

1.0 THURSTON PUD

1.1 Local Hazard Mitigation Planning Team

Primary Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Hazard Mitigation Planning Team Members.

Name	Title
Kim Gubbe	Director of Planning and Compliance
Doug Piehl, P.E.	District Engineer III
Jim Campbell	Director of Field Operation
Rick Sanchez	Field Technician III
Dan Lovell	Project Management Specialist I
Rich Holmes	Field Technician I

1.2 Jurisdiction Profile

1.2.1 Overview

Thurston PUD was officially formed in 1938 by a vote of the people. Thurston PUD provides water planning and utility services to the citizens of Thurston County, and also owns and operates water systems in Pierce, Lewis, Grays Harbor, and Mason counties.

Thurston PUD’s three elected Commissioners assumes responsibility for the adoption of this plan; the Planning and Compliance Department will oversee its implementation.

1.2.2 Service Area

The District serves water systems throughout Lewis County:

- Total Water Systems 54
- Total Customer Connections 678
- Total Estimated People Served 1,830

1.2.3 Assets

Table 1-2 summarizes the assets of the District and their value.

Table 1-2. Special Purpose District Assets.

Asset	Value
Property	
Equipment	
Critical Facilities/Community Lifelines/Water Systems	
2533 (2439 St Hwy 508, Onalaska 98532)	\$139,375
4199-A (4199 Jackson Hwy, Chehalis 98532)	\$105,925
4199-B (4199 Jackson Hwy, Chehalis 98532)	\$95,725
4199-C (4199 Jackson Hwy, Chehalis 98532)	\$103,725
4199-D (4199 Jackson Hwy, Chehalis 98532)	\$93,725
Antrim (114 Topaz Ct, Winlock 98596)	\$137,350
Aust (134 Chehalis Valley Dr, Chehalis 98532)	\$650,525
Bear (110 Jack Fir Ct E, Packwood 98361)	\$76,195
Brockway #1 (106 Walsh Lane, Chehalis 98532)	\$115,325
Brockway #2 (106 Walsh Lane, Chehalis 98532)	\$116,450
Brookhaven 1 (116 Kim Court, Napavine 98532)	\$161,150
Brookhaven 2 (108 Kim Court, Napavine 98532)	\$140,675
Brookhaven 3 (119 Karen Court, Napavine 98532)	\$136,350
Cougar (110 Jack Fir Ct E, Packwood 98361)	\$91,195
Cowlitz (151 Barrier Dr, Salkum 98582)	\$136,450
Crow (110 Jack Fir Ct E, Packwood 98361)	\$161,395
Eagle (110 Jack Fir Ct E, Packwood 98361)	\$99,195
Eastridge 2 (103 Kelli Lane, Centralia 98531)	\$127,225
Eastridge 3 (103 Kelli Lane, Centralia 98531)	\$139,925
Eastridge W (133 Big Hanaford Rd, Centralia 98531)	\$199,775
Foron (2910 Yahtahay St, Centralia 98531)	\$147,550
Fuller (103 Prairie Ln, Salkum 98582)	\$148,500
Granite #1 (115 Granite Lane, Chehalis 98532)	\$109,625
Granite #2 (123 Granite Lane, Chehalis 98532)	\$128,125
Harmon Rd (454 Harmon Road, Chehalis 98532)	\$126,975
Hemlock (110 Jack Fir Ct E, Packwood 98361)	\$84,195
Hidden Meadows I (184 Hidden Meadows, Chehalis 98532)	\$173,825
Hidden Meadows II (184 Hidden Meadows, Chehalis 98532)	\$164,825
Hidden Meadows III (115 Bridle Path Ln, Chehalis 98532)	\$177,875
Hunter 1 (169 Josephine Lp, Onalaska 98570)	\$133,950
Hunter 2 (169 Josephine Lp, Onalaska 98570)	\$128,700
Hunter 3 (169 Josephine Lp, Onalaska 98570)	\$132,200
Hunter 4 (169 Josephine Lp, Onalaska 98570)	\$132,700
Johnson (547 Larson Rd, Silvercreek 98585)	\$159,450
Maple (110 Jack Fir Ct E, Packwood 98361)	\$95,195
Margaret Meadows (118 Margaret Meadows Dr, Centralia 98531)	\$121,325
Mountain Lakeview (126 Zola Dr., Cinebar 98533)	\$667,800
Post Lane (149A Post Lane, Chehalis 98532)	\$146,150

Asset	Value
Raubuck (277 Raubuck Rd, Winlock 98596)	\$130,796
Raven (110 Jack Fir Ct E, Packwood 98361)	\$76,195
Red Cloud 2 (111 Serene Ln, Onalaska 98570)	\$160,825
RES 1 (278 Raubuck Rd, Winlock 98596)	\$130,796
RES 2 (279 Raubuck Rd, Winlock 98596)	\$126,796
RES 3 (280 Raubuck Rd, Winlock 98596)	\$154,950
ROM (104 Rainbow Court W, Morton 98356)	\$722,029
Rommerman Rd (108 Clearview Circle, Chehalis 98532)	\$144,550
Salkum (151 Barrier Dr, Salkum 98582)	\$141,450
Sandra Avenue (2910 Sandra Ave, Centralia 98531)	\$308,800
Sward (106 Draws Lane, Winlock 98596)	\$257,350
Taylor Cr #1 (107 Taylor Creek Ln, Chehalis 98532)	\$121,375
Taylor Cr #2 (107 Taylor Creek Ln, Chehalis 98532)	\$145,775
Timberline Village (107 Bearfoot Rd, Packwood 98361)	\$4,044,755
Valley Meadows (140 Valley Meadows Lp, Chehalis 98532)	\$1,116,820
Whitney (112 Deer Fern Ln, Chehalis 98532)	\$171,600
Total:	\$13,961,482

1.3 Current Trends

Growth trends do not affect the districts assets. All assets are currently available for future growth in the District's service areas.

1.4 Capability Assessment

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning. Findings of the capability assessment were reviewed to identify opportunities to expand, initiate, or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

An assessment of planning and regulatory capabilities is presented in Table 1-3.

An assessment of fiscal capabilities is presented in Table 1-4.

An assessment of administrative and technical capabilities is presented in Table 1-5.

An assessment of education and outreach capabilities is presented in Table 1-6.

Classifications under various community mitigation programs are presented in Table 1-7.

The community's adaptive capacity for the impacts of climate change is presented in Table 1-8.

Table 1-3. Planning and Regulatory Capability.

Plan, Study, or Program	Date of Most Recent Update	Comment
Thurston PUD Water System Plan – Part A	3/30/2021	Approved by WADOH 10 year plan
SMA Plan Update	3/30/2021	Approved by WADOH 10 year plan

Table 1-4. Fiscal Capability.

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas, or Electric Service	Yes
<i>If yes, specify:</i> Water Rates	
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No
<i>If yes, specify:</i> Enter Response	

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Table 1-5. Administrative and Technical Capability.

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If yes, Department/Position:</i>	No
Engineers or professionals trained in building or infrastructure construction practices <i>If yes, Department/Position:</i> Planning and Compliance/District Engineer Water Only	Yes
Planners or engineers with an understanding of natural hazards <i>If yes, Department/Position:</i> Planning and Compliance/District Engineer Water Only	Yes
Staff with training in benefit/cost analysis <i>If yes, Department/Position:</i> Planning and Compliance/District Engineer	Yes
Surveyors <i>If yes, Department/Position:</i>	No
Personnel skilled or trained in GIS applications <i>If yes, Department/Position:</i> Planning and Compliance/District Engineer	Yes
Scientist familiar with natural hazards in local area <i>If yes, Department/Position:</i>	No
Emergency manager <i>If yes, Department/Position:</i> Planning and Compliance/Director	Yes
Grant writers <i>If yes, Department/Position:</i> Planning and Compliance/Director	Yes
Other <i>If yes, Department/Position:</i>	

Table 1-6. Education and Outreach Capability.

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Current Approved Plan from Thurston County	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i>	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i>	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Monthly Newsletters, Call-Em-All Voice or Text Messaging system.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> One Thurston County Water System has Earthquake Alarm System	Yes

Table 1-7. Community Classifications.

	Participating?	Classification	Date Classified
FIPS Code	No		
UEI #	Yes	QYTKXNE588N9	1/24/2023
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		

Table 1-8. Adaptive Capacity for Climate Change.

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i> Drought is the highest hazard to the water systems. TPUD is working on accessing all vulnerable wells	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i> Resolution 10-30 Greenhouse Gas Policy	Medium
Identified strategies for adaptation to impacts <i>Comment:</i> Conservation measures, including water reduction incentives, educational materials, and tiered water rates	Medium
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negatively impacted <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment:</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy's current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystem's capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

1.5 Integration Review

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Annex Thurston County Hazard Mitigation Plan** – Approved in 9/16/2019
- **Water System Plan, Part A** - Includes Emergency Planning, Climate Change Policy and Capital Planning.

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Pierce County Hazard Mitigation Plan** —Thurston PUD has water systems throughout Pierce Co and is developing an annex plan.
- **Future Water System Plan Update**—Updated and approved by WADOH every 10 years.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.6 Risk Assessment

1.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-9. Past Natural Hazard Events.

Type of Event	FEMA, State, or Local Disaster # or Declaration	Date	Damage Assessment
Severe Winter Storm, Straight-line Winds, Flooding, Landslides, and Mudslides	4682	11/3-11/8/2022	
Goat Rocks Fire – Wildfire size 6,178 acres		8/8/2022 – 11/1/2022	No Damage, Water System was used for mitigation
Severe Winter Storms, Snowstorms, Straight-line Winds, Flooding	4650	12/26/2021-1/15/2022	
Flooding and Mudslides	4635	11/13-11/15/2021	
Severe Winter Storm, Straight-line Winds, Flooding, Landslides, and Mudslides	4593	12/29/2020-1/16/2021	
Severe Storms, Flooding, Landslides, and Mudslides	4539	1/20-2/10/2020	
Biological, COVID-19	4481	1/20/2020-9/11/2023	
Biological, COVID-19	3427	1/20/2020-9/1/2023	
Severe Winter Storms, Flooding, Landslides, and Mudslides	4309	1/30-2/22/2017	
Severe Winter Storm, Straight-line Winds, Flooding, Landslides, Mudslides, Tornado	4235	12/1-12/15/2015	Damages Along Cowlitz River, Packwood Area, Costs Unknown
Severe Storms, Straight-line Winds, Flooding, Landslides, Mudslides	4249	11/12-11/21/2015	
Severe Winter Storm, Flooding, Landslides, and Mudslides	4056	1/14-1/23/2012	

Type of Event	FEMA, State, or Local Disaster # or Declaration	Date	Damage Assessment
Severe Winter Storm, Flooding, Landslides, and Mudslides	1963	1/11-1/21/2011	
Severe Winter Storm and Record and Near Record Snow	1825	12/12/2008-1/05/2009	
Severe Winter Storm, Landslides, Mudslides, and Flooding	1817	1/06-1/16/2009	
Severe Storms, Flooding, Landslides, Mudslides	1734	12/1-12/17/2007	
Severe Winter Storm, Landslides, Mudslides	1682	12/14-12/15/2006	
Severe Storms, Flooding, Landslides, Mudslides	1671	11/2-11/11/2006	Damages Along Cowlitz River, Packwood Area, Costs Unknown
Earthquake	1361	2/28-3/16/2001	
Severe Winter Storms, Flooding	1159	12/26/1996-2/10/1997	
Severe Storms, Flooding	1100	1/26-2/23/1996	
Storms, High Winds, Floods	1079	11/7-12/18/1995	
Severe Storm, High Winds	981	1/20-1/21/1993	
High Tides, Severe Storm	896	12/20-12/31/1990	
Flooding, Severe Storm	883	11/9-12/20/1990	
Flooding, Severe Storm	852	1/6-1/14/1990	
Severe Storms, Flooding	784	11/22-11/29/1986	
Volcanic Eruption, Mt. St. Helens	623	5/21/1980	
Severe Storms, Mudslides, Flooding	545	12/10/1977	
Severe Storms, Flooding	492	12/13/1975	
Severe Storms, Snowmelt, Flooding	414	1/25/1974	
Severe Storms, Flooding	322	2/01/1972	
Heavy Rains, Melting Snow, Flooding	300	2/09/1971	
Heavy Rains and Flooding	185	12/29/1964	

1.6.2 Hazard Risk Ranking

Table 1-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an

assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions target hazards with high and medium rankings.

Table 1-10. Hazard Risk Ranking.

Rank	Hazard	Risk Ranking Score	Risk Category
1	Severe Weather		High
2	Flood	39	High
3	Wildfire	36	High
4	Earthquake	32	Medium
5	Volcano	22	Medium
6	Landslide	12	Low
7	Dam Failure	14	Low
8	Avalanche		Low

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- No backup power during severe weather events
- Emergency drinking water source after catastrophic event
- Climate Change - Drought

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in this annex.

1.7 Status of Previous Plan Actions

Table 1-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-11. Status of Previous Plan Actions.

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update Check Action # in Update if Yes
Did not participate in previous plan.			

1.8 Hazard Mitigation Action Plan

Table 1-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-13 identifies the priority for each action. Table 1-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-12. Hazard Mitigation Action Plan Matrix.

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action TPUD-1 —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	1,3,5,6	Thurston PUD		High	HMGP, BRIC, FMA	Long Term
Action TPUD-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
New and Existing	2,3	Lewis County Emergency Management	Thurston PUD	Low	Staff Time, Water Funds	Short Term
Action TPUD-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power at all water systems.						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	1,4,5,6	Thurston PUD		High	HMGP, BRIC	Long Term
Action TPUD-4 — Implement an emergency preparedness communications and outreach strategy through utility bill inserts. Information campaigns will educate district customers about personal preparedness and disaster resilience						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	3,4	Thurston PUD		Low	Staff Time, Water Funds	Short-Term
Action TPUD-5 — Install seismic sensors and automatic valves on the district’s largest and regionally most important reservoirs. Automatic shut off valves can preserve water in the event of a water main rupture.						
<i>Hazards Mitigated:</i> Earthquake						
Existing	1,4,5,6	Thurston PUD		High	Water Fund, HMGP, BRIC, FMA	Long-Term
Action TPUD-6 — Evaluate the installation of manual operated pumps at all Group A water systems to provide a low-cost means to access groundwater for domestic use during emergencies with prolonged power outages, which could include emergency water sanitation kits and water tree stations, then providing public education on how to use them						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	1,3,4,5,6	Thurston PUD	Customers	High	Staff Time, Water Funds, HMGP, BRIC, FMA	Long-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action TPUD-7 — Implement a systemwide remote monitoring system to record water pressure and flow rates, reservoir levels, disinfectant levels, power supply, security, and other parameters. Remote sensors improve the district’s detection and response during emergencies.						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	1,4,5,6	Thurston PUD		High	Water Funds, HMGP, BRIC, FMA	Long-Term
Action TPUD-8 — Develop and implement a district-wide wildfire prevention strategy to remove hazardous vegetative fuels around facilities and retrofit wood framed structures with fire-resistant materials.						
<i>Hazards Mitigated:</i> Wildfire, Severe Weather						
Existing	1,5,6	Thurston PUD		Low	Staff Time, Water Funds, HMGP, BRIC	Short-Term
Action TPUD-9 — Evaluate and implement mitigation to vulnerable wells to determine best action to mitigate water outages due to drought which could include, but not limited to: Deeping or replacing of wells, intertying or consolidating systems to give greater redundancy and replace high-leak sections of distribution.						
<i>Hazards Mitigated:</i> Severe Weather, Drought						
Existing	1,4,5,6	Thurston PUD		Low	Staff Time, HMGP, BRIC, FMA	Short-Term
Action TPUD-10 — Evaluate and retrofit the District’s headquarters to serve as its emergency operations center.						
<i>Hazards Mitigated:</i> Severe Weather, Drought						
Existing	1,4,5,6	Thurston PUD		Low	Staff Time, HMGP, BRIC, FMA	Short-Term
Action TPUD-11 — Creating and implementing a communication plan between Lewis County Emergency Response teams and Thurston PUD.						
<i>Hazards Mitigated:</i> Severe Weather, Flood, Wildfire, Earthquake, Volcano, Landslide, Dam Failure, Avalanche						
Existing	2,3,4	Thurston PUD	Lewis County Emergency Management	Low	Staff Time	Short-Term

a. Short-term = Existing program that will continue or new program that will start within one year; Medium-term = Completion within 5 years; Long-term = Completion within 10 years. On-going = phased project that will have an extended timeframe. Acronyms used here are defined at the beginning of this volume.

Table 1-13. Mitigation Action Priority.

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
TPUD-1	4	High	High	Yes	Yes	No	Medium	Medium
TPUD-2	2	Low	Low	Yes	No	Yes	Low	Low
TPUD-3	4	High	High	Yes	Yes	No	Medium	High
TPUD-4	2	Low	Low	Yes	No	Yes	Low	Low
TPUD-5	4	High	High	Yes	Yes	Yes	High	High
TPUD-6	5	High	High	Yes	Yes	Yes	Medium	High
TPUD-7	4	High	Medium	Yes	Yes	Ye	Medium	High
TPUD-8	3	High	Medium	Yes	Yes	Yes	Medium	Medium
TPUD-9	4	High	Low	Yes	Yes	Yes	Medium	Medium
TPUD-10	4	High	Low	Yes	Yes	Yes	Medium	Medium
TPUD-11	3	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 1-14. Analysis of Mitigation Actions.

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Severe Weather	1,2,3,4,6,7,8,9,10	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Flood	1,2,3,4,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Wildfire	1,2,3,4,6,7,8	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Medium-Risk Hazards								
Earthquake	1,2,3,4,5,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Volcano	1,2,3,4,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Low-Risk Hazards								
Landslide	1,2,3,4,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Dam Failure	1,2,3,4,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11
Avalanche	1,2,3,4,6,7	1,3,5,6,7,8,9,10	2,4	1,3,5,6,7,9	1,3,4,5,6,7,8,9,10,11	1,3,5,8,10	1,4,7,8,9	2,4,6,11

a. See the introduction to this volume for explanation of mitigation types.

1.9 Public Outreach

Table 1-15 lists public outreach activities for this jurisdiction.

Table 1-15. Local Public Outreach.

Local Outreach Activity	Date	Number of People Involved
Participating in Lewis County Public Outreach		

1.10 Information Sources Used for This Annex

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

Water System Plan (WSP) – Part A – The WSP was used to support the actions created in the Hazard Mitigation Action Plan.

Thurston PUD Strategic Plan – The Commissioners Strategic Plan was used to develop the plan through their vision, mission and purpose:

- **Vision:** Be leaders, educators, and champions of public utility service quality, water, safety and resource conservation.
- **Mission:** Provide safe, reliable, affordable, and sustainable utility services to the customers we serve.
- **Purpose:** The purpose of PUD No. 1 of Thurston County is to serve the public with quality utility services.

The following outside resources and references were reviewed:

Hazard Mitigation Plan Annex Development Toolkit—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.