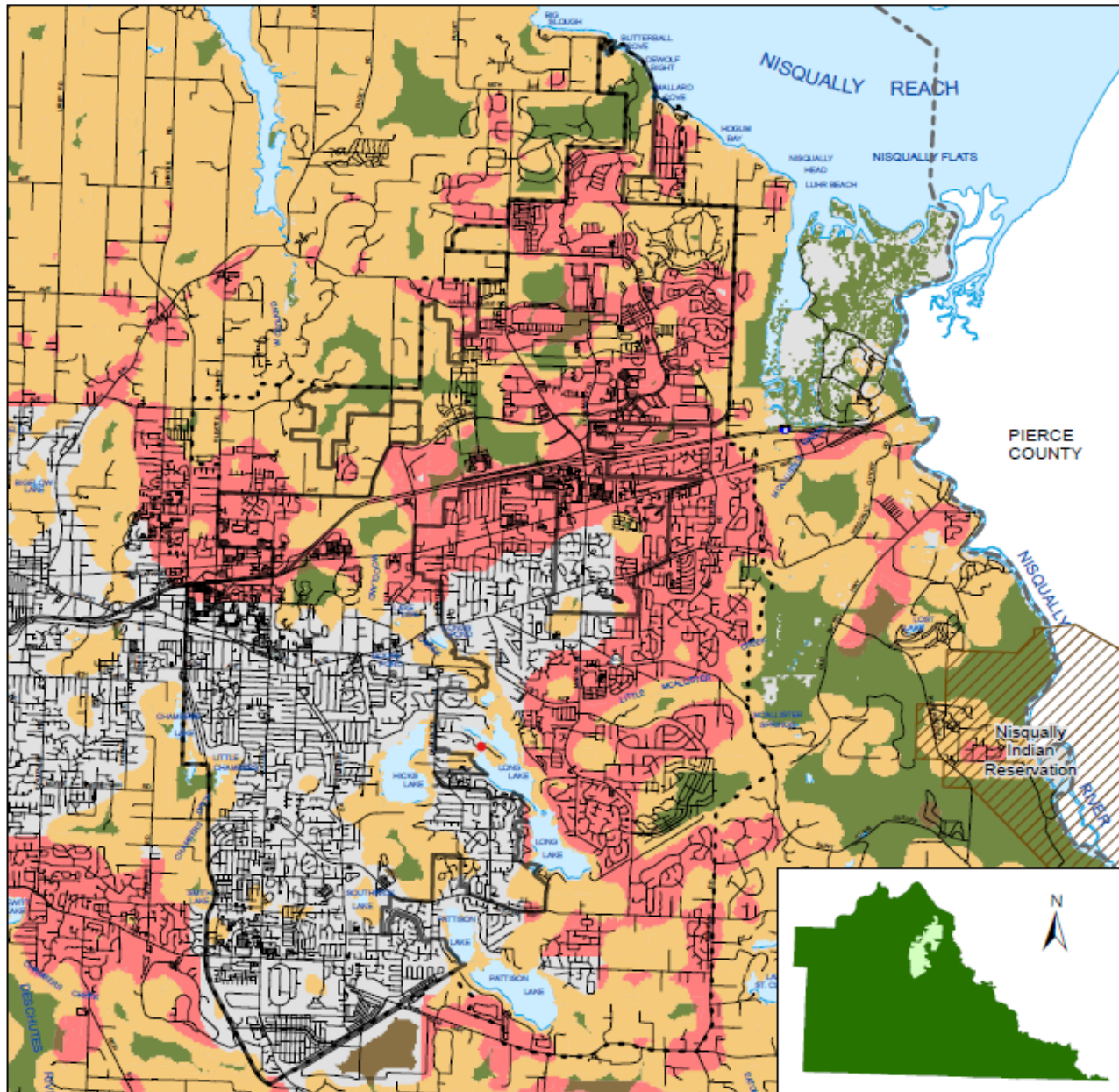
Summary Assessment

There is a Low probability of occurrence of Wildland-Urban Interface and Intermix for the City of Lacey resulting in a Low wildfire hazard risk rating.

Summary of Landslide Hazard Risk Assessment for the City of Lacey

Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
Wildland-Urban Interface	Low	Medium	High	Medium	Low
Wildland-Urban Intermix	Low	Medium	Low	Low	Low

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.



City of Lacey Wildland Urban Interface

<ul style="list-style-type: none"> — Road Urban Growth Area City Thurston County Tribal Reservation 	<p>Wildland Urban Interface Designation</p> <ul style="list-style-type: none"> Interface Intermix Non-Vegetated Inhabited Non-Vegetated Uninhabited Vegetated Uninhabited 	<p>DISCLAIMER: This map is intended for general planning purposes only. Thurston Regional Planning Council makes no representations as to accuracy or fitness of the information for a particular purpose.</p>
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Volcanic Hazards Risk Assessment

Area of Impact

Chapter 4.8 of the Regional Plan lists volcanic hazards as volcanic landslides, lava flows, pyroclastic flows, volcanic ash, and lahar; only volcanic ash and lahar pose a direct threat to areas within Thurston County. The City of Lacey as with the rest of Thurston County could receive a dusting to greater depths of volcanic ash from Mt Rainier or other Cascade volcanos under the right wind conditions.

The lahar hazard area would mostly affect portions of rural Thurston County along the Nisqually River Basin. The City of Lacey and areas in the urban growth boundary would not be subject to damages from a lahar hazard. However, the City of Lacey owns and maintains two (2) water wells that provides potable water to the residents that live in the Nisqually River Valley. A lahar hazard event originating from Mount Rainier would more than likely destroy or render the wells unusable.

Extent

Ash - The severity of the volcanic ash hazard depends on the depth and geographic extent of ash deposition. Ash can travel great distances and cover areas over hundreds or thousands of square miles.

Lahar - Scientific literature for Cascade lahars identifies several size and origin classifications. The USGS has summarized two types of Mount Rainier lahar events that could threaten communities within the Nisqually River Valley. See Chapter 4.8-5 of the Regional Plan as it explains Meltwater Generated Lahars and Landslide Generated Lahars.

Impacts

Ash fall of a 1/4 inch or more would reduce motorist visibility and disrupt nearly every mode of transportation due to both reductions of visibility and contamination for air-breathing engines. The ash would also affect persons with respiratory problems. Large accumulations or wet ash could cause load bearing problems for structures, trees, and utility lines, causing collapses and power/communication outages. The ability of the city to respond to emergency incidents, keep roadways passable, and provide water and sewer services to its citizens could be complicated or reduced. Clean-up and recovery would likely be the greatest cost to both the public and private sector. Air travel and other means of transportation, if limited, could cause subsequent supply chain shortages.

Previous Incidents

There have been no significant volcanic hazard events recorded in the City of Lacey's history.

Probability of Occurrence

The United States Geological Survey reports that Mount Rainier has only produced moderate quantities of ash in past eruptions. The eruption of Mount St. Helens in 1980 did deposit a scant layer of ash in Thurston County, but the fallout did not pose a significant hazard to the region. Thurston County winds prevail from the south and west, therefore ash is more likely to fall on the east side of the Cascades than the west side. If Mount Rainier or Mount St. Helens were to erupt, a resultant ash plume would require an easterly wind to deposit ash in Thurston County. The USGS calculated that the annual probability for a significant ash deposit of one centimeter or greater in Lacey is 0.02 percent as shown in the Probability of Cascades Tephra Hazard illustration. This hazard has a low probability of occurrence.

Changes in Development

N/A

Effects of Climate Change

Volcanic hazards are not expected to be impacted by climate change.

Summary Assessment

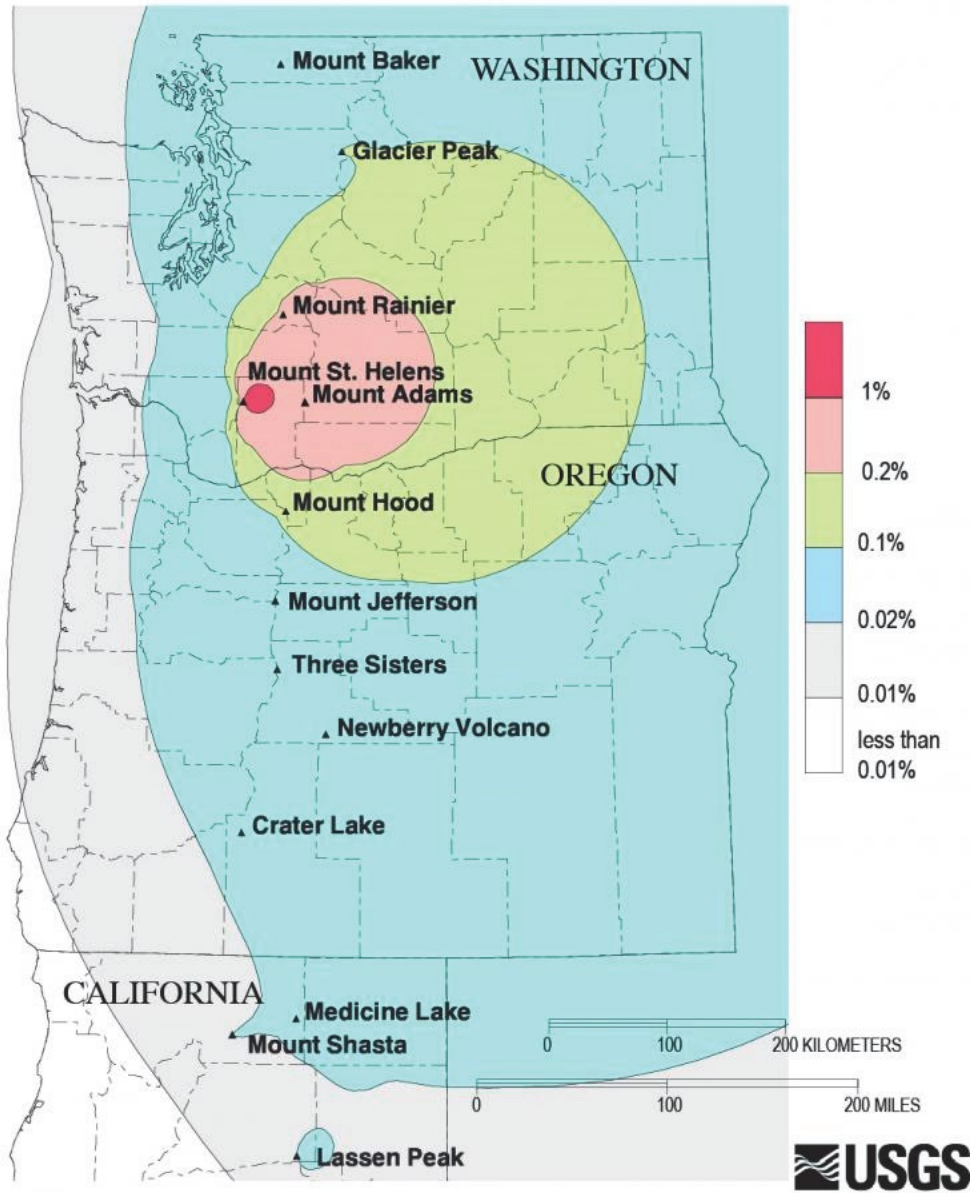
There is a Low probability of occurrence for a volcanic hazard in the City of Lacey.

Summary of Landslide Hazard Risk Assessment for the City of Lacey

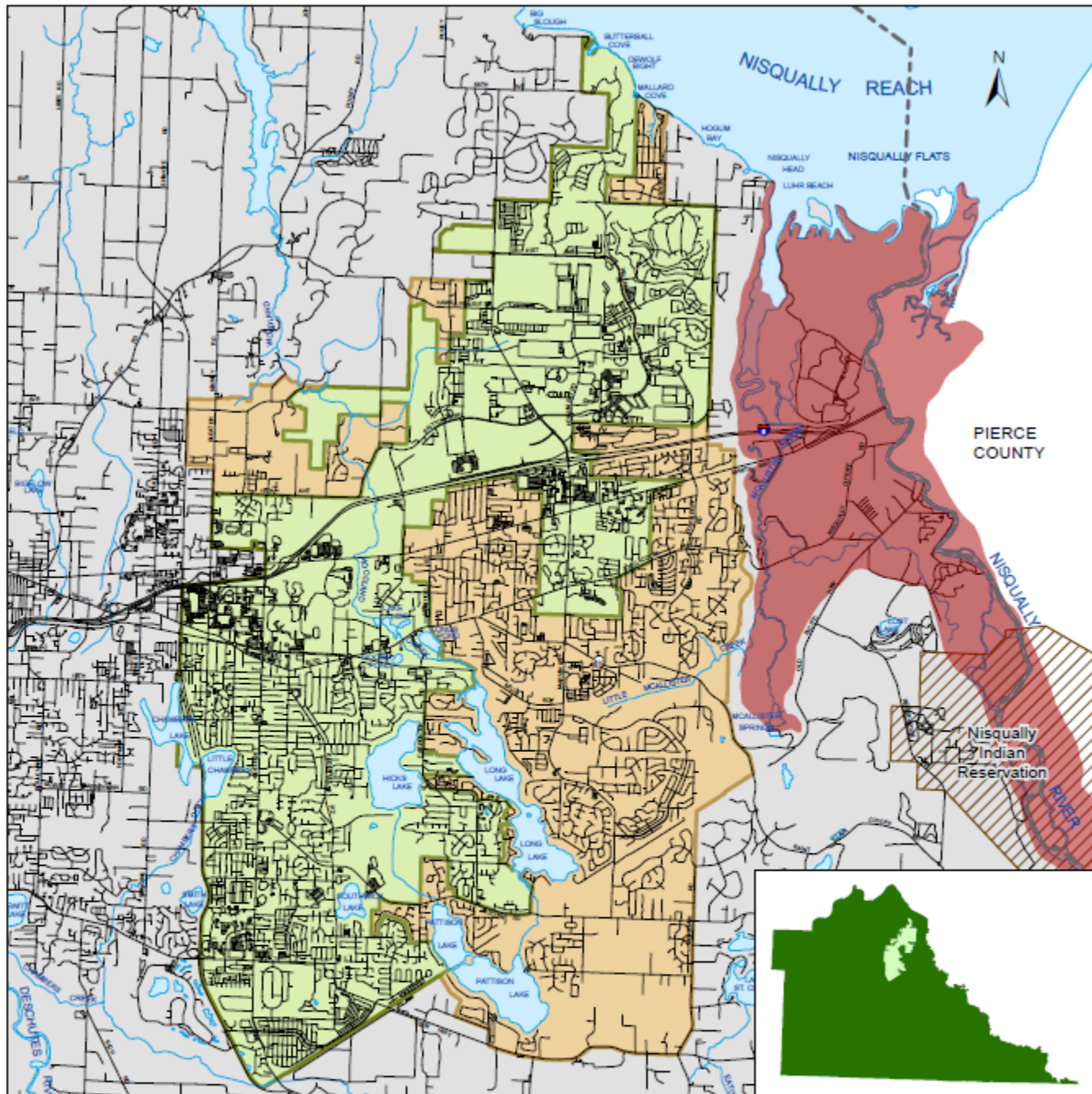
Hazard	Probability of Occurrence	Impact on People	Impact on Property	Impact on Economy	Hazard Risk Rating
Lahar	Low	None	None	None	Low
Volcanic Ash	Low	Low	Low	Low	Low

*See Appendix C: Risk Assessment Ratings Calculation Tables in the Regional Plan.

Probability of Cascades Tephra Hazard



Sourced from Thurston Regional Planning Council



City of Lacey Lahar Hazard Areas

- Lahar Inundation Zone
- City
- Road
- Urban Growth Area
- Tribal Reservation
- Thurston County

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Mitigation Initiative Process

Mitigation Initiatives

Central to the hazard mitigation plan are the proposed projects, programs, and activities the plan participants will implement to provide long-term and sustained benefits that will reduce losses from the impacts of the hazards that are identified in this plan's risk assessment. Each action or initiative was evaluated and scored by benefit-cost review criteria. Each initiative will require significant investments in planning, design, and construction or coordination, and may take years to complete or be sustained as an ongoing activity. The desired outcomes of this plan's mitigation strategy are that communities:

- Build the necessary capacity to improve their knowledge of hazards and their risks.
- Identify and implement actions that will effectively reduce their jurisdiction's vulnerabilities to the hazard identified in the risk assessment; and
- Implement strategies that will fulfill the plan's goals and policies.

The plan contains two sets of mitigation initiatives. Each participating jurisdiction adopts the core plan's Regional Mitigation Initiatives and the initiatives in their annex to form their community's comprehensive mitigation strategy.

1. **Regional Mitigation Initiatives:** These are countywide actions that were identified by members of the Hazards Mitigation Workgroup and stakeholders and approved by the Emergency Management Council. Many of these actions have carried over from previous plans. The initiatives, if implemented, will benefit multiple jurisdictions and improve interagency hazard mitigation planning capabilities. The regional initiatives will be overseen by the Emergency Management Council, the Hazard Mitigation Planning Workgroup, and other leads. Thurston County Emergency Management staff will play a role in convening and coordinating stakeholders, and for some actions, managing the actions' implementation.
2. **Jurisdictional Initiatives:** Each plan partner identifies actions that address specific vulnerabilities in their community. The plan partners are responsible for implementing their actions. The City of Lacey initiatives are presented in this annex.

Review Process

The following paragraphs describe the process that was used by City of Lacey staff to develop, evaluate, and prioritize the mitigation initiatives in the update to the Hazards Mitigation Plan. The first step was to review the 2018 plan and mitigation initiatives and determine which ones had been completed or were no longer relevant. This task, along with modifying existing initiatives was accomplished by input provided by the City's Hazards Mitigation Plan Development Team.

These mitigation initiatives were reviewed, revised, or eliminated through meetings, emails, and discussed with affected departments. In May of 2023 new initiatives were submitted from various departments and discussed with the City's Hazards Mitigation Plan Development Team, initiatives were selected from the existing and new. A total of 25 mitigation initiatives were sent to TRPC to be submitted for public comment. TRPC facilitated an online survey available from July 24, 2023-August 25, 2023 for the community to rate the mitigation initiatives that were important to them. They were asked two survey questions focusing on the jurisdiction's mitigation actions presented:

1. Based on your understanding of hazards and how they might impact you or your community, select the three actions that you would like to see prioritized highest.
2. Based on your understanding of hazards and how they might impact you or your community, what other actions do you suggest should be taken to minimize hazard impacts? Share as much detail as you can.

Book marks were created that were handed out at various public outreach events that directed community participants to take the online survey, in conjunction with several hazard mitigation planning partners being on hand to answer questions at each event. Unfortunately, the survey participation was very low with only fifteen (15) responding participants for the City of Lacey mitigation initiatives, this does not offer a reliable representation of the community with such a low percentage of respondents.

Please see chapter six (6) of the Regional Plan for regional activities held to promote the survey.

After the community input was completed the City's Hazards Mitigation Plan Development Team prioritized the initiatives with the Benefit-Cost Review Criteria and Mitigation Prioritization Worksheet provided by TRPC. The Mitigation Actions Benefit Cost Review Criteria and Scoring Matrix (figure 2.1) rates the benefits from high benefit to no benefit with a score for each ranging from 5-0. There are eight (8) categories with four (4) additional optional categories in which the team was tasked with scoring every mitigation initiative.

Figure 2.1: Mitigation Actions Benefit-Cost Review Criteria and Scoring Matrix

Figure 1: Required Mitigation Action Benefit-Cost Mitigation Review/Prioritization Criteria Ratings and Scores

REQUIRED CRITERIA	HIGH BENEFIT		MEDIUM BENEFIT		LOW BENEFIT		NO BENEFIT	
	Description	Pts	Description	Pts	Description	Pts	Description	Pts
1. Hazard Risk Rating	Action addresses a jurisdiction’s High-Risk Hazard	5	Action addresses a Medium-Risk Hazard	3	Action addresses a Low-Risk Hazard	1	Action Addresses a no-risk hazard	0
2. Project Cost	Low cost, less than \$100K	5	Medium cost, \$100K-\$500K	3	High cost, more than \$500K	1	Cost far exceeds the anticipated benefits	0
3. HMP Goals and Policies	Action strongly supports at least four policies	5	Action supports at least two policies	3	Action supports one policy	1	Action does not support plan policies	0
4. Life/Safety	Action will produce significant and lasting public safety benefits for residents, businesses, and property	5	Action will produce public safety benefits...	3	Action will produce minimal public safety benefits...	1	Action has no public safety benefits	0
5. Social Vulnerability	Action will produce a significant and direct benefit for socially vulnerable or underserved communities	5	Action will produce a benefit...	3	Action will have minimal benefit...	1	Action does not benefit socially vulnerable or underserved communities	0
6. Changes in Development	Action includes measures that strongly account for changes in development	5	Action includes measures that account for changes in development	3	Action includes minimal measures that account for changes in development	1	Action does not account for changes in development...	0

Annex: City of Lacey

7. Climate Change	Action strongly accounts for the effects of climate change on the hazard it addresses	5	Action accounts for the effects of climate change...	3	Action minimally accounts for the effects of climate change...	1	Action does not account for the effects of climate change...	0
8. Geographic Impact	Action addresses hazard risks for the entire affected area of the community	5	Action address risks across at least half of the affected area	3	Action address risk for a very limited portion of the affected area	1	Action does not address risks within the affected area	0

Figure 2: Optional Mitigation Action Benefit-Cost Mitigation Review/Prioritization Criteria Ratings and Scores

9. Capacity Building	Action will strengthen jurisdiction's capacity and expertise to implement the initiative and future initiatives	5	Action will assist jurisdiction's internal capacity and expertise...	3	Action will have minimal effect on jurisdiction's capacity and expertise...	1	Action will require outside technical expertise	0
10. Other Strategic Plan Goals	Action strongly supports jurisdiction's other strategic plan goals	5	Action supports jurisdiction's other strategic plan goals	3	Action minimally supports jurisdiction's other strategic plan goals	1	No support for jurisdiction's other strategic plan goals	0
11. Co-Benefits	Action will produce at least two co-benefits	5	Action will produce at least one co-benefit	3	Action minimally produces some co-benefit	1	Action is unlikely to produce any co-benefits	0
12. Grant Eligibility	The entire project is eligible for FEMA HMA grants or other federal or state grant programs	5	Most of the project is eligible for grant programs	3	Some of the project may be eligible for grant programs	1	The project is not eligible for grant programs	0

City of Lacey Hazard Mitigation Initiative Prioritization

The City of Lacey’s Hazard Mitigation Plan Development Team scored all initiatives using the required and optional criteria. This Cost-Benefit Review/Prioritization worksheet takes into consideration twelve (12) areas of scoring criteria.

Cost-Benefit Review/Prioritization Worksheet – SCORED 6/28/23

Jurisdiction/District/Agency Name:		City of Lacey											
Mitigation Project	Required Criteria								Optional				Total Score
	1. Hazard Risk Rating	2. Project Cost	3. HMP Goals and Policies	4. Life/Safety	5. Social Vulnerability	6. Changes in Development	7. Climate Change	8. Geographic Impact	9. Capacity Building	10. Other Strategic Plan Goals	11. Co-Benefits	12. Grant Eligibility	
Public Outreach and Information													
L-MH 10 - Increase public awareness of hazard mitigation and preparedness by creating a “Pop-Up” Emergency Preparedness display for use at city events throughout the year. As part of this initiative include specific materials geared toward identified vulnerable populations.	3	5	5	5	5	0	5	5	3	3	5	5	49
L-MH 15 - Expand partnerships with the local business community including the Lacey South Sound Chamber of Commerce, the Economic Development Council, the Thurston County Chamber, and the Small Business Association to provide mitigation resources to local business in an effort to increase economic resiliency.	3	5	3	3	3	1	1	3	3	3	5	0	33

L-EH 5 - Develop a catalog of materials/information on non-structural retrofit activities. Provide information in public locations throughout the city. Publish on the website and advertise information on social media.	3	5	3	3	3	0	0	5	1	3	5	1	32
L-FH 2 - Include information in public outreach materials and presentations that flood insurance is typically NOT included in homeowner's insurance policies and that it is incumbent on the consumer to request this coverage over and above the standard policy limits.	1	5	1	1	1	1	0	1	1	0	1	0	13
Plan Coordination and Implementation													
N/A													
Data collection and Mapping													
L-MH 16 - Create a hazard map inventory, identifying areas in city subject to flood, landslide, liquefaction and other geologic hazards; overlay existing building stock to target mitigation efforts. Include in the inventory maps that identify clusters of vulnerable populations.	3	5	3	5	5	5	3	5	5	5	5	0	49
L-MH 19 - Develop and expand partnerships with local businesses and resources to foster natural hazard mitigation and to inventory community assets that could be used during a disaster and for response during a significant event.	5	5	5	5	5	0	1	5	3	3	5	0	42
Development Regulations													
L-EH 4 - Continue to adopt and enforce the most recent of the International Code Series (Building, Fire, and Plumbing etc.); ensure redevelopment and reconstruction are to current codes.	5	5	3	3	3	5	0	5	3	3	5	0	40
Hazard Preparedness													
L-EH 9 - Extend an additional water transmission across Interstate Hwy 5.	5	1	3	5	5	5	3	5	5	5	5	3	50

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L-MH 11 - Conduct an annual review of staff ECC roles and responsibilities. Ensure that all critical ICS roles are addressed and filled with appropriate staff member. Ensure that staff are aware of their role on the ECC team and that appropriate resources available for training.	5	5	5	3	5	0	0	5	5	5	5	5	48
L-MH 12 - Enhance the ICS and Emergency preparedness training program for city staff. Begin with critical staff and managers with the goal to provide annual training to all city staff within five (5) years of program implementation. Include training on the ATC-20 for applicable staff members.	5	5	5	3	5	0	0	5	5	5	5	5	48
L-MH 13 - Formalize a city emergency response team prepared for deployment following an event to perform risk assessments of public and private structures throughout the city. Ensure coordination with the adopted emergency response plan; update the plan as necessary to ensure that it is current with existing staff.	3	5	3	5	5	1	5	3	3	5	5	3	46
L-MH 20 - Install auxiliary power generators at critical drinking water facilities.	5	1	3	5	5	0	3	5	1	5	5	5	43
L-MH 14 - Adopt and proclaim an annual preparedness month in the City of Lacey. Use the month as an avenue to provide outreach and education to community members.	1	5	5	3	3	0	5	5	5	5	5	0	42
L-MH 21 - Develop and maintain an on-site supply of various pipe, fittings, valves, and repair couplings to facilitate rapid repair of the water distribution system.	5	1	5	5	5	1	1	5	3	5	5	1	42

Annex: City of Lacey

L-MH 18 - Expand the list of capable and well-suited volunteers for a response cadre that could be deployed following an event. This could include amateur radio operators, structural engineers, and architects.	3	5	5	3	5	0	0	5	5	3	5	1	40
Hazard Damage Reduction													
L-MH 7 - Begin a sewer line replacement/slip-lining and valve replacement program.	5	1	3	5	5	5	0	5	5	3	5	3	45
L-MH 22 - Expand the city's fuel storage capacity.	5	1	5	5	5	0	0	5	5	5	5	1	42
L-EH 8 - Increase climate resilience by installing a supplemental drinking water well for S04.	3	1	1	3	3	3	5	3	5	5	5	0	37
L-MH 23 - Stand-by generator replacement program.	3	3	3	3	3	0	0	5	3	5	5	3	36
L-MH 24 - Develop a fiber optic network for the city's water and wastewater facilities.	3	1	3	3	3	3	5	3	3	3	5	0	35
L-MH 25 - Develop a program for on-site coliform bacteria testing for drinking water.	3	3	3	3	5	0	0	5	3	3	5	0	33
L-MH26 - Purchase trailer mounted wastewater by-pass pumps.	3	3	3	3	3	0	0	3	3	3	3	1	28
L-EH 3 - Reduce hazards inside of city facilities to prevent property damage and enhance ability to recover and respond after an earthquake.	3	5	1	3	1	0	0	0	1	3	1	1	19
Critical Facilities Replacement/Retrofit													
L-EH 2 - Pursue seismic upgrades to water facilities that do not meet current seismic codes.	5	1	3	5	5	5	3	5	5	5	5	5	52
L-EH 1 - Continue funding the water line replacement program to ensure water supply lines are constantly being upgraded.	5	1	3	5	5	3	0	5	5	5	5	0	42

Benefit points: High=5; Medium=3; Low=1; No

Initiatives

The mitigation initiatives are the City of Lacey’s specific actions for mitigating losses and protecting life and property. They consist of initiatives that carried over from the previous plan update process, as well as new initiatives aimed at increasing preparedness amongst Lacey’s citizens and staff’s readiness for response. The initiatives are placed in order of priority as scored by the City of Lacey’s Hazard Mitigation Plan Development Team during a workgroup session on June 28, 2023.

Priority	ID Number	Category	Action	Status	Priority Score
1	L-EH 2	Critical Facilities Replacement/Retrofit	Pursue seismic upgrades to water facilities that do not meet current seismic codes.	Modified	52
2	L-EH 9	Hazard Preparedness	Extend an additional water transmission across Interstate Hwy 5.	New	50
3	L-MH 10	Public Outreach and Information	Increase public awareness of hazard mitigation and preparedness by creating a “Pop-Up” Emergency Preparedness display for use at city events throughout the year. As part of this initiative include specific materials geared toward identified vulnerable populations	Ongoing	49
4	L-MH 16	Hazard preparedness, plan coordination and implementation, data collection and mapping	Create a hazard map inventory, identifying areas in city subject to flood, landslide, liquefaction and other geologic hazards; overlay existing building stock to target mitigation efforts. Include in the inventory maps that identify clusters of vulnerable populations.	Existing	49
5	L-MH 11	Hazard Preparedness	Conduct an annual review of staff ECC roles and responsibilities. Ensure that all critical ICS roles are addressed and filled with appropriate staff member. Ensure that staff are aware of their role on the ECC team and that appropriate resources are available for training.	Ongoing	48

6	L-MH 12	Hazard Preparedness	Enhance the ICS and Emergency preparedness training program for city staff. Begin with critical staff and managers with the goal to provide annual training to all city staff within five (5) years of program implementation. Include training on the ATC-20 for applicable staff members.	Ongoing	48
7	L-MH 13	Hazard Preparedness	Formalize a city emergency response team prepared for deployment following an event to perform risk assessments of public and private structures throughout the city. Ensure coordination with the adopted emergency response plan; update the plan as necessary to ensure that it is current with existing staff.	Existing	46
8	L-EH 7	Hazard Damage Reduction	Begin a sewer line replacement/slip-lining and valve replacement program.	New	45
9	L-MH 20	Hazard Preparedness	Install auxiliary power generators at critical drinking water facilities.	New	43
10	L-EH 1	Critical Facilities Replacement/Retrofit	Continue funding the water line replacement program to ensure water supply lines are constantly being upgraded.	Ongoing	42
11	L-MH 14	Hazard Preparedness/Public Information	Adopt and proclaim an annual preparedness month in the City of Lacey. Use the month as an avenue to provide outreach and education to community members.	Existing	42
12	L-MH 19	Hazard Preparedness, Data Collection and Mapping	Develop and expand partnerships with local businesses and resources to foster natural hazard mitigation and to inventory community assets that could be used during a disaster and for response during a significant event.	Existing	42
13	L-MH 21	Hazard Preparedness	Develop and maintain an on-site supply of various pipe, fittings, valves, and repair couplings to facilitate rapid repair of the water distribution system.	New	42
14	L-MH 22	Hazard Preparedness	Expand the city's fuel storage capacity.	New	42

Annex: City of Lacey

15	L-EH 4	Hazard Damage Reduction, Development Regulations	Continue to adopt and enforce the most recent of the International Code Series (Building, Fire, and Plumbing etc.); ensure redevelopment and reconstruction are to current codes.	Ongoing	40
16	L-MH 18	Hazard Preparedness	Expand the list of capable and well-suited volunteers for a response cadre that could be deployed following an event. This could include amateur radio operators, structural engineers, and architects.	Existing	40
17	L-EH 8	Hazard Damage Reduction	Increase climate resilience by installing a supplemental drinking water well for S04.	New	37
18	L-MH 23	Hazard Preparedness	Stand-by generator replacement program.	New	36
19	L-MH 24	Critical Facilities Replacement/Retrofit	Develop a fiber optic network for the city's water and wastewater facilities.	New	35
20	L-MH 15	Public Outreach and Information /Hazard Preparedness	Expand partnerships with the local business community including the Lacey South Sound Chamber of Commerce, the Economic Development Council, the Thurston County Chamber, and the Small Business Association to provide mitigation resources to local business in an effort to increase economic resiliency.	Existing	33
21	L-MH 25	Hazard Preparedness	Develop a program for on-site coliform bacteria testing for drinking water.	New	33
22	L-EH 5	Public Outreach and Information /Hazard Damage Reduction	Develop a catalog of materials/information on non-structural retrofit activities. Provide information in public locations throughout the city. Publish on the website and advertise information on social media.	Existing	32
23	L-MH 26	Hazard Preparedness	Purchase of trailer mounted wastewater by-pass pumps.	New	28

Annex: City of Lacey

24	L-EH 3	Hazard Damage Reduction	Reduce hazards inside of city facilities to prevent property damage and enhance ability to recover and respond after an earthquake.	Ongoing	19
25	L-FH 2	Public Outreach and Information	Include information in public outreach materials and presentations that flood insurance is typically NOT included in homeowner's insurance policies and that it is incumbent on the consumer to request this coverage over and above the standard policy limits.	Existing	13

Priority: 1 of 25

Status: Modified

L-EH 2: Pursue seismic upgrades to water facilities that do not meet current seismic codes.

Hazard Addressed: Earthquake Hazard

Category: Critical Facilities Replacement/Retrofit

Rationale: Ensures that Lacey's water storage capability will not be severely impacted during a seismic event. Inspection and potential retrofits may be needed at the Union Mills Reservoir, Judd Hill Reservoir, Steilacoom Reservoir, Hawks Prairie Reservoir, and Nisqually Reservoir with seismic anchors.

Relates to Plan Goal(s) and Objectives: 2B, 2D

Implementer: City of Lacey water utility

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: Lacey water utility matched with potential grant funding.

Source and Date: Water Comp Plan (2013)

Adopted Plan Number: Water - 17

Reference Page: Page 8 - 22

Initiative and Implementation Status: A seismic evaluation of the city's water reservoirs were completed in 2015. Per recommendations made in the evaluation, the operating water level in the Judd Hill Reservoir has been lowered to reduce the risk of overturning during a seismic event. It is currently being evaluated for full decommissioning and demolition following the completion of replacement water storage facilities. Additionally, design and construction of seismic retrofit measures for the Union Mills Reservoir began in 2016 with construction of the upgrades completed in 2018. Seismic upgrades for the Hawks Prairie tank are currently in the design phase with construction anticipated to begin in 2027. Steilacoom and Nisqually Reservoirs have yet to be fully evaluated.

Annex: City of Lacey

Priority: 2 of 25

Status: New

L-EH 9: Extend an additional water transmission across Interstate Hwy 5.

Hazard Addressed: Earthquake Hazard

Category: Hazard Preparedness

Rationale: The Lacey water system relies heavily on the movement of water across I-5 to go from production wells to storage facilities. The effectiveness of the water distribution system and the quantity of available water could be significantly compromised in the event of a failure in this location. The installation of a redundant crossing will increase the water system's resilience against earthquake damage.

Relates to Plan Goal(s) and Objectives:

Implementer: City of Lacey water utility

Estimated Cost: \$4,000,000

Time Period: 2024 - 2029

Funding Source: City of Lacey water utility

Initiative and Implementation Status: This is a new initiative and has not been implemented.

Priority: 3 of 25

Status: Ongoing

L-MH 10: Increase public awareness of hazard mitigation and preparedness by creating a "Pop-Up" Emergency Preparedness display for use at city events throughout the year. As part of this initiative, include specific materials geared toward a whole community approach to emergency preparedness to include people with access and functional needs as defined by FEMA.

Hazard Addressed: *Multi Hazard

Category: Public Outreach and Information

Rationale: This initiative is intended to increase awareness of hazard mitigation throughout the community. By making information available throughout the year at the variety of events that the city holds and/or participates in, will reach a broad segment of the community and increase general awareness of mitigation and preparedness activities. In addition to increasing hazard awareness throughout the community, the City of Lacey has the largest population of individuals over age 65 and of non-English speakers within Thurston County, both considered vulnerable populations. This initiative would include specific materials and methods aimed at increasing preparedness and hazard awareness in the vulnerable populations.

Relates to Plan Goal(s) and Objectives: 6B, 9A&B

Implementer: Emergency Management & Safety Coordinator, Public Affairs, Community and Economic Development, and Public Works Departments

Estimated Cost: \$2,000.00 - \$3,000.00 annually

Time Period: 2024 - 2029

Funding Source: City of Lacey Emergency Services Program

Source and Date: Future Emergency Outreach and Education Plan to be adopted in the 2024 CEMP.

Adopted Plan Number: TBD

Reference Page: TBD

Initiative and Implementation Status: The City of Lacey's Emergency Management & Safety Coordinator has facilitated emergency preparedness outreach events in 2022 and 2023 including annual events sponsored by the city, community celebrations, homeowners association meetings, and at local North Thurston School District outreach events. This will be an ongoing initiative.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 4 of 25

Status: Existing

L-MH 16: Create a hazard map inventory which includes areas in the City subject to flooding, landslide, liquefaction, wildfires, and other geologic hazards; overlay existing building stock to target mitigation efforts. Include in the inventory maps that identify clusters of vulnerable populations.

Hazard Addressed: *Multi Hazard

Category: Hazard preparedness, plan coordination and implementation, data collection and mapping

Rationale: A map inventory will help to inform the development of regulations related to hazard mitigation. The overlay of buildings in the hazard areas will also aid during response by identifying areas that may be most impacted and where to target response efforts. Mapping clusters of vulnerable populations will also allow the city to target response efforts with appropriate resources.

Relates to Plan Goal(s) and Objectives: 9A, 1B, 3A, 7D, 8A

Implementer: Information Services/GIS Administrator; Emergency Management & Safety Coordinator; Community & Economic Development.

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: Not yet initiated, however the city has GIS resources that will make this initiative achievable in the short term. **Update:** This initiative was delayed and not implemented in the previous HMP time frame due to the pandemic and competing projects in Information Services.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 5 of 25

Status: Ongoing

L-MH 11: Conduct an annual review of staff ECC roles and responsibilities. Ensure that all critical ICS roles are addressed and filled with the appropriate staff members. Ensure that staff are aware of their role on the ECC team and that appropriate resources are available for training. Ensure coordination with the Comprehensive Emergency Response Plan.

Hazard Addressed: *Multi Hazard (natural and human caused hazards)

Category: Hazard Preparedness

Rationale: This strategy is designed to address staff readiness for response following an event. A regular review of staff roles will address any staff turnover and ensure that all critical staff roles are filled and ready for response to all natural and human caused hazards including all hazards identified in this plan.

Relates to Plan Goal(s) and Objectives: 1D, 7D

Implementer: Emergency Management & Safety Coordinator

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: TBD

Adopted Plan Number: TBD

Reference Page: TBD

Initiative and Implementation Status: This is a new initiative and has not been implemented. This initiative should be included as a task in the Comprehensive Emergency Preparedness Plan which is scheduled to be updated in summer 2018. **Update:** This initiative was not started due to COVID-19. This initiative will be addressed and identified in the 2024 CEMP update.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 6 of 25

Status: Ongoing

L-MH 12: Enhance the ICS and Emergency preparedness training program for City Staff. Begin with critical staff and managers with the goal to provide annual training to all city staff within five (5) years of program implementation. Include training on ATC-20 for appropriate staff members.

Hazard Addressed: *Multi Hazard (natural and human caused hazards)

Category: Hazard Preparedness

Rationale: This strategy is designed to address staff readiness for response following an event. Training for all staff will ensure that all are prepared for an event and understand the incident command system and the role that each play.

Relates to Plan Goal(s) and Objectives: 1D, 7D

Implementer: Emergency Management & Safety Coordinator

Estimated Cost: \$24,000

Time Period: 2024-2029

Funding Source: City of Lacey General Fund budget

Source and Date: TBD

Adopted Plan Number: TBD

Reference Page: TBD

Initiative and Implementation Status: This initiative was identified and implemented after the Emergency Management & Safety Coordinator was hired in 2019. The training program will be further refined in the city's 2024 CEMP update, under the Training and Exercise Plan Annex.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 7 of 25

Status: Existing

L-MH 13: Formalize a city emergency response team prepared for deployment following an event to perform risk assessments of public and private structures throughout the city. Ensure coordination with the adopted emergency response plan and update the plan as necessary to ensure that it is current with existing staff.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: This strategy is designed to address staff readiness for response following an event. Training for all staff will ensure that all are prepared for an event and understand the incident command system and the role that each play.

Relates to Plan Goal(s) and Objectives: 1D, 7D

Implementer: Emergency Management & Safety Coordinator, Community & Economic Development

Estimated Cost: Unknown

Time Period: 2024-2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is an existing initiative and has not been implemented yet due to COVID-19 and lack of staff. This initiative will be addressed and identified in the 2024 CEMP update.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 8 of 25

Status: New

L-EH 7: Begin a sewer line replacement/slip-lining and valve replacement program.

Hazard Addressed: Earthquake

Category: Hazard Damage Reduction

Rationale: This strategy is designed to reduce the risk of sewer line breakage or blockage due to ground movement. This will be an annual or biennial recurring project with the goal of replacing or lining sewer mains that are made of brittle material or show signs of inflow and infiltration (I&I), root intrusion, excessive slope variance, or are otherwise compromised. Valves on force mains that are inoperable or are non-existent in critical areas will be replaced or added to ensure that flow can be rapidly stopped in the event of a line breakage or when a repair is needed.

Relates to Plan Goal(s) and Objectives: 2B, 4A

Implementer: City of Lacey wastewater utility

Estimated Cost: \$500,000 annually

Time Period: 2024-2029

Funding Source: City of Lacey wastewater utility

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

Priority: 9 of 25

Status: New

L-MH 20: Install auxiliary power generators at critical drinking water facilities.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: Installation of auxiliary generators at critical drinking water facilities will help to ensure the availability of water to Lacey residents in the event of a prolonged power outage that may be caused by natural and human caused hazards including all hazards identified in this plan.

Relates to Plan Goal(s) and Objectives: 1B, 2B, 2D

Implementer: City of Lacey water utility

Estimated Cost: Unknown

Time Period: 2024-2029

Funding Source: City of Lacey water utility budget

Source and Date: Water System Plan Update (2013, 2022)

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: All new drinking water facilities that are deemed critical to water production and distribution efforts are anticipated to have stand-by generators installed as part of their initial construction. Currently six (6) existing sites have been identified for the addition of a generator. One (1) is currently under construction and two (2) others are in the design phase.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 10 of 25

Status: Ongoing

L-EH 1: Continue funding the water line replacement program to ensure water supply lines are constantly being upgraded.

Hazard Addressed: Earthquake Hazard

Category: Critical Facilities Replacement/Retrofit

Rationale: Ensures that the city infrastructure for water delivery is continuously being replaced and built to current seismic codes. Enables flexible joints or other seismic upgrades to be included as part of the water system upgrades, where necessary.

Relates to Plan Goal(s) and Objectives: 2B, 2D

Implementer: City of Lacey water utility.

Estimated Cost: \$1,500,000 or approximately 5,000 LF annually

Time Period: 2024 – 2029

Funding Source: City of Lacey water utility budget

Source and Date: Water Comp Plan (2013)

Adopted Plan Number: Water 20

Reference Page: Refers to the identifiers of the initiative within the adopted document.

Initiative and Implementation Status: This is an annually budgeted program by the Lacey City Council and it is anticipated that it will continue to be funded. Annual funding for this program was increased to \$1,500,000 per year in 2019 and allows for the replacement and modernization of approximately 5,000 LF of water main annually.

Priority: 11 of 25

Status: Modified

L-MH 14: Adopt and proclaim an annual preparedness month in the City of Lacey. Use the month as an avenue to provide outreach and education to community members.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: This strategy is designed specifically to increase public awareness of hazard mitigation and emergency preparedness activities. It is proposed that the city adopt September as Lacey Preparedness Month to build on preparedness efforts already underway with partner agencies like Thurston County and the Washington Emergency Management Division.

Relates to Plan Goal(s) and Objectives: 6B, 9A, 9B

Implementer: Emergency Management & Safety Coordinator, Public Affairs

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey Emergency Services Program budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This Initiative was implemented in September of 2023 and will be continued each year herein after. Staff recommends the proclamation be made during the month of September to coincide with National Emergency Preparedness Month, Thurston County Emergency Management Council Preparedness Expo, and the start of flood and wind storm season in the Pacific Northwest.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 12 of 25

Status: Existing

L-MH 19: Develop and expand partnerships with local businesses and resources to foster natural hazard mitigation and to inventory community assets that could be used during a disaster and for response during a significant event.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: Ensures coordination between public and private sector organizations to share information and resources during the response and recovery phase of any incident.

Relates to Plan Goal(s) and Objectives: 6B, 5B, 5D

Implementer: Community & Economic Development Department/Economic Development Coordinator

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a modified strategy that seeks to expand on the goal to create partnerships with public and private organizations. The city has a relatively new Economic Development Coordinator who is actively working to create partnerships with the local business community, this could foster further discussion regarding natural hazards planning. Although not officially initiated, some preliminary discussions have occurred between the city and a few local businesses regarding continuity of business plans and coordination between tenants of a strip mall for response and recovery, but no formalized program has been developed. It is anticipated that the Economic Development Coordinator could expand this discussion and help to establish a program.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 13 of 25

Status: New

L-MH 21: Develop and maintain an on-site supply of various pipe, fittings, valves, and repair couplings to facilitate rapid repair of the water distribution system.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: By maintaining a supply of water line and associated fittings, any damage to the water distribution system can be rapidly repaired and returned to service. Recent supply chain issues have shown that local supplier's inventory can be unreliable.

Relates to Plan Goal(s) and Objectives: 2B, 5B, 5D

Implementer: City of Lacey water utility

Estimated Cost: Unknown

Time Period: 2024 – 2029

Funding Source: City of Lacey water utility

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: The water utility has invested in a storage container and has begun acquiring miscellaneous sections of pipe and fittings as budget allows.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 14 of 25

Status: New

L-MH 22: Expand the City's fuel storage capacity.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: Fuel for fleet and power generation is critical during emergency situations or prolonged power outages. The city's existing fuel supply could be exhausted quickly if deliveries from suppliers are delayed. The city's fuel storage capability should be expanded, preferably with a second site north of I-5 to reduce transportation distance to remote sites, and to provide an additional level of redundancy.

Relates to Plan Goal(s) and Objectives: 1A, 2B, 2D, 5E

Implementer: City of Lacey Public Works

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget with possible grant funding opportunities

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 15 of 25

Status: Ongoing

L-EH 4: Continue to adopt and enforce the most recent of the International Code Series (Building, Fire, and Plumbing etc.); ensure redevelopment and reconstruction are to current codes.

Hazard Addressed: Earthquake Hazard

Category: Hazard Damage Reduction, Development Regulations

Rationale: By requiring buildings to be constructed to the most recent of the International Code Series the city can ensure that all new construction, redevelopment, and reconstruction are structurally sound.

Relates to Plan Goal(s) and Objectives: 1A, 1B,

Implementer: Community and Economic Development Department / Building Division

Estimated Cost: No additional cost

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is an ongoing action completed by the City of Lacey Building Department. Permits are reviewed to ensure that plans meet the most current versions of the adopted building code. As the International Series of Codes are updated the city responds by adopting the most recent versions in kind.

Priority: 16 of 25

Status: Existing

L-MH 18: Expand the list of capable and well-suited volunteers for a response cadre that can be deployed following an event to augment city staff. This could include amateur radio operators, structural engineers, and architects.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: This initiative is intended to increase response capability following an event by soliciting qualified professionals and community members who could conduct damage assessments following a disaster. The city can work with established CERT teams, HOA's, and other neighborhood organizations to increase participation in the CERT program.

Relates to Plan Goal(s) and Objectives: 1D, 1C, 6B

Implementer: Human Resources/Emergency Management & Safety Coordinator

Estimated Cost: \$23,000

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: Project has not yet been initiated. This project has been identified in the Emergency Management Planning Consultant RFP for the 2024 CEMP update, under the Volunteer Management/Strategy Plan Annex.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 17 of 25

Status: New

L-EH 8: Increase climate resilience by installing a supplemental drinking water well for S04.

Hazard Addressed: Drought/Climate Change

Category: Hazard Damage Reduction

Rationale: This initiative increases climate change and drought resilience of Lacey's drinking water supply by installing a second well at the S04 site into a deeper aquifer zone with increased available drawdown. The existing well at the S04 site taps a shallow water table aquifer which is susceptible to variations in precipitation patterns. Variable precipitation patterns tend to have a delayed and subdued effect on deeper aquifer zones. Drawdown effects associated with pumping wells can also be reduced by operating multiple wells in different zones and at lower flow rates.

Relates to Plan Goal(s) and Objectives: 2B, 8B, 8C

Implementer: City of Lacey water utility with possible grant funding opportunities

Estimated Cost: \$4,000,000

Time Period: 2024 - 2029 (completion in 2027)

Funding Source: Water utility fund

Source and Date: Water System Plan Update (2013, 2022)

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

Annex: City of Lacey

Priority: 18 of 25

Status: New

L-MH 23: Stand-by generator replacement program.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: The City of Lacey owns and operates in excess of fifty (50) stand-by generators to provide emergency power at critical facilities. The City should plan to replace at least one (1) generator per year to prevent too many sites from reaching the end of their useful life at the same time. These replacements should be paired with other facility rehabilitation projects where appropriate.

Relates to Plan Goal(s) and Objectives: 2B, 2C, 5E

Implementer: City of Lacey wastewater utility

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: Varies by facility

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 19 of 25

Status: New

L-MH 24: Develop a fiber optic network for the city's water and wastewater facilities.

Hazard Addressed: *Multi Hazard

Category: Critical Facilities Replacement/Retrofit

Rationale: This initiative is intended to increase redundancy and reliability of the city's SCADA system and the facilities that communicate with it. A dedicated fiber optic network would provide for secure high-speed communication between facilities.

Relates to Plan Goal(s) and Objectives: 2B, 2D, 5E

Implementer: Public Works Water and Wastewater Utilities, Information Services

Estimated Cost: Unknown

Time Period: 2024-2029

Funding Source: City of Lacey water and wastewater utilities

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 20 of 25

Status: Existing

L-MH 15: Expand partnerships with the local business community to include Lacey South Sound Chamber of Commerce, Economic Development Council, Thurston County Chamber, and the Small Business Association to provide mitigation resources to local businesses in an effort to increase economic resiliency.

Hazard Addressed: *Multi Hazard

Category: Public Outreach and Information /Hazard Preparedness

Rationale: Economic resiliency is not only a goal in the Hazard Mitigation Plan, it is also a goal of the Economic Development Element of the Comprehensive Land Use Plan. The goal is to provide resources to the business community to ensure that they can resume operations quickly following an event and increase community economic resiliency.

Relates to Plan Goal(s) and Objectives: 5A, 5B, 6B, 9A

Implementer: Community & Economic Development Department/Economic Development Coordinator

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: Existing initiative, has not yet been initiated.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 21 of 25

Status: New

L-MH 25: Develop a program for on-site coliform bacteria testing.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: The city currently relies on third-party laboratories to provide bacteriological testing service for the drinking water system. In the event of a disaster these laboratories may be inaccessible or even inoperable. The development of a program and procurement of equipment/supplies to allow on-site processing of water samples will allow the utility to make repairs and return service to drinking water customers even if third-party labs are unavailable.

Relates to Plan Goal(s) and Objectives: 1D, 5A, 5C, 5E

Implementer: City of Lacey water utility

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey water utility

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: This is a new initiative and has not been implemented.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 22 of 25

Status: Existing

L-EH 5: Develop a catalog of materials/information on structural and non-structural retrofit activities. Make available in various locations throughout City Hall and on the website. Publish on the website and advertise information on social media.

Hazard Addressed: Earthquake Hazard

Category: Public Outreach and Information/Hazard Damage Reduction

Rationale: This will provide information to residents about steps they can take at home to protect their property and lives while in their residence. This can include non-structural retrofit information related to strapping shelves to walls and securing televisions and other large heavy objects, as well as guidance related to structural retrofit activities like installing earthquake ties to foundations.

Relates to Plan Goal(s) and Objectives: 1B, 7E, 9A, 9B

Implementer: Emergency Management & Safety Coordinator, Community & Economic Development/Building Department, Public Affairs.

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: Not yet initiated due to COVID-19.

Priority: 23 of 25

Status: New

L-MH 26: Purchase of trailer mounted wastewater by-pass pumps.

Hazard Addressed: *Multi Hazard

Category: Hazard Preparedness

Rationale: Portable by-pass pumps provide a critical level of redundancy for sewer pump stations in the event of a failure. Due to the wide variation of flow and head conditions for the city's pump stations at least two (2) different pump models will be needed to cover all applications.

Relates to Plan Goal(s) and Objectives: 2B, 2D

Implementer: City of Lacey wastewater utility

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey wastewater utility

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: One trailer mounted by-pass pump was purchased in 2022. A second pump is planned within the next few years.

*Multi hazard consists of Earthquake, Severe weather, Flood, Landslide, Wildfire, and Volcanic hazards as addressed in this plan.

Priority: 24 of 25

Status: Ongoing

L-EH 3: Reduce hazards inside of city facilities to prevent property damage and enhance ability to recover and respond after an earthquake.

Hazard Addressed: Earthquake Hazard

Category: Hazard Damage Reduction

Rationale: This initiative includes activities such as strapping down computers, CRT's, bookcases, shelving units, and other office and operating supplies and equipment. This will minimize the amount of property damage, increase ability to respond and recover, and reduce the risk of personal injury from falling and projectile objects.

Relates to Plan Goal(s) and Objectives: 3B

Implementer: Emergency Management & Safety Coordinator, Public Works/Facilities

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: 2003 Natural Hazards Mitigation Plan

Adopted Plan Number: L-EH 3

Reference Page: V-51

Initiative and Implementation Status: Ongoing project. **Update:** An email was sent out to all city staff on 3/3/23 asking for help to identify furniture and other equipment that needed to be secured in order to enhance seismic safety. This information was compiled into a list and the list was completed on 5/1/23.

Priority: 25 of 25

Status: Ongoing

L-FH 2: Include information in public outreach materials and presentations that flood insurance is typically NOT included in homeowner's insurance policies and that it is incumbent on the consumer to request this coverage over and above the standard policy limits.

Hazard Addressed: Flood Hazard

Category: Public Outreach and Information

Rationale: This will enable Lacey residents to better understand the limits of their insurance policies and can then lead to an informed decision regarding the purchase of flood insurance depending on each individual's circumstance.

Relates to Plan Goal(s) and Objectives: 9A

Implementer: Community Economic & Development, Public Affairs

Estimated Cost: Unknown

Time Period: 2024 - 2029

Funding Source: City of Lacey General Fund budget

Source and Date: 2003 Natural Hazards Mitigation Plan

Adopted Plan Number: L-FH 2

Reference Page: V-55

Initiative and Implementation Status: Although the risk of riverine, palustrine, and coastal flooding is remote in the City of Lacey, some homeowners may live near a lake or wetland and may want to consider purchasing additional flood insurance. Including this information in our public outreach materials will enable homeowners to make a more informed decision on whether or not flood insurance is necessary for their home's location.

Completed or Removed Mitigation Initiatives

Initiatives that were completed in the last five years are included in this plan to provide evidence of progress made. These initiatives are no longer relevant and no longer part of the City of Lacey’s adopted mitigation strategy. These initiatives are not ranked as they are no longer relevant.

ID Number	Category	Action	Status
L-MH 7	Hazard Preparedness	Purchase and install backup generators to provide power to the remaining sewer lift stations that do not currently have permanently mounted standby generators.	Completed
L-MH 9	Hazard Preparedness	Develop a system for secure off-site, “real time” storage of data from City computers and networks.	Completed
L-MH 17	Public outreach and information, hazard preparedness, hazard damage reduction, plan coordination and implementation	Explore the possibility of creating a Hazard Mitigation/Emergency Preparedness Coordinator for the city; alternatively identify an existing position that can be modified to include the full breadth of the emergency management and hazard mitigation responsibilities	Completed
L-EH 6	Hazard preparedness, public outreach and information	Develop and implement a training program on residential structural and non-structural retrofit activities geared towards home owners, and home owner associations. Partner with appropriate vendors to coordinate trainings.	Removed

Priority: N/A

Status: Completed

L-MH 7: Purchase and install backup generators to provide power to the remaining sewer lift stations that do not currently have permanently mounted standby generators.

Hazard Addressed: Multi Hazard

Category: Hazard Preparedness

Rationale: Most wastewater facilities have been constructed or retrofitted with emergency standby generators to provide power to the pumps and controls during power outages. There is remaining sewer lift stations that have not been retrofitted with generators.

Relates to Plan Goal(s) and Objectives: 2B

Implementer: Public Works

Estimated Cost: \$2,300,000

Time Period: 2018 - 2023

Funding Source: Wastewater Comp Plan (2015)

Source and Date: 2015 WW Comprehensive Plan Update and Annual Budgets

Adopted Plan Number: N/A

Reference Page: Page numbers will change with every adopted budget

Initiative and Implementation Status: All wastewater facilities have permanently mounted standby generators, except for one station which is being completely retrofitted and will have a new generator installed with the project upgrade. The Estimated cost to install the last 14 generators at the sites was \$1,400,000 or \$100,000 per site.

Priority: N/A

Status: Completed

L-MH 9: Develop a system for secure off-site, "real-time" storage of data from city computers and networks.

Hazard Addressed: Multi Hazard

Category: Hazard Preparedness

Rationale: The system would mimic the city's current network structure and files would be backed up instantly as they are created or modified. The backup servers would be located in a hardened secure site that could be accessed remotely or in person by Information Services staff. Having the backups will enable the city to recover more quickly and efficiently after a major disaster.

Relates to Plan Goal(s) and Objectives: 3B

Implementer: Information Services

Estimated Cost: Unknown

Time Period: 2018 - 2023

Funding Source: City of Lacey General Fund budget

Initiative and Implementation Status: This project has been completed by Information Services.

Priority: N/A

Status: Completed

L-MH 17: Explore the possibility of creating a Hazard Mitigation/Emergency Preparedness Coordinator for the city; alternatively identify an existing position that can be modified to include the full breadth of the emergency management and hazard mitigation responsibilities.

Hazard Addressed: Multi Hazard

Category: Public outreach and information, hazard preparedness, hazard damage reduction, plan coordination and implementation.

Rationale: Implementation of the hazard mitigation activities and initiatives will require additional staff time. State and federal planning requirements related to emergency management have increased making it difficult for existing staff to complete requirements within the designated timeframes.

Relates to Plan Goal(s) and Objectives: Will aid in the implementation of the mitigation initiatives throughout the plan

Implementer: Human Resources

Estimated Cost: \$110,000 (includes salary, benefits, computer, supplies...)

Time Period: 2018 - 2023

Funding Source: City of Lacey General Fund budget

Initiative and Implementation Status: In 2019 the city created a new position and recruited for an Emergency Management & Safety Coordinator. This position is responsible for developing and coordinating the city's emergency management, emergency preparedness, and safety programs. This position has oversight of city activities in all phases of emergency management planning, mitigation, preparedness, response, and recovery, as well as performing grant, contract, and budgetary research and analysis.

Priority: N/A

Status: Removed

L-EH - 6: Develop and implement a training program for residential structural and non-structural retrofit activities geared towards homeowners and homeowner associations. Partner with appropriate vendors to coordinate trainings.

Hazard Addressed: Multi Hazard

Category: Hazard preparedness, public outreach and information

Rationale: This initiative is designed to provide homeowners with information necessary to take steps to secure their homes and protect their property. By partnering with appropriate vendors, the city can ensure that homeowners have the knowledge required and tools available to complete structural and non-structural home improvements.

Relates to Plan Goal(s) and Objectives: 9A, 9B

Implementer: Emergency Preparedness Coordinator/Administrative Services/Public Affairs/
Community and Economic Development – Building Division

Estimated Cost: Unknown

Time Period: 2018 - 2023

Funding Source: City of Lacey General Fund budget

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: Project has been integrated into the disaster outreach program being further developed by the Emergency Management & Safety Coordinator.

Summary of Local Flood Hazard and Participation in the National Flood Insurance Program by the City of Lacey

The City of Lacey has actively participated in the National Flood Insurance Program (NFIP) since 1980. The city's Flood Hazard Prevention Ordinance was originally adopted by the city council on July 10, 1980. The current ordinance reflects the most recent revisions that were adopted by the city council on December 21, 2023 and became effective December 26, 2023. Only minor changes were made at that time after major revisions were adopted in October 2012. The 2012 revisions were adopted in response to a review and community assistance visit by the Department of Ecology and the Federal Emergency Management Agency (FEMA) who identified changes needed to maintain compliance with the NFIP. The City of Lacey Flood Insurance Rate Maps were most recently revised on May 15, 2018 as part of a FEMA map update. Flood hazard data from these maps have been incorporated into the city's GIS database.

The city's flood hazard is limited to areas immediately surrounding lakes as well as areas on either side of Woodland Creek within city limits. Citywide there are 34 total flood policies. The city's flood losses are substantially limited; there have only been three (3) insurance claims since the city joined the NFIP in 1980, resulting in approximately \$8,800 in insurance payouts. As of May 2023, there are no repetitive loss structures located within the corporate limits of the City of Lacey.

Flood Plans, Ordinances, and Regulations

The city's flood ordinance is found in LMC 14.34 "Flood Hazard Prevention." This ordinance meets or exceeds all of the minimum standards required by the NFIP. The flood hazard prevention ordinance pertains to building and construction standards required for development within the designated floodplains. While the flood hazard prevention ordinance provides standards for structures within the floodplain, generally speaking new construction is not permitted within regulatory floodplains per the flood ordinance adopted on October 11, 2012. Additionally, the city's other critical areas ordinances limit to a large degree any development that may be proposed to occur in the designated floodplain. The floodplains identified on the Flood Insurance Rate Maps provided by FEMA for the City of Lacey generally correspond with wetlands and or wetland buffers, stream habitat buffers, sensitive areas regulated by the Shoreline Master Program or other critical areas located within the city. Lacey Municipal Code 14.28 'Wetlands Protection', LMC 14.33 'Habitat Conservation Areas Protected' and the City of Lacey Shoreline Master Program restrict development from occurring within wetlands and their buffers, and within the critical habitat areas of streams; these additional codes have essentially limited any development that has occurred in the City of Lacey within the FEMA designated floodplains. The city also had procedures for review of any development proposed to take place within the floodplain. Any development that is proposed is reviewed for compliance during the building permit process by the City of Lacey Building Official and the Floodplain Administrator/Land Use Planner.

Annex: City of Lacey

With the limited flood hazards within the City of Lacey and with the wetlands protection, habitat conservation areas ordinances and the Shoreline Master Program, the city is able to direct development away from the mapped floodplains; and with the flood hazard prevention ordinance in place, the City is able to protect any development that cannot be directed outside of the flood hazard areas. With these regulations and review procedures in place, the City of Lacey maintains compliance with the requirements of the NFIP.

Appendix A-1 Community Capability Assessment

Introduction

Each jurisdiction is required to evaluate and document their unique set of capabilities and tools that can be leveraged to support hazard mitigation and increase community resilience. A capability assessment can aid a plan participant to perform this task. Below are the specific FEMA requirements related to the capability assessment and documentation – its listed in Element C: Mitigation Strategy.

C1. Does the plan document each participant's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))

C1-a. Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?

C1-b. Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation?

A more detailed description of the Community Capability Assessment can be found in the [Updated FEMA Local Mitigation Planning Handbook](#) in Task 5, starting on page 79 (pdf page 87).

Your annex must describe which authorities, policies, programs, funding, and resources your jurisdiction has to accomplish hazard mitigation. The description should include a discussion on:

- Capital facilities plans
- Comprehensive and/or strategic plans
- Building codes
- Land use and development codes
- Ordinances and regulations key to reducing risk

Your annex must also describe ways your jurisdiction can expand on and improve your capabilities to help you understand your hazards and reduce your risks.

- Do your capabilities actively support mitigation?
- How can you specifically address gaps, challenges, and opportunities?

Capability Assessment Worksheets - Instructions

Begin by using the Capability Assessment Worksheets to document the various resources available to your jurisdiction. The worksheet will point your agency to the range of plans, regulations, resources, and practices that you should consider. Consider which department staff who can assist your planning team with the relevant sections of the Capability Assessment Worksheet. Completing the worksheet

will help your planning team identify your strengths and weaknesses to satisfy the FEMA planning requirements. You can reference the Core Plan's Capability Assessment to consider state and regional resources that you may be unfamiliar with. You can also the responses to the [SWOO Assessment](#) performed in March 2023 by the plan participants.

You must document the evaluation of your capability assessment. Each worksheet is followed by an "Observation and Discussion" sheet to report your key findings. Your completed worksheet and evaluation can help you select mitigation actions that are matched to your capabilities. The evaluation may also help you identify new mitigation actions to increase your capacity such as data collection, staff training, and amending existing plans, codes, and policies. FEMA will not penalize jurisdictions for not having the ability to improve a capability, however gaps must be described. Gaps are opportunities for new capacity building mitigation actions.

Capability Assessment Worksheets

Types of Capabilities

There are four mitigation worksheets. Use the worksheets to take notes about relevant capabilities within your jurisdiction. Each type of capability may include laws, regulations, policies, programs, staff, or funding. They may go beyond traditional mitigation, too. Your planning team may find other capabilities that help make your jurisdiction more resilient.

1. Planning and regulatory
2. Administrative and technical
3. Financial
4. Education and outreach

Observations and Discussion Form

Each worksheet includes an 'Observations and Discussion' form. It includes a series of questions to help you document which authorities, policies, programs, funding, and resources your jurisdiction has to accomplish hazard mitigation. The discussion must account for building codes, land use and development codes, ordinances and regulations that are key to reducing risk. It must also describe ways your jurisdiction and expand on and improve your capabilities.

Evaluating Equity in the Capability Assessment

Consider low-income, communities of color, people with disabilities, people who lack English proficiency, people with insecure housing, and others who may be disenfranchised from economic, social, and civic life. Are there barriers to accessing resources in your community? By reducing barriers to socially vulnerable and underserved populations, your jurisdiction can support a whole-community approach to hazard mitigation. Use the following questions to bring equity into your capability assessment.

- Which communities and populations lack resources to improve their resilience?
- What gaps might exist that decrease an underserved community's ability to access resources and plan for risk reduction?
- Do any capabilities disproportionately benefit wealthy areas or neighborhoods?
- Do any capabilities actively increase the vulnerability of underserved and socially vulnerable populations and communities?
- How can you think differently about leveraging non-monetary and non-traditional resources and partners to support underserved communities?

1. Planning and Regulatory

Evaluation for Planning and Regulatory Capabilities

- What is the legal framework for land use planning in your jurisdiction? (Special Purpose Districts are required to report how they coordinate with the county or cities to adhere to their plans, development codes, and regulatory land use requirements).
- What kinds of plans does your jurisdiction have? Which are used most often?
- Are there any specific laws or ordinances that mitigate hazards?
- How do you regulate growth and development?
- How does your jurisdiction protect community lifelines such as well heads, wastewater treatment facilities, and other critical facilities, including dams and levees?

Plans	In Place? Y or N	Notes - Does the plan address hazards? Can the plan be used to implement mitigation actions? When was it last updated? <i>Cite specific sections or language that supports hazard mitigation. Note if there are gaps.</i>
Comprehensive / Master Plan	Yes	The Comprehensive Master Plan does not address specific hazards; it does, however, provide language establishing goals that the city will respond to hazards when they occur (Policy 2-F of Ec. D. Element of the 2016 Comp Plan). The city has a separate CEMP to address specific hazards.
Capital Facilities / Improvement Plans	Yes	Updated hazard-resistant building codes reduce loss of life and property from natural disasters. City of Lacey Capital Facilities Plan
Climate Adaptation Plan	Yes	Environmental Element of Comprehensive Master Plan
Community Wildfire Protection Plan	No	Via state adoption of the IWUIC, October 2023.
Comprehensive Emergency Management Plans	Yes	Consultant - Witt O’Brien’s is currently updating the CEMP and will be completed in 2/2024

Comprehensive Flood Management Plan	Yes	NFIP LMC 14.34 Flood Hazard Prevention
Continuity of Operations Plan	Yes	The COOP was developed by each department to account for essential staff during emergencies or disaster events. This plan spells out the essential duties and the personnel needed to carry out operations for each department. This supports hazard mitigation by having a Continuity of Operations during all emergencies identified in the plan before a disaster or emergent event. Comprehensive Emergency Management Plan (CEMP)
Economic Development / Resiliency Plan	Yes	Via Economic Development, Element of the 2016 Comp Plan
Habitat Conservation Plan	Yes	LMC 14.33 Habitat Conservation Areas Protection
Stormwater Management Plan	Yes	<p>Lacey has two documents that could be considered as Stormwater Management Plans:</p> <ol style="list-style-type: none"> 1. Stormwater Management Program (SWMP) Plan, 2022 Annual Report: Lacey-SWMP-Plan-2022-Report.pdf (cityoflacey.org) This document is updated annually - this latest one was completed in March 2023 - and is submitted to Department of Ecology each year by March 31st with our Annual Report. The SWMP Plan describes the activities we have accomplished over the past year, and activities we plan to accomplish in the coming year(s), in compliance with the Western WA Phase II Municipal Stormwater Permit. This document is current. 2. 2020 Stormwater Comprehensive Plan: 2020-Stormwater-Comp-Plan-Final.pdf (cityoflacey.org). This document is updated every 5-7 years and provides an overview and planning information to guide our stormwater utility, including recommendations for staffing and utility service charges/rates. This current plan was approved by council on November 19, 2020 and is current.

Transportation Plan	Yes	The 2030 Transportation Plan was published in 2012. This Transportation Plan will be reviewed starting in 2023 to begin the update process. The Transportation Plan is the city’s long-range plan for developing its transportation system into the future.
Water Utility Emergency Response Plan	Yes	The city completed this plan in 2021. It is current.
Water Comprehensive Plan	Yes	The city is working on updating its Water Comp Plan. The previous plan was completed in 2013 and is out of date. Not having an adopted current plan is a “gap”. The city has nearly completed the updated plan and so is it is actively addressing this gap.
Reclaimed Water Comprehensive Plan	Yes	The city is working on its first Reclaimed Water Comp Plan. Not having a plan could be seen as a “gap”. However, the city has no reclaimed water customers and uses all reclaimed water for water rights mitigation; therefore, the gap is not critical and the city is in-process to address it.
Wastewater Comprehensive Plan	Yes	The last Wastewater Comp Plan was completed in 2015. This is the adopted plan we use. We are currently working on an update to the plan which should be completed and adopted within a year or two. This should be noted as a gap that the city is in-process of addressing
Land Use Planning and Ordinances	Y or N	Notes - Is the ordinance an effective measure for reducing hazard impacts? Is it adequately administered and enforced? Cite specific language or sections of ordinances or codes that support hazard mitigation, if applicable. Note if there are gaps.
Acquisition of land for open space, public recreation, or conservation	Yes	Since 1990, the city has been collecting a 1% utility tax for the acquisition and development of parks and open spaces. The city has acquired parks, trails, and open space through dedication, donation, partnership, state grants, and city funds. The city currently has 1061.3 acres of public parks, trails, and open space. There are currently 1,870 acres of open space land in private ownership in the city’s UGA boundary. Developers of the residential areas within Lacey are currently required to dedicate ten percent of development as open space.

		CAP: F-09 For sites where elevating or relocating a building is not a viable option in response to flood risks, acquire the property, use the land for appropriate uses (e.g., flood storage or agriculture), and help the occupants resettle in the community. This action would help protect public welfare and physical assets while mitigating flood risks.
Building codes	Yes	2018 ICC Codes via RCW... soon to be 2021 ICC Codes via RCW...
Flood Insurance Rate Maps	Yes	Accessed through Community & Economic Development
Floodplain ordinance	Yes	NFIP LMC 14.34 Flood Hazard Prevention
Natural hazard specific or Critical Areas Ordinance	Yes	LMC 16.54 Environmentally Sensitive Areas
Subdivision ordinance	Yes	LMC 15. Land Division
Zoning ordinance	Yes	LMC 16 Zoning

A. Plans and Regulations Capabilities Observations and Discussion

- *What specific sections of your plans, land use regulations, building codes, and ordinances support your jurisdiction's ability to reduce risks and implement your mitigation actions?*
 1. Comprehensive Plan
 2. Capital Facilities/Improvement Plans
 3. Climate Adaptation Plan
 4. Economic Development/Resiliency Plan
 5. Habitat Conservation Plan
 6. Stormwater Management Plan
 7. Transportation Plan
 8. Building codes
 9. Floodplain ordinance
 10. Critical Areas Ordinance/Environmental sensitive areas
 11. Subdivision ordinance
 12. Zoning ordinance
 13. The Water Comp plan is consistent with the federal Safe Drinking Water Act and applicable state law.
 14. The Wastewater Comp plan is consistent with the federal Clean Water Act and applicable state law.
 15. The Stormwater Comp plan is consistent with the federal Clean Water Act, the NPDES Phase 2 permit, and applicable state law.
- *Are there any gaps in your plans, regulations, or ordinances that may prevent your jurisdiction from supporting your jurisdiction's mitigation actions?*
Unknown
- *How can your plans and regulations be expanded or modified to improve your understanding of hazards and vulnerabilities? How can they be improved to reduce risks?*
- *What type of development regulation mitigation initiatives, if any, could support the integration of hazard mitigation planning policies and programs?*

2. Administrative and Technical

Evaluation for Administrative and Technical

- Who will be responsible for implementing mitigation actions?
- Have available staff been trained to support mitigation?
- Are outside technical expertise or resources needed?
- Do government agencies and departments regularly coordinate and problem-solve?
- Are agreements in place between participants or between participants and other organizations that provide regular administrative or technical assistance?
- Do you work with nongovernmental organizations who also work in mitigation?
- Which staff and abilities are available to help carry out your mitigation plan?
- If you do not have staff in your jurisdiction, consider how county, regional, and state partners can assist your jurisdiction.

Administrative	In Place Y or N	Notes - Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	Yes	The City of Lacey’s Building Official and Fire Marshal is responsible for planning, organizing, controlling and directing the administration and enforcement of the adopted building construction codes for the city. This position is responsible for functions that include, but are not limited to, managing the plan review, inspection and permitting functions necessary to meet the city and State mandated regulations
Civil Engineer	Yes	The City of Lacey’s City Engineer position is responsible for the supervision, coordination, and management of the Engineering Division of the Public Works Department. The duties of the position include but are not limited to, oversight on transportation management, engineering design, development plan review, surveying, and management of all city construction, capital improvement and private development projects.
Community Planner/Development Director	Yes	The City of Lacey’s Community & Economic Development Director plans, organizes, coordinates, directs, and evaluates all activities of the Community Development Department. The Community & Economic Development Department is responsible

		for functions which include, but are not limited to, comprehensive planning for land use and growth management within the city and coordination of development standards with Thurston County for areas within the city's Urban Growth Management Area.
Emergency Manager	Yes	The City of Lacey Emergency Management & Safety Coordinator oversees the emergency management directives needed for the City of Lacey, including leading city workgroups in implementing the city's HMP Annex, implementing staff training on hazards and mitigation, planning exercises, implementing public outreach and disaster preparedness to the citizens of the City of Lacey and coordinating and corresponding with outside agencies in preparation for and responding to disasters or emergent events. They are also responsible for overseeing the update of the CEMP, which give direction for how the city will respond to disasters and emergent events. The City of Lacey Emergency Manager is a representative to the Thurston County Emergency Management Council, where the City of Lacey is one of the voting council members.
Floodplain Administrator	Yes	The City of Lacey's Building Official is the Floodplain Administrator.
GIS Coordinator/Manager	Yes	The City of Lacey employs a GIS Analyst and an Information Services Manager that oversees the department.
Planning Commission	Yes	The nine members of the Lacey Planning Commission develop recommendations for long-range comprehensive planning goals and policies in the City of Lacey. Seven members of the Commission must be Lacey residents; two members may reside in the Urban Growth Area.
Technical	In Place Y or N	Notes - Has capability been used to assess/mitigate risk in the past? Will you use it to implement your current action plan?
Grant Writing	Yes	The City of Lacey has submitted requests for FEMA grant funding and will continue to use the resource to help implement future mitigation actions.

Hazard data and information	Yes	The City of Lacey is a participating agency of the Thurston Regional Hazard Mitigation Plan. TRPC is the lead agency in gathering pertinent hazard data and information.
GIS Analysis	Yes	The City of Lacey uses the GIS analysis gathered by TRPC through the Thurston Regional Hazard Mitigation Plan & from the City of Lacey's GIS Analyst.
Mutual Aid Agreements	Yes	Washington Mutual Aid System (WAMAS), Pacific Northwest Emergency Management Agreement (PNEMA), Emergency Management Assistance Compact (EMAC), ILA Thurston County Law Enforcement Agencies, ILA Thurston County Emergency Management Council (TC EMC), Homeland Security Region 3 (HSR3) Omnibus Agreement, Washington State for interstate Water/Wastewater Agency Response network (WAWARN), local water intertie agreements

A. Administrative and Technical Capabilities Observations and Discussion

- *What specific administrative and technical strengths does your jurisdiction have to support hazard mitigation?*

The City of Lacey is fully staffed with administrative personnel with technical strengths that can support hazard mitigation. The city also has the support of TRPC.

- *Are there any gaps in administrative or technical capabilities to support your jurisdictions understanding of hazards and vulnerabilities?*

No

- *How can your jurisdiction expand or improve its administrative and technical capabilities to reduce risks or your mitigation actions?*

The City of Lacey's management team is constantly assessing the staff's capability to address and resolve gaps that may exist.

- *What type of plan coordination and implementation mitigation initiatives, if any, could enhance your technical and administrative capabilities?*

3. Financial

Evaluation for Financial

- What financial resources can your jurisdiction program for mitigation activities?
- What resources have you used in the past?
- What grant programs can your jurisdiction pursue to fund your mitigation actions?
- Can your jurisdiction cover the 25 percent match for a federally grant funded mitigation project?
- How do your mitigation projects get programmed into your capital facilities/improvement plan?
- Are there any financial policies to direct available funds to mitigation projects?

Funding Resources	In Place Y or N	Notes - Has the funding resource been used in past and for what type of activities? Could it be used to fund future mitigation actions?
Capital Improvements Project Funding	Yes	This has been used for many purposes such as utility work, seismic upgrades, waterline maintenance and replacement, street maintenance, etc.
Community Development Block Grant	Yes	Housing assistance and building improvements.
Non-FEMA Federal Funding Programs	Yes	Federal grant programs for capital projects like streets, bulletproof vests, etc.
Impact Fees	No	N/A
State Funding Programs	Yes	Grants to facilitate infrastructure projects and building improvements.
Utility Fees	Yes	Utility fees help fund our capital projects for utility work.
Taxes and other general gov't revenue	Yes	Funding of emergency management and safety position and risk manager position, funding of off-site data storage, etc.

A. Financial Capabilities Observations and Discussion

- *What specific financial strengths does your jurisdiction have to support hazard mitigation?*
Strong financial position, AAA credit rating, successful grant recipient.
- *Are there any gaps in financial capabilities to support your jurisdictions understanding of hazards and vulnerabilities?*
Financial capability is healthy. Priorities of the organization and leadership play into how the financial resources are allocated.
- *How can your jurisdiction expanded or improve its financial capabilities to implement your mitigation actions?*
Updated mitigation initiatives to use as budgets are created and priorities are set.
- *What type of actions can your jurisdiction take, if any, to secure funding to make your community more resilient?*
Additional funding from grants, partnerships with regional jurisdictions, and local businesses.

4. Education and Outreach

Evaluation for Education and Outreach

- What outreach programs does your jurisdiction use to share important information?
- What venues do you use for outreach activities? Could they be used to promote risk reduction?
- What new or additional outreach efforts could get the most public participation and support for risk reduction?

Programs or Activities	In Place Y or N	Notes – How widespread and effective are these programs in your community?
Hazard awareness campaigns such as Firewise, Storm Ready, Flood Awareness Month, School Programs, or Public Events	Yes	We currently engage in disaster preparedness and education for Earthquake hazards, Storm Ready, Firewise, Fire ready, Flood Awareness, 2 Weeks Ready, Build a kit (emergency preparedness kits for car home and work), and pet preparedness. The city’s Emergency Management & Safety Coordinator engages in many public outreach and education events for disaster preparedness, to include interacting with many HOA communities within the city. We work with Thurston County Emergency Management on the Red Cross Pillowcase Project within many of the local schools teaching elementary students disaster preparedness. The City of Lacey is an active member of the TCEMC which hosts the annual Thurston County Emergency Preparedness Exposition.
Local News Media	Yes	Public Affairs is the liaison that shares outreach to the local news media.
Organizations that represent or advocate for socially vulnerable and underserved populations	Yes	The Human Services Coordinator is the liaison that connects with organizations that represent or advocate for socially vulnerable and underserved populations.
Social Media	Yes	Public Affairs Department

A. Public Outreach and Education Capabilities Observations and Discussion

- *What specific public outreach and education capabilities/strengths does your jurisdiction have to support hazard mitigation?*

The City's Emergency Management & Safety Coordinator works with several HOA's within the city on a regular basis to strengthen their emergency preparedness. We are very involved in public outreach and have in-person informational booths throughout the year at community events to provide disaster preparedness outreach.

- *Are there any gaps in your capabilities to engage the public about natural hazards and your jurisdiction's vulnerabilities?*

One gap that we have identified is the use of our emergency alert system through TC Alert. We have the ability and pay for the alerting service, but have not used it to alert public of pending events. We are implementing SOP's to utilize this service to our advantage.

- *How can your jurisdiction expand or improve its public education and outreach activities?*

The City of Lacey has mitigation initiatives to address improving our public outreach. We are partnering with Thurston County Emergency Management to work more outreach events in both jurisdictions. The City of Lacey is currently working with a consultant to update our CEMP which includes an annex that will address public education and outreach on emergency and disaster preparedness.

- *What type of mitigation actions can your jurisdiction take, if any, to engage your constituents and stakeholders about the natural hazard risks or mitigation actions?*

We have implemented an emergency management website page to give stakeholders information about disasters, share our HMP and our CEMP, and share emergency managers contact information for stakeholders to utilize if they have any questions. We also disseminate information through various social media accounts through our Public Affairs Department. The City of Lacey, in conjunction with our Thurston County regional partners, publish information through open house forums and hold community in-person forums for stakeholders to answer surveys and voice their concerns about disasters that they are concerned about in their areas for the HMP update.

The City of Lacey has four (4) mitigation actions that are included in our mitigation initiatives.

See: L-MH 10, L-MH 15, L-EH 5, and L-FH 2

Appendix A-2 National Flood Insurance Program Assessment

1. National Flood Insurance Program (NFIP) assessment worksheet

Evaluation for National Flood Insurance Program (NFIP) participation

- *Who is the floodplain manager? Is this their primary or a secondary role? Does this person have adequate training and capacity for their role?*

The Building Official is designated as the city's floodplain manager by Lacey Municipal Code (LMC) 14.34 - Flood Hazard Prevention. This is a secondary role for the Building Official. The Building Official is not a CFM, but the city may seek those qualifications for the building official in the future, or designate another person to act as floodplain manager with approval from city council.

- *Is the FIRM and FIS report in an accessible location? Does the community (or state) promote public access to floodplain information?*

Hard copies of the FIRM and FIS report are available to view at City Hall. Additionally, flood data layers can be added to the city's public facing city GIS system. We can also guide residents to the Thurston County Geodata website where flood zone information can be obtained, and/or and federal resources for FIRM and FIS data. City staff also work with community members one-on-one at the permit counter and can provide information related to flood plain management for those proposing work in flood hazard areas. It should be noted that due to the limited flood hazards within the city, questions related to flood hazards and flood plain development are rare.

- *How does the community support map change requests? These could be requests during the Risk MAP process or through Letters of Map Amendment or Revision.*

To date, the City of Lacey has not received any map change requests. If one were to be requested, we would work with our community member to answer questions and to provide support and guidance to submit changes per federal and state requirements. Any floodplain data would be incorporated into future map revisions.

- *Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?*

The city has very limited flood hazard areas. Map changes generally only occur during the FEMA map updated process. The city has not obtained floodplain data or completed independent modeling of flood hazard areas. If this were to occur, staff would forward the data to FEMA and request it be incorporated into future flood mapping efforts.

- *How does the community issue development permits in the special flood hazard area? Who is responsible for permitting?*

The Community & Economic Development Department is responsible for all land use and building permitting in Lacey. As permits are submitted they are reviewed for compliance with applicable building and land use regulations. Projects located within flood hazard areas will need to complete a flood plain development permit and would be reviewed against applicable regulations. In addition to LMC 14.34, the City of Lacey Shoreline Master Program and critical areas ordinances effectively restrict development in the limited flood hazard areas within the Lacey city limits. Although generally not permitted, any buildings that are proposed to be constructed within flood hazard areas would be reviewed by the Building Department to ensure that all building codes related to flood plain development, (elevation requirements, flood proofing, etc.) are met.

- *How are floodplains regulated in new subdivisions?*

N/A

- *Does the community maintain elevation records? Does it track the number of buildings in the special flood hazard area?*

Lacey does not maintain specific elevation records. We do require elevations on our grading permit materials and on civil drawings for proposed projects and maintain records of these drawings. The city has not received building permit applications for buildings in the special flood hazard areas.

- *How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?*

City of Lacey staff works with project applicants to determine if projects are located in special flood hazards areas. Although there are very limited instances of projects located within the flood hazard area, those that may be would be briefed on the rules of development, during a pre-submission conference. The applicant would also be advised of the other ordinances and codes applicable to the project. Typically, with wetland, shoreline, and flood ordinances currently in place, projects do not impact the special flood hazard area. For those projects, applicants that may choose to proceed with a development that may be located in the SFHA, the applicant would be required to submit a floodplain development permit which would go through the applicable land use approval process to ensure all code requirements are met. Development and building plans are reviewed during the application review period to ensure compliance with all codes. Regular inspections are completed during the building and development process to ensure projects are completed according to approved plans. For violations, Lacey has a Code Enforcement Officer; however, they are not currently monitoring or enforcing any active floodplain violations.

- *How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?*

This is a known gap in our current plan. We will provide further guidance in the month of October via our Public Affairs Department. The Emergency Management & Safety Coordinator plans to provide public outreach to our community to provide awareness of resources for flood insurance programs.

NFIP Topic	Response	Source of Information	Notes - If you were unsure or answered "no" to any of these questions, consider short- and long-term action items to address them.
Staff Resources			
Who is responsible for floodplain management in your community? Do they serve any roles other than Community Floodplain Administrator (FPA)?	Building Official/Fire Marshal	LMC 14.34.090	
Is the Community FPA or NFIP Coordinator a Certified Floodplain Manager?	No	Community FPA	Provide training, require successor to have a CFM certificate, or designate another employee to be the CFM.
Is floodplain management an auxiliary function?	Yes	Community FPA	
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	The City of Lacey has very little floodplain areas within its jurisdiction. The identified floodplain areas in Lacey are concentrated around lakes, creeks, and some wetlands. All of these areas are also subject to the city's various critical area regulations or shoreline master program. These regulations require setbacks and/or buffers for proposed development that results in	Community FPA	

	development occurring significantly outside the BFE.		
Insurance Summary			
How many NFIP policies are in the community? What is the total premium and coverage?	34	State NFIP Coordinator or FEMA NFIP Specialist	
How many claims have been paid out in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	<p>There have been three (3) claims paid out in the community.</p> <p>Total amount of paid claims has been \$8,088.00.</p> <p>There have been no claims for substantial damage.</p>	FEMA NFIP or Insurance Specialist	
How many structures (residential and non-residential) are exposed to flood risk within the community?	Unknown?	Community FPA	
Are there any repetitive or severe repetitive loss structures in the community?	No		
Describe any areas of flood risk with limited NFIP policy coverage.	NA	Community FPA and FEMA Insurance Specialist	
How does the community teach property owners or other stakeholders about the importance flood insurance?	This is a known gap in our current plan, we can provide further guidance in the month of October via our Public Affairs Department. The Emergency Management & Safety Coordinator plans to provide public outreach to our community to provide awareness of resources for flood insurance programs.		

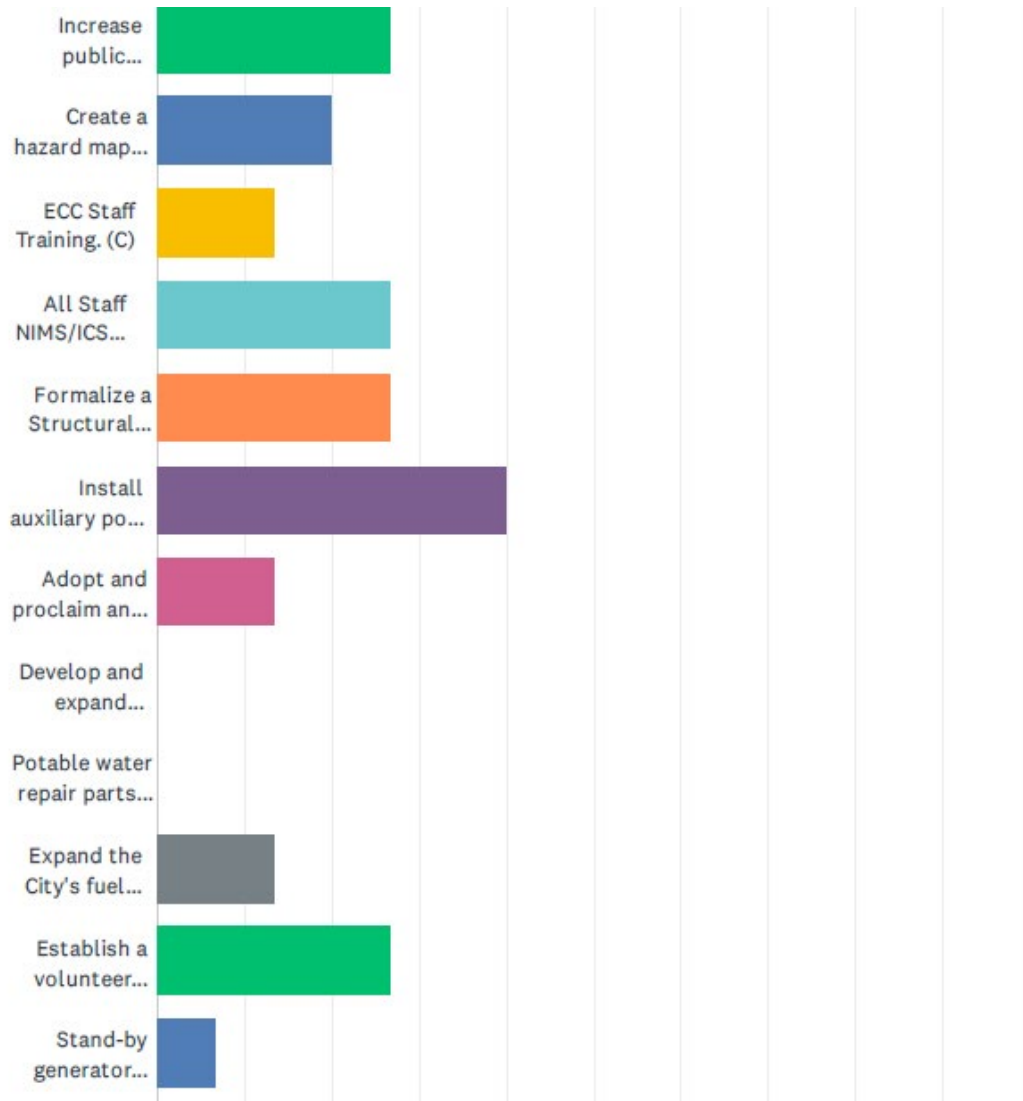
<p>What digital sources (like the FEMA Map Service Center, National Flood Hazard Layer) or non-regulatory tools does the community use?</p>	<p>The city has added FEMA's NFHL to our GIS database and is available for use by staff when performing property or project reviews and assessments.</p>		
<p>Compliance History</p>			
<p>Is the community currently suspended from the NFIP?</p>	<p>No</p>	<p>State NFIP Coordinator, FEMA NFIP Specialist, community records</p>	
<p>Are there any outstanding compliance issues? (i.e., current violations)?</p>	<p>No</p>		
<p>How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance?</p>	<p>Lacey's building department staff have received ATC-45 training and are prepared to perform damage assessments for impacted structures in the event of flood. The process requires application for a permit to repair the damage to the structure. If it is determined that the structure's finished floor elevation falls below the base flood elevation the structure will be required to be elevated in accordance with state and national requirements. Upon permit issuance, construction will commence, and inspection will follow in accordance with Building Codes.</p>		
<p>When was the most recent Community Assistance Visit</p>	<p>May, 2023</p>		

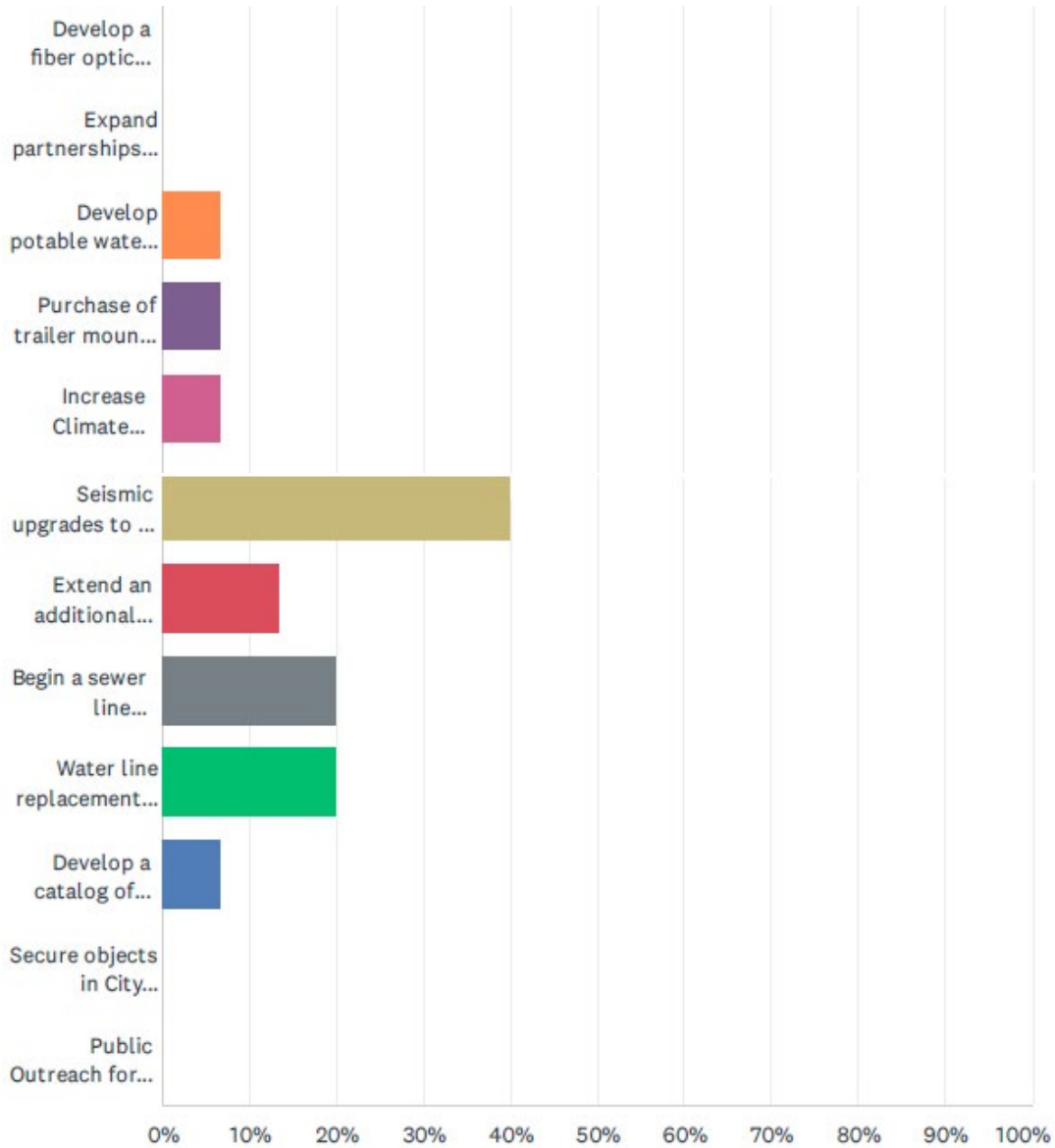
(CAV or Community Assistance Contact (CAC)?			
Is a CAV or CAC scheduled or needed?	No		
Regulation			
When did the community enter the NFIP?	June, 1980	Community Status Book	
Are the FIRMs digital or paper?	Both	Community FPA	
How does the community enforce local floodplain regulations and monitor compliance?	LMC 14.34 regulates development within the floodplain. This chapter expressly prohibits nearly all new development within floodplains. Additionally, as stated above, the city has very little floodplain area within its jurisdiction, and other critical area regulations are overlaid with floodplain areas, and result in development that occurs outside of floodplains.		

Appendix B-1 Draft Mitigation Actions Survey Results

City of Lacey – August 2023

Q1 Based on your understanding of hazards and how they might impact you or your community, select the three actions that you would like to see prioritized highest.





Sourced from Thurston Regional Planning Council

Q2. Based on your understanding of hazards and how they might impact you or your community, what other actions do you suggest should be taken to minimize hazard impacts? Share as much detail as you can.

Responses

1. Improve and use our notification system. I signed up for Smart911 but never hear anything unless it's an automatic message from the NWS. But I hear other actionable other issues from outside sources.
2. A volunteer response program plan can be done in conjunction with all other work, and really should be prioritized. Emergency response cannot be relied upon in a disaster, and neighborhood resilience will prove key in saving lives and mitigating harm. I indicated prioritizing structural upgrades and replacement, as keeping things from breaking in the 1st place is also pretty critical.
3. Coordinate with NGO, Businesses, Volunteer Groups, and Community Organizations to develop an emergency response plan.
4. One concern is our bridges throughout the area. We need to ensure that our bridges will be usable after an earthquake. Also we need to plan for the needs of our citizens for the food, water, and additional supplies and shelter needs during and after a major emergency.
5. If roadbeds are broken up, it is going to be difficult to move around for everyone, including responders. What type of vehicles will be used under these circumstances, and who will be the responsible parties seeing that needs are being met. I don't know. I suppose bulldozers could even out broken asphalt to make roads semi-drivable, so that people can get around. Communication will be very important if such a situation occurs.
6. Increase connectivity in new developments and retrofit existing ones for connections. This is for walking and cycling but could also be for emergency vehicles. This will allow for more walking and cycling if roadways are not passable. It would also allow for people to access transit more easily. Many developments have fences that surround the homes with only one or two entrances. This makes for extra-long walking and cycling routes to get to the bus and services or schools.
7. Fire hazards (actually ban-enforce fireworks sales - use)

Appendix B-2 Lacey Draft Annex Final Public Comment Summary

City of Lacey – February 2024

Q- What Section of the plan does your comment address?

Comment-1*Risk Assessment,*

We need to add extreme heat weather events to this plan, and establish a regional strategy to mitigate risk when these events occur. The heat dome weather event in 2021 killed more people in Thurston County than any other natural disaster in the last several years, and events like that one will be more frequent in years to come.

Mitigation Strategy,

We need to develop a strategy to motivate risk for screened heat events. See my previous comment. By including it in this plan, we will establish it as a priority that local jurisdictions must plan and account for.

Other - General Comments,

The Thurston Board of Health heard a presentation about the risks and impacts of extreme heat events a few months ago. I will share the presentation with TRPC and Lacey staff.

Other - General Comments,

I previously submitted a comment about needing to address extreme weather. However, I missed the section of the plan that addresses my concern when I reviewed it before. My mistake! I'm very glad to see the extreme weather risk assessment and mitigation plan in this document. Thankyou!

Comment-2 (Received by Ed Taylor, City of Lacey via email Sunday February 4, 2024)

Our community has more of a diverse community than your strategy identifies. Your data uses 2016-2020 numbers when the American Community Survey has numbers for 2022.

https://data.census.gov/table/ACSDP5Y2022.DP02?g=160XX00US5336745_040XX00US53&tid=ACSDP5Y2022.DP02

Here's an example of the difference. The new numbers show:

79.4% speak English only

8.6% speak Spanish

Your old data showed 82.6% speak English only and 6% speak Spanish.

It's state law for governments to provide life safety information in languages other than English if the limited English proficient population is five percent of the total population or 1,000 people, whichever is smaller. As a result, it's important to have accurate stats.

If using OFM figures, there are new estimates released as of 2021, which might be more up to date than what is presented. What I see is only for counties, though, not cities.

<https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/limited-english-proficiency-population-estimates>

Under vulnerable populations, the plan utilized a population figure from 2010 and an assessment of what our population will look like by 2040.

Later, some percentages are given — but that 2010 number remains. Is there a more up-to-date figure that can be used? With just percentages given, it makes it seem like a percentage of that 2010 number and feels like we're comparing apples and oranges. It's confusing to me, anyway.

The report also talks about social vulnerabilities and the national risk index, but there are flaws in this system. News site Politiico identifies problems with the risk index and the state has objected to its use. Has Lacey objected to the risk index or by incorporating it into the plan is Lacey accepting the index and its findings?

The liquefaction hazard map is a great public education tool and I wish more would be done to get the word out about this hazard, especially to those neighborhoods that a higher susceptibility. Ideas could be to make a higher resolution map available on the city website & talk about earthquake insurance.