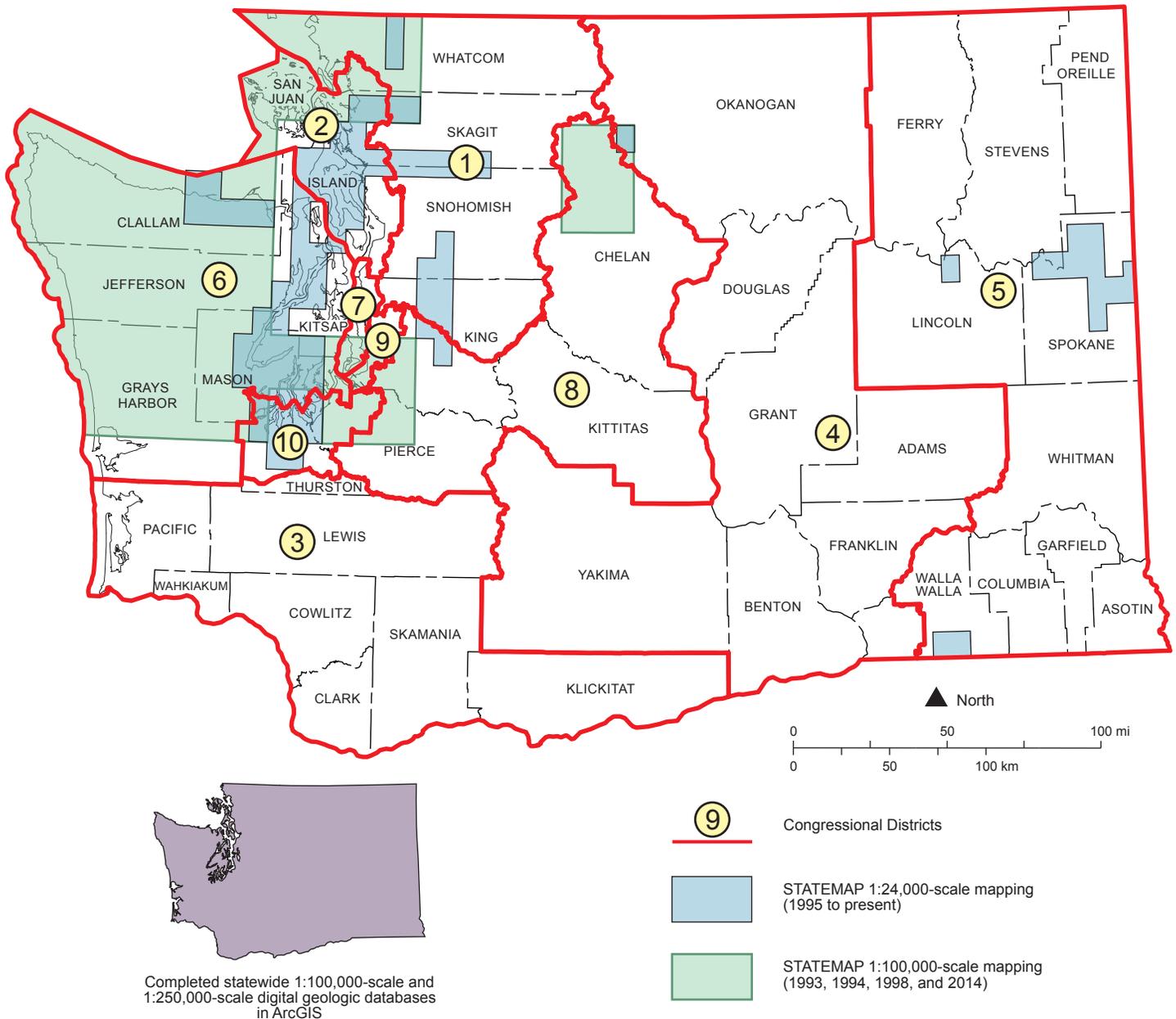


National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping

WASHINGTON



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Summary of STATEMAP Geologic Mapping Program in Washington

Federal Fiscal Year	Project Title	State Dollars	Federal Dollars	Total Project Dollars
1993	Roche Harbor and Bellingham 1:100,000-scale (100k) quadrangles	25,000	25,000	50,000
1994	Western half of the Twisp 100k quad	30,000	30,000	60,000
1995	Gilbert 7.5-minute (1:24,000-scale) quad	30,000	30,000	60,000
1996	Deming, Kendall, and Mead 7.5' quads; Digitization of 18 previously published 100k quads	120,492	120,492	240,984
1997	Bow, Alger, Dartford, and Sequim 7.5' quads; Digitization 11 previously published 100k quads	144,350	144,350	288,700
1998	Lyman, Sedro-Woolley North, Spokane Northeast, and Spokane Southeast 7.5' quads; Compilation, digitization, and partial mapping of 9 previously published 100k quads	143,848	143,848	287,696
1999	Carlsborg, Longbranch, McNeil Island, Anacortes South, and La Conner 7.5' quads; Digitization of 12 previously published 100k quads	140,892	140,892	281,784
2000	Morse Creek, Utsalady, Conway, and Squaxin Island 7.5' quads	137,328	126,045	263,373
2001	Fortson, Darrington, Shelton, and Tumwater 7.5' quads, 1:24,000; NGMDB Data Entry Project; Digitization of the previously published 250k southeast quadrant of Washington	129,811	129,811	259,622
2002	Oso, Mount Higgins, Lacey, Nisqually, and Nine Mile Falls 7.5' quads	170,907	170,907	341,814
2003	Elwha, Port Angeles, Angeles Point, Ediz Hook, Summit Lake, Stimson Hill, Greenacres, and part of the Liberty Lake and Newman Lake 7.5' quads	218,306	218,306	436,612
2004	Port Townsend North, Port Townsend South, Coupeville, Oak Harbor, Crescent Harbor, Smith Island, East Olympia, Deer Park, and Chattaroy 7.5' quads	275,275	275,275	550,550
2005	McMurray, Freeland, Fox Island, College Place, Walla Walla, and part of the Camano, Langley, and Hansville 7.5' quads	288,220	288,220	576,440
2006	Fall City, Juniper Beach, Vaughn, Four Mound Prairie, and part of the Camano and Langley 7.5' quads	337,882	222,491	560,373
2007	Maytown, North Bend, and Olsen Canyon 7.5' quads; Digital conversion of Bow and Alger 7.5' quads	292,586	228,155	520,741
2008	Snoqualmie, Belfair, Burley, Lake Wooten, and Mason Lake 7.5' quads	275,332	217,726	493,058
2009	Carnation, Lilliwaup, Skokomish Valley, and Union 7.5' quads	213,000	213,000	426,000
2010	Monroe, Holly, and Hoodspout 7.5' quads	228,665	228,665	457,330
2011	Lake Joy, Brinnon, and Eldon 7.5' quads	225,710	225,710	451,420
2012	Sultan, Lofall, Poulsbo, and Seabeck 7.5' quads	222,767	213,136	435,903
2013	Center, Quilcene, and Lake Chaplain 7.5' quads	205,351	203,626	408,977
2014	Lake Roesiger, Hansville, and part of the Port Ludlow 7.5' quads; Tacoma 100K quad	197,711	181,274	378,985
	Totals	\$3,793,366	\$3,776,929	\$7,830,362

Skyrocketing population growth in Washington State is depleting natural resources and multiplying the risks associated with the state's many geologic hazards. Geologic maps are essential tools for mitigating the negative effects of rapid growth through their use in growth management planning; infrastructure building and maintenance; dam safety; earthquake, volcano, and landslide risk assessment; water-resource appraisals; mineral resource exploitation and protection; education; recreation; and scientific research. Since its inception in 1992, the STATEMAP Program has enabled DGER to improve map quality and coverage throughout the state.

DGER has completed a statewide 1:100,000-scale digital geographic information systems (GIS) geologic database that is now part of the National Geologic Map Database. This database is the basis for a regional sand and gravel resource inventory program that is embraced by producers, users, and regulatory agencies. Information from this map database has also been used for watershed-basin analysis, forest fertilization planning, wildlife habitat research, and aquifer protection projects, among other things. DGER has also incorporated these map data into the Washington Interactive Geologic Map (<http://www.dnr.wa.gov/geology> portal).

Geologic maps of seventy-seven 1:24,000-scale quadrangles (maps of smaller areas with more detail than the 1:100,000-scale maps) and seven partial quadrangles have been completed under the STATEMAP program, and three more are in progress.

Many of these maps are being incorporated into a Puget Lowland digital geologic database, a regional cooperative program between DGER, the USGS, and the University of Washington. The database is used to identify areas that are susceptible to landslides, earthquake shaking, earthquake liquefaction, and volcano-induced hazards. For example, mapping has provided evidence that part of the Interstate 5 corridor was once and could again be inundated by volcanic debris flows (lahars) from Glacier Peak, and that large areas in the Skagit Valley may be susceptible to earthquake-induced liquefaction. Also, detailed mapping in the Snoqualmie River valley has shown that the active southern Whidbey Island fault zone extends southeast to Rattlesnake Mountain; this fault zone likely truncates the Seattle fault zone and forms a major tectonic boundary in the region. STATEMAP products have also been used in eastern Washington, where mapping in the Spokane area has delineated the volume of the region's major water resource—the Spokane–Rathdrum Prairie aquifer—and defined its vulnerability to contamination and depletion.

As public awareness of the need for information about the natural environment has grown, the demand for good geologic maps has increased dramatically. The STATEMAP program is an integral part of Washington State's ability to meet that demand.