FEATURED PRODUCTS

Washington State Geology News
The Survey now has a blog, called the Washington State Geology News, where we share current events within the Survey, preliminary research findings, exciting geology photography, and recent publication announcements. Once there you can subscribe to receive new blog posts automatically. [ONLINE]

Washington Geologic Information Portal
The portal allows you to access interactive earth science mapping, data, and related information. Using our interactive maps, you can create, save, and print custom maps, find out more about map features, and download map data for use in a geographic information system (GIS). In addition to a variety of geoscience layers that can be turned on and off, each interactive map has many base layers to choose from, so you can customize your map in any number of ways. [ONLINE]

Catalog of the Washington Geology Library
Looking for an obscure geologic report? This searchable database of library holdings will help you find it. The Washington Geology library contains more than 40,000 titles on the geology of Washington State, more than 3000 current and historic topographic and geologic maps, a comprehensive set of dissertations and theses, environmental impact statements and watershed analyses, and the National Tsunami Hazard Mitigation Program library collection. There are links to online publications where available. [ONLINE]

1:100,000-, 1:250,000-, and 1:500,000-scale Geologic Maps of Washington State
All of our geologic maps are now available through our website on our Publications and Maps page. Scroll down and click on “Geologic Maps”. The maps can also be found on a page-size color map that shows published geologic mapping of 7.5-minute topographic quadrangles in Washington State from all sources. Attached text lists quads alphabetically and by author, with links to online publications. [ONLINE]

1:24,000-scale (7.5-minute) Geologic Maps of Washington State
All of our geologic maps are now available through our website on our Publications and Maps page. Scroll down and click on “Geologic Maps”. The maps can also be found on a page-size color map that shows published geologic mapping of 7.5-minute topographic quadrangles in Washington State from all sources. Attached text lists quads alphabetically and by author, with links to online publications. [ONLINE]

Geoscience GIS Data
A variety of geographic information system (GIS) data is available on our website in ESRI shapefile format, including geologic coverage of the entire state of Washington at scales of 1:24,000, 1:100,000, 1:250,000, and 1:500,000. [ONLINE]

TsuInfo Alert
TsuInfo Alert is a bi-monthly newsletter that links scientists, emergency responders, and community planners to the latest tsunami research. It is published by WGS for the National Tsunami Hazard Mitigation Program, a state/federal partnership funded through the National Oceanic and Atmospheric Administration. It is made possible by a grant from the Federal Emergency Management Agency via the Washington Military Department Emergency Management Division. [ONLINE]

Coal Mine Map Collection
Coal has been mined in Washington since 1853. Although current production is from surface mines, nearly all coal produced prior to about 1970 came from underground workings. Since early in this century, Washington State law has required mine operators to submit detailed plans of all underground coal operations to the state on an annual basis. About 1,100 individual maps representing about 230 mines have been scanned and are available electronically. [ONLINE]
HOW TO OBTAIN PUBLICATIONS

Publications are listed by series. This document is searchable using the Acrobat search function. Online publications are indicated by a hyperlink [ONLINE] at the end of the publication description. Where possible, larger files have been broken into parts for ease of downloading [PART 1] [PART 2]. For unusual cases, we have tried to make the link name descriptive enough to distinguish between files. If you need a hard copy of a large-format report, such as a map, and do not have access to a plotter, your local copy center may be able to print it out. Reports marked “Lib. use only” may be viewed in the Survey library in Olympia. All new Survey reports and maps are announced on our website.

PRINTED PUBLICATIONS

Our publications are no longer for sale as printed documents through the Department of Enterprise Services, but they are available online. If you can’t find what you are looking for in this publications list, search our online library catalog at: http://www.dnr.wa.gov/programs-and-services/geology/washington-geology-library. Printed items are sometimes returned to the Survey and are made available ‘first-come, first-served’. Availability changes often; e-mail stephanie.earls@dnr.wa.gov for current availability.

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Visitors may enter the Natural Resources Building parking lot using the Washington Street entrance. Visitor parking (VP) is on level P1. Follow the signs. There is a fee for parking.

The Survey is across the Rotunda, past the four elevators, on the north side of first floor. See the building directory in the lobby. Sign in at the Information Desk in the Rotunda to get a visitor’s pass.

Staff List
The Survey Staff List has contact information for individual staff.
**Publication Series Descriptions**

**Bulletin**

The subject matter of a Bulletin is of widespread interest in the geologic community and the subject matter is treated thoroughly and in a well-organized, scholarly manner. Bulletins are usually written for geologic audiences. Bulletins are peer reviewed and edited to Survey/USGS/major journal standards.

**Geologic Map (GM) and Map Series (MS)**

Geologic Maps (GMs) and Map Series (MS) publications are geological, geophysical, or derivative maps, with text on the map or in an accompanying pamphlets. The maps are the chief vehicles of communication. They are usually the result of original field investigations or extensive compilation and re-presentation of data in map form. Geologic Maps are peer reviewed and edited to Survey/USGS/major journal standards. Map Series are not peer reviewed, but are still edited to conform to Survey/USGS/major journal standards.

**Report of Investigations (RI)**

A Report of Investigations (RI) conveys the results of significant field investigations, usually by a Survey staff geologist. It may contain a map or maps larger than page size, but the report is chiefly text and page-sized figures and tables. It is usually shorter than a Bulletin and narrower in scope and more restricted in geographic coverage. It is still a thorough and often scholarly presentation that conveys important information and is complete and able to stand on its own. RIs are usually written for a geologic audience. They are peer reviewed and edited to Survey/USGS/major journal standards.

**Information Circular (IC)**

An Information Circular (IC) is a vehicle for all types of geologic or geology-related information, usually in 8½ x 11 in. format. Original field work may be involved but often is not. Instead, the report is usually a compilation of data or historical records, assembled because the information has geologic significance, is needed by a large number of people, or is otherwise unavailable in convenient form. An IC is sometimes written for a geologic audience, but is more often written to be useful to geologists and understandable to the general public. ICs have been catalogs (earthquake hypocenters, oil and gas exploration wells, mining operations, map indexes, theses), road logs, or reports on particular areas. An IC is edited to Survey/USGS/major journal standards, but is not always peer reviewed.

**Topographic Map (TM)**

The only Topographic Maps (TM) issued to date are the 1:250,000 topographic maps prepared by the Survey to serve as base maps for the southwest, northeast, and southeast quadrants of the state geologic map (GM-34, GM-39, and GM-45).

**Digital Data Series (DS)**

Digital Data Series (DS) present geologic data in GIS file geodatabase format. The data are available online and intended to be used interactively (that is, the data can be analyzed, displayed, or otherwise manipulated to meet the user’s needs). The datasets may be updated from time to time, will not exist on paper, and are not archived; that is, when the data is updated, no copy of the previous version is kept. For DSs, there are specific hardware/software/expertise requirements. Updates are identified by a version number, typically the date. For some Digital Reports, requesters may be asked to execute a product license agreement. Digital Data Series are usually edited for conformance to Survey digital data standards.

**Digital Report (DR)**

Digital Reports (DR) present large data sets in electronic form. The reports are available online and intended to be used interactively (that is, the data can be sorted, subdivided, or otherwise manipulated to meet the user’s needs). The reports may be updated from time to time, may not exist on paper, and are not archived; that is, when the report is updated, no copy of the previous version is kept. For some DRs, there are specific hardware/software/expertise requirements. Updates are identified by a version number, typically the date (for example, DR-1, ver. 8/26/1998). For some Digital Reports, requesters may be asked to execute a product license agreement. Digital Reports are usually not edited or peer reviewed in the usual sense. Instead they are prepared with due care and then modified or corrected as authors and (or) users find problems or errors.

**Open File Report (OFR)**

An Open File Report (OFR) is a body of geologic or geology-related information in map and (or) text form that is significant enough to make available to the public, but, for one reason or another, has not been prepared and released as a Bulletin, GM, RI, or IC. These reasons include: (1) the report is preliminary, (2) the report must be released quickly, (3) the report was never intended for publication, perhaps because very few copies will be needed, (4) the report is informal or doesn’t lend itself to one of the formal report series, or (5) people, money, and (or) time are not available to prepare a Bulletin, GM, RI, or IC. OFRs may or may not be peer reviewed and (or) edited to Survey/USGS/major journal standards.

**Field Trip Guide (FTG)**

A Field Trip Guide (FTG) is just what it says it is—a field trip guide. FTGs may or may not be peer reviewed and (or) edited to Survey/USGS/major journal standards.
WASHINGTON STATE GEOLOGIST

Annual Reports are available online only.

Mines and minerals of Washington—Annual report of George A. Bethune, first State Geologist, 1890, by G. A. Bethune. 1891. 122 p. [ONLINE]


WASHINGTON MINING BUREAU

First annual report of the Mining Bureau of the State of Washington, from April 1, 1891 to April 1, 1892. 1892. 46 p., 5 pl. [ONLINE]

WASHINGTON GEOLOGICAL SURVEY

Annual Report for 1901; Volume I. 1902. 344 p. [PARTS I-II] [ONLINE]

The chapters are also available separately:

Part I. Creation of a state geological survey, and an outline of the geology of Washington, by Henry Landes. 1902. 35 p., 5 pl. [ONLINE]

Part II. The metalliferous resources of Washington, except iron, by Henry Landes, W. S. Thynge, D. A. Lyon, and Milnor Roberts. 1902. 123 p., 4 pl. [ONLINE]

Part III. The non-metalliferous resources of Washington, except coal, by Henry Landes. 1902. 55 p., 11 pl. [ONLINE]


Part V. The water resources of Washington—Potable and mineral water, by H. G. Byers; Artesian water, by C. A. Ruddy; and, Water power, by R. E. Heine. 1902. 37 p., 7 pl. [ONLINE]

Part VI. Bibliography of the literature referring to the geology of Washington, by Ralph Arnold. 1902. 16 p. [ONLINE]


The biennial report of the Board of Geological Survey of the State of Washington for the term 1901-1903. 1903. 7 p. [ONLINE]


The biennial report of the Board of Geological Survey of the State of Washington for the term 1911-13. 1913. 24 p. 3 pl. [ONLINE]

The biennial report of the Board of Geological Survey of the State of Washington for the term 1913-1915. 1915. 31 p. 3 pl. [ONLINE]

The biennial report of the Board of Geological Survey of the State of Washington for the term 1915-1917. 1917. 29 p. 3 pl. [ONLINE]

Department of Conservation and Development*

Report of the Supervisor of Geology, Department of Conservation and Development, from April 1, 1921, to September 30, 1922, by Solon Shedd. 1922. 9 p. [ONLINE]


Third biennial report of the Department of Conservation and Development from April 1, 1925, to September 30, 1926, by E. J. Barnes. 1927. 93 p. 2 pl. [ONLINE]

Fourth biennial report of the Department of Conservation and Development from October 1, 1926, to September 30, 1928, by E. J. Barnes. 1928. 75 p. 2 pl. [ONLINE]

Seventh biennial report of the Department of Conservation and Development from October 1, 1932, to September 30, 1934, by E. F. Banker. 1935. 57 p. [ONLINE]

Biennial report of Division of Geology—April 1, 1933, to November 30, 1934, by H. E. Culver. 1935. 14 p. [ONLINE]

Eighth biennial report of the Department of Conservation and Development—October 1, 1934, to September 30, 1936, by J. B. Fink. 1937. 68 p. [ONLINE]

First biennial report of the Division of Mines and Mining, June 1, 1935, to December 31, 1936, by T. B. Hill. 1937. 6 p. [ONLINE]

Summary report of major activities, Division of Geology, for the biennium 1935-37, by H. E. Culver. 1936. 7 p. [ONLINE]

Ninth biennial report of the Department of Conservation and Development—October 1, 1936–September 30, 1938, by J. B. Fink. 1939. 115 p. [ONLINE]

[Second biennial report of the] Division of Mines and Mining, January 1, 1937, to December 31, 1938, by T. B. Hill. 1939. 17 p. [ONLINE]

Tenth biennial report of the Department of Conservation and Development, October 1, 1938–September 30, 1940, by J. B. Fink. 1941. 150 p. [ONLINE]

Third biennial report of the Division of Mines and Mining for the period commencing January 1, 1939 and ending January 1, 1941, by T. B. Hill. 1941. [ONLINE]

Eleventh biennial report of the Department of Conservation and Development—October 1, 1940–September 30, 1942, by Ed Davis. 1943. 54 p. [ONLINE]

We have published under several different names, as our organization and our parent agency have changed significantly since its inception. Former publishing names include the Department of Conservation and Development, the Division of Geology, the Division of Mines and Mining, and the Division of Mines and Geology. In 1965, the Division was made a part of the Department of Natural Resources. In 1973, the Division of Mines and Geology became the Division of Geology and Earth Resources. In 2017, we became the Washington Geological Survey.
Fourth biennial report of the Division of Mines and Mining for the period commencing October 1, 1940 and ending September 30, 1942, by S. L. Glover. 1943. 9 p. [ONLINE]

Twelfth biennial report of the Department of Conservation and Development—October 1, 1942–September 30, 1944, by Ed Davis. 1944. 52 p. [ONLINE]

Fifth biennial report of the Division of Mines and Mining for the period commencing October 1, 1942, and ending September 30, 1944, by S. L. Glover. 1944. 6 p. [ONLINE]

Biennial report no. 1 of the Division of Mines and Geology for the period commencing October 1, 1944 and ending September 30, 1946, by S. L. Glover. 1946. 24 p. [ONLINE]

Biennial report no. 2 of the Division of Mines and Geology for the period commencing October 1, 1946 and ending September 30, 1948; including a report on Washington’s mineral industry, by S. L. Glover. 1948. 28 p. [ONLINE]

Biennial report no. 3 of the Division of Mines and Geology for the period commencing October 1, 1948 and ending September 30, 1950, by S. L. Glover. 1951. 13 p. [ONLINE]

Biennial report no. 4 of the Division of Mines and Geology and the period commencing October 1, 1950 and ending September 30, 1952, by S. L. Glover. 1952. 8 p. [ONLINE]


Biennial report no. 7 of the Division of Mines and Geology for the period commencing July 1, 1956 and ending June 30, 1958, by M. T. Huntington. 1958. 19 p. [ONLINE]


The Washington Division of Geology and Earth Resources—Geology in the public interest. 2003. 4 p. [ONLINE]

The Washington Division of Geology and Earth Resources—Geology in the public interest. 2005. 4 p. [ONLINE]

The Washington Division of Geology and Earth Resources—Geology in the public interest [short version]. 2005. 2 p. [ONLINE]

The Washington Division of Geology and Earth Resources—Geology in the public interest. 2009. 4 p. [ONLINE]
Contact us to see if paper copies are available (see p. 3)

Washington Geological Survey

1. Geology and ore deposits of Republic mining district, by J. B. Umpleby. 1910. 66 p., 13 pl., 5 figs. [ONLINE]

2. The road materials of Washington, by Henry Landes. 1911. 204 p., 17 pl., 51 figs. [ONLINE]

3. The coal fields of King County, by G. W. Evans. 1912. 247 p., 23 pl., 59 figs. [ONLINE]

4. Cement materials and industry in Washington, by Solon Shedd. 1913. 268 p., 21 pl., 10 figs. [PART 1] [PART 2]

5. Part I. Geology and ore deposits of the Myers Creek mining district; Part II. Geology and ore deposits of the Oroville–Nighthawk mining district, by J. B. Umpleby. 1911. 113 p., 3 pl., 5 figs. [ONLINE]

6. Geology and ore deposits of the Blewett mining district, by C. E. Weaver. 1911. 104 p., 10 pl., 1 fig. [ONLINE]

7. Geology and ore deposits of the Index mining district, by C. E. Weaver. 1912. 96 p., 7 pl. [ONLINE]

8. Glaciation of the Puget Sound region, by H. Brezec. 1913. 244 p., 24 pl., 27 figs. [ONLINE]

9. The coal fields of Kittitas County, by E. J. Saunders. 1914. 204 p., 38 pl., 52 figs. [ONLINE]

10. The coal fields of Pierce County, by Joseph Daniels. 1914. 146 p., 30 pl., 23 figs. [ONLINE]

11. The mineral resources of Washington, with statistics for 1912, by Henry Landes. 1914. 53 p., 1 pl. [ONLINE]


13. The Tertiary formations of western Washington, by C. E. Weaver. 1916. 327 p., 30 figs., 3 pl. [PART 1] [PART 2]


16. Geology and ore deposits of the Covada mining district, by C. E. Weaver. 1913. 87 p., 5 pl., 3 figs. [ONLINE]

17. A geographic dictionary of Washington, by Henry Landes. 1917. 346 p., 10 pl. [PART 1] [PART 2]

18. The country about Camp Lewis, by M. M. Leighton. 1918. 105 p., 12 pl., 6 figs. [ONLINE]


20. The mineral resources of Stevens County, by C. E. Weaver. 1920. 350 p., 20 pl., 14 figs. [PART 1] [PART 2]


23. The metal mines of Washington, by E. N. Patty. 1921. 366 p., 36 pl., 27 figs. [PART 1] [PART 2]

Division of Geology

24. Clays and shales of Washington, by S. L. Glover. 1941. 368 p., 14 pl., 6 figs. [PART 1] [PART 2]

25. The magnesite deposits of Washington, their occurrence and technology, by G. E. Whitwell and E. N. Patty. 1921. 194 p., 13 pl., 5 figs. [ONLINE]

26. Underground water supply of the region about White Bluffs and Hanford, by O. P. Jenkins. 1922. 41 p., 3 pl., 1 fig. [ONLINE]


30. The mineral resources of Washington, with statistics for 1922, by Solon Shedd, with an article on coal and coke by W. G. Evans. 1924. 224 p., 3 figs. [ONLINE]


34. Tungsten resources of Washington, by W. A. Broughton. 1945. 89 p., 23 pl., 9 figs. [ONLINE]


Division of Mines and Geology


37. Inventory of Washington minerals:
   Part II. Metallic minerals, by M. T. Huntting. 1956. 2 v. (v. 1, 428 p. text; v. 2, maps, 67 p. text, 27 pl.). [PART 1, PART 2, PART 3, PART 4, MAPS]
| 38. | The place of steam-electric generating stations in the orderly program of electric power development in the Pacific Northwest, by H. H. Houston. 1930. 117 p., 1 pl., 25 figs. [ONLINE] |
| 40. | Geology of the Bead Lake district, Pend Oreille County, Washington, by M. C. Schroeder. 1952. 57 p., 1 pl., 6 figs. [ONLINE] |
| 44. | Peat resources of Washington, by G. B. Rigg. 1958. 272 p., 1 pl., 263 figs. [PART 1] [PART 2] [PART 3] |
| 48. | High-calcium limestones of eastern Washington, by J. W. Mills. 1962. 268 p., 7 pl., 64 figs. [PART 1] [PART 2] [PART 3] [PART 4] |
| 52. | Limestone resources of western Washington, by W. R. Danner. 1966. 474 p. [PART 1] [PART 2] [PART 3] |
| 58. | Chemical and physical controls for base metal deposition in the Cascade Range of Washington, by A. R. Grant. 1969. 107 p., 33 figs. [ONLINE] |
| 63. | Geology and mineral resources of King County, Washington, by V. E. Livingston Jr. 1971. 200 p., 6 pl., 103 figs. [PART 1, PART 2] |
| 65. | Distribution of copper and other metals in gully sediments of part of Okanogan County, Washington, by K. F. Fox Jr., and C. D. Rinehart. 1972. 38 p., 4 pl. (pl. 1: 26 x 28 in. color geologic map, scale 1:96,000, with 2 overlays), 10 figs. [ONLINE] |
| 68. | Geology of the Methow Valley, Okanogan County, Washington, by J. D. Barksdale. 1975. 72 p., 1 pl., 17 figs. [ONLINE] |
| 73. | Myers Creek and Wauconda mining districts of northeastern Okanogan County, Washington, by W. S. Moen. 1980. 96 p., 6 pl., 36 figs. [ONLINE] |


77. Selected papers on the geology of Washington, edited by J. E. Schuster. 1987. 406 p. [PART 1] [PART 2] [PART 3]

78. Engineering geology in Washington, edited by R. W. Galster, chairman. 1989. [2 v.], 1234 p. [VOL 1 PART 1] [VOL 1 PART 2] [VOL 1 PART 3] [VOL 1 PART 4] [VOL 2 PART 1] [VOL 2 PART 2] [VOL 2 PART 3] [VOL 2 PART 4]


80. Regional Geology of Washington State, Raymond Lasmanis and E. S. Cheney, convenors. 1994. 227 p., 136 figs., 18 tables. [PART 1, PART 2]


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**DIGITAL DATA SERIES**

Digital Data Series are available online only.


15. Hazardous minerals database—GIS data, by Washington Division of Geology and Earth Resources. 2015. [ONLINE] Web only


18. Surface geology, 1:100,000—GIS data, by Washington Division of Geology and Earth Resources. 2016. [ONLINE] Web only


**DIGITAL REPORTS**

Digital Reports are available online only.


**FACT SHEETS**

Fact Sheets are available online only.

- Geology in the public interest. 2015. 4 p. [ONLINE]
- The Washington Geology Library. 2015. 2 p. [ONLINE]
- Landslide hazards in Washington state. 2015. 2 p. [ONLINE]
- What are landslides and how do they occur? 2015. 2 p. [ONLINE]
- Washington State Geologic Information Portal. 2014. 2 p. [ONLINE]
- What are landslides and how do they occur? 2015. 2 p. [ONLINE]
- Waterfall loop tour on the historic Columbia River Highway [Oregon] [ONLINE]

**FIELD TRIP GUIDES**

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- Waterfall loop tour on the historic Columbia River Highway [Oregon] [ONLINE]

**GEOLOGIC MAPS**

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**Division of Geology**

Preliminary geologic map, State of Washington, compiled from published and unpublished sources, edited by G. W. Stose. 1936. 53 x 35 in. color sheet, scale 1:500,000. [ACOMPANIED BY BULLETIN 32, WHICH IS OUT OF PRINT.] [ONLINE]

**Division of Mines and Geology**

Geologic map of Washington, by M. T. Hunting, W. A. G. Bennett, V. E. Livingston Jr., and W. S. Moen. 1961. One 75 x 50 in. color sheet or two 50 x 40 in. color sheets, scale 1:500,000. [SHEET 1 OF 2] [SHEET 2 OF 2]

Geologic cross section to accompany the 1961 Geologic map of Washington, by V. E. Livingston, Jr. 1961. 1 sheet, scale 1:500,000. [ONLINE]
GEOLOGIC MAPS

Contact us to see if paper copies are available (see p. 3)


Division of Geology and Earth Resources


GM-14. Preliminary surficial geologic map of the Edmonds East and Edmonds West [7.5-minute] quadrangles, Snohomish and King Counties, Washington, by Mackey Smith. 1975. 31 x 24 in. sheet, scale 1:24,000. [ONLINE]


GM-20. Preliminary surficial geologic map of the Mukilteo and Everett [7.5-minute] quadrangles, Snohomish County, Washington, by Mackey Smith. 1976. 35 x 24 in. sheet, scale 1:24,000. [ONLINE]


GM-44. Liquefaction susceptibility for the Sumner 7.5-minute quadrangles, Washington, by J. D. Dragovich and P. T. Pringle, with a section on liquefaction by S. P. Palmer. 1995. 24 x 26 in. color sheet, scale 1:24,000, with 26 p. text. [ONLINE]


| GM-57 | Geologic map of the Port Townsend South and part of the Port Townsend North 7.5-minute quadrangles, Jefferson County, Washington, by H. W. Schasse and S. L. Slaughter. 2005. 42 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-58 | Geologic map of the Coupeville and part of the Port Townsend North 7.5-minute quadrangles, Island County, Washington, by Michael Polenz, S. L. Slaughter, and G. W. Thorsen. 2005. 50 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-60 | Geologic map of the Timberwolf Mountain 7.5-minute quadrangle, Yakima County, Washington, by P. E. Hammond. 2005. 48 x 36 in. color sheet, scale 1:24,000. Additional information available as Open File Report 2005-5. [ONLINE] |
| GM-61 | Geologic map of the McMurray 7.5-minute quadrangle, Skagit and Snohomish Counties, Washington, with a discussion of the evidence for Holocene activity on the Darrington–Devils Mountain fault zone, by J. D. Dragovich and A. J. DeOme. 2006. 33 x 36 in. color sheet, scale 1:24,000, with 18 p. text. [ONLINE] |
| GM-63 | Geologic map of the Fox Island 7.5-minute quadrangle, Pierce County, Washington, by R. L. Logan, T. J. Walsh, and K. G. Troost. 2006. 33 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-64 | Geologic map of the Freeman and northern part of the Hansville 7.5-minute quadrangles, Island County, Washington, by Michael Polenz, H. W. Schasse, and B. B. Petersen. 2006. 46 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-65 | Geologic map of the Vaughn 7.5-minute quadrangle, Pierce and Mason Counties, Washington, by R. L. Logan and T. J. Walsh. 2007. 42 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-66 | Geologic map of the Four Mound Prairie 7.5-minute quadrangle, Spokane and Stevens Counties, Washington, by R. E. Derkey and M. M. Hamilton. 2007. 42 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-67 | Geologic map of the Fall City 7.5-minute quadrangle, King County, Washington, by J. D. Dragovich, M. L. Anderson, T. J. Walsh, B. L. Johnson, and T. L. Adams. 2007. 42 x 36 in. color sheet, scale 1:24,000, with 16 p. text. [ONLINE] |
| GM-69 | Geologic map of the Langley and western part of the Tulalip 7.5-minute quadrangles, Island County, Washington, by H. W. Schasse, M. L. Kalk, B. B. Petersen, and Michael Polenz. 2009. 47 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-70 | Geologic map of the Juniper Beach 7.5-minute quadrangle, Island County, Washington, by H. W. Schasse, M. L. Kalk, and Michael Polenz. 2009. 39 x 36 in. color sheet, scale 1:24,000. [ONLINE] |
| GM-73 | Geologic map of the North Bend 7.5-minute quadrangle, King County, Washington, with a discussion of major faults, folds, and basins in the map area, by J. D. Dragovich, T. J. Walsh, M. L. Anderson, Renate Hartog, S. A. DuFran, Jeff Vervoot, S. A. Williams, Recep Cakir, K. D. Stanton, F. E. Wolff, and D. K. Norman. 2009. 38 x 36 in. color sheet, scale 1:24,000, with 39 p. text. [ONLINE] |
| GM-74 | Geologic map of the Meeks Table and western two-thirds of the Nile 7.5-minute quadrangles, Yakima County, Washington, by P. E. Hammond. 2009. 36 x 38 in. color sheet, scale 1:24,000, with 12 p. text. [ONLINE] |
| GM-75 | Geologic map of the Snoqualmie 7.5-minute quadrangle, King County, Washington, by J. D. Dragovich, H. A. Littke, M. L. Anderson, Renate Hartog, G. R. Wessel, S. A. DuFran, T. J. Walsh, J. H. MacDonald Jr., J. F. Mangano, and Recep Cakir. 2009. Two 42 x 36 in. color sheets, scale 1:24,000. [ONLINE] |
| GM-76 | Geologic map of the Clifdell and western two-thirds of the Manastash Lake 7.5-minute quadrangles, Yakima and Kittitas Counties, Washington, by P. E. Hammond. 2010. 36 x 48 in. color sheet, scale 1:24,000, with 11 p. text. [ONLINE] |

Note: STATEMAP 7.5-minute quadrangles from 2012 through the present have been published under the new Map Series.
### Division of Geology

3. State publications in geology, issued by the First State Geologist, 1890-1892, the Washington Geological Survey, 1901-1902, the Division of Geology, 1921—,—, compiled by S. L. Glover. 1937. 5 p. [ONLINE]

### Division of Mines and Mining

2. January, 1940, supplement to directory of Washington mines, 1939, compiled by the Division of Mines and Mining. 1940. 3 p. [ONLINE] Out of print
3. Directory of Washington metallic mining properties, by the Division of Mines and Mining. 1940. 72 p. [ONLINE] Out of print
5. Directory of Washington metallic mining properties, by the Division of Mines and Mining. 1940. 72 p. [ONLINE] Out of print

### Division of Mines and Geology

22R. Introduction to Washington geology and resources, revised by C. D. Campbell. 44 p., 5 figs. [Revised 1962.] In print
38. A geologic trip along Snoqualmie, Swauk, and Stevens Pass highways, by University of Washington Geology Department staff, revised by V. E. Livingston Jr. 1963. 51 p. [ONLINE]


42. 1964 directory of Washington mining operations, by W. S. Moen and G. W. Thorsen. 1965. 86 p., 3 figs. [ONLINE]


50. Energy resources of Washington, by Washington Division of Geology and Earth Resources staff; and others. 1974. 158 p. [ONLINE]


54. A geologic road log over Chinook, White Pass, and Ellensburg to Yakima highways, by N. P. Campbell. 1975. 82 p., figs. [ONLINE]


58. Engineering geologic studies, by Washington Division of Geology and Earth Resources staff; and others. 1976. 40 p. [ONLINE]


61. Annotated guide to sources of information on the geology, minerals, and ground-water resources of the Puget Sound region, Washington, King County section, by W. H. Reichert, with supplemental references by D. D. Dethier. 1978. 63 p., 8 figs. [ONLINE]


73. Index to geologic and geophysical mapping of Washington, compiled by C. J. Manson. 1981. 63 p., 10 pl. [ONLINE]
[ONLINE]

[ONLINE]


[ONLINE]

[ONLINE]


Most open-file reports are preliminary and have not been edited or reviewed for conformity with our standards and geologic nomenclature. These reports marked “Lib. use only” may be inspected in the Division library in Olympia. Those marked “Web only” may be downloaded from the Division website. Where possible, larger files (20MB+) have been broken into parts for ease of downloading [PART 1] [PART 2]. For unusual cases, we have tried to make the link name descriptive enough to distinguish between files. If you need a hard copy of a large format report, such as a map, and do not have access to a plotter, your local copy center may be able to print it out.

Division of Geology


25-0. Geology and resources of the Pasco and Prosser quadrangles, by Solon Shedd. 1925. 125 p., 1 pl. [PART 1] [PART 2] [PART 3]

Division of Mines and Geology


69-0. Compilation of geologic mapping in Washington through 1968—A continuation of Leona Boardman’s index to geologic mapping in Washington; also, Geologic maps from theses on Washington geology, by W. H. Reichert. 1969. 43 p., 11 maps, scale 1:1,000,000.


69-2. Analyses of stream sediment samples in Washington for copper, molybdenum, lead, and zinc, by W. S. Moen. 1969. 91 p. (including 15 tables), 39 pl., scale 1:125,000. [PART 1] [PART 2] [PART 3] [PART 4] [PART 5] [PART 6] [PART 7] [PART 8] [PART 9]


Division of Geology and Earth Resources

73-1. Preliminary report on the geology of southern Snohomish County, by Gerald Capps, J. D. Simmons, and F. D. Videgar. 1973. 12 p., 1 pl. [PART 1] [PART 2] [PART 3] [PART 4] [PART 5] [PART 6] [PART 7]


73-3. Preliminary geologic map of the southern Cascade Range, by P. E. Hammond. 1973. 5 pl., scales 1:24,000, 1:125,000, 1:500,000. [ONLINE]


73-5. East Wenatchee and vicinity geologic hazard maps, by E. R. Artim. 1973. 9 sheets, scale 1:24,000 [nonreproducible]. [PART 1] [PART 2] [PART 3] [PART 4] [PART 5] [PART 6]


74-4. Environmental geology of the Parkland–Spanaway area, Washington, by John Battie, Donnella Johnston, and Craig Sears. 1975. 7 sheets, scale 1:24,000. [PART 1] [PART 2]


74-8. Geologic mapping of the Wenatchee area, by R. L. Gresens. 1975. 2 sheets, scale 1:12,000. Also available in hand-colored version. [ORIGINAL] [COLOR 1] [COLOR 2]

74-9. Geologic interpretive map showing areas of unstable slopes, Kitsap County, Washington, by K. L. Othberg. 1975. 5 p., 12 pl., 1 fig., explanation, scale 1:24,000. [PART 1] [PART 2] [PART 3] [PART 4]


75-3. Environmental geology of the Parkland–Spanaway area, Washington, by John Battie, Donnella Johnston, and Craig Sears. 1975. 7 sheets, scale 1:24,000. [PART 1] [PART 2]

75-4. Geologic mapping of the Cispus Quadrangles, Lewis County, Washington, by E. R. Artim. 1975. 9 sheets, scale 1:24,000. [PART 1] [PART 2] [PART 3] [PART 4] [PART 5] [PART 6] [PART 7] [PART 8] [PART 9]

75-5. Geologic mapping of the Wenatchee area, by R. L. Gresens. 1975. 2 sheets, scale 1:12,000. Also available in hand-colored version. [ORIGINAL] [COLOR 1] [COLOR 2]

75-6. Geologic interpretive map showing areas of unstable slopes, Kitsap County, Washington, by K. L. Othberg. 1975. 5 p., 12 pl., 1 fig., explanation, scale 1:24,000. [PART 1] [PART 2] [PART 3] [PART 4]

75-7. Geologic interpretive map showing areas of unstable slopes, Kitsap County, Washington, by K. L. Othberg. 1975. 5 p., 12 pl., 1 fig., explanation, scale 1:24,000. [PART 1] [PART 2] [PART 3] [PART 4]


Contact us to see if paper copies are available (see p. 3)


77-3. Whatcom County, Washington, coal reserves, by E. R. Vonheeder. 1977. 3 sheets, scale 1:130,000. [ONLINE]

77-4. Lewis County, Washington, coal resources, by E. R. Vonheeder. 1977. 7 sheets, scale 1:130,000. [ONLINE]

77-5. Cowlitz County, Washington, coal resources, by E. R. Vonheeder. 1977. 2 sheets, scale 1:130,000. [ONLINE]


77-7. Geology, relative slope stability, and flood hazards of the Selah area, Yakima County, Washington, by N. P. Campbell. 1977. 3 sheets, scale 1:24,000. [ONLINE]

77-8. Geology, relative slope stability, and flood hazards of the Snipes Mountain area, Yakima County, Washington, by N. P. Campbell. 1977. 3 sheets, scale 1:24,000. [ONLINE]

77-9. Geologic map of the City of Tacoma, Pierce County, Washington, by Mackey Smith. 1977. 1 sheet, scale 1:24,000. [ONLINE]


78-1. Kittitas County, Washington, coal reserves, by E. R. Vonheeder. 1978. 6 sheets including 3 maps, scale 1:130,000. [ONLINE]


78-5. Skagit County, Washington, coal reserves, by E. R. Vonheeder. 1978. 3 sheets, scale 1:130,000. [ONLINE]


79-2. An assessment of the uranium potential in the Ellensburg Formation, south-central Washington, by P. C. Milne. 1979. 32 p., 4 pl., scale 1:250,000. [PART 1] [PART 2] [PART 3] [PHOTOS]


79-4. Pierce County, Washington, coal reserves, by E. R. Vonheeder. 1979. 5 sheets, scale 1:130,000, including 6 tables. [ONLINE]


### OPEN FILE REPORTS

Contact us to see if paper copies are available (see p. 3)

<table>
<thead>
<tr>
<th>Report No.</th>
<th>Title</th>
<th>Authors</th>
<th>Edition</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-18</td>
<td>Preliminary surficial geologic map of the Sequim [7.5-minute] quad, Clallam County, Washington</td>
<td>K. L. Othberg and Pamela Palmer</td>
<td>1979. 4 p., 1 pl., scale 1:24,000</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>80-0</td>
<td>Stratigraphy of pre-Vashon Quaternary sediments applied to the evaluation of a proposed major tectonic structure in Island County, Washington—Final technical report</td>
<td>K. L. Stoffel</td>
<td>1980. 161 p., 12 figs.</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>80-1</td>
<td>Geology and energy resources of the Roslyn–Cle Elum area, Kittitas County, Washington</td>
<td>C. W. Walker</td>
<td>1980. 59 p., 26 pl.</td>
<td>[PART 1][PART 2][PART 3][PART 4][PART 5][PART 6][PART 7]</td>
</tr>
<tr>
<td>80-2</td>
<td>Preliminary fault map of Washington</td>
<td>G. B. McLucas</td>
<td>1980. 5 p., 2 pl., map scales 1:100,000 and 1:500,000</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>80-3</td>
<td>Surficial geology of the Springdale and Forest Center [7.5-minute] quadrangles, Stevens County, Washington</td>
<td>G. B. McLucas</td>
<td>1980. 29 p., 2 pl., scale 1:24,000</td>
<td>[ONLINE]</td>
</tr>
</tbody>
</table>

Note: Also released as Open File Report 81-3, Chapter IX. Superseded by Open File Report 2009-2.


82-2. Table of chemical analyses for thermal and mineral spring and well waters collected in 1980 and 1981, by M. A. Korosec. 1982. 5 p. [ONLINE]


82-10. Targeting geothermal exploration sites in the Mount St. Helens area using soil mercury surveys, by Jenny Holmes and Kathleen Waugh. 1983. 13 p., 3 appendices, 2 pl. [ONLINE]


82-13. Geochronological ages for volcanic rocks in the eastern part of the state of Washington, compiled by D. A. Berri and M. A. Korosec. 1983. 36 p., 1 pl. [ONLINE]


83-17. Map of coal mine workings in part of King County, Washington, by T. J. Walsh. 1983. 1 pl., scale 1:24,000, 4-p. explanation. [ONLINE]


84-3. Geology and coal resources of central King County, Washington, by T. J. Walsh. 1984. 24 p., 3 pl. [ONLINE]


86-4. Geologic map of the west half of the Toppenish quadrangle, Washington, compiled by T. J. Walsh. 1986. 7 p., 1 pl., scale 1:100,000. [ONLINE]


86-6. Geologic map of the Astoria and Ilwaco quadrangles, Washington, by T. J. Walsh. 1986. 9 p., 1 pl., scale 1:100,000. [ONLINE]


87-1. Geologic map of the Astoria and Ilwaco quadrangles, Washington and Oregon, compiled by T. J. Walsh. 1987. 28 p., 1 pl., scale 1:100,000. [ONLINE]

87-2. Geologic map of the Astoria and Ilwaco quadrangles, Washington and Oregon, compiled by T. J. Walsh. 1987. 7 p., 1 pl., scale 1:100,000. [ONLINE]

87-3. Geologic map of the south half of the Tacoma quadrangle, Washington, compiled by T. J. Walsh. 1987. 10 p., 1 pl., scale 1:100,000. [ONLINE]


87-17. Geology of the Twisp River–Chelan divide region, North Cascades, Washington, by R. B. Miller. 1987. 12 p., 12 pl., scales 1:100,000 (pl. 1); 1:24,000 (pl. 2-11); cross sections, pl. 12. [PART 1] [PART 2] [PART 3] [PART 4] Web


88-5. Structural geology along the northwestern Columbia River basalt margin, Washington, by N. P. Campbell. 1988. 108 p., 8 pl. [PART 1] [PART 2] [PART 3] [PART 4] Lib. use


90-1. Geologic map of the Moses Lake 1:100,000 quadrangle, Washington, compiled by C. W. Gulick. 1990. 9 p., 1 pl., scale 1:100,000. [ONLINE] Web only

90-2. Geologic map of the Ritzville 1:100,000 quadrangle, Washington, compiled by C. W. Gulick. 1990. 7 p., 1 pl., scale 1:100,000. [ONLINE] Web only


Superseded by the online bibliography.

90-9. Geologic map of the east half of the Twisp 1:100,000 quadrangle, Washington, compiled by B. B. Bunning. 1990. 52 p., 1 pl., scale 1:100,000. [ONLINE] Web only


90-16. Geologic map of the Nespelem 1:100,000 quadrangle, Washington, compiled by N. L. Joseph. 1990. 47 p., 1 pl., scale 1:100,000. [ONLINE]


91-4. Geologic strip map of the Ninemile Creek–Wilmont Creek–Hunters Creek area, Ferry and Stevens Counties, Washington, by M. T. Smith. 1991. 9 p., 1 pl., scale 1:24,000. [ONLINE]


Superseded by the online bibliography.


94-1. Bibliography and index of geothermal resources and development in Washington State, with selected general works, compiled by R. A. Christie. 1994. 56 p. Lib. use only


94-9. Geologic map of the east half of the Yakima 1:100,000 quadrangle, Washington, compiled by J. E. Schuster. 1994. 1 sheet, scale 1:100,000, with 17 p. text. [ONLINE]

94-10. Geologic map of the east half of the Toppenish 1:100,000 quadrangle, Washington, compiled by J. E. Schuster. 1994. 1 sheet, scale 1:100,000, with 15 p. text. [ONLINE]


94-12. Geologic map of the east half of the Yakima 1:100,000 quadrangle, Washington, compiled by J. E. Schuster. 1994. 1 sheet, scale 1:100,000, with 22 p. text. [ONLINE]


95-1. Landslide map and inventory, Tilton River–Mineral Creek area, Lewis County, Washington, by J. D. Dragovich and M. J. Brunengo. 1995. 165 p., 3 pl., scale 1:36,600. [TEXT] [PLATES]


95-3. Geologic map of the west half of the Twisp 1:100,000 quadrangle, Washington, compiled by J. D. Dragovich and D. K. Norman. 1995. 63 p., 1 pl. [ONLINE]


95-7. Maps of the surficial geology and depth to bedrock of False Bay, Friday Harbor, Richardson, and Shaw Island 7.5-minute quadrangles, San Juan County, Washington, by D. P. Dethier, D. P. White, and C. M. Brookfield. 1996. 7 p., 2 pl. [ONLINE]


96-5. Geologic map of the Pomeroy area, southeastern Washington, compiled by P. R. Hooper and B. A. Gillespie. 1996. 26 p., 1 pl., scale 1:38,520. [ONLINE]


96-7. Maps of the surficial geology and depth to bedrock of False Bay, Friday Harbor, Richardson, and Shaw Island 7.5-minute quadrangles, San Juan County, Washington, by D. P. Dethier, D. P. White, and C. M. Brookfield. 1996. 7 p., 2 pl. [ONLINE]


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2002-1. Tsunami inundation map of the Port Angeles, Washington, area, by T. J. Walsh, E. P. Myers III, and A. M. Baptista. 2002. 48 x 36 in. color sheet, scale 1:24,000. [ONLINE]


<table>
<thead>
<tr>
<th>Open File Reports</th>
<th>Contact us to see if paper copies are available (see p. 3)</th>
</tr>
</thead>
</table>


2005-4. Development of design guidelines for structures that serve as tsunami vertical evacuation sites, by Harry Yeh, Ian Robertson, and Jane Preuss. 2005. 34 p. [ONLINE]


2007-3. Sand point count and geochemical data in the Fall City and Carnation 7.5-minute quadrangles, King County, Washington, by J. D. Dragovich. 2007. 2 Microsoft Excel files with 6 p. text. [ONLINE]

2007-4. Seismic design category maps for residential construction in Washington, by Recep Cakir and T. J. Walsh. 2007. 2 color sheets, 58 x 36 in., scale 1:500,000. [ONLINE]

2007-5. Contains description and location of sample sites by map unit, analyses of samples, 40Ar/39Ar age dates, and 40Ar/39Ar age plateau and inverse isochron diagrams in Microsoft Excel and Adobe PDF formats. [ONLINE]


2008-4. Geochemical sample analyses of Tertiary and pre-Tertiary volcanic rocks in and around the North Bend 7.5-minute quadrangle, King County, Washington, by J. D. Dragovich and T. J. Walsh. 2008. 1 Microsoft Excel file with 6 p. text. [ONLINE]


Supersedes Open File Report 94-1.

2009-3. Data supplement to GM-74—Geologic map of the Meeks Table and western two-thirds of the Niel 7.5-minute quadrangles, Yakima County, Washington, by P. E. Hammond. 2009. 1 Microsoft Excel file. [ONLINE]

2009-4. Geochemistry, geochronology, and sand point count data for the Snoqualmie 7.5-minute quadrangle, King County, Washington, by J. D. Dragovich, H. A. Littke, J. H. MacDonald, Jr., S. A. DuFran, M. L. Anderson, G. R. Wessel, Renate Hartog. 2009. 3 Microsoft Excel files with 35 p. text. [ONLINE]

2009-5. Geologic map of the Lake Wooten 7.5-minute quadrangle, Mason County, Washington, by R. E. Derkey, N. J. Hehemann, and Katelin Alldrigg. 2009. 35 x 36 in. color sheet, scale 1:24,000. [ONLINE]


2010-4 Geologic map of the Lilliwaup 7.5-minute quadrangle, Mason County, Washington, by T. A. Contreras, Gabriel Legorreta Paulin, J. L. Czajkowski, Michael Polenz, R. L. Logan, R. J. Carson, S. A. Mahan, T. J. Walsh, C. N. Johnson, and R. H. Skov. 2010. 27.5 x 36 in. color sheet, scale 1:24,000, with 13 p. text. [ONLINE]

2010-5 Supplement to geologic maps of the Lilliwaup, Mason County, Washington, Jefferson, Kitsap, and Mason Counties, Washington, by J. L. Czajkowski and J. D. Bowman. 2014. 36 x 45 color plate, scale 1:32,000. [ONLINE]


2013-01 Passive seismic analyses in the Sultan 7.5-Minute quadrangle, King and Snohomish Counties, Washington, by Koichi Hayashi, Recep Cakir, J. D. Dragovich, B. A. Stoker, T. J. Walsh, and H. A. Littke. 2013. 9 p. [ONLINE]

2013-02 Geothermal favorability model of Washington State, by D. E. Boschkam, J. L. Czajkowski, and J. D. Bowman. 2014. 20 p. with 48 x 36 in. color plate, scale 1:900,000. [ONLINE]

2013-03 Tsunami hazard map of Everett, Washington: Model results for magnitude 7.3 and 6.7 Seattle fault earthquakes, by T. J. Walsh, Diego Arcas, V. V. Titov, and C. C. Chamberlin 2014. 50 x 36 in. color sheet, scale 1:32,000. [ONLINE]


2014-05 Faults and earthquakes in Washington State, by J. L. Czajkowski and J. D. Bowman. 2014. 36 x 45 color sheet, scale 1:750,000. [ONLINE]

2020-01 Earthquake regional impact analysis for Columbia County, Oregon and Clark County, Washington, by J. M. Bauer, Recep Cakir, Corina Allen, Kate Mickelson, Trevor Contreras, Robert Hairston-Porter, and Yumei Wang. 2020. 93 p. text, 14 plates, 3 Esri file geodatabases. [ONLINE]

Note: STATEMAP 7.5-minute quadrangles from 2012 through the present have been published under the new Map Series.
Division of Mines and Mining

1. Olympic Peninsula manganese, by J. W. Melrose. 1940. 50 p. [ONLINE]
2. Washington iron ores, a summary report, by S. L. Glover. 1942. 23 p. [ONLINE]
5. Memorandum report on iron ores of the Cle Elum district, Washington, by Carl Zappfe. 1944. 27 p., 2 pl., 5 fgs. [ONLINE]

Division of Geology

1. Abstract of the report [by Solon Shedd] on the geology and resources of the Pasco and Prosser quadrangles, by H. E. Culver. 1926. 7 p., 1 pl., 29 x 22 in., scale 1:125,000. [ONLINE]
2. Oil and gas possibilities of western Whatcom County, by S. L. Glover. 1935. 69 p., 1 pl., 1 fig. [ONLINE]
3. A report on a geologic reconnaissance of the St. Helens mining district, Washington, by Everett Hougland. 1935. 4 p., 1 fig., 1 pl., 18 x 19 in. [ONLINE]
6. Inventory of mineral properties in Snohomish County, Washington, by W. A. Broughton. 1942. 64 p., 1 pl. [Accompanied by Index to mineral properties of Snohomish County. 1942. 8 p., tables.] [ONLINE]
7. Character and tonnage of the Turk magnesite deposit, by W. A. G. Bennett. 1943. 22 p., 1 pl., 1 fig. [ONLINE]
8. The Buckhorn iron deposits of Okanogan County, Washington; Results of a magnetic survey, by W. A. Broughton. 1943. 21 p., 1 pl., 4 fgs. [ONLINE]
10. The Blewett iron deposit, Chelan County, Washington (with preliminary tonnage estimates), by W. A. Broughton. 1943. 17 p., 1 pl., 2 fgs. [ONLINE]
15. Pumice and pumicite occurrences of Washington, by Ward Carithers. 1946. 78 p., 6 pl., 7 fgs. [ONLINE]
17. Perlite and other volcanic glass occurrences in Washington, by M. T. Hunting. 1949. 32 p. [ONLINE]
21. Stratigraphy of Eocene rocks in a part of King County, Washington, by J. D. Vine. 1962. 20 p., 3 fgs. [ONLINE]


32. Liquefaction features from a subduction zone earthquake—Preserved examples from the 1964 Alaska earthquake, by T. J. Walsh, R. A. Combellick, and G. L. Black. 1995. 80 p., 75 figs., 3 tables. [ONLINE]


34. Digital landslide inventory for the Cowlitz County urban corridor—Kelso to woodland (Coweeman River to Lewis River), Cowlitz County, Washington, by K. W. Wegmann. 2003. Consists of a GIS inventory of landslides as ArcView shapefiles, a Microsoft Access database, a Microsoft Excel spreadsheet version of the database, digital photographs of individual landslides, associated metadata, 1:24,000-scale landslide inventory maps for 7.5-minute quadrangles in the inventory area, and 20 p. text. 1 CD-ROM.


Washington Geological Survey


41. Landslide inventory of western King County, by K. A. Mickelson, K. E. Jacobacci, T. A. Contreras, W. N. Gallin, and S. L. Slaughter. 2019. 7 p. text and 1 ESRI geodatabase. [ONLINE]

### REPRINTS

Contact us to see if paper copies are available (see p. 3)


5. What are the prospects in Washington State?, by F. H. Wurden; and Puget Sound area has several prospective oil and gas basins, by J. Q. Anderson. 1959. 10 p. [ONLINE]


### RESOURCE MAPS

Contact us to see if paper copies are available (see p. 3)


### TOPOGRAPHIC MAPS

Topographic Maps are available online only.

TM-1. State of Washington—Southwest quadrant, prepared by Division of Geology and Earth Resources staff. 1987. 1 sheet, scale 1:250,000. [Available rolled (R) or folded (F).] [ONLINE]

TM-2. State of Washington—Northeast quadrant, prepared by Division of Geology and Earth Resources staff. 1991. 1 sheet, scale 1:250,000. [Available rolled (R) or folded (F).] [ONLINE]

TM-3. Topographic map, State of Washington—Southeast quadrant, prepared by Division of Geology and Earth Resources staff. 1997. 1 sheet, scale 1:250,000. [Available rolled (R) or folded (F).] [ONLINE]


Shallow seismic site characterizations at 25 ANSS/PNSN stations and compilation of site-specific data for the entire strongmotion network in Washington and Oregon, by Recep Cakir and T. J. Walsh. 2012. 61 p. [ONLINE]

Shallow seismic site characterizations at 23 strong-motion station sites in and near Washington State, by Recep Cakir and T. J. Walsh. 2011. 101 p. [ONLINE]

Shallow-seismic site characterizations of near-surface geology at 20 strongmotion stations in Washington State, by Recep Cakir and T. J. Walsh. 2010. 39 p. [ONLINE]


Thunder Creek basin, Skagit County—Report of DNR Study Team, by Jerry Thorsen. 1989. 33 p. [ONLINE]


Introduction to the petroleum geology of the Olympic coast of Washington and adjacent portions of the continental shelf—A road log—Ocean Shores to Kalaloch guidebook, by Washington Division of Geology and Earth Resources staff. 1988. 46 p. [ONLINE]


Notes on division history, by J. E. Schuster. 1986. 9 p. [ONLINE]


A pre-1980 eruption description of Mount St. Helens, by the Washington Division of Geology and Earth Resources. 1980. 10 p. [ONLINE]

Bibliography of Snohomish County geology, with an index to geologic mapping, by S. J. Simpson. 1979. 81 p., 6 pl. [ONLINE]


Geothermal energy—Questions and answers, by J. E. Schuster. 1972. 4 p. [ONLINE]

Holden tailings [Holden mine, Chelan County], by G. W. Thorsen. 1970. 20 p. [ONLINE]

Landslide of January 1967 which diverted the North Fork of the Stillaguamish River near Hazel [Snohomish County], by G. W. Thorsen. 1970. 8 p. [ONLINE]


Ghost town references, by the State of Washington Board of Natural Resources. 1968? 3 p. [ONLINE]

Mineral resources in the Puget Sound area, by the U.S. Bureau of Mines; Washington Division of Mines and Geology; Washington Department of Natural Resources. 1968. 150 p. [ONLINE]


Mining developments and future needs of Washington, by M. T. Hunting. 1965. 6 p. [ONLINE]

State mineral production at all time high in 1964, by M. T. Hunting. 1965? 4 p. [ONLINE]

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Miscellaneous Reports are available online only.

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Year</th>
<th>Pages</th>
<th>Online Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine resource programs—Present and future</td>
<td>M. T. Huntting</td>
<td>1964</td>
<td>3</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Origin of Dry Falls [Grant County]</td>
<td>V. E. Livingston, Jr.</td>
<td>1964</td>
<td>4</td>
<td>[ONLINE]</td>
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<tr>
<td>Tumtum Mountain [Clark County]—A potential source of feldspar</td>
<td>W. A. G. Bennett</td>
<td>1964</td>
<td>5</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Annotated bibliography of Washington clays</td>
<td>W. H. Reichert</td>
<td>1963</td>
<td>19</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Dolomite and andalusite deposits of northern Stevens County</td>
<td>W. S. Moen and W. A. G. Bennett</td>
<td>1963</td>
<td>4</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>A set of Washington rocks and minerals for schools</td>
<td>Washington Division of Mines and Geology; Washington State Superintendent of Public Instruction</td>
<td>1963</td>
<td>13</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>State Department of Conservation has record year [1962]</td>
<td>M. T. Huntting</td>
<td>1963</td>
<td>7</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Preliminary report on mineral resources of the Cougar Lake limited area [Yakima County]</td>
<td>W. S. Moen</td>
<td>1962</td>
<td>9</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Preliminary surveys for highway salvage archeology in the State of Washington—A final report</td>
<td>Bruce Stallard</td>
<td>1958</td>
<td>23</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Mining in Washington</td>
<td>C. P. Purdy, Jr.</td>
<td>1953</td>
<td>3</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Steilacoom gravel</td>
<td>S. H. Green and M. T. Huntting</td>
<td>1948</td>
<td>9</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>A factual review of mining developments in the State of Washington</td>
<td>S. H. Green</td>
<td>1947</td>
<td>4</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Preliminary report on the mines and prospects of the upper Methow region, Okanogan and Whatcom Counties</td>
<td>Ward Carithers</td>
<td>1946</td>
<td>40</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Oil and gas studies by the Division of Geology</td>
<td>S. L. Glover</td>
<td>1936</td>
<td>8</td>
<td>[ONLINE]</td>
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<tr>
<td>Report of natural resources survey from October 1, 1933, to March 1, 1935</td>
<td>T. B. Hill</td>
<td>1935</td>
<td>30</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Colloidal fuel</td>
<td>M. C. Butler</td>
<td>1934</td>
<td>9</td>
<td>[ONLINE]</td>
</tr>
<tr>
<td>Mining in the Pacific Northwest</td>
<td>L. K. Hodges</td>
<td>1897</td>
<td>183</td>
<td>[ONLINE]</td>
</tr>
</tbody>
</table>
The following geologic maps have been processed and converted into 3D models. The listed publisher, series, author, and year are for the original publication.

Airway Heights
WGS Open File Report 2004-1—Derkey and others, 2004

Auburn
USGS GQ 406—Mullineaux and others, 1961

Belfair
WGS Open File Report 2009-7—Polenz and others, 2009

Black Diamond
USGS GQ 407—Mullineaux and others, 1965

Brinnon
WGS Map Series 2012-02—Polenz and others, 2012

Buckley
USGS PP 388A—Crandell and others, 1959

Burley
WGS Open File Report 2009-8—Polenz and others, 2009

Camano
WGS Geologic Map 68—Polenz and others, 2009

Carnation
WGS Open File Report 2010-02—Dragovich and others, 2010

Center
WGS Map Series 2014-02—Hanson and others, 1976

Chattaroy
WGS Geologic Map 55—Hamilton and others, 2005

Cliffdell and Manastash Lake
WGS Geologic Map 76—Hammond and others, 2010

College Place and Walla Walla
WGS Geologic Map 62—Derkey and others, 2009

Coupeville
WGS Geologic Map 58—Polenz and others, 2005

Crescent Harbor
WGS Geologic Map 59—Dragovich and others, 2005

Darrington
WGS Open File Report 2002-7—Dragovich and others, 2002

Deer Island
WGS Geologic Map 54—Evarts and others, 2002

East Olympia
WGS Geologic Map 56—Walsh and others, 2005

Eldon
WGS Map Series 2012-03—Contreras and others, 2012

Elwha and Angeles Point
WGS Open File Report 2004-14—Polenz and others, 2004

Fall City
WGS Geologic Map 67—Dragovich and others, 2007

Forton
WGS Open File Report 2002-6—Dragovich and others, 2002

Four Lakes
WGS Open File Report 2004-2—Hamilton and others, 2004

Four Mound Prairie
WGS Geologic Map 66—Derkey and others, 2007

Fox Island
WGS Geologic Map 63—Logan and others, 2006

Freeland and Hansville
WGS Geologic Map 64—Polenz and others, 2006

Greenacres

Holly
WGS Open File Report 2011-6—Contreras and others, 2012

Hoodsport
WGS Open File Report 2011-3—Polenz and others, 2012

Juniper Beach
WGS Geologic Map 70—Schasse and others, 2009

Lacey

Lake Chaplain
WGS Map Series 2014-01—Dragovich and others, 2014

Lake Joy
WGS Map Series 2012-01—Dragovich and others, 2012

Lake Wooten
WGS Open File Report 2009-5—O’Neal and others, 2005

Langley
WGS Geologic Map 69—Schasse and others, 2009

Liberty Lake and Newman Lake
WGS Open File Report 2004-12—Derkey and others, 2004

Lilliwaup
WGS Open File Report 2010-4—O’Neal and others, 2005

Lofall
WGS Map Series 2013-03—Contreras and others, 2013

Longbranch

Mason Lake
WGS Open File Report 2009-6—Derkey and others, 2009

Maytown
WGS Geologic Map 72—Logan and others, 2009

McMurray
WGS Geologic Map 61—Dragovich and others, 2006

McNeil Island

Meeks Table and Nile
WGS Geologic Map 74—Hammond and others, 2009

Monroe
WGS Open File Report 2011-1—Capps and others, 1973

Morse Creek
WGS Open File Report 2002-8—Schasse and others, 2002

Mt Higgins

Nine Mile Falls

Nisqually

North Bend
WGS Geologic Map 73—Dragovich and others, 2009
The following geologic maps have been processed and converted into 3D models. The listed publisher, series, author, and year are for the original publication.

- **Oak Harbor**
  - WGS Geologic Map 59—Dragovich and others, 2005

- **Olsen Canyon**
  - WGS Geologic Map 71—Derkey and others, 2009

- **Orting**
  - USGS PP 388A—Crandell and others, 1959

- **Port Angeles and Ediz Hook**
  - WGS Open File Report 2004-13—Schasse and others, 2004

- **Port Townsend South**
  - WGS Geologic Map 57—Schasse and others, 2005

- **Quilcene**
  - WGS Map Series 2014-03—Hanson and others, 1976

- **Seabeck and Poulsbo**
  - WGS Map Series 2013-02—Polenz and others, 2013

- **Shelton**

- **Skokomish Valley and Union**
  - WGS Open File Report 2010-03—Polenz and others, 2011

- **Snoqualmie**
  - WGS Geologic Map 75—Dragovich and others, 2009

- **Spokane NW**
  - WGS Open File Report 2004-3—Derkey and others, 2004

- **Spokane SW**
  - WGS Open File Report 2004-4—Hamilton and others, 2004

- **Squaxin Island**

- **Stimson Hill**

- **Sultan**
  - WGS Map Series 2013-01—Dragovich and others, 2013

- **Summit Lake**
  - WGS Open File Report 2004-10—Logan and others, 2004

- **Timberwolf Mtn**
  - WGS Geologic Map 60—Hammond and others, 2005

- **Tumwater**

- **Utslady and Conway**
  - WGS Open File Report 2002-5—Dragovich and others, 2002

- **Vaughn**
  - WGS Geologic Map 65—Logan and others, 2007

- **Wilkeson**
  - USGS PP 388A—Crandell and others, 1959
Color Page-Size Geologic Map of Washington
This 8½ x 14 in. map, compiled by J. E. Schuster, includes a brief description of the geologic history of Washington. Scale 1:2,250,000 (or 1 in. = 37 mi). Revised 2013. [ONLINE]

Mining Districts of Washington
A map (circa 1980?) of the named mining districts. This map is not definitive—names have changed over the years. [ONLINE]

Mount St. Helens Slide Sets
Two sets of slides of the eruptions and short descriptions of the scenes are available:
Set 1 contains 20 slides and covers the period from March through June 1980. This slide set was digitally remastered in 2015. [ONLINE]
Set 2 contains 20 slides and covers the period from May 18, 1980, to May 13, 1981. This slide set was digitally remastered in 2015. [ONLINE]
Set 3 contains 16 digitally remastered photographs and slides of the eruption and its aftermath. [ONLINE]

DGER News
_DGER News_ was an electronic-only newsletter about the activities of the Survey. It was published quarterly from 2003 to 2007 and is available in PDF format. [ONLINE]

Washington Geology Journal
*Washington Geology*_ was published about four times a year from 1973 to 2002. It is currently on hiatus. All issues are available in PDF format. Articles cover topics of interest to both geologists and the general public. [ONLINE]

GEOLOGY RECREATION AND EDUCATION

**Fossil and Mineral Collecting**

**Geology Resources for Teachers**
Selected information about earth science for teachers, including online sources. [ONLINE]

**Gold Panning**
Information on recreational placer gold mining and mining claims procedures (both state and federal), includes _Mining Claims and Sites on Federal Lands, Small Scale Prospecting and Placer Mining in Washington, Boundaries of State-owned Aquatic Lands, Recreational Gold Panning_, and the “Gold & Fish” brochure.

REGULATORY INFORMATION

**Rules, Regulations and Forms** – Surface Mining Reclamation and Oil and Gas Conservation Acts and accompanying rules, regulations, fees, and forms. [ONLINE]

SCENARIO EARTHQUAKES FOR WASHINGTON STATE
Emergency management experts have created a series of reports on seismic zones at risk of a major earthquake in Washington State. These reports discuss the most likely size and type of earthquake and the amount and location of damage expected. The most up-to-date version of these data can be found in our _Geologic Hazard Maps_ page on our website. Reports are available for the following:
- Boulder Creek in Whatcom County (M6.8)
- Canyon River–Saddle Mountain in Mason County (M7.4)
- Cascadia (M9.0)
- Cascadia North (M8.3)
- Chelan (M7.2)
- Cle Elum (M6.8)
- Darrington–Devils Mountain (M7.1)
- Darrington–Devils Mountain West (M7.4)
- Hite in Walla Walla County (M6.8)
- Lake Creek–Boundary Creek in Clallam County (M6.8)
- Mill Creek in Yakima County (M7.1)
- Nisqually (M7.2)
- Olympia (M5.7)
- Saddle Mountain in south-central Washington (M7.4)
- SeaTac (M7.2)
- Seattle (M7.2)
- Latah in Spokane County (M5.5)
- Mount St. Helens (M7.0)
- southern Whidbey Island (M7.4)
- Tacoma (M7.1)

TOPOGRAPHIC INDEXES FOR WASHINGTON STATE
We have scanned our collection of U.S. Geological Survey topographic quadrangle indexes and catalogs for Washington State. Some quadrangle names have changed over the years. These indexes provide a historical record of the evolution of topographic mapping in Washington State. [1996] [1987] [1983] [1982] [1980] [1976] [1974] [1973] [1965] [1960] [1959] [1958] [1957] [1956] [1955] [1953] [1941] [1933] [1914] [1903]

**Washington State Historic Topographic Maps**—Inventory held by the Washington Geology Library. This is a list of topographic maps by the USGS and Army Map Service at scales of 1:24,000, 1:25,000, 1:62,500, and 1:125,000. The maps themselves are not online, but the inventory will tell you what we have on hand before you make the trip to Olympia. [ONLINE]

You may be able to find scans of historic topographic maps at the USGS Historical Topographic Map Collection at http://nationalmap.gov/historical/.

For more information on the topographic mapping of Washington State, see the article in _Washington Geology_ [v. 20, no. 1, p. 41].

HISTORICAL FIELD NOTEBOOK COLLECTION
We have scanned our collection of field notebooks dating back to the first years of the Survey in 1899. This digitized collection includes field notebooks, maps, theses, and other publications that are out-of-print and some that may never have been published. These notebooks document geologic insights and records of mineral resources across Washington State. [ONLINE]