

Appendix C

Risk Assessment Ratings Calculation Tables

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Appendix C: Risk Assessment Ratings Calculation Tables

Dam Failure Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure			
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	230	571	93.7%	\$37,907,781
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.0%	\$0
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	636	1,719	1.2%	\$149,534,795
Total	300,500	104,854	98,260	\$73,540,652,648	866	2,291	0.8%	\$187,442,576

Jurisdiction	Acres of Inundation Area	Number of Structures in Skookumchuck Dam Inundation Area (2)							
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	
Bucoda	260	222	6	0	0	0	2	0	
Lacey	0	0	0	0	0	0	0	0	
Olympia	0	0	0	0	0	0	0	0	
Rainier	0	0	0	0	0	0	0	0	
Tenino	0	0	0	0	0	0	0	0	
Tumwater	0	0	0	0	0	0	0	0	
Yelm	0	0	0	0	0	0	0	0	
Unincorporated	16,839	615	15	3	0	1	2	0	
Total	17,100	837	21	3	0	1	4	0	

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure			
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	0	0	0.0%	\$0
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.0%	\$0
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	796	2,116	1.5%	\$143,783,309
Total	300,500	104,854	98,260	\$73,540,652,648	796	2,116	0.7%	\$143,783,309

Jurisdiction	Acres of Inundation Area	Number of Structures in Alder and LaGrande Dams Inundation Area (2)							
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	
Bucoda	0	0	0	0	0	0	0	0	
Lacey	0	0	0	0	0	0	0	0	
Olympia	0	0	0	0	0	0	0	0	
Rainier	0	0	0	0	0	0	0	0	
Tenino	0	0	0	0	0	0	0	0	
Tumwater	0	0	0	0	0	0	0	0	
Yelm	0	0	0	0	0	0	0	0	
Unincorporated	7,788	757	34	1	0	0	0	4	
Total	7,788	757	34	1	0	0	0	4	

Jurisdiction	MUNICIPAL RISK SCORES AND RATINGS Dam Failure (S)							
	Probability		Impact on People				Impact on Property	
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)
Bucoda	Low	1	93.67%	High	3	9	94.06%	High
Lacey	Low	1	0.00%	None	0	0	0.00%	None
Olympia	Low	1	0.00%	None	0	0	0.00%	None
Rainier	Low	1	0.00%	None	0	0	0.00%	None
Tenino	Low	1	0.00%	None	0	0	0.00%	None
Tumwater	Low	1	0.00%	None	0	0	0.00%	None
Yelm	Low	1	0.00%	None	0	0	0.00%	None
Unincorporated	Low	1	2.67%	Low	1	3	1.86%	Low
Total	Low	1	1.47%	Low	1	3	0.71%	Low

Notes:

- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
- (2) Values based off of 2022 tax assessor data provided by Thurston County.

- (3) Percent of residential buildings exposed multiplied by the Estimated Population.
- (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

Skookumchuck Dam (3)										
			Economic Impact							
Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
\$22,032,603	\$59,940,384	94.1%	7,248	169	12	230	\$28,330,608	\$18,079,019	\$46,409,627	72.8%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$84,005,388	\$233,540,183	0.9%	14,362	20	0	566	\$53,433,544	\$31,212,504	\$84,646,048	0.3%
\$106,037,991	\$293,480,567	0.4%	21,610	188	12	796	\$81,764,152	\$49,291,523	\$131,055,675	0.2%

Total
230
0
0
0
0
0
0
636
866

Dam Failure Alder and LaGrande Dams on Nisqually River (3)										
			Economic Impact							
Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$84,128,736	\$227,912,044	0.9%	33,115	31	2	567	\$54,674,990	\$88,257,261	\$142,932,250	0.6%
\$84,128,736	\$227,912,044	0.3%	33,115	31	2	567	\$54,674,990	\$88,257,261	\$142,932,250	0.2%

Total
0
0
0
0
0
0
0
0
796
796

Skookumchuck, Alder and LaGrande Dams							
Property		Impact on Economy				Risk	
Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
3	6	72.83%	High	3	3	18	Medium
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
1	2	0.92%	Low	1	1	6	Low
1	2	0.37%	Low	1	1	6	Low

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population.
 (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Dam Failure Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICTS RISK SCORE						
	Probability		Impact on People				
East Olympia Fire District	Low	1	0.00%	None	0	0	0.00%
Intercity Transit	Low	1	0.00%	None	0	0	0.00%
Lacey Fire District	Low	1	0.94%	Low	1	3	0.00%
McLane Black Lake Fire District	Low	1	0.00%	None	0	0	0.00%
Olympia School District	Low	1	0.00%	None	0	0	0.00%
SE Thurston Fire Authority	Low	1	4.09%	Low	1	3	0.00%
South Bay Fire District	Low	1	0.00%	None	0	0	0.00%
The Evergreen State College	Low	1	0.00%	None	0	0	0.00%
Thurston PUD	Low	1	0.76%	Low	1	3	3.85%
West Thurston Regional Fire Authority	Low	1	3.04%	Low	1	3	0.00%

Jurisdiction	Special Purpose District Critical Facilities Loss Detail						
	Critical Facilities	Facilities in Dam Failure	% in Hazard	Total Valuation	Structure Value	% Loss of Affected Facilities	% Total Value Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0	0%	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0%	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0%	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0%	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0%	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0	0%	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0%	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0%	0.00%
Thurston PUD	104	4	3.85%	\$157,995,117	\$3,598,933	0%	0.00%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0%	0.00%

Appendix C: Risk Assessment Ratings Calculation Tables

Dam Failure Hazard Scenario, by Watershed, Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure					Economic Impact							
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)	Value Structure and contents in \$ Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Content Damaged (6)
Bacoda	610	245	237	\$63,726,655	230	571	93.7%	\$37,907,781	\$22,632,603	\$59,940,384	94.1%	7,248	169	12	230	\$28,130,608	\$18,075,000
Lacey	58,180	18,985	17,637	\$15,357,526,547	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Rainier	2,510	875	814	\$393,063,023	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Tenino	2,050	751	651	\$404,778,123	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	168	453	2.0%	\$37,643,405	\$21,550,167	\$59,193,572	2.1%	3,755	6	0	148	\$9,719,312	\$5,910,000
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	86	238	2.0%	\$23,947,418	\$14,843,629	\$38,791,047	1.9%	1,725	3	0	68	\$2,617,237	\$1,360,000
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Meallister Creek	18,142	6,855	6,490	\$3,712,893,851	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,846	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	382	1,029	63.6%	\$87,943,971	\$47,611,593	\$135,555,564	67.3%	8,881	10	0	350	\$41,096,905	\$23,900,000
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Total	308,500	104,854	98,260	\$73,540,652,648	866	2,291	0.8%	\$187,442,576	\$106,837,991	\$293,498,567	6.6%	21,610	188	12	796	\$81,764,152	\$49,200,000

Jurisdiction	Acres of Inundation Area	Number of Structures in Skookumchuck Dam Inundation Area (2)							
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
Bacoda	260	222	6	0	0	0	0	0	230
Lacey	0	0	0	0	0	0	0	0	0
Olympia	0	0	0	0	0	0	0	0	0
Rainier	0	0	0	0	0	0	0	0	0
Tenino	0	0	0	0	0	0	0	0	0
Tumwater	0	0	0	0	0	0	0	0	0
Yelm	0	0	0	0	0	0	0	0	0
Unincorporated Black River	5,093	162	4	1	0	1	0	168	168
Unincorporated Budd Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Chehalis River	4,734	85	1	0	0	0	0	86	86
Unincorporated Deschutes Mountain Zone	0	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Lower	0	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Middle	0	0	0	0	0	0	0	0	0
Unincorporated Eld Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Henderson Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Meallister Creek	0	0	0	0	0	0	0	0	0
Unincorporated Nisqually	0	0	0	0	0	0	0	0	0
Unincorporated Nisqually Reach	0	0	0	0	0	0	0	0	0
Unincorporated Skookumchuck River	7,012	368	10	2	0	2	0	382	382
Unincorporated Totten Inlet	0	0	0	0	0	0	0	0	0
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0	0
Total	17,099	837	21	3	0	1	2	866	866

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure					Economic Impact							
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)	Value Structure and contents in \$ Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Content Damaged (6)
Bacoda	610	245	237	\$63,726,655	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Lacey	58,180	18,985	17,637	\$15,357,526,547	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Rainier	2,510	875	814	\$393,063,023	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Tenino	2,050	751	651	\$404,778,123	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Meallister Creek	18,142	6,855	6,490	\$3,712,893,851	0	211	2.9%	\$39,827,218	\$26,271,871	\$66,099,090	1.8%	9,272	9	0	175	\$12,628,498	\$7,700,000
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,846	585	1,610	10.5%	\$103,956,090	\$57,856,864	\$161,812,955	8.3%	23,843	22	2	392	\$42,646,492	\$51,100,000
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0	\$0	0.0%	0	0	0	0	\$0	\$0
Total	308,500	104,854	98,260	\$73,540,652,648	796	2,116	0.7%	\$143,783,309	\$84,128,736	\$227,912,044	0.3%	33,115	31	2	567	\$54,674,990	\$88,200,000

Jurisdiction	Acres of Inundation Area	Number of Structures in Alder and LaGrande Dams Inundation Area (2)							
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
Bacoda	0	0	0	0	0	0	0	0	0
Lacey	0	0	0	0	0	0	0	0	0
Olympia	0	0	0	0	0	0	0	0	0
Rainier	0	0	0	0	0	0	0	0	0
Tenino	0	0	0	0	0	0	0	0	0
Tumwater	0	0	0	0	0	0	0	0	0
Yelm	0	0	0	0	0	0	0	0	0
Unincorporated Black River	0	0	0	0	0	0	0	0	0
Unincorporated Budd Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Chehalis River	0	0	0	0	0	0	0	0	0
Unincorporated Deschutes Mountain Zone	0	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Lower	0	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Middle	0	0	0	0	0	0	0	0	0
Unincorporated Eld Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Henderson Inlet	0	0	0	0	0	0	0	0	0
Unincorporated Meallister Creek	2,427	181	29	1	0	0	0	211	211
Unincorporated Nisqually	5,361	576	5	0	0	0	4	585	585
Unincorporated Nisqually Reach	0	0	0	0	0	0	0	0	0
Unincorporated Skookumchuck River	0	0	0	0	0	0	0	0	0
Unincorporated Totten Inlet	0	0	0	0	0	0	0	0	0
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0	0
Total	7,788	787	34	1	0	0	4	796	796

Jurisdiction	Probability		Impact on People				Impact on Property				Impact on Economy				Risk	
	Probability (High, Med, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Med, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Med, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Med, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
Lacey	Low	1	93.7%	High	3	96.0%	High	3	62.8%	High	3	3	3	9	18	Medium
Olympia	Low	1	0.0%	None	0	0.0%	None	0	0.0%	None	0	0	0	0	0	Low
Rainier	Low	1	0.0%	None	0	0.0%	None	0	0.0%	None	0	0	0	0	0	Low
Tenino	Low	1	0.0%	None	0	0.0%	None	0	0.0%	None	0	0	0	0	0	Low
Tumwater	Low	1	0.0%	None	0	0.0%	None	0	0.0%	None	0	0	0	0	0	Low
Yelm	Low	1	0.0%	None	0	0.0%	None	0	0.0%	None	0	0	0	0	0	Low
Unincorporated Black River	Low	1	2.0%	Low	1	2.1%	Low	1	2	0.56%	Low	1</				

Appendix C: Risk Assessment Ratings Calculation Tables

Earthquake Cascadia M9.3 Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Exposure					Structure Debris (x 1,000 Tons) (3)	Number of Displaced Households
	Estimated Population (1)	% Population Exposed	Total Number of Buildings (2)	Total Building Value (Structure and contents in \$) (2)	% of Total Value Exposed		
Bucoda	610	100%	245	\$63,726,655	100%	16.79	40
Lacey	58,180	100%	18,985	\$17,357,526,547	100%	272.95	1,57
Olympia	56,370	100%	18,242	\$19,116,213,011	100%	474.69	2,01
Rainier	2,510	100%	875	\$393,003,023	100%	11.36	14
Tenino	2,030	100%	751	\$404,778,123	100%	22.72	13
Tumwater	26,360	100%	9,513	\$9,362,171,728	100%	198.35	811
Yelm	10,680	100%	3,139	\$2,077,637,133	100%	44.59	68
Unincorporated	143,760	100%	53,104	\$24,765,596,428	100%	315.83	655
TOTAL	300,500	100%	104,854	\$73,540,652,648	100%	1,357.28	5,18

Jurisdiction	RISK RANKING						
	Probability		Impact on People				% of Total Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
Bucoda	Medium	2	100.00%	High	3	9	100.0
Lacey	Medium	2	100.00%	High	3	9	100.0
Olympia	Medium	2	100.00%	High	3	9	100.0
Rainier	Medium	2	100.00%	High	3	9	100.0
Tenino	Medium	2	100.00%	High	3	9	100.0
Tumwater	Medium	2	100.00%	High	3	9	100.0
Yelm	Medium	2	100.00%	High	3	9	100.0
Unincorporated	Medium	2	100.00%	High	3	9	100.0
TOTAL	Medium	2	100.00%	High	3	9	100.0

Notes:

- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
- (2) Values based off of 2022 tax assessor data provided by Thurston County.
- (3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 5.1.
- (4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 5.1.

Economic Impact - Cascadia M9.3 Scenario					
Number of Damaged Units (3)	People Requiring Short-Term Shelter (3)	Value Structure in \$ Damaged (4)	Value Contents in \$ Damaged (4)	Total Value (Structure and Contents in \$) Damaged (4)	% of Total Value Damaged
	24	\$6,483,618	\$2,086,159	\$8,569,777	13.4%
2	877	\$652,953,041	\$294,139,558	\$947,092,599	5.5%
0	1,096	\$1,120,596,938	\$456,206,118	\$1,576,803,056	8.2%
	8	\$8,703,252	\$3,693,126	\$12,396,378	3.2%
	7	\$12,441,838	\$6,159,193	\$18,601,032	4.6%
	406	\$682,594,027	\$314,297,626	\$996,891,653	10.6%
	43	\$32,826,674	\$17,612,336	\$50,439,009	2.4%
6	369	\$984,579,057	\$357,753,068	\$1,342,332,124	5.4%
2	2,830	\$3,501,178,444	\$1,451,947,183	\$4,953,125,627	6.7%

M9.3 Earthquake - Cascadia Scenario M9.3 Scenario									
Total Value Damaged	Impact on Property			Impact on Economy				Risk	
	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
13.45%	High	3	6	13.45%	High	3	3	36	High
5.46%	High	3	6	5.46%	Medium	2	2	34	High
8.25%	High	3	6	8.25%	Medium	2	2	34	High
3.15%	High	3	6	3.15%	Low	1	1	32	Medium
4.60%	High	3	6	4.60%	Low	1	1	32	Medium
10.65%	High	3	6	10.65%	High	3	3	36	High
2.43%	High	3	6	2.43%	Low	1	1	32	Medium
5.42%	High	3	6	5.42%	Medium	2	2	34	High
6.74%	High	3	6	6.74%	Medium	2	2	34	High

Earthquake Cascadia M9.3 Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	Special Purpose Districts					
	Probability		Impact on People			
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor
East Olympia Fire District	Medium	2	100.00%	High	3	9
Intercity Transit	Medium	2	100.00%	High	3	9
Lacey Fire District	Medium	2	100.00%	High	3	9
McLane Black Lake Fire District	Medium	2	100.00%	High	3	9
Olympia School District	Medium	2	100.00%	High	3	9
SE Thurston Fire Authority	Medium	2	100.00%	High	3	9
South Bay Fire District	Medium	2	100.00%	High	3	9
The Evergreen State College	Medium	2	100.00%	High	3	9
Thuston PUD	Medium	2	100.00%	High	3	9
West Thurston Regional Fire Authority	Medium	2	100.00%	High	3	9

District Risk Ranking - Cascadia Scenario M9.3 Scenario									
Impact on Property				Functional Downtime				Risk Ranking Score	Hazard Risk Rating
Oil Value Used	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Days until 50% Functionality	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium
0%	High	3	6	7	Low	1	1	32	Medium
0%	High	3	6	14	Low	1	1	32	Medium

Earthquake Nisqually M7.2 Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Exposure					Structure Debris (x 1,000 Tons) (3)	Number of Display Households
	Estimated Population (1)	% Population Exposed	Total Number of Buildings (2)	Total Building Value (Structure and contents in \$) (2)	% of Total Value Exposed		
Bucoda	610	100%	245	\$63,726,655	100%	1.67	2
Lacey	58,180	100%	18,985	\$17,357,526,547	100%	36.22	152
Olympia	56,370	100%	18,242	\$19,116,213,011	100%	61.57	185
Rainier	2,510	100%	875	\$393,003,023	100%	1.25	1
Tenino	2,030	100%	751	\$404,778,123	100%	2.05	0
Tumwater	26,360	100%	9,513	\$9,362,171,728	100%	24.70	68
Yelm	10,680	100%	3,139	\$2,077,637,133	100%	5.70	4
Unincorporated	143,760	100%	53,104	\$24,765,596,428	100%	29.64	30
TOTAL	300,500	100%	104,854	\$73,540,652,648	100%	162.80	443

Jurisdiction	RISK RANK						
	Probability		Impact on People				% of Total Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
Bucoda	Medium	2	100.00%	High	3	9	100.00%
Lacey	Medium	2	100.00%	High	3	9	100.00%
Olympia	Medium	2	100.00%	High	3	9	100.00%
Rainier	Medium	2	100.00%	High	3	9	100.00%
Tenino	Medium	2	100.00%	High	3	9	100.00%
Tumwater	Medium	2	100.00%	High	3	9	100.00%
Yelm	Medium	2	100.00%	High	3	9	100.00%
Unincorporated	Medium	2	100.00%	High	3	9	100.00%
TOTAL	Medium	2	100.00%	High	3	9	100.00%

- Notes:**
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.
 (3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 5.1.
 (4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

Economic Impact - Nisqually Fault M7.2 Scenario					
Number of Affected Units (3)	People Requiring Short-Term Shelter (3)	Value Structure in \$ Damaged (4)	Value Contents in \$ Damaged (4)	Total Value (Structure and Contents in \$) Damaged (4)	% of Total Value Damaged
	1	\$1,135,105	\$1,396,488	\$2,531,594	4.0%
2	85	\$146,583,916	\$165,638,440	\$312,222,356	1.8%
5	97	\$198,776,101	\$234,573,117	\$433,349,219	2.3%
	0	\$1,829,173	\$2,062,368	\$3,891,541	1.0%
	0	\$2,200,024	\$2,631,481	\$4,831,505	1.2%
	35	\$109,742,430	\$133,975,231	\$243,717,661	2.6%
	3	\$10,756,046	\$11,772,790	\$22,528,836	1.1%
	17	\$161,594,486	\$177,886,479	\$339,480,964	1.4%
3	237	\$632,617,281	\$729,936,394	\$1,362,553,675	1.9%

Seismic Earthquake - Nisqually Fault M7.2 Scenario									
Impact on Property				Impact on Economy				Risk	
Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0%	High	3	6	3.97%	Low	1	1	32	Medium
0%	High	3	6	1.80%	Low	1	1	32	Medium
0%	High	3	6	2.27%	Low	1	1	32	Medium
0%	High	3	6	0.99%	Low	1	1	32	Medium
0%	High	3	6	1.19%	Low	1	1	32	Medium
0%	High	3	6	2.60%	Low	1	1	32	Medium
0%	High	3	6	1.08%	Low	1	1	32	Medium
0%	High	3	6	1.37%	Low	1	1	32	Medium
0%	High	3	6	1.85%	Low	1	1	32	Medium

Earthquake Nisqually M7.2 Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	Special Purpose						% of Total Exposed
	Probability		Impact on People				
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia Fire District	Medium	2	100.00%	High	3	9	100.00%
Intercity Transit	Medium	2	100.00%	High	3	9	100.00%
Lacey Fire District	Medium	2	100.00%	High	3	9	100.00%
McLane Black Lake Fire District	Medium	2	100.00%	High	3	9	100.00%
Olympia School District	Medium	2	100.00%	High	3	9	100.00%
SE Thurston Fire Authority	Medium	2	100.00%	High	3	9	100.00%
South Bay Fire District	Medium	2	100.00%	High	3	9	100.00%
The Evergreen State College	Medium	2	100.00%	High	3	9	100.00%
Thurston PUD	Medium	2	100.00%	High	3	9	100.00%
West Thurston Regional Fire Authority	Medium	2	100.00%	High	3	9	200.00%

District Risk Ranking - Nisqually Fault M7.2 Scenario									
Impact on Property				Functional Downtime				Risk Ranking Score	Hazard Risk Rating
Value Used	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Days until 50% Functionality	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	3	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium

Earthquake Seattle Fault Zone M7.2 Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Exposure					Structure Debris (x 1,000 Tons) (3)	Number of Displayed Households
	Estimated Population (1)	% Population Exposed	Total Number of Buildings (2)	Total Building Value (Structure and contents in \$) (2)	% of Total Value Exposed		
Bucoda	610	100%	245	\$63,726,655	100%	0.22	0
Lacey	58,180	100%	18,985	\$17,357,526,547	100%	12.18	38
Olympia	56,370	100%	18,242	\$19,116,213,011	100%	20.12	47
Rainier	2,510	100%	875	\$393,003,023	100%	0.24	0
Tenino	2,030	100%	751	\$404,778,123	100%	0.40	0
Tumwater	26,360	100%	9,513	\$9,362,171,728	100%	6.59	15
Yelm	10,680	100%	3,139	\$2,077,637,133	100%	1.31	1
Unincorporated	143,760	100%	53,104	\$24,765,596,428	100%	9.07	9
TOTAL	300,500	100%	104,854	\$73,540,652,648	100%	50.13	111

Jurisdiction	RISK RANKING-Ea						
	Probability		Impact on People				% of Total Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
Bucoda	Medium	2	100.00%	High	3	9	100.00%
Lacey	Medium	2	100.00%	High	3	9	100.00%
Olympia	Medium	2	100.00%	High	3	9	100.00%
Rainier	Medium	2	100.00%	High	3	9	100.00%
Tenino	Medium	2	100.00%	High	3	9	100.00%
Tumwater	Medium	2	100.00%	High	3	9	100.00%
Yelm	Medium	2	100.00%	High	3	9	100.00%
Unincorporated	Medium	2	100.00%	High	3	9	100.00%
TOTAL	Medium	2	100.00%	High	3	9	100.00%

- Notes:**
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.
 (3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 5.1.
 (4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

Economic Impact - Seattle Fault Zone - Southern M7.2 Scenario					
Number of People Requiring Short-Term Shelter (3)	Value Structure in \$ Damaged (4)	Value Contents in \$ Damaged (4)	Total Value (Structure and Contents in \$) Damaged (4)	% of Total Value Damaged	
0	\$38,530	\$23,758	\$62,288	0.1%	
21	\$20,699,242	\$13,927,947	\$34,627,190	0.2%	
26	\$48,840,580	\$27,970,420	\$76,811,000	0.4%	
0	\$106,093	\$67,599	\$173,692	0.0%	
0	\$85,319	\$66,855	\$152,174	0.0%	
8	\$16,949,031	\$10,225,500	\$27,174,530	0.3%	
1	\$769,636	\$558,440	\$1,328,075	0.1%	
5	\$29,791,008	\$15,264,168	\$45,055,176	0.2%	
61	\$117,279,439	\$68,104,686	\$185,384,126	0.3%	

Earthquake - Seattle Fault Zone - Southern M7.2 Scenario									
Impact on Property				Impact on Economy				Risk	
Impact Value Used	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0%	High	3	6	0.10%	Low	1	1	32	Medium
0%	High	3	6	0.20%	Low	1	1	32	Medium
0%	High	3	6	0.40%	Low	1	1	32	Medium
0%	High	3	6	0.04%	Low	1	1	32	Medium
0%	High	3	6	0.04%	Low	1	1	32	Medium
0%	High	3	6	0.29%	Low	1	1	32	Medium
0%	High	3	6	0.06%	Low	1	1	32	Medium
0%	High	3	6	0.18%	Low	1	1	32	Medium
0%	High	3	6	0.25%	Low	1	1	32	Medium

Earthquake Seattle Fault Zone M7.2 Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	Special Purpose District						
	Probability		Impact on People				
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Exposed
East Olympia Fire District	Medium	2	100.00%	High	3	9	100.00%
Intercity Transit	Medium	2	100.00%	High	3	9	100.00%
Lacey Fire District	Medium	2	100.00%	High	3	9	100.00%
McLane Black Lake Fire District	Medium	2	100.00%	High	3	9	100.00%
Olympia School District	Medium	2	100.00%	High	3	9	100.00%
SE Thurston Fire Authority	Medium	2	100.00%	High	3	9	100.00%
South Bay Fire District	Medium	2	100.00%	High	3	9	100.00%
The Evergreen State College	Medium	2	100.00%	High	3	9	100.00%
Thuston PUD	Medium	2	100.00%	High	3	9	100.00%
West Thurston Regional Fire Authority	Medium	2	200.00%	High	3	9	200.00%

Risk Ranking - Seattle Fault Zone - Southern M7.2 Scenario									
Impact on Property				Functional Downtime				Risk Ranking Score	Hazard Risk Rating
Impact Value Assigned	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Days until 50% Functionality	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium
0%	High	3	6	1	Low	1	1	32	Medium

Appendix C: Risk Assessment Ratings Calculation Tables

50-Year Flood Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure					
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)	Value Contents in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	113	288	47.26%	\$14,842,523	\$7,447,025	
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.00%	\$0	\$0	
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.00%	\$0	\$0	
Rainier	2,510	875	814	\$393,003,023	0	0	0.00%	\$0	\$0	
Tenino	2,030	751	651	\$404,778,123	1	3	0.15%	\$111,427	\$55,714	
Tumwater	26,360	9,513	8,408	\$9,362,171,728	5	16	0.06%	\$851,244	\$425,622	
Yelm	10,680	3,139	2,827	\$2,077,637,133	19	53	0.50%	\$4,330,605	\$3,013,885	
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	515	1,319	0.92%	\$106,013,033	\$67,289,493	
Total	300,500	104,854	98,260	\$73,540,652,648	653	1,679	0.56%	\$126,148,832	\$78,231,739	

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)							
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
Bucoda	165	112	1	0	0	0	0	0	113
Lacey	2	0	0	0	0	0	0	0	0
Olympia	6	0	0	0	0	0	0	0	0
Rainier	0	0	0	0	0	0	0	0	0
Tenino	50	1	0	0	0	0	0	0	1
Tumwater	630	5	0	0	0	0	0	0	5
Yelm	234	14	2	2	0	1	0	0	19
Unincorporated	16,976	472	37	3	0	0	1	2	515
Total	18,063	604	40	5	0	1	1	2	653

MUNICIPAL RISK SCORE AND RATING										
Jurisdiction	Probability		Impact on People				Impact on Property			
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor
Bucoda	High	3	47.26%	High	3	9	34.98%	High	3	9
Lacey	High	3	0.00%	None	0	0	0.00%	None	0	0
Olympia	High	3	0.00%	None	0	0	0.00%	None	0	0
Rainier	High	3	0.00%	None	0	0	0.00%	None	0	0
Tenino	High	3	0.15%	Low	1	3	0.04%	Low	1	3
Tumwater	High	3	0.06%	Low	1	3	0.01%	Low	1	3
Yelm	High	3	0.50%	Low	1	3	0.35%	Low	1	3
Unincorporated	High	3	0.92%	Low	1	3	0.70%	Low	1	3
Total	High	3	0.56%	Low	1	3	0.28%	Low	1	3

Notes:

- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
- (2) Values based off of 2022 tax assessor data provided by Thurston County
- (3) Percent of residential buildings exposed multiplied by the Estimated Population
- (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1
- (5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population
- (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1

Appendix C: Risk Assessment Ratings Calculation Tables

		Economic Impact							
Value (Structure and Contents in \$) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
\$22,289,549	34.98%	400	143	2	110	\$123,924	\$86,399	\$210,323	0.3%
\$0	0.00%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	0.00%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	0.00%	0	0	0	0	\$0	\$0	\$0	0.0%
\$167,141	0.04%	60	0	0	1	\$30,450	\$17,164	\$47,614	0.0%
\$1,276,866	0.01%	608	0	0	5	\$0	\$0	\$0	0.0%
\$7,344,489	0.35%	336	1	0	14	\$11,938	\$4,793	\$16,731	0.0%
\$173,302,527	0.70%	7,471	24	0	513	\$7,249,832	\$8,084,559	\$15,334,391	0.1%
\$204,380,571	0.28%	8,876	168	2	643	\$7,416,145	\$8,192,915	\$15,609,060	0.0%

3 50-yr Flood						
Impact on Economy					Risk	
Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
6	0.33%	Low	1	1	48	High
0	0.00%	None	0	0	0	Low
0	0.00%	None	0	0	0	Low
0	0.00%	None	0	0	0	Low
2	0.01%	Low	1	1	18	Medium
2	0.00%	None	0	0	15	Low
2	0.00%	None	0	0	15	Low
2	0.06%	Low	1	1	18	Medium
2	0.02%	Low	1	1	18	Medium

50-Year Flood Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICTS						
	Probability		Impact on People			Risk Rating	
East Olympia Fire District	High	3	0.07%	Low	1	3	0.00%
Intercity Transit	High	3	0.00%	None	0	0	0.00%
Lacey Fire District	High	3	0.81%	Low	1	3	0.00%
McLane Black Lake Fire District	High	3	0.00%	None	0	0	0.00%
Olympia School District	High	3	0.00%	None	0	0	0.00%
SE Thurston Fire Authority	High	3	0.71%	Low	1	3	0.00%
South Bay Fire District	High	3	0.00%	None	0	0	0.00%
The Evergreen State College	High	3	0.00%	None	0	0	0.00%
Thuston PUD	High	3	0.56%	Low	1	3	1.00%
West Thurston Regional Fire Authority	High	3	0.94%	Low	1	3	0.00%

Special Purpose District Critical Facility Loss Detail							
Jurisdiction	Critical Facilities	Facilities in 50yr Flood	% in Hazard	Total Valuation	Structure Value	% Modeled Loss	% Total Value Damage
	6	0	0.00%	\$4,995,000	0	0	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0	0	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0	0.00%
Thuston PUD	104	1	0.96%	\$157,995,117	\$1,076,176	0.78	0.53%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0	0.00%

DISTRICT RISK SCORES AND RATINGS 50-yr Flood								
Impact on Property			Impact on Economy				Risk Ranking Score	Hazard Risk Rating
None	0	0	0.00%	None	0	0	9	Low
None	0	0	0.00%	None	0	0	0	Low
None	0	0	0.00%	None	0	0	9	Low
None	0	0	0.00%	None	0	0	0	Low
None	0	0	0.00%	None	0	0	0	Low
None	0	0	0.00%	None	0	0	9	Low
None	0	0	0.00%	None	0	0	0	Low
None	0	0	0.00%	None	0	0	0	Low
Low	1	2	0.53%	Low	1	1	18	Medium
None	0	0	0.00%	None	0	0	9	Low

Appendix C: Risk Assessment Ratings Calculation Tables

50-Year Flood Hazard Scenario, by Watershed, Risk Assessment Results and Risk Rating

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure				
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents Exposed (2)
Bucoda	610	245	237	\$63,726,655	113	288	47.3%	\$14,842,523	\$7,447
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%	\$0	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.0%	\$0	\$0
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0	\$0
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$111,427	\$55,7
Tumwater	26,360	9,513	8,408	\$9,362,171,728	5	16	0.1%	\$851,244	\$425,7
Yelm	10,680	3,139	2,827	\$2,077,637,133	19	53	0.5%	\$4,330,605	\$3,013
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	49	134	0.8%	\$9,702,050	\$5,099
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	0	0	0.0%	\$0	\$0
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	31	87	0.7%	\$5,461,093	\$2,730
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	0	0	0.0%	\$0	\$0
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	2	6	0.0%	\$1,752,521	\$876,6
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	27	75	1.0%	\$3,630,259	\$1,815
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	0	0	0.0%	\$0	\$0
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	0	0	0.0%	\$0	\$0
Unincorporated Mcallister Creek	18,142	6,855	6,490	\$3,712,893,851	180	422	2.3%	\$33,507,636	\$23,377
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,946	163	439	2.9%	\$40,657,499	\$26,247
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	0	0	0.0%	\$0	\$0
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	63	157	9.7%	\$11,301,975	\$7,153
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	0	0	0.0%	\$0	\$0
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0
Total	300,500	104,854	98,260	\$73,540,652,648	653	1,679	0.6%	\$126,148,832	\$78,231

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)								
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total	
Bucoda	165	112	1	0	0	0	0	0	0	
Lacey	2	0	0	0	0	0	0	0	0	
Olympia	6	0	0	0	0	0	0	0	0	
Rainier	0	0	0	0	0	0	0	0	0	
Tenino	50	1	0	0	0	0	0	0	0	
Tumwater	630	5	0	0	0	0	0	0	0	
Yelm	234	14	2	2	0	1	0	0	0	
Unincorporated Black River	3,805	48	1	0	0	0	0	0	0	
Unincorporated Budd Inlet	24	0	0	0	0	0	0	0	0	
Unincorporated Chehalis River	3,725	31	0	0	0	0	0	0	0	
Unincorporated Deschutes Mountain Zone	174	0	0	0	0	0	0	0	0	
Unincorporated Deschutes River Lower	823	2	0	0	0	0	0	0	0	
Unincorporated Deschutes River Middle	873	27	0	0	0	0	0	0	0	
Unincorporated Eld Inlet	0	0	0	0	0	0	0	0	0	
Unincorporated Henderson Inlet	4	0	0	0	0	0	0	0	0	
Unincorporated Mcallister Creek	1,495	151	27	2	0	0	0	0	0	
Unincorporated Nisqually	3,683	157	4	0	0	0	0	2	0	
Unincorporated Nisqually Reach	0	0	0	0	0	0	0	0	0	
Unincorporated Skookumchuck River	2,369	56	5	1	0	0	1	0	0	
Unincorporated Totten Inlet	0	0	0	0	0	0	0	0	0	
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0	0	
Total	18,063	604	40	5	0	1	1	2	0	

Jurisdiction	RISK SCORE AND RATING 50-yr								
	Probability			Impact on People			Impact on Property		
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor
Bucoda	High	3	47.26%	High	3	9	34.98%	High	3
Lacey	High	3	0.00%	None	0	0	0.00%	None	0
Olympia	High	3	0.00%	None	0	0	0.00%	None	0
Rainier	High	3	0.00%	None	0	0	0.00%	None	0
Tenino	High	3	0.15%	Low	1	3	0.04%	Low	1
Tumwater	High	3	0.06%	Low	1	3	0.01%	Low	1
Yelm	High	3	0.50%	Low	1	3	0.35%	Low	1
Unincorporated Black River	High	3	0.78%	Low	1	3	0.53%	Low	1
Unincorporated Budd Inlet	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated Chehalis River	High	3	0.71%	Low	1	3	0.41%	Low	1
Unincorporated Deschutes Mountain Zone	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated Deschutes River Lower	High	3	0.04%	Low	1	3	0.10%	Low	1
Unincorporated Deschutes River Middle	High	3	1.02%	Low	1	3	0.56%	Low	1
Unincorporated Eld Inlet	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated Henderson Inlet	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated Mcallister Creek	High	3	2.33%	Low	1	3	1.53%	Low	1
Unincorporated Nisqually	High	3	2.87%	Low	1	3	3.44%	Low	1
Unincorporated Nisqually Reach	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated Skookumchuck River	High	3	9.67%	Low	1	3	9.16%	Low	1
Unincorporated Totten Inlet	High	3	0.00%	None	0	0	0.00%	None	0
Unincorporated West Capitol Forest	High	3	0.00%	None	0	0	0.00%	None	0
Total	High	3	0.56%	Low	1	3	0.28%	Low	1

Notes:
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.

(3) Percent of residential buildings exposed multiplied by the Estimated Population.
 (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

Contents in \$ Exposed (1)	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Economic Impact							
			Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
0.025	\$22,289,549	35.0%	400	143	2	110	\$123,924	\$86,399	\$210,323	0.3%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
14	\$167,141	0.0%	60	0	0	1	\$30,450	\$17,164	\$47,614	0.0%
622	\$1,276,866	0.0%	608	0	0	5	\$0	\$0	\$0	0.0%
,885	\$7,344,489	0.4%	336	1	0	14	\$11,938	\$4,793	\$16,731	0.0%
,775	\$14,801,825	0.5%	711	2	0	48	\$231,621	\$144,698	\$376,318	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
,547	\$8,191,640	0.4%	450	1	0	31	\$41,705	\$26,614	\$68,319	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
260	\$2,628,781	0.1%	29	0	0	2	\$0	\$0	\$0	0.0%
,130	\$5,445,389	0.6%	392	2	0	27	\$195,780	\$99,742	\$295,522	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
3,474	\$56,881,111	1.5%	2,611	8	0	181	\$2,193,805	\$4,706,613	\$6,900,417	0.2%
1,260	\$66,898,759	3.4%	2,365	8	0	161	\$3,914,916	\$2,505,866	\$6,420,781	0.3%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
,048	\$18,455,023	9.2%	914	3	0	63	\$672,007	\$601,027	\$1,273,033	0.6%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
1,739	\$204,380,571	0.3%	8,876	168	2	643	\$7,416,145	\$8,192,915	\$15,609,060	0.0%

113
0
0
0
1
5
19
49
0
31
0
2
27
0
0
180
163
0
63
0
0
653

Flood		Impact on Economy				Risk	
Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	6	0.33%	Low	1	1	48	High
	0	0.00%	None	0	0	0	Low
	0	0.00%	None	0	0	0	Low
	0	0.00%	None	0	0	0	Low
	2	0.01%	Low	1	1	18	Medium
	2	0.00%	None	0	0	15	Low
	2	0.00%	None	0	0	15	Low
	2	0.01%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	2	0.00%	None	0	0	15	Low
	0	0.00%	None	0	0	0	Low
	2	0.00%	None	0	0	15	Low
	2	0.03%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	0	0.00%	None	0	0	0	Low
	2	0.19%	Low	1	1	18	Medium
	2	0.33%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	2	0.63%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	0	0.00%	None	0	0	0	Low
	2	0.02%	Low	1	1	18	Medium

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population
(6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

100-Year Flood Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure			
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	128	324	53.2%	\$18,387,102
Lacey	58,180	18,985	17,637	\$17,357,526,547	1	3	0.0%	\$308,553
Olympia	56,370	18,242	16,257	\$19,116,213,011	77	118	0.2%	\$129,687,028
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$111,427
Tumwater	26,360	9,513	8,408	\$9,362,171,728	16	28	0.1%	\$57,077,072
Yelm	10,680	3,139	2,827	\$2,077,637,133	17	60	0.6%	\$4,448,895
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	908	2,376	1.7%	\$194,459,365
Total	300,500	104,854	98,260	\$73,540,652,648	1,148	2,913	1.0%	\$404,479,441

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)						
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education
Bucoda	173	126	2	0	0	0	0	0
Lacey	605	1	0	0	0	0	0	0
Olympia	946	34	41	2	0	0	0	0
Rainier	1	0	0	0	0	0	0	0
Tenino	51	1	0	0	0	0	0	0
Tumwater	924	9	7	0	0	0	0	0
Yelm	141	16	0	1	0	0	0	0
Unincorporated	33,651	850	50	4	0	0	2	2
Total	36,492	1,037	100	7	0	0	2	2

Jurisdiction	RISK RANKING-100-year							
	Probability		Impact on People			Impact on Property		
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)
Bucoda	High	3	53.16%	High	3	9	44.57%	High
Lacey	High	3	0.01%	None	0	0	0.00%	None
Olympia	High	3	0.21%	Low	1	3	1.17%	Low
Rainier	High	3	0.00%	None	0	0	0.00%	None
Tenino	High	3	0.15%	Low	1	3	0.04%	Low
Tumwater	High	3	0.11%	Low	1	3	1.21%	Low
Yelm	High	3	0.57%	Low	1	3	0.37%	Low
Unincorporated	High	3	1.65%	Low	1	3	1.25%	Low
Total	High	3	0.97%	Low	1	3	0.93%	Low

- Notes:
- (1)2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Percent of residential buildings exposed multiplied by the Estimated Population.
 - (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.
 - (5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population.
 - (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

			Economic Impact							
Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
\$10,017,487	\$28,404,589	44.6%	458	174	6	121	\$223,241	\$177,927	\$401,168	0.6%
\$154,276	\$462,829	0.0%	143	0	0	1	\$0	\$0	\$0	0.0%
\$93,302,235	\$222,989,262	1.2%	1,833	2	1	52	\$2,656,715	\$5,873,652	\$8,530,367	0.0%
\$0	\$0	0.0%	1	0	0	0	\$0	\$0	\$0	0.0%
\$55,714	\$167,141	0.0%	63	0	0	1	\$37,083	\$20,770	\$57,853	0.0%
\$56,345,143	\$113,422,215	1.2%	738	0	0	12	\$42,427	\$81,452	\$123,878	0.0%
\$3,174,175	\$7,623,070	0.4%	369	2	0	18	\$16,783	\$6,123	\$22,906	0.0%
\$115,945,962	\$310,405,327	1.3%	11,867	79	16	680	\$12,928,749	\$13,865,202	\$26,793,951	0.1%
\$278,994,992	\$683,474,433	0.9%	15,472	257	23	885	\$15,904,998	\$20,025,126	\$35,930,123	0.0%

Total
128
1
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Flood							
Property		Impact on Economy				Risk	
Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
3	6	0.63%	Low	1	1	48	High
0	0	0.00%	None	0	0	0	Low
1	2	0.04%	Low	1	1	18	Medium
0	0	0.00%	None	0	0	0	Low
1	2	0.01%	Low	1	1	18	Medium
1	2	0.00%	None	0	0	15	Low
1	2	0.00%	None	0	0	15	Low
1	2	0.11%	Low	1	1	18	Medium
1	2	0.05%	Low	1	1	18	Medium

100-Year Flood Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICTS						% of Total Value Exposed
	Probability		Impact on People				
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia Fire District	High	3	0.77%	Low	1	3	0.00%
Intercity Transit	High	3	0.00%	None	0	0	0.00%
Lacey Fire District	High	3	1.01%	Low	1	3	0.00%
McLane Black Lake Fire District	High	3	0.82%	Low	1	3	0.00%
Olympia School District	High	3	0.50%	Low	1	3	0.00%
SE Thurston Fire Authority	High	3	0.78%	Low	1	3	0.00%
South Bay Fire District	High	3	0.64%	Low	1	3	0.00%
The Evergreen State College	High	3	0.00%	None	0	0	0.00%
Thurston PUD	High	3	0.97%	Low	1	3	1.00%
West Thurston Regional Fire Authority	High	3	2.68%	Low	1	3	0.00%

Special Purpose District Critical Facility Loss Detail							
Jurisdiction	Critical Facilities	Facilities in 100yr Flood	% in Hazard	Total Valuation	Structure Value	% Modeled Loss	% Total Value Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0	0.00%	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0.00%	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0.00%	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0.00%	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0.00%	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0	0.00%	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0.00%	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0.00%	0.00%
Thurston PUD	104	1	0.96%	\$157,995,117	\$1,076,176	1.43%	0.01%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0.00%	0.00%

DISTRICT RISK SCORES AND RATINGS-100-yr Flood									
Value	Impact on Property			Impact on Economy				Risk	
	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	0	Low
	Low	1	2	0.01%	None	0	0	15	Low
	None	0	0	0.00%	None	0	0	9	Low

Value

Appendix C: Risk Assessment Ratings Calculation Tables

100-Year Flood Hazard Scenario, by Watershed, Risk Assessment Results and Risk Rating

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure				
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents Exposed (2)
Bucoda	610	245	237	\$63,726,655	128	324	53.2%	\$18,387,102	\$10,017,487
Lacey	58,180	18,985	17,637	\$17,357,526,547	1	3	0.0%	\$308,553	\$154,276
Olympia	56,370	18,242	16,257	\$19,116,213,011	77	118	0.2%	\$129,687,028	\$93,302,235
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0	\$0
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$111,427	\$55,714
Tumwater	26,360	9,513	8,408	\$9,362,171,728	16	28	0.1%	\$57,077,072	\$56,345,143
Yelm	10,680	3,139	2,827	\$2,077,637,133	17	60	0.6%	\$4,448,895	\$3,174,175
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	145	394	2.3%	\$28,686,084	\$15,314,794
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	37	98	0.9%	\$8,875,966	\$4,776,461
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	78	218	1.8%	\$15,218,742	\$7,609,371
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	0	0	0.0%	\$0	\$0
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	41	115	0.8%	\$11,114,482	\$5,557,241
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	74	207	2.8%	\$11,874,516	\$5,937,258
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	30	84	0.7%	\$7,583,791	\$3,791,895
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	17	48	0.2%	\$5,409,105	\$2,704,552
Unincorporated Meallister Creek	18,142	6,855	6,490	\$3,712,893,851	209	498	2.7%	\$40,240,177	\$27,334,470
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,946	178	475	3.1%	\$43,790,725	\$28,380,005
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	8	11	0.2%	\$3,118,918	\$2,826,584
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	82	204	12.6%	\$17,233,677	\$11,056,739
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	9	25	0.6%	\$1,313,182	\$656,591
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0
Total	300,500	104,854	98,260	\$73,540,652,648	1,148	2,913	1.0%	\$404,479,441	\$278,994,992

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)							Total
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	
Bucoda	173	126	2	0	0	0	0	0	0
Lacey	605	1	0	0	0	0	0	0	0
Olympia	946	34	41	2	0	0	0	0	0
Rainier	1	0	0	0	0	0	0	0	0
Tenino	51	1	0	0	0	0	0	0	0
Tumwater	924	9	7	0	0	0	0	0	0
Yelm	141	16	0	1	0	0	0	0	0
Unincorporated Black River	8,354	141	4	0	0	0	0	0	0
Unincorporated Budd Inlet	817	35	1	0	0	0	1	0	0
Unincorporated Chehalis River	4,663	78	0	0	0	0	0	0	0
Unincorporated Deschutes Mountain Zone	279	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Lower	1,960	41	0	0	0	0	0	0	0
Unincorporated Deschutes River Middle	2,677	74	0	0	0	0	0	0	0
Unincorporated Eld Inlet	400	30	0	0	0	0	0	0	0
Unincorporated Henderson Inlet	1,034	17	0	0	0	0	0	0	0
Unincorporated Meallister Creek	2,359	178	29	2	0	0	0	0	0
Unincorporated Nisqually	5,565	170	6	0	0	0	0	2	2
Unincorporated Nisqually Reach	24	4	4	0	0	0	0	0	0
Unincorporated Skookumchuck River	4,720	73	6	2	0	0	1	0	0
Unincorporated Totten Inlet	798	9	0	0	0	0	0	0	0
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0	0
Total	36,492	1,037	100	7	0	0	2	2	2

Jurisdiction	Probability		Impact on People			Impact on Property			RISK RANKING-100-yr Flood		
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor		
	Bucoda	High	3	53.16%	High	3	9	44.57%	High	3	
Lacey	High	3	0.01%	None	0	0	0.00%	None	0		
Olympia	High	3	0.21%	Low	1	3	1.17%	Low	1		
Rainier	High	3	0.00%	None	0	0	0.00%	None	0		
Tenino	High	3	0.15%	Low	1	3	0.04%	Low	1		
Tumwater	High	3	0.11%	Low	1	3	1.21%	Low	1		
Yelm	High	3	0.57%	Low	1	3	0.37%	Low	1		
Unincorporated Black River	High	3	2.28%	Low	1	3	1.57%	Low	1		
Unincorporated Budd Inlet	High	3	0.93%	Low	1	3	0.78%	Low	1		
Unincorporated Chehalis River	High	3	1.79%	Low	1	3	1.14%	Low	1		
Unincorporated Deschutes Mountain Zone	High	3	0.00%	None	0	0	0.00%	None	0		
Unincorporated Deschutes River Lower	High	3	0.83%	Low	1	3	0.65%	Low	1		
Unincorporated Deschutes River Middle	High	3	2.80%	Low	1	3	1.83%	Low	1		
Unincorporated Eld Inlet	High	3	0.73%	Low	1	3	0.41%	Low	1		
Unincorporated Henderson Inlet	High	3	0.18%	Low	1	3	0.18%	Low	1		
Unincorporated Meallister Creek	High	3	2.74%	Low	1	3	1.82%	Low	1		
Unincorporated Nisqually	High	3	3.11%	Low	1	3	3.71%	Low	1		
Unincorporated Nisqually Reach	High	3	0.24%	Low	1	3	0.66%	Low	1		
Unincorporated Skookumchuck River	High	3	12.61%	Medium	2	6	14.04%	Medium	2		
Unincorporated Totten Inlet	High	3	0.57%	Low	1	3	0.28%	Low	1		
Unincorporated West Capitol Forest	High	3	0.00%	None	0	0	0.00%	None	0		
Total	High	3	0.97%	Low	1	3	0.93%	Low	1		

Notes:
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.
 (3) Percent of residential buildings exposed multiplied by the Estimated Population.
 (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

ID	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Economic Impact							
			Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
	\$28,404,589	44.6%	458	174	6	121	\$223,241	\$177,927	\$401,168	0.6%
	\$462,829	0.0%	143	0	0	1	\$0	\$0	\$0	0.0%
	\$222,989,262	1.2%	1,833	2	1	52	\$2,348,593	\$5,538,602	\$7,887,195	0.0%
	\$0	0.0%	1	0	0	0	\$0	\$0	\$0	0.0%
	\$167,141	0.0%	63	0	0	1	\$37,083	\$20,770	\$57,853	0.0%
	\$113,422,215	1.2%	738	0	0	12	\$42,427	\$81,452	\$123,879	0.0%
	\$7,623,070	0.4%	369	2	0	18	\$16,783	\$6,123	\$22,906	0.0%
	\$44,000,878	1.6%	2,231	21	4	92	\$1,091,187	\$623,253	\$1,714,440	0.1%
	\$13,652,427	0.8%	409	1	0	33	\$1,195,842	\$1,030,984	\$2,226,826	0.1%
	\$22,828,113	1.1%	980	3	0	35	\$84,726	\$52,943	\$137,669	0.0%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$16,671,724	0.7%	450	1	0	30	\$159,946	\$78,904	\$238,850	0.0%
	\$17,811,774	1.8%	865	3	1	51	\$507,635	\$268,531	\$776,166	0.1%
	\$11,375,686	0.4%	310	2	0	12	\$457,481	\$219,465	\$676,946	0.0%
	\$8,113,657	0.2%	176	1	0	8	\$144,292	\$71,909	\$216,201	0.0%
	\$67,574,647	1.8%	2,660	17	4	185	\$3,040,067	\$6,248,661	\$9,288,728	0.3%
	\$72,170,731	3.7%	2,280	20	6	160	\$4,839,658	\$3,360,704	\$8,200,362	0.4%
	\$5,945,501	0.7%	112	0	0	6	\$365,244	\$1,040,603	\$1,405,847	0.2%
	\$28,290,416	14.0%	1,188	7	1	58	\$951,711	\$1,078,239	\$2,029,950	1.0%
	\$1,969,774	0.3%	205	3	0	10	\$399,082	\$126,057	\$525,139	0.1%
	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
	\$683,474,433	0.9%	15,472	257	23	885	\$15,904,998	\$20,025,127	\$35,930,125	0.0%

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78
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41
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ID	Impact on Economy				Risk		
	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	6	0.63%	Low	1	1	48	High
	0	0.00%	None	0	0	0	Low
	2	0.04%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	2	0.01%	Low	1	1	18	Medium
	2	0.00%	None	0	0	15	Low
	2	0.00%	None	0	0	15	Low
	2	0.06%	Low	1	1	18	Medium
	2	0.13%	Low	1	1	18	Medium
	2	0.01%	None	0	0	15	Low
	0	0.00%	None	0	0	0	Low
	2	0.01%	None	0	0	15	Low
	2	0.08%	Low	1	1	18	Medium
	2	0.02%	Low	1	1	18	Medium
	2	0.00%	None	0	0	15	Low
	2	0.25%	Low	1	1	18	Medium
	2	0.42%	Low	1	1	18	Medium
	2	0.16%	Low	1	1	18	Medium
	4	1.01%	Low	1	1	33	High
	2	0.07%	Low	1	1	18	Medium
	0	0.00%	None	0	0	0	Low
	2	0.05%	Low	1	1	18	Medium

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population
(6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

500-Year Flood Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure				
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents Exposed (2)
Bucoda	610	245	237	\$63,726,655	145	363	59.5%	\$21,114,868	\$11,744,000
Lacey	58,180	18,985	17,637	\$17,357,526,547	1	3	0.0%	\$308,553	\$154,200
Olympia	56,370	18,242	16,257	\$19,116,213,011	125	128	0.2%	\$263,263,151	\$192,563,000
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0	\$0
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$111,427	\$55,700
Tumwater	26,360	9,513	8,408	\$9,362,171,728	23	34	0.1%	\$68,792,391	\$67,540,000
Yelm	10,680	3,139	2,827	\$2,077,637,133	29	98	0.9%	\$11,494,798	\$9,129,000
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	1,069	2,809	2.0%	\$232,973,507	\$137,604,000
Total	300,500	104,854	98,260	\$73,540,652,648	1,393	3,440	1.1%	\$598,058,696	\$418,792,000

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)								Total
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Other	
Bucoda	184	141	3	0	0	0	1	0	0	
Lacey	607	1	0	0	0	0	0	0	0	
Olympia	999	37	86	2	0	0	0	0	0	
Rainier	1	0	0	0	0	0	0	0	0	
Tenino	57	1	0	0	0	0	0	0	0	
Tumwater	1,143	11	12	0	0	0	0	0	0	
Yelm	149	26	2	1	0	0	0	0	0	
Unincorporated	35,937	1,005	54	5	0	1	2	2	2	
Total	39,077	1,222	157	8	0	1	3	2	2	

Jurisdiction	RISK RANKING-500-yr Flood								
	Probability		Impact on People				Impact on Property		
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor
Bucoda	Medium	2	59.49%	High	3	9	51.56%	High	3
Lacey	Medium	2	0.01%	None	0	0	0.00%	None	0
Olympia	Medium	2	0.23%	Low	1	3	2.38%	Low	1
Rainier	Medium	2	0.00%	None	0	0	0.00%	None	0
Tenino	Medium	2	0.15%	Low	1	3	0.04%	Low	1
Tumwater	Medium	2	0.13%	Low	1	3	1.46%	Low	1
Yelm	Medium	2	0.92%	Low	1	3	0.99%	Low	1
Unincorporated	Medium	2	1.95%	Low	1	3	1.50%	Low	1
Total	Medium	2	1.14%	Low	1	3	1.38%	Low	1

- Notes:**
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County
 (3) Percent of residential buildings exposed multiplied by the Estimated Population
 (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1
 (5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population
 (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1

Appendix C: Risk Assessment Ratings Calculation Tables

			Economic Impact							
Units in \$	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in \$ Damaged (6)	Value Contents in \$ Damaged (6)	Total Value (Structure and Contents in \$) Damaged (6)	% of Total Value Damaged
069	\$32,858,936	51.6%	731	203	10	141	\$1,351,160	\$1,449,167	\$2,800,327	4.4%
76	\$462,829	0.0%	216	0	0	1	\$0	\$0	\$0	0.0%
667	\$455,826,818	2.4%	1,840	18	0	74	\$2,900,374	\$6,684,489	\$9,584,864	0.1%
	\$0	0.0%	1	0	0	0	\$0	\$0	\$0	0.0%
4	\$167,141	0.0%	148	0	0	1	\$53,044	\$29,308	\$82,352	0.0%
491	\$136,332,881	1.5%	995	10	0	20	\$54,419	\$2,027,259	\$2,081,678	0.0%
33	\$20,623,831	1.0%	441	11	0	29	\$64,075	\$56,956	\$121,031	0.0%
905	\$370,578,413	1.5%	12,211	191	27	695	\$13,564,185	\$16,220,072	\$29,784,256	0.1%
155	\$1,016,850,850	1.4%	16,583	434	37	961	\$17,987,258	\$26,467,250	\$44,454,508	0.1%

1
145
1
125
0
1
23
29
1069
1393

Factor	Weighted Impact Factor	Impact on Economy				Risk	
		% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	6	4.39%	Low	1	1	32	Medium
	0	0.00%	None	0	0	0	Low
	2	0.05%	Low	1	1	12	Low
	0	0.00%	None	0	0	0	Low
	2	0.02%	Low	1	1	12	Low
	2	0.02%	Low	1	1	12	Low
	2	0.01%	None	0	0	10	Low
	2	0.12%	Low	1	1	12	Low
	2	0.06%	Low	1	1	12	Low

500-Year Flood Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE						
	Probability		Impact on People				% of Total Exposure
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia Fire District	Medium	2	0.82%	Low	1	3	0.00%
Intercity Transit	Medium	2	0.00%	None	0	0	0.00%
Lacey Fire District	Medium	2	1.09%	Low	1	3	0.00%
McLane Black Lake Fire District	Medium	2	0.86%	Low	1	3	0.00%
Olympia School District	Medium	2	0.51%	Low	1	3	0.00%
SE Thurston Fire Authority	Medium	2	0.98%	Low	1	3	0.00%
South Bay Fire District	Medium	2	0.64%	Low	1	3	0.00%
The Evergreen State College	Medium	2	0.00%	None	0	0	0.00%
Thuston PUD	Medium	2	0.02%	Low	1	3	1.00%
West Thurston Regional Fire Authority	Medium	2	3.41%	Low	1	3	0.00%

Jurisdiction	Special Purpose District Critical Facility Loss Detail						
	Critical Facilities	Facilities in 500yr Flood	% in Hazard	Total Valuation	Structure Value	% Modeled Loss	% Total Value Damaged
East Olympia Fire District	6	0	0.00%	\$4,995,000	0	0.00%	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0.00%	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0.00%	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0.00%	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0.00%	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0	0.00%	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0.00%	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0.00%	0.00%
Thuston PUD	104	1	0.96%	\$157,995,117	\$1,076,176	7.13%	0.05%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0.00%	0.00%

Appendix C: Risk Assessment Ratings Calculation Tables

500-Year Flood Hazard Scenario, by Watershed, Risk Assessment Results and Risk Rating

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure				
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Content Exposed (2)
Bucoda	610	245	237	\$63,726,655	145	363	59.5%	\$21,114,868	\$11,172,500
Lacey	58,180	18,985	17,637	\$17,357,526,547	1	3	0.0%	\$308,553	\$15,000
Olympia	56,370	18,242	16,257	\$19,116,213,011	125	128	0.2%	\$263,263,151	\$192,000
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0	\$0
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$111,427	\$5,000
Tumwater	26,360	9,513	8,408	\$9,362,171,728	23	34	0.1%	\$68,792,391	\$67,500
Yelm	10,680	3,139	2,827	\$2,077,637,133	29	98	0.9%	\$11,494,798	\$9,100
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	176	475	2.7%	\$38,448,198	\$21,500
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	42	103	1.0%	\$10,369,746	\$5,700
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	110	307	2.5%	\$22,343,981	\$11,100
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	7	20	10.0%	\$748,718	\$37,000
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	42	117	0.9%	\$11,233,268	\$5,600
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	92	257	3.5%	\$15,229,152	\$7,600
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	30	84	0.7%	\$7,583,791	\$3,700
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	17	48	0.2%	\$5,409,105	\$2,700
Unincorporated Mcallister Creek	18,142	6,855	6,490	\$3,712,893,851	231	559	3.1%	\$44,986,223	\$29,000
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,946	195	520	3.4%	\$48,108,402	\$30,500
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	8	11	0.2%	\$3,118,918	\$2,800
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	110	282	17.4%	\$24,080,825	\$14,400
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	9	25	0.6%	\$1,313,182	\$65,000
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0
Total	300,500	104,854	98,260	\$73,540,652,648	1,393	3,440	1.1%	\$598,058,696	\$418,000

Jurisdiction	Acres of Floodplain	Number of Structures in Floodplain (2)								
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total	
Bucoda	184	141	3	0	0	0	1	0	0	
Lacey	607	1	0	0	0	0	0	0	0	
Olympia	999	37	86	2	0	0	0	0	0	
Rainier	1	0	0	0	0	0	0	0	0	
Tenino	57	1	0	0	0	0	0	0	0	
Tumwater	1,143	11	12	0	0	0	0	0	0	
Yelm	149	26	2	1	0	0	0	0	0	
Unincorporated Black River	8,855	170	4	1	0	1	0	0	0	
Unincorporated Budd Inlet	924	37	4	0	0	0	1	0	0	
Unincorporated Chehalis River	5,059	110	0	0	0	0	0	0	0	
Unincorporated Deschutes Mountain Zone	319	7	0	0	0	0	0	0	0	
Unincorporated Deschutes River Lower	2,083	42	0	0	0	0	0	0	0	
Unincorporated Deschutes River Middle	2,916	92	0	0	0	0	0	0	0	
Unincorporated Eld Inlet	400	30	0	0	0	0	0	0	0	
Unincorporated Henderson Inlet	1,034	17	0	0	0	0	0	0	0	
Unincorporated Mcallister Creek	2,514	200	29	2	0	0	0	0	0	
Unincorporated Nisqually	5,946	186	7	0	0	0	0	2	2	
Unincorporated Nisqually Reach	24	4	4	0	0	0	0	0	0	
Unincorporated Skookumchuck River	5,066	101	6	2	0	0	1	0	0	
Unincorporated Totten Inlet	798	9	0	0	0	0	0	0	0	
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0	0	
Total	39,077	1,222	157	8	0	1	3	2	2	

Jurisdiction	Probability		Impact on People				Impact on Property		
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor
	Bucoda	High	3	59.49%	High	3	9	51.56%	High
Lacey	High	3	0.01%	None	0	0	0.00%	None	0
Olympia	High	3	0.23%	Low	1	3	2.38%	Low	1
Rainier	High	3	0.00%	None	0	0	0.00%	None	0
Tenino	High	3	0.15%	Low	1	3	0.04%	Low	1
Tumwater	High	3	0.13%	Low	1	3	1.46%	Low	1
Yelm	High	3	0.92%	Low	1	3	0.99%	Low	1
Unincorporated Black River	High	3	2.75%	Low	1	3	2.16%	Low	1
Unincorporated Budd Inlet	High	3	0.99%	Low	1	3	0.92%	Low	1
Unincorporated Chehalis River	High	3	2.53%	Low	1	3	1.68%	Low	1
Unincorporated Deschutes Mountain Zone	High	3	10.00%	Medium	2	6	7.55%	Low	1
Unincorporated Deschutes River Lower	High	3	0.85%	Low	1	3	0.66%	Low	1
Unincorporated Deschutes River Middle	High	3	3.48%	Low	1	3	2.34%	Low	1
Unincorporated Eld Inlet	High	3	0.73%	Low	1	3	0.41%	Low	1
Unincorporated Henderson Inlet	High	3	0.18%	Low	1	3	0.18%	Low	1
Unincorporated Mcallister Creek	High	3	3.08%	Low	1	3	2.01%	Low	1
Unincorporated Nisqually	High	3	3.40%	Low	1	3	4.06%	Low	1
Unincorporated Nisqually Reach	High	3	0.24%	Low	1	3	0.66%	Low	1
Unincorporated Skookumchuck River	High	3	17.44%	Medium	2	6	19.13%	Medium	2
Unincorporated Totten Inlet	High	3	0.57%	Low	1	3	0.28%	Low	1
Unincorporated West Capitol Forest	High	3	0.00%	None	0	0	0.00%	None	0
Total	High	3	1.14%	Low	1	3	1.38%	Low	1

Notes:
 (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.
 (3) Percent of residential buildings exposed multiplied by the Estimated Population.
 (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

			Economic Impact							
Contents in S Exposed (2)	Value (Structure and contents in S) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in S Damaged (6)	Value Contents in S Damaged (6)	Total Value (Structure and Contents in S) Damaged (6)	% of Total Value Damaged
44,069	\$32,858,936	51.6%	731	203	10	141	\$1,351,160	\$1,449,167	\$2,800,327	4.4%
4,276	\$462,829	0.0%	216	0	0	1	\$0	\$0	\$0	0.0%
563,667	\$455,826,818	2.4%	1,840	18	0	74	\$2,900,374	\$6,684,489	\$9,584,863	0.1%
\$0	\$0	0.0%	1	0	0	0	\$0	\$0	\$0	0.0%
5,714	\$167,141	0.0%	148	0	0	1	\$53,044	\$29,308	\$82,352	0.0%
640,491	\$136,332,881	1.5%	995	10	0	20	\$54,419	\$2,027,259	\$2,081,678	0.0%
29,033	\$20,623,831	1.0%	441	11	0	29	\$64,075	\$56,956	\$121,031	0.0%
952,563	\$60,400,760	2.2%	2,244	68	8	118	\$2,340,154	\$1,580,843	\$3,920,997	0.1%
72,951	\$16,142,697	0.9%	427	2	0	42	\$1,205,144	\$1,054,726	\$2,259,870	0.1%
171,991	\$33,515,972	1.7%	1,001	7	0	101	\$1,065,079	\$555,707	\$1,620,786	0.1%
4,359	\$1,123,077	7.5%	1	0	0	2	\$0	\$0	\$0	0.0%
16,634	\$16,849,902	0.7%	462	3	0	33	\$111,789	\$48,845	\$160,634	0.0%
14,576	\$22,843,728	2.3%	896	7	1	65	\$543,687	\$293,050	\$836,737	0.1%
91,895	\$11,375,686	0.4%	357	4	0	16	\$462,902	\$222,166	\$685,068	0.0%
4,552	\$8,113,657	0.2%	199	3	0	8	\$129,823	\$65,104	\$194,927	0.0%
707,492	\$74,693,715	2.0%	2,720	36	9	87	\$2,643,714	\$6,546,451	\$9,190,165	0.2%
934,404	\$79,042,806	4.1%	2,302	39	8	130	\$3,158,175	\$3,682,381	\$6,840,556	0.4%
26,584	\$5,945,501	0.7%	144	4	0	6	\$374,333	\$1,042,546	\$1,416,879	0.2%
180,314	\$38,561,139	19.1%	1,243	12	1	78	\$1,134,603	\$1,007,894	\$2,142,497	1.1%
6,591	\$1,969,774	0.3%	216	6	0	9	\$394,783	\$120,357	\$515,140	0.1%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
792,155	\$1,016,850,850	1.4%	16,583	433	37	961	\$17,987,258	\$26,467,249	\$44,454,507	0.1%

total
145
1
125
0
1
23
29
176
42
110
7
42
92
30
17
231
195
8
110
9
1069
1393

0-yr Flood							
Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact on Economy			Risk	
			Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
3	6	4.39%	Low	1	1	48	High
0	0	0.00%	None	0	0	0	Low
1	2	0.05%	Low	1	1	18	Medium
0	0	0.00%	None	0	0	0	Low
1	2	0.02%	Low	1	1	18	Medium
1	2	0.02%	Low	1	1	18	Medium
1	2	0.01%	None	0	0	15	Low
1	2	0.14%	Low	1	1	18	Medium
1	2	0.13%	Low	1	1	18	Medium
1	2	0.08%	Low	1	1	18	Medium
1	2	0.00%	None	0	0	24	Medium
1	2	0.01%	None	0	0	15	Low
1	2	0.09%	Low	1	1	18	Medium
1	2	0.02%	Low	1	1	18	Medium
1	2	0.00%	None	0	0	15	Low
1	2	0.25%	Low	1	1	18	Medium
1	2	0.35%	Low	1	1	18	Medium
1	2	0.16%	Low	1	1	18	Medium
2	4	1.06%	Low	1	1	33	High
1	2	0.07%	Low	1	1	18	Medium
0	0	0.00%	None	0	0	0	Low
1	2	0.06%	Low	1	1	18	Medium

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population.
 (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

High Groundwater Flood Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Exposure				
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	0	0	0.0%	\$0	\$0
Lacey	58,180	18,985	17,637	\$17,357,526,547	61	201	0.3%	\$7,613,500	\$3,806,750
Olympia	56,370	18,242	16,257	\$19,116,213,011	1	0	0.0%	\$402,355	\$402,355
Rainier	2,510	875	814	\$393,003,023	1	3	0.1%	\$57,945	\$28,972
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%	\$0	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	9	19	0.1%	\$2,220,600	\$1,610,965
Yelm	10,680	3,139	2,827	\$2,077,637,133	2	8	0.1%	\$433,821	\$216,910
Unincorporated Black River	17,289	6,519	6,185	\$2,801,171,662	25	70	0.4%	\$6,688,064	\$3,344,032
Unincorporated Budd Inlet	10,480	3,844	3,749	\$1,752,014,029	1	3	0.0%	\$99,334	\$49,667
Unincorporated Chehalis River	12,148	4,575	4,346	\$1,999,992,610	8	22	0.2%	\$2,163,541	\$1,081,770
Unincorporated Deschutes Mountain Zone	196	70	70	\$14,876,117	0	0	0.0%	\$0	\$0
Unincorporated Deschutes River Lower	13,775	5,007	4,928	\$2,548,777,015	1	3	0.0%	\$197,518	\$98,759
Unincorporated Deschutes River Middle	7,380	2,666	2,640	\$975,938,911	1	3	0.0%	\$239,395	\$119,698
Unincorporated Eld Inlet	11,505	4,253	4,116	\$2,786,155,643	5	14	0.1%	\$1,992,846	\$996,423
Unincorporated Henderson Inlet	26,843	9,837	9,603	\$4,424,313,689	1	3	0.0%	\$128,357	\$64,178
Unincorporated Mcallister Creek	18,142	6,855	6,490	\$3,712,893,851	13	36	0.2%	\$2,908,337	\$1,454,169
Unincorporated Nisqually	15,285	5,593	5,468	\$1,945,195,946	15	42	0.3%	\$4,717,672	\$2,358,836
Unincorporated Nisqually Reach	4,702	1,697	1,682	\$895,133,285	0	0	0.0%	\$0	\$0
Unincorporated Skookumchuck River	1,618	593	579	\$201,544,596	0	0	0.0%	\$0	\$0
Unincorporated Totten Inlet	4,377	1,581	1,566	\$701,366,142	1	3	0.1%	\$656,889	\$328,444
Unincorporated West Capitol Forest	20	14	7	\$6,222,931	0	0	0.0%	\$0	\$0
Total	300,500	104,854	98,260	\$73,540,652,648	145	429	0.1%	\$30,520,173	\$15,961,929

Jurisdiction	Number of Structures in High Ground Water Area (2)							
	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
Bucoda	0	0	0	0	0	0	0	0
Lacey	61	0	0	0	0	0	0	61
Olympia	0	1	0	0	0	0	0	1
Rainier	1	0	0	0	0	0	0	1
Tenino	0	0	0	0	0	0	0	0
Tumwater	6	2	1	0	0	0	0	9
Yelm	2	0	0	0	0	0	0	2
Unincorporated Black River	25	0	0	0	0	0	0	25
Unincorporated Budd Inlet	1	0	0	0	0	0	0	1
Unincorporated Chehalis River	8	0	0	0	0	0	0	8
Unincorporated Deschutes Mountain Zone	0	0	0	0	0	0	0	0
Unincorporated Deschutes River Lower	1	0	0	0	0	0	0	1
Unincorporated Deschutes River Middle	1	0	0	0	0	0	0	1
Unincorporated Eld Inlet	5	0	0	0	0	0	0	5
Unincorporated Henderson Inlet	1	0	0	0	0	0	0	1
Unincorporated Mcallister Creek	13	0	0	0	0	0	0	13
Unincorporated Nisqually	15	0	0	0	0	0	0	15
Unincorporated Nisqually Reach	0	0	0	0	0	0	0	0
Unincorporated Skookumchuck River	0	0	0	0	0	0	0	0
Unincorporated Totten Inlet	1	0	0	0	0	0	0	1
Unincorporated West Capitol Forest	0	0	0	0	0	0	0	0
Total	141	3	1	0	0	0	0	145

Jurisdiction	RISK RANKING-High Ground Water								
	Probability		Impact on People			Impact on Property			
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor
Bucoda	Medium	2	0.00%	None	0	0	0.00%	None	0
Lacey	Medium	2	0.35%	Low	1	3	0.07%	Low	1
Olympia	Medium	2	0.00%	None	0	0	0.00%	None	0
Rainier	Medium	2	0.12%	Low	1	3	0.02%	Low	1
Tenino	Medium	2	0.00%	None	0	0	0.00%	None	0
Tumwater	Medium	2	0.07%	Low	1	3	0.04%	Low	1
Yelm	Medium	2	0.07%	Low	1	3	0.03%	Low	1
Unincorporated Black River	Medium	2	0.40%	Low	1	3	0.36%	Low	1
Unincorporated Budd Inlet	Medium	2	0.03%	Low	1	3	0.01%	None	0
Unincorporated Chehalis River	Medium	2	0.18%	Low	1	3	0.16%	Low	1
Unincorporated Deschutes Mountain Zone	Medium	2	0.00%	None	0	0	0.00%	None	0
Unincorporated Deschutes River Lower	Medium	2	0.02%	Low	1	3	0.01%	Low	1
Unincorporated Deschutes River Middle	Medium	2	0.04%	Low	1	3	0.04%	Low	1
Unincorporated Eld Inlet	Medium	2	0.12%	Low	1	3	0.11%	Low	1
Unincorporated Henderson Inlet	Medium	2	0.01%	Low	1	3	0.00%	None	0
Unincorporated Mcallister Creek	Medium	2	0.20%	Low	1	3	0.12%	Low	1
Unincorporated Nisqually	Medium	2	0.27%	Low	1	3	0.36%	Low	1
Unincorporated Nisqually Reach	Medium	2	0.00%	None	0	0	0.00%	None	0
Unincorporated Skookumchuck River	Medium	2	0.00%	None	0	0	0.00%	None	0
Unincorporated Totten Inlet	Medium	2	0.06%	Low	1	3	0.14%	Low	1
Unincorporated West Capitol Forest	Medium	2	0.00%	None	0	0	0.00%	None	0
Total	Medium	2	0.14%	Low	1	3	0.06%	Low	1

Notes:
 (1)2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 (2) Values based off of 2022 tax assessor data provided by Thurston County.
 (3) Percent of residential buildings exposed multiplied by the Estimated Population.

Appendix C: Risk Assessment Ratings Calculation Tables

Value (Structure and Contents in \$) Exposed (2)	% of Total Value Exposed
\$0	0.0%
\$11,420,250	0.1%
\$804,710	0.0%
\$86,917	0.0%
\$0	0.0%
\$3,831,565	0.0%
\$650,731	0.0%
\$10,032,097	0.4%
\$149,001	0.0%
\$3,245,311	0.2%
\$0	0.0%
\$296,277	0.0%
\$359,093	0.0%
\$2,989,269	0.1%
\$192,535	0.0%
\$4,362,506	0.1%
\$7,076,508	0.4%
\$0	0.0%
\$0	0.0%
\$985,333	0.1%
\$0	0.0%
\$46,482,102	0.1%

Weighted Impact Factor	Impact on Economy				Risk	
	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0	0.00%	None	0	0	0	Low
2	0.02%	Low	1	1	12	Low
0	0.00%	None	0	0	0	Low
2	0.01%	None	0	0	10	Low
0	0.00%	None	0	0	0	Low
2	0.01%	Low	1	1	12	Low
2	0.01%	None	0	0	10	Low
2	0.09%	Low	1	1	12	Low
0	0.00%	None	0	0	6	Low
2	0.04%	Low	1	1	12	Low
0	0.00%	None	0	0	0	Low
2	0.00%	None	0	0	10	Low
2	0.01%	None	0	0	10	Low
2	0.03%	Low	1	1	12	Low
0	0.00%	None	0	0	6	Low
2	0.03%	Low	1	1	12	Low
2	0.09%	Low	1	1	12	Low
0	0.00%	None	0	0	0	Low
0	0.00%	None	0	0	0	Low
2	0.04%	Low	1	1	12	Low
0	0.00%	None	0	0	0	Low
2	0.02%	Low	1	1	12	Low

High Groundwater Flood Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	Probability		Impact on People				SPECIAL PURPOSE
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Exposed
East Olympia Fire District	Medium	2	0.09%	Low	1	3	0.00%
Intercity Transit	Medium	2	0.00%	None	0	0	0.00%
Lacey Fire District	Medium	2	0.23%	Low	1	3	0.00%
McLane Black Lake Fire District	Medium	2	0.07%	Low	1	3	0.00%
Olympia School District	Medium	2	0.01%	Low	1	3	0.00%
SE Thurston Fire Authority	Medium	2	0.21%	Low	1	3	0.00%
South Bay Fire District	Medium	2	0.02%	Low	1	3	0.00%
The Evergreen State College	Medium	2	0.00%	None	0	0	0.00%
Thurston PUD	Medium	2	0.14%	Low	1	3	0.00%
West Thurston Regional Fire Authority	Medium	2	0.28%	Low	1	3	0.00%

Jurisdiction	Special Purpose District Critical Facilities Loss Detail					
	Critical Facilities	Facilities in HGW	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0.00	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0.00	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0.00	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0.00	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0.00	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0.00	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0.00	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0.00	0.00%
Thurston PUD	104	0	0.00%	\$157,995,117	0.00	0.00%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0.00	0.00%

Appendix C: Risk Assessment Ratings Calculation Tables

E DISTRICT RISK SCORES AND RATINGS - HGW Flood									
Value	Impact on Property			Impact on Economy				Risk	
	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low

Landslide Hazard - Municipal Risk Assessment Results and Risk Rating

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Washington DNR Landslide Hazard			
					Estimated Buildings Exposed (3)			
					Estimated Buildings Exposed (2)	Population Exposed (4)	% of Population Exposed	Value Structure Exposed
Bucoda	610	245	237	\$63,726,655	0	0	0.0%	\$0
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	647	1,789	3.2%	\$243,001,000
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	595	1,658	1.2%	\$164,241,000
Total	300,500	104,854	98,260	73,540,652,648	1,242	3,447	1.1%	\$407,242,000

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Slope greater than 40 Percent			
					Estimated Buildings Exposed (3)			
					Estimated Buildings Exposed (2)	Population Exposed (4)	% of Population Exposed	Value Structure Exposed
Bucoda	610	245	237	\$63,726,655	0	0	0.0%	\$0
Lacey	58,180	18,985	17,637	\$17,357,526,547	20	66	0.1%	\$6,171,900
Olympia	56,370	18,242	16,257	\$19,116,213,011	224	645	1.1%	\$215,666,000
Rainier	2,510	875	814	\$393,003,023	4	12	0.5%	\$988,960
Tenino	2,030	751	651	\$404,778,123	1	3	0.2%	\$258,060
Tumwater	26,360	9,513	8,408	\$9,362,171,728	74	223	0.8%	\$28,959,900
Yelm	10,680	3,139	2,827	\$2,077,637,133	3	11	0.1%	\$843,140
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	482	1,325	0.9%	\$117,559,000
Total	300,500	104,854	98,260	73,540,652,648	808	2,285	0.8%	\$370,448,000

RISK RANKING- Landslide Hazards (WA DNR Landslide Hazard)								
	Probability		Impact on People				% of Total Value Exposed	Impact (High, Medium, Low)
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
Bucoda	High	3	0.00%	None	0	0	0.00%	None
Lacey	High	3	0.11%	Low	1	3	0.05%	Low
Olympia	High	3	4.32%	Low	1	3	4.06%	Low
Rainier	High	3	0.49%	Low	1	3	0.38%	Low
Tenino	High	3	0.15%	Low	1	3	0.10%	Low
Tumwater	High	3	0.84%	Low	1	3	0.49%	Low
Yelm	High	3	0.11%	Low	1	3	0.06%	Low
Unincorporated	High	3	2.07%	Low	1	3	1.72%	Low
Total	High	3	1.91%	Low	1	3	1.71%	Low

- Notes:
- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Washington DNR Landslide Compilation & Slope greater than 40 Percent.
 - (4) Percent of residential buildings exposed multiplied by the Estimated Population.

Appendix C: Risk Assessment Ratings Calculation Tables

Landslide Compilation (3)				Number of Structures exposed to WA DNR Landslides (2)							
Structure in \$ (2)	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
062	\$166,129,145	\$409,130,207	2.1%	516	131	0	0	0	0	0	647
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
720	\$82,691,568	\$246,933,289	1.0%	593	2	0	0	0	0	0	595
782	\$248,820,713	\$656,063,496	0.9%	1,109	133	0	0	0	0	0	1,242

Slope greater than 40 Percent (3)				Number of Structures exposed to Slope greater than 40 Percent (2)							
Structure in \$ (2)	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
	\$0	\$0	0.0%	0	0	0	0	0	0	0	0
40	\$3,085,970	\$9,257,909	0.1%	20	0	0	0	0	0	0	20
668	\$150,673,011	\$366,339,679	1.9%	186	35	0	0	0	3	0	224
2	\$494,481	\$1,483,443	0.4%	4	0	0	0	0	0	0	4
4	\$129,032	\$387,095	0.1%	1	0	0	0	0	0	0	1
919	\$17,374,214	\$46,334,133	0.5%	71	3	0	0	0	0	0	74
7	\$421,573	\$1,264,720	0.1%	3	0	0	0	0	0	0	3
963	\$62,244,601	\$179,804,564	0.7%	474	8	0	0	0	0	0	482
662	\$234,422,883	\$604,871,545	0.8%	759	46	0	0	0	3	0	808

Landslide Compilations & Slope greater than 40 Percent)								
Impact on Property			Impact on Economy					
Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	0	0	0.00%	None	0	0	0	Low
	1	2	0.01%	Low	1	1	18	Medium
	1	2	1.01%	Low	1	1	18	Medium
	1	2	0.09%	Low	1	1	18	Medium
	1	2	0.02%	Low	1	1	18	Medium
	1	2	0.12%	Low	1	1	18	Medium
	1	2	0.02%	Low	1	1	18	Medium
	1	2	0.43%	Low	1	1	18	Medium
	1	2	0.43%	Low	1	1	18	Medium

Landslide Hazard - Special Purpose Districts Risk Assessment Results and Risk Rating

SPECIAL PURPOSE DISTRICT RISK SCORES AND RATINGS							
Jurisdiction	Probability		Impact on People				% of Total Value Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia Fire District	High	3	0.31%	Low	1	3	0.00%
Intercity Transit	High	3	0.00%	None	0	0	0.00%
Lacey Fire District	High	3	0.18%	Low	1	3	11.00%
McLane Black Lake Fire District	High	3	4.03%	Low	1	3	0.00%
Olympia School District	High	3	0.00%	None	0	0	0.00%
SE Thurston Fire Authority	High	3	0.25%	Low	1	3	0.00%
South Bay Fire District	High	3	2.94%	Low	1	3	0.00%
The Evergreen State College	High	3	0.00%	None	0	0	0.00%
Thuston PUD	High	3	1.15%	Low	1	3	0.00%
West Thurston Regional Fire Authority	High	3	0.09%	Low	1	3	0.00%

Special Purpose District Critical Facilities Detail						
Jurisdiction	Critical Facilities	Facilities in Tsunami	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0.00%
SE Thurston Fire Authority	6	1	16.67%	\$5,967,300	\$167,531	0.70%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0.00%
Thuston PUD	104	0	0.00%	\$157,995,117	0	0.00%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0.00%

Landslide Hazards (WA DNR Landslide Compilations & Slope greater than 40 Percent)									
Impact on Property				Impact on Economy					
Total Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0%	None	0	0	0.00%	None	0	0	9	Low
0%	None	0	0	0.00%	None	0	0	0	Low
0%	Medium	2	4	0.00%	None	0	0	21	Medium
0%	None	0	0	0.00%	None	0	0	9	Low
0%	None	0	0	0.00%	None	0	0	0	Low
0%	None	0	0	0.70%	Low	1	1	12	Low
0%	None	0	0	0.00%	None	0	0	9	Low
0%	None	0	0	0.00%	None	0	0	0	Low
0%	None	0	0	0.00%	None	0	0	9	Low
0%	None	0	0	0.00%	None	0	0	9	Low

Appendix C: Risk Assessment Ratings Calculation Tables

Sea Level Rise Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Estimated Building Exposure			
					Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed	Value Structure in \$ Exposed (2)
Bucoda	610	245	237	\$63,726,655	0	0	0.0%	\$0
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%	\$0
Olympia	56,370	18,242	16,257	\$19,116,213,011	122	114	0.2%	\$322,608,575
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%	\$0
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%	\$0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%	\$0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%	\$0
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	154	375	0.3%	\$43,850,493
Total	300,500	104,854	98,260	\$73,540,652,648	276	489	0.2%	\$366,459,068

Jurisdiction	Acres of Inundation Area	Number of Structures in Inundation Area (2)						
		Residential	Commercial	Industrial	Agriculture	Religion	Government	Education
Bucoda	0	0	0	0	0	0	0	0
Lacey	5	0	0	0	0	0	0	0
Olympia	197	33	83	3	0	0	3	0
Rainier	0	0	0	0	0	0	0	0
Tenino	0	0	0	0	0	0	0	0
Tumwater	0	0	0	0	0	0	0	0
Yelm	0	0	0	0	0	0	0	0
Unincorporated	2,122	134	19	0	0	0	1	0
Total	2,324	167	102	3	0	0	4	0

Jurisdiction	Probability		Impact on People				RISK RANKING-Sea Level Rise	
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)
Bucoda	Low	1	0.00%	None	0	0	0.00%	None
Lacey	High	3	0.00%	None	0	0	0.00%	None
Olympia	High	3	0.20%	Low	1	3	2.91%	Low
Rainier	Low	1	0.00%	None	0	0	0.00%	None
Tenino	Low	1	0.00%	None	0	0	0.00%	None
Tumwater	Low	1	0.00%	None	0	0	0.00%	None
Yelm	Low	1	0.00%	None	0	0	0.00%	None
Unincorporated	High	3	0.26%	Low	1	3	0.29%	Low
Total	High	3	0.16%	Low	1	3	0.85%	Low

- Notes:
- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Percent of residential buildings exposed multiplied by the Estimated Population.
 - (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.
 - (5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population.
 - (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

			Economic Impact							
Value Contents in S Exposed (2)	Value (Structure and contents in S) Exposed (2)	% of Total Value Exposed	Structure Debris (Tons) (4)	Displaced Population (5)	People Requiring Short-Term Shelter (5)	Buildings Impacted (6)	Value Structure in S Damaged (6)	Value Contents in S Damaged (6)	Total Value (Structure and Contents in S) Damaged (6)	% of Total Value Damaged
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$233,915,577	\$556,524,151	2.9%	538	0	0	122	\$8,729,964	\$21,883,034	\$30,612,998	0.2%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$0	\$0	0.0%	0	0	0	0	\$0	\$0	\$0	0.0%
\$27,355,301	\$71,205,795	0.3%	1,837	1	0	154	\$5,222,311	\$4,790,130	\$10,012,441	0.0%
\$261,270,878	\$627,729,946	0.9%	2,375	1	0	276	\$13,952,275	\$26,673,163	\$40,625,439	0.1%

Total
0
0
122
0
0
0
0
0
154
276

Level Rise							
Property		Impact on Economy				Risk	
Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
1	2	0.16%	Low	1	1	18	Medium
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
0	0	0.00%	None	0	0	0	Low
1	2	0.04%	Low	1	1	18	Medium
1	2	0.06%	Low	1	1	18	Medium

Appendix C: Risk Assessment Ratings Calculation Tables

Sea Level Rise Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdictions	SPECIAL PURPOSE DISTRICTS						
	Probability		Impact on People				
East Olympia Fire District	Low	1	0.00%	None	0	0	0.00%
Intercity Transit	High	3	0.00%	None	0	0	0.00%
Lacey Fire District	High	3	0.01%	None	0	0	0.00%
McLane Black Lake Fire District	High	3	0.69%	Low	1	3	0.00%
Olympia School District	High	3	0.45%	Low	1	3	0.00%
SE Thurston Fire Authority	Low	1	0.00%	None	0	0	0.00%
South Bay Fire District	High	3	1.00%	Low	1	3	0.00%
The Evergreen State College	High	3	0.00%	None	0	0	0.00%
Thurston PUD	High	3	0.16%	Low	1	3	0.00%
West Thurston Regional Fire Authority	Low	1	0.00%	None	0	0	0.00%

Jurisdictions	Special Purpose District Critical Facilities Loss Detail						
	Critical Facilities	Facilities in Sea Level Rise	% in Hazard	Total Valuation	Total Damaged	% Total Damage	
East Olympia Fire District	6	0	0.00%	\$4,995,000	0.00%	0.00%	
Intercity Transit	9	0	0.00%	\$84,647,258	0.00%	0.00%	
Lacey Fire District	9	0	0.00%	\$66,350,723	0.00%	0.00%	
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0.00%	0.00%	
Olympia School District	22	0	0.00%	\$237,434,380	0.00%	0.00%	
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0.00%	0.00%	
South Bay Fire District	3	0	0.00%	\$4,245,296	0.00%	0.00%	
The Evergreen State College	31	0	0.00%	\$633,990,605	0.00%	0.00%	
Thurston PUD	104	0	0.00%	\$157,995,117	0.00%	0.00%	
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0.00%	0.00%	

STRICT RISK SCORES AND RATINGS Sea Level Rise									
Impact on Property				Impact on Economy				Risk Ranking Score	Hazard Risk Rating
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	9	Low
	None	0	0	0.00%	None	0	0	0	Low

Severe Weather Hazard - Municipal and Special Purpose Districts Risk Assessment Results and R

Jurisdiction	MUNICIPAL RISK SCORE						
	Probability		Impact on People				% of Total Value Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
Bucoda	High	3	5.00%	Low	1	3	5.00%
Lacey	High	3	5.00%	Low	1	3	5.00%
Olympia	High	3	5.00%	Low	1	3	5.00%
Rainier	High	3	5.00%	Low	1	3	5.00%
Tenino	High	3	5.00%	Low	1	3	5.00%
Tumwater	High	3	5.00%	Low	1	3	5.00%
Yelm	High	3	5.00%	Low	1	3	5.00%
Unincorporated	High	3	5.00%	Low	1	3	5.00%
Total	High	3	5.00%	Low	1	3	5.00%

Jurisdiction	SPECIAL PURPOSE DISTRICT RISK SCORE						
	Probability		Impact on People				% of Total Value Exposed
Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
East Olympia Fire District	High	3	5.00%	Low	1	3	5.00%
Intercity Transit	High	3	5.00%	Low	1	3	5.00%
Lacey Fire District	High	3	5.00%	Low	1	3	5.00%
McLane Black Lake Fire District	High	3	5.00%	Low	1	3	5.00%
Olympia School District	High	3	5.00%	Low	1	3	5.00%
SE Thurston Fire Authority	High	3	5.00%	Low	1	3	5.00%
South Bay Fire District	High	3	5.00%	Low	1	3	5.00%
The Evergreen State College	High	3	5.00%	Low	1	3	5.00%
Thurston PUD	High	3	5.00%	Low	1	3	5.00%
West Thurston Regional Fire Authority	High	3	5.00%	Low	1	3	5.00%

Risk Rating

IMPACTS AND RATINGS SEVERE WEATHER HAZARDS								
Impact on Property			Impact on Economy				Risk	
Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium

RISK SCORES AND RATINGS SEVERE WEATHER HAZARDS								
Impact on Property			Impact on Economy				Risk	
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium
Low	1	2	1.00%	Low	1	1	18	Medium

Tsunami Cascadia M9.3 Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Buildings Exposed (2)	Population Exposed (3)	% of Population Exposed
Bucoda	610	245	237	\$63,726,655	0	0	0.0%
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.0%
Olympia	56,370	18,242	16,257	\$19,116,213,011	35	52	0.1%
Rainier	2,510	875	814	\$393,003,023	0	0	0.0%
Tenino	2,030	751	651	\$404,778,123	0	0	0.0%
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.0%
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.0%
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	49	109	0.1%
Total	300,500	104,854	98,260	\$73,540,652,648	84	161	0.1%

Jurisdiction	Number of Structures in Tsunami Inundation Area (2)						
	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education
Bucoda	0	0	0	0	0	0	0
Lacey	0	0	0	0	0	0	0
Olympia	15	18	2	0	0	0	0
Rainier	0	0	0	0	0	0	0
Tenino	0	0	0	0	0	0	0
Tumwater	0	0	0	0	0	0	0
Yelm	0	0	0	0	0	0	0
Unincorporated	39	10	0	0	0	0	0
Total	54	28	2	0	0	0	0

Jurisdiction	Probability		Impact on People				% of Total Value Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
Bucoda	Low	1	0.00%	None	0	0	0.00%
Lacey	Medium	2	0.00%	None	0	0	0.00%
Olympia	Medium	2	0.09%	Low	1	3	0.38%
Rainier	Low	1	0.00%	None	0	0	0.00%
Tenino	Low	1	0.00%	None	0	0	0.00%
Tumwater	Low	1	0.00%	None	0	0	0.00%
Yelm	Low	1	0.00%	None	0	0	0.00%
Unincorporated	Medium	2	0.08%	Low	1	3	0.09%
Total	Medium	2	0.05%	Low	1	3	0.13%

Notes:

- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
- (2) Values based off of 2022 tax assessor data provided by Thurston County.
- (3) Percent of residential buildings exposed multiplied by the Estimated Population.
- (4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1.
- (5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 5.1, and adjusted to reflect the estimated population.
- (6) Calculated using a user-defined (UDF) analysis in Hazus 5.1.

Appendix C: Risk Assessment Ratings Calculation Tables

Estimated Exposure				
	Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value Exposed
	\$0	\$0	\$0	0.0%
	\$0	\$0	\$0	0.0%
	\$38,825,561	\$33,870,770	\$72,696,331	0.4%
	\$0	\$0	\$0	0.0%
	\$0	\$0	\$0	0.0%
	\$0	\$0	\$0	0.0%
	\$0	\$0	\$0	0.0%
	\$12,742,393	\$9,473,317	\$22,215,710	0.1%
	\$51,567,954	\$43,344,088	\$94,912,042	0.1%

Total	
0	0
0	0
0	35
0	0
0	0
0	0
0	0
0	49
0	84

RISK RANKING-Tsunami									
Impact on Property				Impact on Economy				Risk	
Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating	
None	0	0	0.00%	None	0	0	0	Low	
None	0	0	0.00%	None	0	0	0	Low	
Low	1	2	0.10%	Low	1	1	12	Low	
None	0	0	0.00%	None	0	0	0	Low	
None	0	0	0.00%	None	0	0	0	Low	
None	0	0	0.00%	None	0	0	0	Low	
None	0	0	0.00%	None	0	0	0	Low	
Low	1	2	0.02%	Low	1	1	12	Low	
Low	1	2	0.03%	Low	1	1	12	Low	

Tsunami Cascadia M9.3 Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICT						
	Probability		Impact on People				% of Total Value Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia Fire District	Low	1	0.00%	None	0	0	0.00%
Intercity Transit	Medium	2	0.00%	None	0	0	0.00%
Lacey Fire District	Medium	2	0.00%	None	0	0	0.00%
McLane Black Lake Fire District	Medium	2	0.45%	Low	1	3	0.00%
Olympia School District	Medium	2	0.19%	Low	1	3	0.00%
SE Thurston Fire Authority	Low	1	0.00%	None	0	0	0.00%
South Bay Fire District	Medium	2	0.17%	Low	1	3	0.00%
The Evergreen State College	Medium	2	0.00%	None	0	0	0.00%
Thuston PUD	Medium	2	0.05%	Low	1	3	0.00%
West Thurston Regional Fire Authority	Low	1	0.00%	None	0	0	0.00%

Jurisdiction	Special Purpose District Critical Facility Loss Detail					
	Critical Facilities	Facilities in Tsunami	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0.00	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0.00	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0.00	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0.00	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0.00	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0.00	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0.00	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0.00	0.00%
Thuston PUD	104	0	0.00%	\$157,995,117	0.00	0.00%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0.00	0.00%

HAZARDS RISK SCORES AND RATINGS TSUNAMI HAZARDS									
Impact on Property				Impact on Economy				Risk	
Asset	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	0	Low
	None	0	0	0.00%	None	0	0	6	Low
	None	0	0	0.00%	None	0	0	0	Low

Mount Rainier Case I Lahar Hazard Scenario - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Volcano Lahar Inundation			
					Estimated Exposed			
					Estimated Buildings Exposed (2)	Population Exposed (4)	% of Population Exposed	Value Structure Exposed (2)
Bucoda	610	245	237	\$63,726,655	0	0	0.00%	0
Lacey	58,180	18,985	17,637	\$17,357,526,547	0	0	0.00%	0
Olympia	56,370	18,242	16,257	\$19,116,213,011	0	0	0.00%	0
Rainier	2,510	875	814	\$393,003,023	0	0	0.00%	0
Tenino	2,030	751	651	\$404,778,123	0	0	0.00%	0
Tumwater	26,360	9,513	8,408	\$9,362,171,728	0	0	0.00%	0
Yelm	10,680	3,139	2,827	\$2,077,637,133	0	0	0.00%	0
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	857	2,284	1.59%	163,656,517
Total	300,500	104,854	98,260	73,540,652,648	857	2,284	0.76%	163,656,517

	RISK RANKING - Volcano Lahar Hazard							
	Probability		Impact on People				Impact on Value	
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)
Bucoda	Low	1	0.00%	None	0	0	0.00%	None
Lacey	Low	1	0.00%	None	0	0	0.00%	None
Olympia	Low	1	0.00%	None	0	0	0.00%	None
Rainier	Low	1	0.00%	None	0	0	0.00%	None
Tenino	Low	1	0.00%	None	0	0	0.00%	None
Tumwater	Low	1	0.00%	None	0	0	0.00%	None
Yelm	Low	1	0.00%	None	0	0	0.00%	None
Unincorporated	Low	1	1.59%	Low	1	3	1.04%	Low
Total	Low	1	0.76%	Low	1	3	0.35%	Low

- Notes:**
- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Volcano Lahar Hazard data provided by USGS.
 - (4) Percent of residential buildings exposed multiplied by the Estimated Population.

Flood Hazard Area (3)				Number of Structures in Hazard Area (2)							
Value in \$	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	0	0	0.00%	0	0	0	0	0	0	0	0
	94,432,130	258,088,648	1.04%	817	35	1	0	0	0	4	857
	94,432,130	258,088,648	0.35%	817	35	1	0	0	0	4	857

Flood Hazard Area (3)								
Impact on Property			Impact on Economy					
Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
0	0	0.00%	None	0	0	0	Low	
1	2	0.26%	Low	1	1	6	Low	
1	2	0.09%	Low	1	1	6	Low	

Mount Rainier Case I Lahar Hazard Scenario - Special Purpose Districts Risk Assessment Results and Risk Rat

Jurisdiction	SPECIAL PURPOSE DISTRICT					
	Probability		Impact on People			
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor
East Olympia	Low	1	0.00%	None	0	0
Intercity Transit	Low	1	0.00%	None	0	0
Lacey Fire District	Low	1	1.01%	Low	1	3
McLane Black Lake Fire District	Low	1	0.00%	None	0	0
Olympia School District	Low	1	0.00%	None	0	0
SE Thurston Fire Authority	Low	1	4.43%	Low	1	3
South Bay Fire District	Low	1	0.00%	None	0	0
The Evergreen State College	Low	1	0.00%	None	0	0
Thuston PUD	Low	1	0.76%	Low	1	3
West Thurston Regional Fire Authority	Low	1	0.00%	None	0	0

Jurisdiction	Special Purpose District Critical Facilities Detail					
	Critical Facilities	Facilities in Tsunami	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	0	0.00%	\$4,995,000	0	0.00%
Intercity Transit	9	0	0.00%	\$84,647,258	0	0.00%
Lacey Fire District	9	0	0.00%	\$66,350,723	0	0.00%
McLane Black Lake Fire District	7	0	0.00%	\$9,451,467	0	0.00%
Olympia School District	22	0	0.00%	\$237,434,380	0	0.00%
SE Thurston Fire Authority	6	0	0.00%	\$5,967,300	0	0.00%
South Bay Fire District	3	0	0.00%	\$4,245,296	0	0.00%
The Evergreen State College	31	0	0.00%	\$633,990,605	0	0.00%
Thuston PUD	104	1	0.96%	\$157,995,117	\$468,751	0.07%
West Thurston Regional Fire Authority	6	0	0.00%	\$8,619,586	0	0.00%

Wildland-Urban Interface Hazard - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Washington			
					Estimated Buildings Exposed (2)	Population Exposed (4)	% of Population Exposed	Value Exposed
Bucoda	610	245	237	\$63,726,655	224	561	92.0%	\$
Lacey	58,180	18,985	17,637	\$17,357,526,547	4,342	12,951	22.3%	\$
Olympia	56,370	18,242	16,257	\$19,116,213,011	3,444	10,142	18.0%	\$
Rainier	2,510	875	814	\$393,003,023	517	1,437	57.2%	\$
Tenino	2,030	751	651	\$404,778,123	693	1,868	92.0%	\$
Tumwater	26,360	9,513	8,408	\$9,362,171,728	4,142	11,431	43.4%	\$
Yelm	10,680	3,139	2,827	\$2,077,637,133	2,744	9,226	86.4%	\$
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	18,524	49,279	34.3%	\$
Total	300,500	104,854	98,260	73,540,652,648	34,630	96,894	32.2%	\$

Jurisdiction	RISK SCORE AND RATING WILD							
	Probability (5)		Impact on People				% of Total Value Exposed	Risk Rating
Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor			
Bucoda	Low	1	91.98%	High	3	9	91.94%	High
Lacey	Low	1	22.26%	Medium	2	6	34.40%	Medium
Olympia	Low	1	17.99%	Medium	2	6	25.04%	Medium
Rainier	Low	1	57.25%	High	3	9	61.00%	High
Tenino	Low	1	92.01%	High	3	9	94.55%	High
Tumwater	Low	1	43.36%	High	3	9	36.59%	High
Yelm	Low	1	86.38%	High	3	9	88.39%	High
Unincorporated	Medium	2	34.28%	High	3	9	36.79%	High
Total	Medium	2	32.24%	High	3	9	35.10%	High

- Notes:**
- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Wildland Urban Interface and Intermix data provided by Washington DNR.
 - (4) Percent of residential buildings exposed multiplied by the Estimated Population.
 - (5) Probability is based on 2008-2022 Washington DNR Wildfire Data for Thurston County. Probability is assigned as follows: High, 20+ acre fires in this period; Medium, 5-10 acre fires in this period; low 0-1 acre fires in this period.

Appendix C: Risk Assessment Ratings Calculation Tables

DNR Wildland Urban Interface (3)				Number of Structures in Wildland Urban Interface (2)							
Estimated Exposure				Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
Value Structure in \$ Exposed (2)	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value								
\$37,150,528	\$21,438,267	\$58,588,795	91.9%	218	4	0	0	0	2	0	224
\$3,322,957,920	\$2,648,459,432	\$5,971,417,351	34.4%	3,926	347	19	0	5	1	44	4,342
\$2,669,027,331	\$2,117,031,646	\$4,786,058,977	25.0%	2,925	507	2	0	5	1	4	3,444
\$141,499,831	\$98,246,273	\$239,746,104	61.0%	466	42	0	0	2	1	6	517
\$220,337,015	\$162,363,873	\$382,700,888	94.5%	599	72	0	1	7	5	9	693
\$1,930,103,308	\$1,495,341,610	\$3,425,444,918	36.6%	3,646	433	48	1	1	6	7	4,142
\$1,089,473,790	\$746,942,304	\$1,836,416,094	88.4%	2,442	262	10	1	13	5	11	2,744
\$5,653,973,894	\$3,458,460,282	\$9,112,434,176	36.8%	17,629	669	94	4	32	24	72	18,524
\$15,064,523,615	\$10,748,283,687	\$25,812,807,303	35.1%	31,851	2,336	173	7	65	45	153	34,630

WILDLAND FIRE HAZARD (Wildland Urban Interface)								
Impact on Property			Impact on Economy				Risk	
Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
High	3	6	22.98%	High	3	3	18	Medium
High	3	6	8.60%	Medium	2	2	14	Low
High	3	6	6.26%	Medium	2	2	14	Low
High	3	6	15.25%	High	3	3	18	Medium
High	3	6	23.64%	High	3	3	18	Medium
High	3	6	9.15%	Medium	2	2	17	Medium
High	3	6	22.10%	High	3	3	18	Medium
High	3	6	9.20%	Medium	2	2	34	High
High	3	6	8.78%	Medium	2	2	34	High

the fires.

Wildland-Urban Interface Hazard - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICTS RISK ASSESSMENT RESULTS					
	Probability (5)		Impact on People			
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor
East Olympia Fire District	Low	1	37.06%	High	3	9
Intercity Transit	Low	1	0.00%	None	0	0
Lacey Fire District	Low	1	39.99%	High	3	9
McLane Black Lake Fire District	Medium	2	25.14%	High	3	9
Olympia School District	Low	1	22.98%	Medium	2	6
SE Thurston Fire Authority	High	3	46.75%	High	3	9
South Bay Fire District	Low	1	17.61%	Medium	2	6
The Evergreen State College	Medium	2	0.00%	None	0	0
Thuston PUD	Medium	2	32.24%	High	3	9
West Thurston Regional Fire Authority	High	3	26.40%	High	3	9

Jurisdiction	Special Purpose District Critical Facilities Detail					
	Critical Facilities	Facilities in Interface	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	3	50.00%	\$4,995,000	\$4,475,000	22.40%
Intercity Transit	9	0	0.00%	\$84,647,258	\$0	0.00%
Lacey Fire District	9	1	11.11%	\$66,350,723	\$2	0.00%
McLane Black Lake Fire District	7	2	28.57%	\$9,451,467	\$4,464,625	11.81%
Olympia School District	22	5	22.73%	\$237,434,380	\$42,744,026	4.50%
SE Thurston Fire Authority	6	2	33.33%	\$5,967,300	\$3,093,609	12.96%
South Bay Fire District	3	1	33.33%	\$4,245,296	\$3,255,552	19.17%
The Evergreen State College	31	31	100.00%	\$633,990,605	\$633,990,605	25.00%
Thuston PUD	104	27	25.96%	\$157,995,117	\$65,365,922	10.34%
West Thurston Regional Fire Authority	6	4	66.67%	\$8,619,586	\$5,667,603	16.44%

RISK SCORES AND RATINGS Wildfire Hazards (Wildland-Urban Interface)									
Impact on Property				Impact on Economy				Risk Ranking Score	Hazard Risk Rating
% of Total Value Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor		
0.00%	None	0	0	22.40%	High	3	3	12	Low
0.00%	None	0	0	0.00%	None	0	0	0	Low
50.00%	High	3	6	0.00%	None	0	0	15	Low
100.00%	High	3	6	11.81%	High	3	3	36	High
24.00%	Medium	2	4	4.50%	Low	1	1	11	Low
33.00%	High	3	6	12.96%	High	3	3	54	High
100.00%	High	3	6	19.17%	High	3	3	15	Low
100.00%	High	3	6	25.00%	High	3	3	18	Medium
0.00%	None	0	0	10.34%	High	3	3	24	Medium
67.00%	High	3	6	16.44%	High	3	3	54	High

Wildland-Urban Intermix Hazard - Municipal Risk Assessment Results and Risk Ratings

Jurisdiction	Estimated Population (1)	Total Number of Buildings (2)	Total Number of Residential Buildings (2)	Total Building Value (Structure and contents in \$) (2)	Washington DNR			
					Estimated Buildings Exposed (2)	Population Exposed (4)	% of Population Exposed	Value Structure Exposed (2)
Bucoda	610	245	237	\$63,726,655	21	49	8.0%	\$3,281,434
Lacey	58,180	18,985	17,637	\$17,357,526,547	2,007	6,469	11.1%	\$1,065,524,8
Olympia	56,370	18,242	16,257	\$19,116,213,011	1,427	4,757	8.4%	\$503,348,67
Rainier	2,510	875	814	\$393,003,023	358	1,073	42.8%	\$99,644,900
Tenino	2,030	751	651	\$404,778,123	58	162	8.0%	\$13,972,990
Tumwater	26,360	9,513	8,408	\$9,362,171,728	1,162	3,499	13.3%	\$479,581,10
Yelm	10,680	3,139	2,827	\$2,077,637,133	395	1,454	13.6%	\$157,412,98
Unincorporated	143,760	53,104	51,429	\$24,765,596,428	29,967	81,849	56.9%	\$8,817,191,0
Total	300,500	104,854	98,260	73,540,652,648	35,395	99,313	33.0%	\$11,139,957,9

Jurisdiction	RISK SCORES AND RATINGS WILD							
	Probability (5)		Impact on People				Impact on People	
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Exposed	Impact (High, Medium, Low, None)
Bucoda	Low	1	8.02%	Low	1	3	8.06%	Low
Lacey	Low	1	11.12%	Medium	2	6	9.85%	Low
Olympia	Low	1	8.44%	Low	1	3	4.11%	Low
Rainier	Low	1	42.75%	High	3	9	39.00%	High
Tenino	Low	1	7.99%	Low	1	3	5.45%	Low
Tumwater	Low	1	13.27%	Medium	2	6	8.08%	Low
Yelm	Low	1	13.62%	Medium	2	6	11.61%	Medium
Unincorporated	Medium	2	56.93%	High	3	9	55.10%	High
Total	Medium	2	33.05%	High	3	9	23.55%	Medium

- Notes:
- (1) 2022 population from State of Washington, Office of Financial Management, Forecasting and Research Division
 - (2) Values based off of 2022 tax assessor data provided by Thurston County.
 - (3) Wildland Urban Interface and Intermix data provided by Washington DNR.
 - (4) Percent of residential buildings exposed multiplied by the Estimated Population.
 - (5) Probability is based on 2008-2022 Washington DNR Wildfire Data for Thurston County. Probability is assigned as follows: High, 20+acre fires in this period; Medium, 5-10 acre fires in this period; low 0-1 acre fires.

Appendix C: Risk Assessment Ratings Calculation Tables

Wildland Urban Intermix (3)				Number of Structures in Wildland Urban Intermix (2)							
Estimated Exposure	Value Contents in \$ Exposed (2)	Value (Structure and contents in \$) Exposed (2)	% of Total Value	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
	\$1,856,426	\$5,137,860	8.1%	19	2	0	0	0	0	0	21
59	\$644,078,438	\$1,709,603,307	9.8%	1,961	38	1	0	3	2	2	2,007
9	\$282,480,846	\$785,829,525	4.1%	1,372	52	0	0	1	0	2	1,427
0	\$53,612,019	\$153,256,919	39.0%	348	7	1	0	1	1	0	358
0	\$8,104,245	\$22,077,234	5.5%	52	4	0	0	0	2	0	58
5	\$277,069,037	\$756,650,143	8.1%	1,116	41	2	0	3	0	0	1,162
7	\$83,808,052	\$241,221,039	11.6%	385	5	4	0	1	0	0	395
21	\$4,829,411,313	\$13,646,602,334	55.1%	29,281	557	24	1	37	28	39	29,967
84	\$6,180,420,377	\$17,320,378,361	23.6%	34,534	706	32	1	46	33	43	35,395

FIRE HAZARD (Wildland-Urban Intermix)								
Impact on Property			Impact on Economy				Risk	
h, (None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
	1	2	2.02%	Low	1	1	6	Low
	1	2	2.46%	Low	1	1	9	Low
	1	2	1.03%	Low	1	1	6	Low
	3	6	9.75%	Medium	2	2	17	Medium
	1	2	1.36%	Low	1	1	6	Low
	1	2	2.02%	Low	1	1	9	Low
	2	4	2.90%	Low	1	1	11	Low
	3	6	13.78%	High	3	3	36	High
	2	4	5.89%	Medium	2	2	30	Medium

Wildland-Urban Intermix Hazard - Special Purpose Districts Risk Assessment Results and Risk Ratings

Jurisdiction	SPECIAL PURPOSE DISTRICT RISK						
	Probability (5)		Impact on People				% of Value Exposed
	Probability (High, Medium, Low, None)	Probability Factor (3,2,1,0)	% Population Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	
East Olympia	Low	1		None	0	0	33.00%
Intercity Transit	Low	1	17.99%	Medium	2	6	0.00%
Lacey Fire District	Low	1	11.12%	Medium	2	6	50.00%
McLane Black Lake Fire District	Medium	2	20.00%	Medium	2	6	71.00%
Olympia School District	Low	1	87.44%	High	3	9	10.00%
SE Thurston Fire Authority	High	3	20.00%	Medium	2	6	67.00%
South Bay Fire District	Low	1	20.00%	Medium	2	6	100.00%
The Evergreen State College	Medium	2	100.00%	High	3	9	0.00%
Thurston PUD	Medium	2	33.05%	High	3	9	75.00%
West Thurston Regional Fire Authority	High	3	20.00%	Medium	2	6	33.00%

Jurisdiction	Special Purpose District Critical Facilities Detail					
	Critical Facilities	Facilities in Interface	% in Hazard	Total Valuation	Exposed Value	% Total Damage
East Olympia Fire District	6	2	33.33%	\$4,995,000	\$520,000	2.60%
Intercity Transit	9	0	0.00%	\$84,647,258	\$0	0.00%
Lacey Fire District	9	4	44.44%	\$66,350,723	\$15,650,721	5.90%
McLane Black Lake Fire District	7	5	71.43%	\$9,451,467	\$4,986,842	13.19%
Olympia School District	22	2	9.09%	\$237,434,380	\$5,584,020	0.59%
SE Thurston Fire Authority	6	4	66.67%	\$5,967,300	\$2,873,691	12.04%
South Bay Fire District	3	4	133.33%	\$4,245,296	\$989,744	5.83%
The Evergreen State College	31	0	0.00%	\$633,990,605	\$0	0.00%
Thurston PUD	104	75	72.12%	\$157,995,117	\$91,302,380	14.45%
West Thurston Regional Fire Authority	6	3	50.00%	\$8,619,586	\$2,951,983	8.56%

RISK SCORES AND RATINGS Wildfire Hazards (Wildland-Urban Intermix)									
Impact on Property				Impact on Economy				Risk	
Total Exposed	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	% of Total Value Damaged	Impact (High, Medium, Low, None)	Impact Factor	Weighted Impact Factor	Risk Ranking Score	Hazard Risk Rating
0%	High	3	6	2.60%	Low	1	1	7	Low
0%	None	0	0	0.00%	None	0	0	6	Low
0%	High	3	6	5.90%	Medium	2	2	14	Low
0%	High	3	6	13.19%	High	3	3	30	Medium
0%	Medium	2	4	0.59%	Low	1	1	14	Low
0%	High	3	6	12.04%	High	3	3	45	High
0%	High	3	6	5.83%	Medium	2	2	14	Low
0%	None	0	0	0.00%	None	0	0	18	Medium
0%	High	3	6	14.45%	High	3	3	36	High
0%	High	3	6	8.56%	Medium	2	2	42	High

