

Enlargement of south-central Washington State

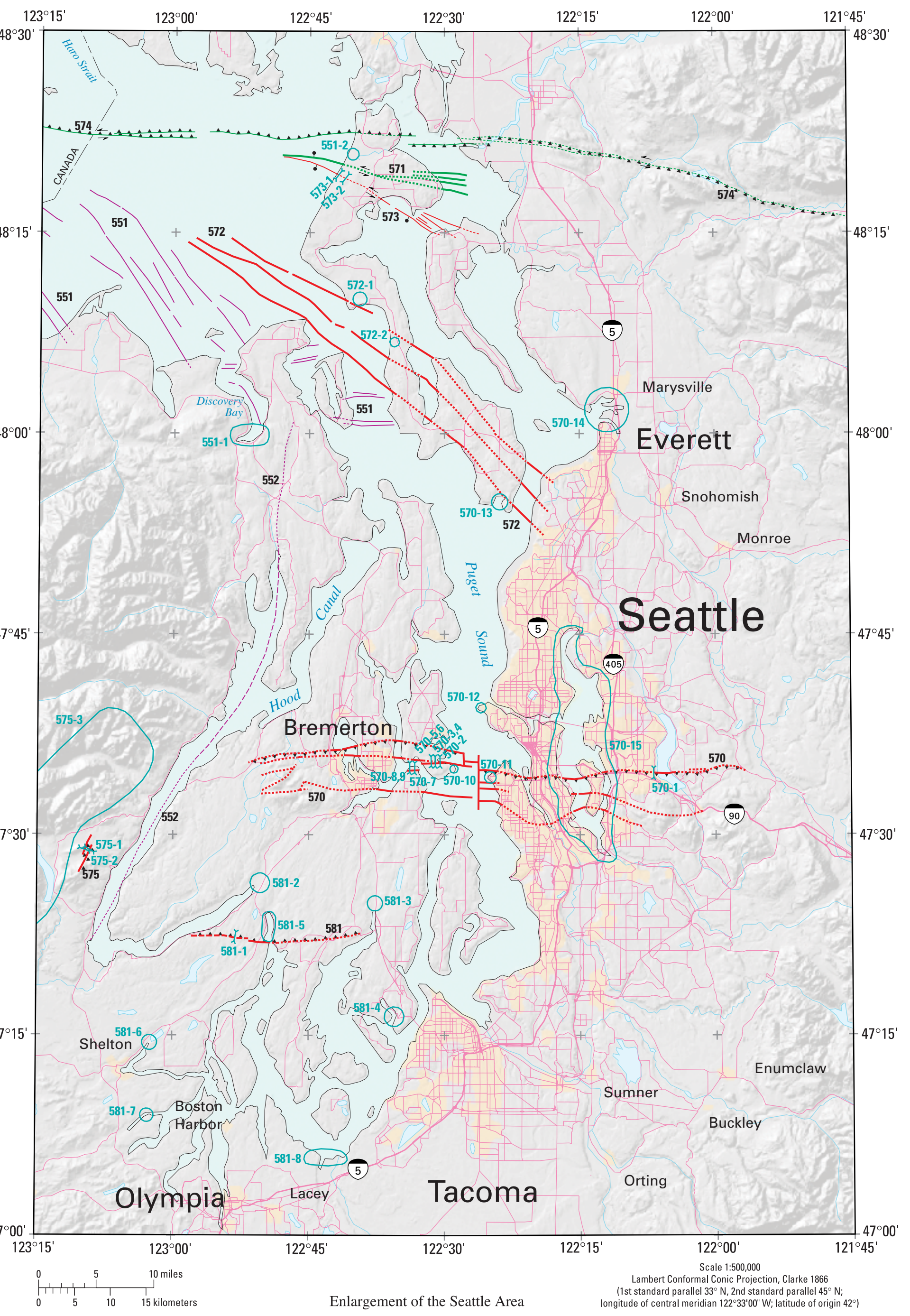


TABLE 1.—DATA ON QUATERNARY FAULTS AND FOLDS IN WASHINGTON STATE

Abbreviations: ka, thousands of years ago; Ma, millions of years ago; —, not reported or not applicable.									
Fault Number	Name of structure	Primary 1° x 2° sheet	Most recent event	Slip rate (mm/yr)	Length, out to end (km)	Length, cumulative (km)	Azimuth (degrees)	Fault type	
550	Calabash fault	Cape Henry, Victoria	<15 ka	<0.2	82.5	84.5	N42°W	Sinistral? Thrust? Reverse? Normal?	
551	Unnamed fault in Strait of Juan de Fuca and Puget Sound (Class B)	Seattle	<1.6 Ma	<0.2	77.6	79.3	N22°E	Normal? Dextral? Reverse?	
552	Hood Canal fault (Class B)	Concordia	<1.6 Ma	<0.2	128.9	160.7	N4°W	Dextral, Reverse? Normal?	
554	Mucanley Creek thrust (Class B)	Victoria	<1.6 Ma?	<0.2	4.4	7.2	N34°E	Thrust	
555	Unnamed fault south of Port Angeles	Victoria	<1.6 Ma	<0.2	11.3	11.3	N67°W	Thrust	
556	Little River fault	Seattle	<1.6 Ma	<0.2	29.9	30.0	N28°W	Thrust	
557	Unnamed fault along Barrow Creek (Class B)	Victoria, Seattle	<1.6 Ma?	<0.2	40.2	40.5	N25°W	Reverse? Thrust?	
558	Cumma River fault (Class B)	Seattle	<1.6 Ma?	<0.2	1.9	1.9	N67°E	Reverse, Dextral? Sinistral?	
559	Pine fault (Class B)	Riviera	<1.6 Ma?	<0.2	15.4	16.8	N30°E	Normal	
560	Kinnis Valley fault (Class B)	Westcliffe	<1.6 Ma?	<0.2	27.0	22.6	N62°W	Reverse?	
561	Frenchman Hills structures	Walla Walla	<1.6 Ma	<0.2	95.8	183.7	N32°W	Thrust, Reverse	
561a	Frenchman Hills fault section	Walla Walla	<1.6 Ma?	<0.2	51.2	53.1	N32°W	Thrust, Reverse	
561b	Lind Coulee fault section	Walla Walla	<1.6 Ma	<0.2	3.8	4.7	N38°E	Thrust, Reverse	
561c	Folds and other faults of the Frenchman Hills fault section (Class B)	Walla Walla	<1.6 Ma	<0.2	95.8	155.8	N32°W	Anticline, Syncline, Thrust, Normal	
562	Saddle Mountains structures	Walla Walla	—	—	104.8	244.9	N21°W	—	
562a	Saddle Mountains fault section	Walla Walla	<130 ka	0.2-1	65.4	18.7	N21°W	Thrust, Reverse, Normal	
562b	Folds and other faults of the Saddle Mountains fault section (Class B)	Walla Walla	<1.6 Ma	<0.2	104.8	162.3	N21°W	Anticline, Syncline, Monocline, Thrust, Reverse, Dextral	
563	Unnamed Ridge-Gable Mountain structures	Walla Walla	<130 ka	<0.2	2.1	2.7	N54°E	Reverse, Thrust	
563a	Central Gable Mountain fault section	Walla Walla	<1.6 Ma?	<0.2	17.9	20.6	N67°W	Anticline, Syncline, Thrust, Reverse, Normal	
563b	Folds and other faults of the Unnamed Ridge-Gable Mountain uplift section (Class B)	Walla Walla	<1.6 Ma?	<0.2	17.9	20.6	N67°W	—	
564	Altman Ridge structures	Yakima	<130 ka	<0.2	17.8	23.5	N38°E	Reverse, Thrust, Normal	
564a	Altman Creek fault section	Yakima	<1.6 Ma?	<0.2	59.7	91.7	N38°E	Anticline, Thrust, Reverse, Normal, Dextral	
564b	Folds and other faults of the Altman Ridge uplift section (Class B)	Yakima	<1.6 Ma?	<0.2	59.7	91.7	N38°E	—	
565	Rattlesnake Hills structures (Class B)	Walla Walla	<1.6 Ma?	<0.2	107.6	157.2	N31°W	Anticline, Syncline, Thrust, Reverse, Normal	
566	Toppenish Ridge structures	Walla Walla	<1.6 Ma?	<0.2	82.5	173.9	N38°E	Anticline, Thrust, Dextral, Normal	
566a	Mt. Creek fault section	Yakima	<15 ka	<0.2	18.7	25.5	N32°W	Thrust, Reverse, Normal	
566b	Folds and other faults of the Toppenish Ridge uplift section (Class B)	Yakima	<1.6 Ma?	<0.2	82.5	184.4	N38°E	Anticline, Thrust, Dextral, Normal	
567	Horse Heaven Hills structures (Class B)	Walla Walla	<1.6 Ma?	<0.2	176.1	425.4	N30°E	Anticline, Syncline, Thrust, Reverse, Normal	
568	Columbia Hills structures (Class B)	The Dalles	<1.6 Ma?	<0.2	165.5	238.3	N25°E	Anticline, Syncline, Thrust, Reverse, Normal	
569	Unnamed fault north of Seattle (Class B)	Pendleton	<1.6 Ma?	<0.2	6.8	6.8	N30°E	Normal, Sinistral?	
570	Seattle fault zone	Seattle	<15 ka	0.2-1	65.4	210.5	N38°W	Thrust, Reverse	
571	Shawnee Peak fault	Seattle	<15 ka	0.2-1	24.4	54.1	N30°E	Sinistral, Thrust, Reverse	
572	Southern Whidbey Island fault zone	Victoria	<15 ka	0.2-1	64.2	180.1	N31°W	Thrust, Reverse, Sinistral? Dextral?	
573	Whidbey Island fault	Victoria	<15 ka	<0.2	28.5	62.8	N31°W	Sinistral, Thrust, Reverse	
574	Devils Mountain fault	Victoria	<130 ka	<0.2	124.3	166.8	N31°W	Sinistral, Thrust, Reverse	
575	Saddle Mountains fault	Seattle	<15 ka	0.2-1	5.4	7.3	N30°E	Normal, Dextral?	
576	Devils Overlook fault (Class B)	Yakima	<1.6 Ma?	<0.2	16.8	2.8	N38°W	Sinistral? Reverse?	
577	Central Ferry fault (Class B)	Pullman	<1.6 Ma?	<0.2	15.9	10.9	N39°W	—	
578	Unnamed fault near Walla Walla	Walla Walla	<1.6 Ma?	<0.2	19.2	25.8	N39°W	Normal, Thrust, Reverse, Dextral, Sinistral	
578a	Burker fault section	Walla Walla	<1.6 Ma	<0.2	3.7	3.7	N31°E	Normal, Thrust, Reverse, Dextral, Sinistral	
579	Unnamed fault near northwestern fault section (Class B)	The Dalles	<1.6 Ma	<0.2	19.2	22.2	N32°W	Dextral? Normal? Thrust?	
579a	Lane Butte fault	The Dalles	<1.6 Ma	<0.2	30.9	49.7	N24°W	Dextral, Normal?	
580	Palix near the Dalles	The Dalles	<1.6 Ma	<0.2	54.3	86.7	N38°W	Dextral, Normal	
581	Tacoma fault	Tacoma	<15 ka	0.2-1	23.6	23.8	N39°E	Thrust, Reverse	
582	Unnamed fault just offshore of Quetzalcoatl River	Copalis Beach	<15 ka	<0.2	33.7	86.4	N21°W	Reverse, Thrust	
583	Unnamed fault zone near and offshore of Ruff River	Copalis Beach	<130 ka	<0.2	15.8	16.0	N21°W	Reverse, Thrust	
584	Unnamed fault zone near and offshore of Rock Creek	Copalis Beach	<15 ka	<0.2	20.6	25.1	N30°E	Reverse, Thrust	
585	Unnamed fault near West Creek	Copalis Beach	<130 ka	<0.2	8.6	7.1	N38°W	Reverse, Thrust	
586	Unnamed fault zone near and offshore of Alaba	Copalis Beach	<15 ka	<0.2	31.9	44.1	N30°E	Reverse, Thrust	
587	Unnamed fault zone near and offshore of Langley Hill	Copalis Beach	<15 ka	<0.2	35.3	79.3	N32°E	Reverse, Thrust	
588	Saddle Hill fault zone	Copalis Beach	<15 ka	<0.2	28.8	37.8	N30°E	Reverse, Thrust	
589	Grays Harbor fault zone	Cape Disappointment	<15 ka	<0.2	21.5	57.9	N27°E	Reverse, Thrust	
590	Unnamed fault zone north of mouth of Willapa Bay	Cape Disappointment	<1.6 Ma	<0.2	26.1	26.7	N14°W	Reverse	
591	Unnamed fault zone offshore of Cape Shoabower	Cape Disappointment	<1.6 Ma	<0.2	6.1	11.1	N34°W	Reverse	
592	Willapa Bay fault zone	Hoodlum	<130 ka	0.2-1	37.5	34.3	N22°W	Reverse, Thrust, Dextral? Sinistral	
593	Unnamed offshore fault zone near Grays Canyon	Copalis Beach	<15 ka	<0.2	54.0	102.1	N37°W	Normal	
594	North Willapa fault zone	Copalis Beach	<15 ka	<0.2	27.5	<80.2	N37°W	Sinistral	
595	South Willapa fault zone	Copalis Beach	<15 ka	<0.2	41.0	<17.0	N32°W	Sinistral	
596	Willapa Canyon fault zone	Cape Disappointment	<1.6 Ma	<0.2	38.2	60.3	N30°W	Sinistral	
597	Cascade subduction zone	Cape Disappointment	<15 ka	<0.2	<358.0	<257.5	N28°W	Sinistral	
784	Cascadia fold and thrust belt	Cape Disappointment	<1.6 Ma	<0.2	<188.4	<188.0	N27°W	Anticline, Syncline, Thrust	
785	Unnamed fault zone near and offshore of Lewis and Clark	Cape Disappointment	<1.6 Ma	<0.2	<186.3	<184.0	N27°W	Sinistral, Dextral, Reverse, Normal	
786	Hobart fault	Cape Disappointment	<1.6 Ma	<0.2	1.6	1.6	N15°W	Dextral, Reverse	
787	Hubbard fault	Cape Disappointment	<1.6 Ma	<0.2	1.6	1.6	N39°W	Normal, Sinistral?	
788	Hila fault system	Pendleton	<1.6 Ma	<0.2	140.7	140.0	N20°E	—	
845a	Hila section	Pendleton	<1.6 Ma	<0.2	81.0	132.3	N27°E	Sinistral-Normal	
845b	Koskowiak section	Walla Walla	<130 ka	<0.2	18.9	18.9	N30°E	Sinistral-Normal	
846a	Thorn Hollow section	Pendleton	<130 ka	<0.2	44.0	43.8	N10°E	Sinistral-Normal	
846b	Agnes section	Pendleton	<1.6 Ma	<0.2	27.9	28.4	N26°E	Sinistral-Normal	
847	Walla Walla fault zone	Pendleton	<1.6 Ma	<0.2	82.9	160.2	N32°W	Dextral? Reverse? Normal?	
848	Arthropod-Shader Butte fault	The Dalles	<130 ka	<0.2	52.2	53.4	N42°W	Dextral? Normal?	
849	Lacamas fault	Vancouver	<130 ka	<0.2	22.7	22.8	N42°W	Dextral-Normal? Reverse?	

TABLE 2.—DATA ON SUSPECT (CLASS C AND CLASS D) FAULTS AND FOLDS IN WASHINGTON STATE

Name of structure	Primary 1° x 2° sheet	Reason for suspicion
Livak fault (Class C)	Pullman	No evidence of Quaternary offset
Maymoran Ridge structures (Class C)	Yakima	No evidence of Quaternary offset
Moore fault zone (Class C)	Yakima	reported scarps probably formed by differential erosion
Rhangan sharp zone (Class C)	Changgan	No evidence of Quaternary offset
Prehistoric Point fault (Class C)	Walla Walla	No evidence of Quaternary offset
Sage Ridge-Cowiche Mountain structures (Class C)	Yakima	No unequivocal evidence of Quaternary deformation
Unnamed fault zone (Class C)	Yakima	No evidence of Quaternary offset
Unnamed fault zone near and offshore of Rock Creek	Yakima	reported scarps probably are landslide features
Yakima Ridge structures (Class C)	Seattle	Tectonic origin uncertain
Unnamed fault east of Auburn (Class C)	Seattle	No unequivocal evidence of Quaternary deformation
Unnamed fault zone near and offshore of Tacoma (Class C)	Seattle	Tectonic origin uncertain
Sequim fault zone (Class C)	Seattle	Possible relation of this seismic zone to scattered areas of deformed Quaternary sediments are uncertain
Western Rainier zone (Class C)	Seattle	Trace of syncline not respected and tectonic origin uncertain; no unequivocal evidence of Quaternary deformation along faults
Kabachik syncline and north-east-striking faults in western Olympic Peninsula (Class C)	Copalis Beach	

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