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# Publications of the Washington Geological Survey

July 2022



WASHINGTON STATE DEPT OF  
**NATURAL  
RESOURCES**  
WASHINGTON  
GEOLOGICAL SURVEY

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## ■ 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 30- by 60-minute topographic quadrangles in Washington State from all sources, as well as quadrant and whole state maps. 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](mailto:stephanie.earls@dnr.wa.gov) for current availability.

## ■ CONTACT US ■

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URL: [www.dnr.wa.gov/geology](http://www.dnr.wa.gov/geology)

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.



## **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.

## ■ ANNUAL REPORTS ■

*Annual Reports are available online only.*

### Washington State Geologist

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

Mines and minerals of Washington—Second annual report of George A. Bethune, State Geologist, by G. A. Bethune. 1892. 186 p. [\[ONLINE\]](#) Out of print

### 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. [\[ONLINE\]](#) Out of print

### Washington Geological Survey

Annual Report for 1901; Volume I. 1902. 344 p. [\[PARTS I-II\]](#) [\[PARTS III-VI\]](#) Out of print

*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. [\[ONLINE\]](#) Out of print

Part II. The metalliferous resources of Washington, except iron, by Henry Landes, W. S. Thyng, D. A. Lyon, and Milnor Roberts. 1902. 123 p., 4 pl. [\[ONLINE\]](#) Out of print

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

Part IV. The iron ores of Washington, by Solon Shedd, and, The coal deposits of Washington, by Henry Landes. 1902. 67 p., 13 pl. [\[ONLINE\]](#) Out of print

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. [\[ONLINE\]](#) Out of print

Part VI. Bibliography of the literature referring to the geology of Washington, by Ralph Arnold. 1902. 16 p. [\[ONLINE\]](#) Out of print

Annual report for 1902; Volume II. 1903. 277 p., 23 pl. (Contains: Part I. The building and ornamental stones of Washington, by Solon Shedd [\[ONLINE\]](#); Part II. Coal deposits of Washington, by Henry Landes and C. A. Ruddy [\[ONLINE\]](#)) Out of print

The biennial report of the Board of Geological Survey of the State of Washington for the term 1901-1903. 1903. 7 p. [\[ONLINE\]](#) Out of print

The biennial report of the Board of Geological Survey of the State of Washington for the term 1909-11. 1910. 24 p. 1 pl. [\[ONLINE\]](#) Out of print

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

The biennial report of the Board of Geological Survey of the State of Washington for the term 1913-1915. 1915. 31 p. 3 pl. [\[ONLINE\]](#) Out of print

The biennial report of the Board of Geological Survey of the State of Washington for the term 1915-1917. 1917. 29 p. 3 pl. [\[ONLINE\]](#) Out of print

The biennial report of the Board of Geological Survey of the State of Washington for the term 1917-1919. 1919. 26 p. 3 pl. [\[ONLINE\]](#) Out of print

The biennial report of the Board of Geological Survey of the State of Washington for the term 1919-1921. 1921. 29 p. [\[ONLINE\]](#) Out of print

### 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. [\[ONLINE\]](#) Out of print

Report of the Supervisor of Geology, Department of Conservation and Development, from October 1, 1922, to September 30, 1924, by Solon Shedd. 1924. 12 p. 1 pl. [\[ONLINE\]](#) Out of print

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. [\[ONLINE\]](#) Out of print

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. [\[ONLINE\]](#) Out of print

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. [\[ONLINE\]](#) Out of print

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

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

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

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

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

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

Tenth biennial report of the Department of Conservation and Development, October 1, 1938—September 30, 1940, by J. B. Fink. 1941. 150 p. [\[ONLINE\]](#) Out of print

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. [\[ONLINE\]](#) Out of print

Eleventh biennial report of the Department of Conservation and Development—October 1, 1940—September 30, 1942, by Ed Davis. 1943. 54 p. [\[ONLINE\]](#) Out of print

\* 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.

## ■ ANNUAL REPORTS ■

*Annual Reports are available online only.*

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. [ <a href="#">ONLINE</a> ]	Out of print	Biennial report no. 8 of the Division of Mines and Geology [for the period commencing July 1, 1958 and ending June 30, 1960], by M. T. Huntting. 1960. 26 p. [ <a href="#">ONLINE</a> ]	Out of print
Twelfth biennial report of the Department of Conservation and Development—October 1, 1942–September 30, 1944, by Ed Davis. 1944. 52 p. [ <a href="#">ONLINE</a> ]	Out of print	Biennial report no. 9 [of the] Division of Mines and Geology for the period commencing July 1, 1960 and ending June 30, 1962, by M. T. Huntting. 1962? 19 p. [ <a href="#">ONLINE</a> ]	Out of print
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. [ <a href="#">ONLINE</a> ]	Out of print	Biennial report no. 10 [of the] Division of Mines and Geology [for the period commencing July 1, 1962 and ending June 30, 1964], by M. T. Huntting. 1964? 18 p. [ <a href="#">ONLINE</a> ]	Out of print
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. [ <a href="#">ONLINE</a> ]	Out of print	Biennial report no. 11 [of the] Division of Mines and Geology [for the period commencing July 1, 1964 and ending June 30, 1966], by M. T. Huntting. 1966? 17 p. [ <a href="#">ONLINE</a> ]	Out of print
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. [ <a href="#">ONLINE</a> ]	Out of print	[Biennial report no. 12 of the] Mines and Geology Division [1966-1968], by M. E. Felt. 1968? 5 p. [ <a href="#">ONLINE</a> ]	Out of print
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. [ <a href="#">ONLINE</a> ]	Out of print	<b>Department of Natural Resources</b> <b>Division of Geology and Earth Resources</b>	
Biennial report no. 4 of the Division of Mines and Geology for the period commencing October 1, 1950 and ending September 30, 1952, by S. L. Glover. 1952. 8 p. [ <a href="#">ONLINE</a> ]	Out of print	Geology for the decade 1980-1990, by Raymond Lasmanis. 1983. 67 p. [ <a href="#">ONLINE</a> ]	Out of print
Biennial report no. 5 of the Division of Mines and Geology for the period commencing July 1, 1952 and ending June 30, 1954; Including a special report: One hundred years of mining, by S. L. Glover. 1954? 20 p. [ <a href="#">ONLINE</a> ]	Out of print	The Washington Division of Geology and Earth Resources—Geology in the public interest. 2003. 4 p. [ <a href="#">ONLINE</a> ]	Out of print
Biennial report no. 6 of the Division of Mines and Geology for the period commencing July 1, 1954 and ending June 30, 1956, by S. L. Glover. 1956? 12 p. [ <a href="#">ONLINE</a> ]	Out of print	The Washington Division of Geology and Earth Resources—Geology in the public interest. 2005. 4 p. [ <a href="#">ONLINE</a> ]	Out of print
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. Huntting. 1958. 19 p. [ <a href="#">ONLINE</a> ]	Out of print	The Washington Division of Geology and Earth Resources—Geology in the public interest [short version]. 2005. 2 p. [ <a href="#">ONLINE</a> ]	Out of print
		The Washington Division of Geology and Earth Resources—Geology in the public interest. 2009. 4 p. [ <a href="#">ONLINE</a> ]	Out of print



## ■ BULLETINS ■

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

### Washington Geological Survey

- |  |   |
|--|---|
| <p>1. Geology and ore deposits of Republic mining district, by J. B. Umpleby. 1910. 66 p., 13 pl., 5 figs. <a href="#">[ONLINE]</a></p> <p>2. The road materials of Washington, by Henry Landes. 1911. 204 p., 17 pl., 51 figs. <a href="#">[ONLINE]</a></p> <p>3. The coal fields of King County, by G. W. Evans. 1912. 247 p., 23 pl., 59 figs. <a href="#">[ONLINE]</a></p> <p>4. Cement materials and industry in Washington, by Solon Shedd. 1913. 268 p., 21 pl., 10 figs. <a href="#">[PART 1]</a> <a href="#">[PART 2]</a></p> <p>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. <a href="#">[ONLINE]</a></p> <p>6. Geology and ore deposits of the Blewett mining district, by C. E. Weaver. 1911. 104 p., 10 pl., 1 fig. <a href="#">[ONLINE]</a></p> <p>7. Geology and ore deposits of the Index mining district, by C. E. Weaver. 1912. 96 p., 7 pl. <a href="#">[ONLINE]</a></p> <p>8. Glaciation of the Puget Sound region, by J. H. Bretz. 1913. 244 p., 24 pl., 27 figs. <a href="#">[ONLINE]</a></p> <p>9. The coal fields of Kittitas County, by E. J. Saunders. 1914. 204 p., 38 pl., 52 figs. <a href="#">[ONLINE]</a></p> <p>10. The coal fields of Pierce County, by Joseph Daniels. 1914. 146 p., 30 pl., 23 figs. <a href="#">[ONLINE]</a></p> <p>11. The mineral resources of Washington, with statistics for 1912, by Henry Landes. 1914. 53 p., 1 pl. <a href="#">[ONLINE]</a></p> <p>12. Bibliography of Washington geology and geography, by Gretchen O'Donnell. 1913. 63 p.<br/><i>Superseded by the <a href="#">online bibliography</a>.</i></p> <p>13. The Tertiary formations of western Washington, by C. E. Weaver. 1916. 327 p., 30 figs., 3 pl. <a href="#">[PART 1]</a> <a href="#">[PART 2]</a></p> <p>14. A preliminary report on the Quincy Valley Irrigation Project, by Henry Landes, A. W. Mangum, H. K. Benson, E. J. Saunders, and Joseph Jacobs. 1912. 49 p., 7 pl. <a href="#">[ONLINE]</a></p> <p>15. A preliminary report on the Tertiary paleontology of western Washington, by C. E. Weaver. 1912. 80 p., 16 pl. <a href="#">[ONLINE]</a></p> <p>16. Geology and ore deposits of the Covada mining district, by C. E. Weaver. 1913. 87 p., 5 pl., 3 figs. <a href="#">[ONLINE]</a></p> <p>17. A geographic dictionary of Washington, by Henry Landes. 1917. 346 p., 10 pl. <a href="#">[PART 1]</a> <a href="#">[PART 2]</a></p> <p>18. The country about Camp Lewis, by M. M. Leighton. 1918. 105 p., 12 pl., 6 figs. <a href="#">[ONLINE]</a></p> <p>19. The coal fields of southwestern Washington, by H. E. Culver. 1919. 155 p., 24 pl., 12 figs. <a href="#">[ONLINE]</a></p> <p>20. The mineral resources of Stevens County, by C. E. Weaver. 1920. 350 p., 20 pl., 14 figs. <a href="#">[PART 1]</a> <a href="#">[PART 2]</a></p> | <p>21. The mineral resources of Washington, with statistics for 1919, by E. N. Patty and S. L. Glover. 1921. 155 p., 13 pl., 3 figs. <a href="#">[ONLINE]</a></p> <p>22. The road building sands and gravels of Washington, by M. M. Leighton. 1919. 307 p., 9 pl., 36 figs. <a href="#">[ONLINE]</a></p> <p>23. The metal mines of Washington, by E. N. Patty. 1921. 366 p., 36 pl., 27 figs. <a href="#">[PART 1]</a> <a href="#">[PART 2]</a></p>  |
| <b>Division of Geology</b>   |   |
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| <p>Geology in the public interest. 2015. 4 p. [<a href="#">ONLINE</a>]</p>        | <p>Web<br/>only</p> | <p>What are landslides and how do they occur? 2015. 2 p. [<a href="#">ONLINE</a>]</p>    | <p>Web<br/>only</p> |
| <p>The Washington Geology Library. 2015. 2 p. [<a href="#">ONLINE</a>]</p>        | <p>Web<br/>only</p> | <p>Washington State Geologic Information Portal. 2014. 2 p. [<a href="#">ONLINE</a>]</p> | <p>Web<br/>only</p> |
| <p>Landslide hazards in Washington state. 2015. 2 p. [<a href="#">ONLINE</a>]</p> | <p>Web<br/>only</p> |  |                     |

## ■ FIELD TRIP GUIDES ■

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

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|--|---------------------|---|---------------------|
| <p>Geology of the Yakima Valley wine country—A geologic field trip guide from Stevenson to Zillah, Washington, by D. K. Norman, A. J. Busacca, and Ron Teissere. 2004. Color, 13 p. [<a href="#">ONLINE</a>]</p> | <p>In<br/>print</p> | <p>Geologic Field Trip to the Aldercrest–Banyon Landslide and Mount St. Helens, Washington, Part I—Stevenson to Castle Rock, by K. W. Wegmann. 2004. 24 p. [<a href="#">ONLINE</a>]</p> | <p>Web<br/>only</p> |
| <p>Geologic guide to the Yakima Valley wine-growing region, Benton and Yakima Counties, Washington, by D. K. Norman and A. J. Busacca. 2008. 10 p. [<a href="#">ONLINE</a>]</p>                                  | <p>Web<br/>only</p> | <p>Waterfall loop tour on the historic Columbia River Highway [Oregon] [<a href="#">ONLINE</a>]</p>   | <p>Web<br/>only</p> |

## ■ GEOLOGIC MAPS ■

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

*Note:* Geologic maps may also be found under other categories, such as Open File Reports, Bulletins, and Information Circulars.

### 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. [Accompanied by Bulletin 32, which is out of print.] [[ONLINE](#)]

Out of  
print

### Division of Mines and Geology

Geologic map of Washington, by M. T. Huntting, 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. [1 [SHEET](#)] [[SHEET 1 OF 2](#)] [[SHEET 2 OF 2](#)]

Out of  
print

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

Out of  
print

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|---|---------------------|
| <p>GM-1. Preliminary geologic map of the Hobart and Maple Valley [7.5-minute] quadrangles, King County, Washington, by J. D. Vine. 1962. 43 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>                      | <p>In<br/>print</p> |
| <p>GM-2. Preliminary geologic map of the Cumberland [7.5-minute] quadrangle, King County, Washington, by H. D. Gower and A. A. Wanek. 1963. 30 x 41 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>                   | <p>In<br/>print</p> |
| <p>GM-3. Geology of the Simcoe Mountains volcanic area, Washington, by R. A. Sheppard. 1967. 43 x 23 in. sheet, scale 1:125,000. [<a href="#">ONLINE</a>]</p>   | <p>In<br/>print</p> |
| <p>GM-4. Geology of the Grays River [15-minute] quadrangle, Wahkiakum and Pacific Counties, Washington, by E. W. Wolfe and E. H. McKee. 1968. 23 x 34 in. color sheet, scale 1:62,500, with 6 p. text. [<a href="#">ONLINE</a>]</p> | <p>In<br/>print</p> |

## ■ GEOLOGIC MAPS ■

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

GM-5.	Preliminary geologic map of the Chewelah Mountain [15-minute] quadrangle, Stevens County, Washington, by L. D. Clark and F. K. Miller. 1968. Two 25 x 32 in. color sheets, scale 1:62,500, with 6 p. text. <a href="#">[ONLINE]</a>	In print	GM-18.	Relative slope stability of Gig Harbor Peninsula, Pierce County, Washington, by Mackey Smith. 1976. 21 x 35 in. color sheet, scale 1:31,250. <a href="#">[ONLINE]</a>	In print
GM-6.	Preliminary geologic map of the Loon Lake [15-minute] quadrangle, Stevens and Spokane Counties, Washington, by F. K. Miller. 1969. 30 x 29 in. color sheet, scale 1:62,500, with 7 p. text. <a href="#">[ONLINE]</a>	In print	GM-19.	Geologic factors affecting waste disposal practices, Gig Harbor Peninsula, Pierce County, Washington, by Mackey Smith. 1976. 1 sheet (21 x 35 in.), scale 1:31,250. <a href="#">[ONLINE]</a>	In print
<b>Division of Geology and Earth Resources</b>			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. <a href="#">[ONLINE]</a>	In print
GM-7.	Preliminary geologic map of the Newport Number 1 [15-minute] quadrangle, Pend Oreille County, Washington, and Bonner County, Idaho, by F. K. Miller. 1974. 24 x 31 in. color sheet, scale 1:62,500, with 6 p. text. <a href="#">[ONLINE]</a>	Out of print	GM-21.	Mineral resources of the southern Hood Canal area, Washington, by Mackey Smith and R. J. Carson. 1976. 23 x 27 in. sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	In print
GM-8.	Preliminary geologic map of the Newport Number 2 [15-minute] quadrangle, Pend Oreille and Stevens Counties, Washington, by F. K. Miller. 1974. 22 x 32 in. color sheet, scale 1:62,500, with 6 p. text. <a href="#">[ONLINE]</a>	Out of print	GM-22.	Mineral resource maps of Washington, by W. S. Moen. 1978. Four 28 x 19 in. color sheets, scale 1:1,000,000, with 4 p. text. [Reprinted 1986.] <a href="#">[ONLINE]</a>	In print
GM-9.	Preliminary geologic map of the Newport Number 3 [15-minute] quadrangle, Pend Oreille, Stevens, and Spokane Counties, Washington, by F. K. Miller. 1974. 23 x 32 in. color sheet, scale 1:62,500, with 7 p. text. <a href="#">[ONLINE]</a>	Out of print	GM-23.	Geologic map of the Marblemount [15-minute] quadrangle, Washington, by Peter Misch. 1979. 36 x 30 in. color sheet, scale 1:48,000. <a href="#">[ONLINE]</a>	In print
GM-10.	Preliminary geologic map of the Newport Number 4 [15-minute] quadrangle, Spokane and Pend Oreille Counties, Washington, and Bonner County, Idaho, by F. K. Miller. 1974. 24 x 30 in. color sheet, scale 1:62,500, 6 p. text. <a href="#">[ONLINE]</a>	Out of print	GM-24.	Geologic map in the vicinity of the lower Bogachiel and Hoh River valleys and the Washington coast, by W. W. Rau. 1979. 29 x 47 in. color sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	In print
GM-11.	Complete Bouguer gravity anomaly map of Washington, by W. E. Bonini, D. W. Hughes, and Z. F. Daneš. 1974. 59 x 43 in. sheet, scale 1:500,000. <a href="#">[ONLINE]</a>	Out of print	GM-25.	Geothermal resources of Washington, compiled by M. A. Korosec, K. L. Kaler, J. E. Schuster, R. G. Bloomquist, S. J. Simpson, and D. D. Blackwell. 1981. 50 x 42 in. color sheet, scale 1:500,000. <a href="#">[ONLINE]</a>	In print
GM-12.	Thickness of unconsolidated sediments, Puget Lowland, Washington, by J. B. Hall and K. L. Othberg. 1974. 23 x 35 in. sheet, scale 1:250,000, with 3 p. text. <a href="#">[ONLINE]</a>	Out of print	GM-26.	Geology of the Pullman, Moscow West, Colton, and Uniontown 7½-minute quadrangles, Washington and Idaho, by P. R. Hooper and G. D. Webster. 1982. 33 x 22 in. two-color sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	Out of print
GM-13.	Geologic map of the Destruction Island and Taholah [15-minute] quadrangles, Washington, by W. W. Rau. 1975. 36 x 47 color sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	Out of print	GM-27.	Complete Bouguer gravity anomaly map, Cascade Mountains, Washington, by Z. F. Daneš and W. M. Phillips. 1983. Two 24 x 35 in. two-color sheets, scale 1:250,000. <a href="#">[ONLINE]</a>	In print
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. <a href="#">[ONLINE]</a>	Out of print	GM-28.	Geologic map of the Ellensburg [15-minute] quadrangle, Washington, by R. D. Bentley and N. P. Campbell. 1983. 34 x 23 in. two-color sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	Out of print
GM-15.	Slope stability map of Thurston County, Washington, by E. R. Artim. 1976. 31 x 19 in. color sheet, scale 1:125,000. <a href="#">[ONLINE]</a>	In print	GM-29.	Geologic map of the Yakima quadrangle, Washington, by R. D. Bentley and N. P. Campbell. 1983. 34 x 23 in. two-color sheet, scale 1:62,500. <a href="#">[ONLINE]</a>	Out of print
GM-16.	Relative ground settlement hazards of Thurston County, Washington, by E. R. Artim. 1976. 31 x 19 in. color sheet, scale 1:125,000. <a href="#">[ONLINE]</a>	In print	GM-30.	Availability of Federal land for mineral exploration and development in the State of Washington, by D. P. Banister, D. J. Barnes, and W. D. Longwill. 1984. Four 50 x 37 in. color sheets, scale 1:500,000, with 17 p. text. <a href="#">[ONLINE]</a>	In print
GM-17.	Relative potential for differential settlement, Gig Harbor Peninsula, Pierce County, Washington, by Mackey Smith. 1976. 21 x 35 in. color sheet, scale 1:31,250. <a href="#">[ONLINE]</a>	In print	GM-31.	Geologic map of the Clarkston 15-minute quadrangle, Washington and Idaho, by P. R. Hooper, G. D. Webster, and V. E. Camp. 1985. 27 x 33 in. color sheet, scale 1:48,000, with 11 p. text. <a href="#">[ONLINE]</a>	Out of print
			GM-32.	Geologic maps of the Marcus and Kettle Falls [7.5-minute] quadrangles, Stevens and Ferry Counties, Washington, by J. W. Mills. 1985. Two 27 x 29 in. color sheets, scale 1:24,000, with 18 p. text. <a href="#">[ONLINE]</a>	In print

## ■ GEOLOGIC MAPS ■

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

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|--|-------------|--|-----------------|
| GM-33. Geologic map of the Humptulips [15-minute] quadrangle and adjacent areas, Grays Harbor County, Washington, by W. W. Rau. 1986. 31 x 41 in. color sheet, scale 1:62,500. [ <a href="#">ONLINE</a> ]  | In<br>print | GM-45. Geologic map of Washington—Southeast quadrant, by J. E. Schuster, C. W. Gulick, S. P. Reidel, K. R. Fecht, and Stephanie Zurenko. 1997. 62 x 39 in. color sheet, scale 1:250,000, and accompanying explanatory sheet (38 x 31 in.) with bedrock geology and tectonic map at 1:625,000, with 20 p. text. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| GM-34. Geologic map of Washington—Southwest quadrant, by T. J. Walsh, M. A. Korosec, W. M. Phillips, R. L. Logan, and H. W. Schasse. 1987. 54 x 39 in. color sheet, scale 1:250,000, and accompanying explanatory sheet (63 x 40 in.), with 28 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-46. Geologic map and bedrock history of the Gilbert 7.5-minute quadrangle, Chelan and Okanogan Counties, Washington, by J. D. Dragovich, D. K. Norman, R. A. Haugerud, and R. B. Miller. 1997. 40 x 28 in. two-color sheet, scale 1:24,000, with 67 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print     |
| GM-35. Geologic map of the Bluelight 15-minute quadrangle, Washington, by R. D. Bentley, N. P. Campbell, and J. E. Powell. 1988. 25 x 37 in. two-color sheet, scale 1:48,000. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-47. Geologic folio of the Olympia–Lacey–Tumwater urban area, Washington—Liquefaction susceptibility map, by S. P. Palmer, T. J. Walsh, and W. G. Gerstel. 1999. 31 x 27 in. color sheet, scale 1:48,000, with 16 p. text. [ <a href="#">ONLINE</a> ]  | Out of<br>print |
| GM-36. Geologic map of the Poisel Butte 15-minute quadrangle, Washington, by R. D. Bentley, N. P. Campbell, and J. E. Powell. 1988. 25 x 37 in. two-color sheet, scale 1:48,000. [ <a href="#">ONLINE</a> ]  | In<br>print | GM-48. Liquefaction susceptibility of the greater Eastside area, King County, Washington, by S. P. Palmer, B. D. Evans, and H. W. Schasse. 2002. 29 x 36 in. color sheet, scale 1:36,000, with 14 p. text. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| GM-37. Geologic map of the Logy Creek 15-minute quadrangle, Washington, by R. D. Bentley, N. P. Campbell, and J. E. Powell. 1988. 26 x 37 in. two-color sheet, scale 1:48,000. [ <a href="#">ONLINE</a> ]  | In<br>print | GM-49. Tsunami hazard map of the southern Washington coast—Modeled tsunami inundation from a Cascadia subduction zone earthquake, by T. J. Walsh, C. G. Caruthers, A. C. Heintz, E. P. Myers III, A. M. Baptista, G. B. Erdakos, and R. A. Kamphaus. 2000. 26 x 52 color sheet, scale 1:100,000, with 12 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print     |
| GM-38. Geologic map of the Saddle Mountains, Washington, by S. P. Reidel. 1988. 28 p., 5 pl. (3 two-color)(pl. 1 & 2, 25 x 16 in.; pl. 3, 18 x 27 in.; pl. 4, 27 x 19 in.; pl. 5, 25 x 21 in.), scale 1:48,000. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-50. Geologic map of Washington—Northwest quadrant, by J. D. Dragovich, R. L. Logan, H. W. Schasse, T. J. Walsh, W. S. Lingley Jr., D. K. Norman, W. J. Gerstel, T. J. Lapen, J. E. Schuster, and K. D. Meyers. 2002. 62 x 45 in. color sheet, scale 1:250,000, and two accompanying explanatory sheets (52 x 36 in. and 40 x 33 in.), with 72 p. text. [ <a href="#">ONLINE</a> ] | In<br>print     |
| GM-39. Geologic map of Washington—Northeast quadrant, by K. L. Stoffel, N. L. Joseph, S. Z. Waggoner, C. W. Gulick, M. A. Korosec, and B. B. Bunning. 1991. 62 x 39 in. color sheet, scale 1:250,000, and two accompanying explanatory sheets (57 x 39 in. and 46 x 39 in.), including a bedrock geologic and tectonic map at 1:625,000 scale, with 36 p. text. [ <a href="#">ONLINE</a> ] | In<br>print | GM-51. Liquefaction susceptibility of the greater Tacoma urban area, Pierce and King Counties, Washington, by S. P. Palmer, W. J. Perkins, and W. P. Grant. 2003. 48 x 36 in. color pl., scale 1:30,000, with 11 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print     |
| GM-40. Geologic map of southeast Asotin County, Washington, by S. P. Reidel, P. R. Hooper, G. D. Webster, and V. E. Camp. 1992. 27 x 38 in. two-color sheet, scale 1:48,000, with 22 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-52. Tectonic elements and evolution of northwest Washington, by E. H. Brown and J. D. Dragovich. 2003. 38 x 36 in. color sheet, scale 1:625,000, with 12 p. text. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| GM-41. Liquefaction susceptibility for the Des Moines and Renton 7.5-minute quadrangles, Washington, by S. P. Palmer, H. W. Schasse, and D. K. Norman. 1994. Two 28 x 27 in. color sheets, scale 1:24,000, with 15 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-53. Geologic map of Washington State, by J. E. Schuster. 2005. 55.5 x 36 in. color sheet, scale 1:500,000, with 44 p. text. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| GM-42. Relative earthquake hazard map for the Vancouver, Washington, urban region, by M. A. Mabey, I. P. Madin, and S. P. Palmer. 1994. Two color sheets (28 x 30 in. and 28 x 32 in.), scale 1:24,000, with 5 p. text. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-54. Geologic map of the Deer Park 7.5-minute quadrangle, Spokane County, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2005. 36 x 42 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| GM-43. Liquefaction susceptibility for the Auburn and Poverty Bay 7.5-minute quadrangles, Washington, by S. P. Palmer, T. J. Walsh, R. L. Logan, and W. G. Gerstel. 1995. Two 24 x 26 in. color sheets, scale 1:24,000, with 15 p. text. [ <a href="#">ONLINE</a> ]  | In<br>print | GM-55. Geologic map of the Chattaroy 7.5-minute quadrangle, Spokane County, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2005. 36 x 42 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]  | In<br>print     |
| 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. [ <a href="#">ONLINE</a> ]   | In<br>print | GM-56. Geologic map of the East Olympia 7.5-minute quadrangle, Thurston County, Washington, by T. J. Walsh and R. L. Logan. 2005. 42 x 36 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]  | In<br>print     |



## ■ GEOLOGIC MAPS ■

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

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. [ <a href="#">ONLINE</a> ]	In print	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. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ]	In print	GM-68. Geologic map of the Camano 7.5-minute quadrangle, Island County, Washington, by Michael Polenz, H. W. Schasse, M. L. Kalk, and B. B. Petersen. 2009. 48 x 36 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]	In print
GM-59. Geologic map of the Oak Harbor, Crescent Harbor, and part of the Smith Island 7.5-minute quadrangles, Island County, Washington, by J. D. Dragovich, G. T. Petro, G. W. Thorsen, S. L. Larson, G. R. Foster, and D. K. Norman. 2005. Two 42 x 36 in. color sheets, scale 1:24,000. [ <a href="#">ONLINE</a> ]	In print	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. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ]	In print	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. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ]	In print	GM-71. Geologic map of the Olsen Canyon 7.5-minute quadrangle, Lincoln and Stevens Counties, Washington, by R. E. Derkey and M. M. Hamilton. 2009. 42 x 36 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]	In print
GM-62. Geologic map of the College Place and Walla Walla 7.5-minute quadrangles, Walla Walla County, Washington, and Umatilla County, Oregon, by R. E. Derkey, D. F. Stradling, K. A. Lindsey, and T. L. Tolan. 2006. 46 x 36 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]	In print	GM-72. Geologic map of the Maytown 7.5-minute quadrangle, Thurston County, Washington, by R. L. Logan, T. J. Walsh, B. W. Stanton, and I. Y. Sarikhan. 2009. 42 x 36 in. color sheet, scale 1:24,000. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ]	In print	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. DuFrane, 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. [ <a href="#">ONLINE</a> ]	In print
GM-64. Geologic map of the Freeland 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. [ <a href="#">ONLINE</a> ]	In print	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. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ].	In print	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. DuFrane, 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. [ <a href="#">ONLINE</a> ]	In print
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. [ <a href="#">ONLINE</a> ]	In print	GM-76. Geologic map of the Cliffdell 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. [ <a href="#">ONLINE</a> ]	In print
		<i>Note:</i> STATEMAP 7.5-minute quadrangles from 2012 through the present have been published under the new <a href="#">Map Series</a> .	

## ■ INFORMATION CIRCULARS ■

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

### Division of Geology

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|---|--------------|--|--------------|
| <p>1. Present status of topographic mapping in Washington, by S. L. Glover. 1935. 10 p. [<a href="#">ONLINE</a>]</p>  | Out of print | <p>15. Wells drilled for oil or gas in Washington from 1945 to July 1953 inclusive; Supplement to Information Circular 15, by S. L. Glover. 1953. 9 p. (table). [<a href="#">ONLINE</a>]</p> | Out of print |
| <p>2. Summary report on Washington minerals, production and resources, by S. L. Glover. 1935. 10 p. [<a href="#">ONLINE</a>]</p>  | Out of print | <p>16. 1948 directory of Washington mining operations, by S. H. Green. 1948. 51 p. [<a href="#">ONLINE</a>]</p>  | Out of print |
| <p>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. [<a href="#">ONLINE</a>]</p> | Out of print | <p>17. 1949 directory of Washington mining operations, by M. T. Huntting. 1949. 62 p. [<a href="#">ONLINE</a>]</p>   | Out of print |

### Division of Mines and Mining

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|---|--------------|--|--------------|
| <p>1. Directory of Washington mines 1938, compiled by the Division of Mines and Mining. 1938. 15 p. [<a href="#">ONLINE</a>]</p>  | Out of print | <p>19. 1951 directory of Washington mining operations, by R. H. Stebbins. 1951. 75 p., 2 figs. [<a href="#">ONLINE</a>]</p>                                      | Out of print |
| <p>1. Summary of state and federal mining laws relating to federal lands and mining laws relating to state lands, compiled by the Washington State Library. 1935. 8 p. [Reprinted 1938.] [<a href="#">ONLINE</a>]</p> | Out of print | <p>20. 1952 directory of Washington mining operations, by C. P. Purdy Jr. 1952. 75 p., 2 figs. [<a href="#">ONLINE</a>]</p>                                      | Out of print |
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2012-03	Geologic map of the Eldon 7.5-minute quadrangle, Jefferson, Kitsap, and Mason Counties, Washington, by T. A. Contreras, Eleanor Spangler, L. A. Fusso, D. A. Reioux, Gabriel Legorreta Paulin, P. T. Pringle, R. J. Carson, E. F. Lindstrum, K. P. Clark, J. H. Tepper, Domenico Pileggi, and S. A. Mahan. 2012. 42 x 36 in. color plate, scale 1:24,000, with 60 p. text. [ <a href="#">ONLINE</a> ]	In print	2015-03	Geologic map of the Tacoma 1:100,000-scale quadrangle, Washington, by J. E. Schuster, A. A. Cabibbo, J. F. Schilter, and I. J. Hubert. 2015. 42 x 36 in. color plate, scale 1:100,000, with 31 p. text. [ <a href="#">ONLINE</a> ]	In print
2013-01	Geologic map of the Sultan 7.5-minute quadrangle, King and Snohomish Counties, Washington, by J. D. Dragovich, H. A. Littke, S. A. Mahan, M. L. Anderson, J. H. MacDonald, Jr., Recep Cakir, B. A. Stoker, C. J. Koger, J. P. Bethel, S. A. DuFrane, D. T. Smith, and N. M. Villeneuve. 2013. 44 x 36 in. color plate, scale 1:24,000, with 52 p. text. [ <a href="#">ONLINE</a> ]	In print	2016-01	Tsunami hazard maps of the San Juan Islands, Washington—Model results from a Cascadia subduction zone earthquake scenario, by T. J. Walsh, Edison Gica, Diego Arcas, V. V. Titov, and D. W. Eungard. 2016. Four 36 x 36 in. map sheets, scale 1:24,000 and 1:48,000, with 9 p. text. [ <a href="#">ONLINE</a> ] <i>Partially superseded by <a href="#">Map Series 2021-01</a>.</i>	Web only
2013-02	Geologic map of the Seabeck and Poulsbo 7.5-minute quadrangles, Kitsap and Jefferson Counties, Washington, by Michael Polenz, G. T. Petro, T. A. Contreras, K. A. Stone, and Gabriel Legorreta Paulin, and Recep Cakir. 2013. 48 x 36 in. color plate, scale 1:24,000, with 39 p. text. [ <a href="#">ONLINE</a> ]	In print	2016-02	Geologic map of the Shelton Valley 7.5-minute quadrangle, Mason County, Washington, by Michael Polenz, M. D. Allen, Gabriel Legorreta Paulin, D. W. Eungard, Recep Cakir, S. P. Scott, and S. A. Mahan. 2016, rev. 2018. 42 x 36 in. color plate, scale 1:24,000, with 45 p. text. [ <a href="#">ONLINE</a> ]	Web only
2013-03	Geologic map of the Lofall 7.5-minute quadrangle, Jefferson and Kitsap Counties, Washington, by T. A. Contreras, K. A. Stone, and Gabriel Legorreta Paulin. 2013. 40 x 36 in. color plate, scale 1:24,000, with 19 p. text. [ <a href="#">ONLINE</a> ]	In print	2016-03	Geologic map of the Granite Falls 7.5-minute quadrangle, Snohomish County, Washington, by J. D. Dragovich, S. P. Mavor, M. L. Anderson, S. A. Mahan, J. H. MacDonald, Jr., J. H. Tepper, D. T. Smith, B. A. Stoker, C. J. Koger, Recep Cakir, S. A. DuFrane, S. P. Scott, and B. P. Justman. 2016. 42 x 36 in. color plate, scale 1:24,000, with 63 p. text. [ <a href="#">ONLINE</a> ]	Web only
2014-01	Geologic map of the Lake Chaplain 7.5-minute quadrangle, Snohomish County, Washington, by J. D. Dragovich, C. L. Frattali, M. L. Anderson, S. A. Mahan, J. H. MacDonald, Jr., B. A. Stoker, D. T. Smith, C. J. Koger, Recep Cakir, S. A. DuFrane, and K. B. Sauer. 2014. 42 x 36 in. color plate, scale 1:24,000, with 51 p. text. [ <a href="#">ONLINE</a> ]	In print	<b>Washington Geological Survey</b>		
2014-02	Geologic map of the Center 7.5-minute quadrangle, Jefferson County, Washington, by M. P. Polenz, H. O. Gordon, I. J. Hubert, T. A. Contreras, A. I. Patton, Gabriel Legorreta Paulin, and Recep Cakir. 2014. 42 x 36 in. color plate, scale 1:24,000, with 35 p. text. [ <a href="#">ONLINE</a> ]	In print	2017-01	Geologic map of the Littlerock 7.5-minute quadrangle, Thurston County, Washington, by Michael Polenz, J. L. Vermeer, Gabriel Legorreta Paulin, J. H. Tepper, S. A. Mahan, and Recep Cakir. 2017. 42 x 36 in. color plate, scale 1:24,000, with 36 p. text. [ <a href="#">ONLINE</a> ]	Web only
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- 1961 Open-file report of analyses of Washington limestone, samples collected in 1959-1960, by Washington Division of Mines and Geology. 1961. 20 p. [\[ONLINE\]](#) Web only
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2002-7. Geologic map of the Darrington 7.5-minute quadrangle, Skagit and Snohomish Counties, Washington, by J. D. Dragovich, L. A. Gilbertson, W. S. Lingley Jr., Michael Polenz, and Jennifer Glenn. 46 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-12. Geologic map of the Mount Higgins 7.5-minute quadrangle, Skagit and Snohomish Counties, Washington, by J. D. Dragovich, B. W. Stanton, W. S. Lingley Jr., G. A. Griesel, and Michael Polenz. 2003. 48 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2002-8. Geologic map of the Morse Creek 7.5-minute quadrangle, Clallam County, Washington, by H. W. Schasse and Michael Polenz. 2002. 2 color plates, 30 x 36 in., scale 1:24,000, plus 19 p. text. <a href="#">[ONLINE]</a>	Web only	2003-13. Inactive and abandoned mine lands—New Light and Mammoth mines, Slate Creek mining district, Whatcom County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2003. 11 p. <a href="#">[ONLINE]</a>	Web only
2003-1. Tsunami inundation map of the Quileute, Washington, area, by T. J. Walsh, E. P. Myers III, and A. M. Baptista. 2003. 44 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-14. Tsunami hazard map of the Elliott Bay area, Seattle, Washington: Modeled tsunami inundation from a Seattle fault earthquake, by T. J. Walsh, V. V. Titov, A. J. Venturato, H. O. Mofjeld, and F. I. Gonzalez. 2003. 36 x 36 in. color sheet, scale 1:50,000. <a href="#">[ONLINE]</a> <i>Superseded by Map Series 2022-03.</i>	Web only
2003-2. Tsunami inundation map of the Neah Bay, Washington, area, by T. J. Walsh, E. P. Myers III, and A. M. Baptista. 2003. 38 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-15. Geologic map of the Shelton 1:100,000 quadrangle, Washington, by R. L. Logan. 2003. 45 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only
2003-3. Inactive and abandoned mine lands—Spada Lake and Cecile Creek watershed analysis units, Snohomish and Okanogan Counties, Washington, by R. W. Phipps, D. T. McKay Jr., D. K. Norman, and F. E. Wolff. 2003. 37 p. <a href="#">[ONLINE]</a>	Web only	2003-16. Geologic map of the Copalis Beach 1:100,000 quadrangle, Washington, by R. L. Logan. 2003. 29 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only
2003-4. Geologic map of the Mount Olympus 1:100,000 quadrangle, Washington, by W. J. Gerstel and W. S. Lingley Jr. 2003. 52 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only	2003-17. Geologic map of the Washington portion of the Roche Harbor 1:100,000 quadrangle, by R. L. Logan. 2003. 24 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only
2003-5. Geologic map of the Washington portion of the Cape Flattery 1:100,000 quadrangle, by H. W. Schasse. 2003. 45 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only	2003-18. Inactive and abandoned mine lands—United Copper Group mines, Chewelah Mining District, Stevens County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2003. 12 p. <a href="#">[ONLINE]</a>	Web only
2003-6. Geologic map of the Washington portion of the Port Angeles 1:100,000 quadrangle, by H. W. Schasse. 2003. 45 x 36 in. color sheet, scale 1:100,000. <a href="#">[ONLINE]</a>	Web only	2003-19. Inactive and abandoned mine lands—Red Mountain Mine, Chiwawa mining district, Chelan County, Washington, by D. T. McKay Jr., F. E. Wolff, and D. K. Norman. 2003. 11 p. <a href="#">[ONLINE]</a>	Web only
2003-7. Inactive and abandoned mine lands—Mystery and Justice mines, Monte Cristo mining district, Snohomish County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2003. 13 p. <a href="#">[ONLINE]</a>	Web only	2003-20. Inactive and abandoned mine lands—Sierra Zinc Mine, Chewelah Mining District, Stevens County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2003. 9 p. <a href="#">[ONLINE]</a>	Web only
2003-8. Geologic map of the Nine Mile Falls 7.5-minute quadrangle, Spokane and Stevens Counties, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2003. 38 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-21. Geologic map of the Longbranch 7.5-minute quadrangle, Thurston, Pierce, and Mason Counties, Washington, by R. L. Logan, T. J. Walsh, and Michael Polenz. 2003. 42 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2003-9. Geologic map of the Lacey 7.5-minute quadrangle, Thurston County, Washington, by R. L. Logan, T. J. Walsh, H. W. Schasse, and Michael Polenz. 2003. 36 x 32 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-22. Geologic map of the McNeil Island 7.5-minute quadrangle, Pierce and Thurston Counties, Washington, by T. J. Walsh, R. L. Logan, and Michael Polenz. 2003. 42 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2003-10. Geologic map of the Nisqually 7.5-minute quadrangle, Thurston and Pierce Counties, Washington, by T. J. Walsh, R. L. Logan, Michael Polenz, and H. W. Schasse. 2003. 42 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-23. Geologic map of the Squaxin Island 7.5-minute quadrangle, Mason and Thurston Counties, Washington, by R. L. Logan, Michael Polenz, T. J. Walsh, and H. W. Schasse. 2003. 34 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2003-11. Geologic map of the Oso 7.5-minute quadrangle, Skagit and Snohomish Counties, Washington, by J. D. Dragovich, B. W. Stanton, W. S. Lingley Jr., G. A. Griesel, and Michael Polenz. 2003. 45 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only	2003-24. Geologic map of the Shelton 7.5-minute quadrangle, Mason and Thurston Counties, Washington, by H. W. Schasse, R. L. Logan, Michael Polenz, and T. J. Walsh. 2003. 36 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only



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| <p>2003-25. Geologic map of the Tumwater 7.5-minute quadrangle, Thurston County, Washington, by T. J. Walsh, R. L. Logan, H. W. Schasse, and Michael Polenz. 2003. 43 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>   | Web only  | <p>2004-13. Geologic map of the Port Angeles and Ediz Hook 7.5-minute quadrangles, Clallam County, Washington, by H. W. Schasse, K. W. Wegmann, and Michael Polenz. 2004. 45 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only      |
| <p>2004-1. Geologic map of the Airway Heights 7.5-minute quadrangle, Spokane County, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2004. 30 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>   | Web only  | <p>2004-14. Geologic map of the Elwha and Angeles Point 7.5-minute quadrangles, Clallam County, Washington, by Michael Polenz, K. W. Wegmann, and H. W. Schasse. 2004. 48 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>   | Web only      |
| <p>2004-2. Geologic map of the Four Lakes 7.5-minute quadrangle, Spokane County, Washington, by M. M. Hamilton, R. E. Derkey, and D. F. Stradling. 2004. 30 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>   | Web only  | <p>2004-15. Tsunami hazard map of the Bellingham area, Washington—Modeled tsunami inundation from a Cascadia subduction zone earthquake, by T. J. Walsh, V. V. Titov, A. J. Venturato, H. O. Mofjeld, and F. I. González. 2004. 40 x 36 in. color sheet, scale 1:50,000. [<a href="#">ONLINE</a>]</p>                              | Web only      |
| <p>2004-3. Geologic map of the Spokane Northwest 7.5-minute quadrangle, Spokane County, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2004. 30 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2004-16. Inactive and abandoned mine lands—Alder Mine, Twisp mining district, Okanogan County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2004. 12 p. [<a href="#">ONLINE</a>]</p>  | Web only      |
| <p>2004-4. Geologic map of the Spokane Southwest 7.5-minute quadrangle, Spokane County, Washington, by M. M. Hamilton, R. E. Derkey, and D. F. Stradling. 2004. 30 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2004-17. Inactive and abandoned mine lands—Iroquois Mine, Leadpoint mining district, Stevens County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2004. 9 p. [<a href="#">ONLINE</a>]</p>   | Web only      |
| <p>2004-5. Inactive and abandoned mine lands—Great Excelsior mine, Mount Baker mining district, Whatcom County, Washington, by F. E. Wolff, D. T. McKay Jr., D. K. Norman, and M. I. Brookshier. 2004. 12 p. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2004-18. Inactive and abandoned mine lands—Talisman Mine, Orient mining district, Ferry County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2004. 9 p. [<a href="#">ONLINE</a>]</p>  | Web only      |
| <p>2004-6. A comparative study of aerial photographs and LIDAR imagery for landslide detection in the Puget Lowland, Washington, by R. D. Gold. 2004. 66 p., 1 plate, ArcView shapefiles. [<a href="#">ONLINE</a>]</p>   | Web only  | <p>2004-19. Inactive and abandoned mine lands—Gladstone and Electric Point Mines, Northport mining district, Stevens County, Washington, by F. E. Wolff, D. T. McKay Jr., and D. K. Norman. 2004. 12 p. [<a href="#">ONLINE</a>]</p>   | Web only      |
| <p>2004-7. A self-guided tour of the geology of the Columbia River Gorge—Portland Airport to Skamania Lodge, Stevenson, Washington, by D. K. Norman and J. M. Roloff. 2004. 9 p. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2004-20. Liquefaction susceptibility and site class maps of Washington State, by county, by S. P. Palmer, S. L. Magsino, E. L. Bilderback, J. L. Poelstra, D. S. Folger, and R. A. Niggemann. 2004. 78 sheets, with 45 p. text. [<a href="#">ONLINE</a>]</p>  | Web only      |
| <p>2004-8. Yakima River floodplain mining impact study, by the Yakima River Floodplain Mining Impact Study Team. 2004. 270 p., 15 appendices. [<a href="#">MAIN TEXT</a>] [<a href="#">APPENDICES</a>]</p>   | CD \$1.00 | <p>2005-1. Tsunami hazard map of the Anacortes–Whidbey Island area, Washington—Modeled tsunami inundation from a Cascadia subduction zone earthquake, by T. J. Walsh, V. V. Titov, A. J. Venturato, H. O. Mofjeld, and F. I. González. 2005. 48 x 36 in. color sheet, scale 1:62,500. [<a href="#">ONLINE</a>]</p>                 | Web only      |
| <p>2004-9. Geologic map of the Stimson Hill 7.5-minute quadrangle, Skagit and Snohomish Counties, Washington, by J. D. Dragovich, M. W. Wolfe, B. W. Stanton, and D. K. Norman. 2004. 45 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2005-2. Geologic map of the Ebey’s Landing National Historical Reserve, Island County, Washington, by Michael Polenz, S. L. Slaughter, J. D. Dragovich, and G. W. Thorsen. 2005. 50 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only      |
| <p>2004-10. Geologic map of the Summit Lake 7.5-minute quadrangle, Thurston and Mason Counties, Washington, by R. L. Logan and T. J. Walsh. 2004. 42 x 36 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only  | <p>2005-3. Digital 1:100,000-scale geology of Washington State, version 1.0, by Washington Division of Geology and Earth Resources staff. 2005. Contains 11 ESRI shapefiles of geologic data, 3 shapefiles of nongeologic auxiliary data, and 7 documentation files in Microsoft Word, Microsoft Excel, and Adobe PDF formats.</p> | Lib. use only |
| <p>2004-11. Geologic map of the Greenacres 7.5-minute quadrangle, Spokane County, Washington, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2004. 36 x 39 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p>  | Web only  | <i>Superseded by online GIS data.</i>  |               |
| <p>2004-12. Geologic map of the Washington portions of the Liberty Lake 7.5-minute quadrangle and the south half of the Newman Lake 7.5-minute quadrangle, Spokane County, by R. E. Derkey, M. M. Hamilton, and D. F. Stradling. 2004. 36 x 40 in. color sheet, scale 1:24,000. [<a href="#">ONLINE</a>]</p> | Web only  |  |               |

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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. <a href="#">[ONLINE]</a>	Web only	2009-1	Landslide field trip to Morton, Glenoma, and Randle, Lewis County, Washington, by I. Y. Sarikhan and T. A. Contreras. 2009. 13 p. <a href="#">[ONLINE]</a>	Web only
2005-5.	Supplement to Geologic Map GM-60, Geologic map of the Timberwolf Mountain 7.5-minute quadrangle, Yakima County, Washington, by P. E. Hammond. 2005. Contains description and location of sample sites by map unit, analyses of samples, <sup>40</sup> Ar/ <sup>39</sup> Ar age dates, and <sup>40</sup> Ar/ <sup>39</sup> Ar age plateau and inverse isochron diagrams in Microsoft Excel and Adobe PDF formats. <a href="#">[ONLINE]</a>	Web only	2009-2	Bibliography and index of geothermal resources and development in Washington State, with selected general works, compiled by R. A. Christie and updated by Lee Walkling. 2009. 90 p. <a href="#">[ONLINE]</a> <i>Supersedes Open File Report 94-1.</i>	Web only
2006-1.	Directory of Washington State surface mining reclamation sites—2006, compiled by T. C. Duerr, M. A. Shawver, and M. I. Brookshier. 2006. 271 p. <a href="#">[ONLINE]</a> <i>Superseded by Open File Report 2010-7.</i>	Web only	2009-3	Data supplement to 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. 1 Microsoft Excel file. <a href="#">[ONLINE]</a>	Web only
2007-1.	Field data for a trench on the Canyon River fault, southeast Olympic Mountains, Washington, by T. J. Walsh and R. L. Logan. 2007. 60 x 36 in. color sheet. <a href="#">[ONLINE]</a>	Web only	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. DuFrane, M. L. Anderson, G. R. Wessel, Renate Hartog. 2009. 3 Microsoft Excel files with 35 p. text. <a href="#">[ONLINE]</a>	Web only
2007-2.	The Darrington–Devils Mountain fault—A probably active reverse-oblique-slip fault zone in Skagit and Island Counties, Washington, by J. D. Dragovich and B. W. Stanton. 2007. 2 color sheets: 101 x 36 in. (scale 1:31,104) and 26 x 36 in. <a href="#">[ONLINE]</a>	Web only	2009-5	Geologic map of the Lake Wooten 7.5-minute quadrangle, Mason County, Washington, by R. E. Derkey, N. J. Hehemann, and Katelin Alldritt. 2009. 35 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	2009-6	Geologic map of the Mason Lake 7.5-minute quadrangle, Mason County, Washington, by R. E. Derkey, N. J. Hehemann, and Katelin Alldritt. 2009. 35 x 36 color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	2009-7	Geologic map of the Belfair 7.5-minute quadrangle, Mason, Kitsap, and Pierce Counties, Washington by Michael Polenz, Katelin Alldritt, N. J. Hehemann, I. Y. Sarikhan, and R. L. Logan. 2009. 45 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2008-1.	Cascadia deep earthquakes, by Cascadia Region Earthquake Workgroup. 2008. 26 p. <a href="#">[ONLINE]</a>	Web only	2009-8	Geologic map of the Burley 7.5-minute quadrangle, Kitsap and Pierce Counties, Washington, by Michael Polenz, Katelin Alldritt, N. J. Hehemann, and R. L. Logan. 2009. 41 x 36 in. color sheet, scale 1:24,000. <a href="#">[ONLINE]</a>	Web only
2008-2.	Shear-wave database for Quaternary and bedrock geologic units, Washington State, by E. L. Bilderback, S. P. Palmer, D. S. Folger, J. L. Poelstra, S. L. Magsino, and R. A. Niggemann. 2008. Contains a database in Microsoft Access and ASCII formats, and a 528 p. text. <a href="#">[ONLINE]</a>	Web only	2009-9	Tsunami hazard map of Tacoma, Washington—Model results for Seattle fault and Tacoma fault earthquake tsunamis, by T. J. Walsh, Diego Arcas, A. J. Venturato, V. V. Titov, H. O. Mofjeld, C. C. Chamberlin, and F. I. González. 2009. 55 x 36 in. color sheet, scales 1:36,000 and 1:62,500. <a href="#">[ONLINE]</a> <i>Partially superseded by Map Series 2022-03.</i>	Web only
2008-3.	Tuff of Stampede Pass and tuff of Green Canyon in the central Cascade Range, King and Kittitas Counties, Washington, by P. E. Hammond and J. D. Dragovich. 2008. 2 Microsoft Excel files with 8 p. text. <a href="#">[ONLINE]</a>	Web only	2010-1	Geologic map of the Carnation 7.5-minute quadrangle, King County, Washington, by J. D. Dragovich, H. A. Littke, M. L. Anderson, G. R. Wessel, C. J. Koger, J. H. Saltonstall, J. H. MacDonald Jr., S. A. Mahan, and S. A. DuFrane. 2010. 42 x 36 in. color sheet, scale 1:24,000, with 21 p. text. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only			
2008-5	Landslide reconnaissance following the storm event of December 1–3, 2007, in western Washington, by I. Y. Sarikhan, K. D. Stanton, T. A. Contreras, Michael Polenz, Jack Powell, T. J. Walsh, and R. L. Logan. 2008. 16 p. <a href="#">[ONLINE]</a>	Web only			

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| <p>2010-2 Supplement to the geologic map of the Carnation 7.5-minute quadrangle, King County, Washington—Geochronologic, geochemical, point count, geophysical, earthquake, fault, and neotectonic data, by J. D. Dragovich, M. L. Anderson, J. H. MacDonald Jr., S. A. Mahan, S. A. DuFrane, H. A. Littke, G. R. Wessel, J. H. Saltonstall, C. J. Koger, and Recep Cakir. 2010. 42 p. with 8 digital appendices. [<a href="#">ONLINE</a>]</p>                   | Web only | <p>2011-3 Geologic map of the Hoodspport 7.5-minute quadrangle, Mason County, Washington, by Michael Polenz, B. A. Miller, Nigel Davies, B. B. Perry, K. P. Clark, T. J. Walsh, R. J. Carson, and J. F. Hughes. 2012. 33 x 36 in. color sheet, scale 1:24,000, with 18 p. text. [<a href="#">ONLINE</a>]</p>                                       | Web only |
| <p>2010-3 Geologic map of the Skokomish Valley and Union 7.5-minute quadrangles, Mason County, Washington, by Michael Polenz, J. L. Czajkowski, Gabriel Legorreta Paulin, T. A. Contreras, B. A. Miller, M. E. Martin, T. J. Walsh, R. L. Logan, R. J. Carson, C. N. Johnson, R. H. Skov, S. A. Mahan, and C. R. Cohan. 2010, rev. 2011. 42 x 36 in. color sheet, scale 1:24,000, with 21 p. text. [<a href="#">ONLINE</a>]</p>                                  | Web only | <p>2011-4 Analytical data from the Hoodspport 7.5-minute quadrangle, Mason County, Washington—Supplement to Open File Report 2011-3, by Michael Polenz, B. A. Miller, Nigel Davies, B. B. Perry, J. F. Hughes, K. P. Clark, T. J. Walsh, J. H. Tepper, and R. J. Carson. 2012. 42 p. [<a href="#">ONLINE</a>]</p>                                  | Web only |
| <p>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. [<a href="#">ONLINE</a>]</p>  | Web only | <p>2011-5 Geologic map of the Holly 7.5-minute quadrangle, Jefferson, Kitsap, and Mason Counties, Washington, by T. A. Contreras, S. A. Weeks, K. M. D. Stanton, B. W. Stanton, B. B. Perry, T. J. Walsh, R. J. Carson, K. P. Clark, and S. A. Mahan. 2012. 37 x 36 in. color sheet, scale 1:24,000, with 13 p. text. [<a href="#">ONLINE</a>]</p> | Web only |
| <p>2010-5 Supplement to geologic maps of the Lilliwaup, Skokomish Valley, and Union 7.5-minute quadrangles, Mason County, Washington—Geologic setting and development around the Great Bend of Hood Canal, by Michael Polenz, T. A. Contreras, J. L. Czajkowski, Gabriel Legorreta Paulin, B. A. Miller, M. E. Martin, T. J. Walsh, R. L. Logan, R. J. Carson, C. N. Johnson, R. H. Skov, S. A. Mahan, and C. R. Cohan. 2010. 27 p. [<a href="#">ONLINE</a>]</p> | Web only | <p>2011-6 Analytical data from the Holly 7.5-minute quadrangle, Jefferson, Kitsap, and Mason Counties, Washington—Supplement to Open File Report 2011-5, by T. A. Contreras, S. A. Weeks, and B. B. Perry. 2012. 16 p. [<a href="#">ONLINE</a>]</p>  | Web only |
| <p>2010-6 Supplement to GM-76, Geologic map of the Cliffdell and western two-thirds of the Manastash Lake 7.5-minute quadrangles, Yakima and Kittitas Counties, Washington, by P. E. Hammond. 2010. 1 Microsoft Excel file. [<a href="#">ONLINE</a>]</p>   | Web only | <p>2011-7 Washington State School Seismic Safety Pilot Project—Providing safe schools for our students, by T. J. Walsh, J. D. Schelling, and the Washington State Seismic Safety Committee. 2011. 14 p. [<a href="#">ONLINE</a>]</p>   | In print |
| <p>2010-7 Directory of Washington State surface mining reclamation sites – 2010, by T. C. Duerr. 2010. 282 p. [<a href="#">ONLINE</a>]</p>   | Web only | <p>2012-01 Remotely operated vehicle (ROV) video investigation of two large seafloor mounds in southern Hood Canal, Washington, by Recep Cakir, R. L. Logan, C. N. Johnson, T. J. Walsh, Todd Palzer, R. E. Pacunski, James Beam, and Lisa Hillier. 2012. 14 p. plus 6 shapefiles. [<a href="#">ONLINE</a>]</p>                                    | Web only |
| <p>2011-1 Geologic map of the Monroe 7.5-minute quadrangle, King and Snohomish Counties, Washington, by J. D. Dragovich, M. L. Anderson, S. A. Mahan, C. J. Koger, J. H. Saltonstall, J. H. MacDonald Jr., G. R. Wessel, B. A. Stoker, J. P. Bethel, J. E. Labadie, Recep Cakir, J. D. Bowman, and S. A. DuFrane. 2011. 42 x 36 in. color sheet, scale 1:24,000, with 24 p. text. [<a href="#">ONLINE</a>]</p>   | Web only | <p>2012-02 Oil and gas wells in Washington State, by J. L. Czajkowski, J. D. Bowman, J. E. Schuster, and C. M. Wheeler. 2012., rev. 2015, 1 Microsoft Excel file with 4 p. text. [<a href="#">ONLINE</a>]</p>  | Web only |
| <p>2011-2 Analytical data from the Monroe 7.5-minute quadrangle, King and Snohomish Counties, Washington—Supplement to Open File Report 2011-1, by J. D. Dragovich, S. A. Mahan, M. L. Anderson, J. H. MacDonald Jr., G. R. Wessel, S. A. DuFrane, Recep Cakir, J. D. Bowman, and H. A. Littke. 2011. 61 p., 2 plates, and 2 Microsoft Excel files. [<a href="#">ONLINE</a>]</p>   | Web only | <p>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. [<a href="#">ONLINE</a>]</p>  | Web only |
|  |          | <p>2014-01 Geologic mapping and geothermal assessment of the Wind River valley, Skamania County, Washington, by J. L. Czajkowski, J. D. Bowman, L. A. Fusso, and D. E. Boschmann. 2014. 30 p. with 42 x 42 in. color plate, scale 1:24,000. [<a href="#">ONLINE</a>]</p>   | Web only |
|  |          | <p>2014-02 Geothermal favorability model of Washington State, by D. E. Boschmann, J. L. Czajkowski, and J. D. Bowman. 2014. 20 p. with 48 x 36 in. color plate, scale 1:900,000. [<a href="#">ONLINE</a>]</p>  | Web only |
|  |          | <p>2014-03 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. [<a href="#">ONLINE</a>]</p>   | Web only |

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## ■ OPEN FILE REPORTS ■

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

- 2014-04 Models of bedrock elevation and unconsolidated sediment thickness in the Puget Lowland, Washington, by D. W. Eungard. 2014. 2 plates, scale 1:475,000, with 20 p. text. [[ONLINE](#)] Web only
- 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](#)] Web only
- 2019-01 Report on site class assessments for the Washington State School Seismic Safety Project, by L. T. West, Travis Neilson, and Corina Forson. 2019. 214 p. text. [[ONLINE](#)] Web only
- 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](#)] Web only
- 2022-01 Surficial geologic map of the Sadie Creek fault, Clallam County, Washington, by W. C. Duckworth, Y. E. Perez, C. B. Amos, E. R. Schermer, and Michael Polenz. 2022. 60 x 30 in. color sheet, scale 1:10,000. [[ONLINE](#)] Web only
- Note:* STATEMAP 7.5-minute quadrangles from 2012 through the present have been published under the new [Map Series](#).



## ■ REPORTS OF INVESTIGATIONS ■

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### Division of Mines and Mining

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| 1.  | Olympic Peninsula manganese, by J. W. Melrose. 1940. 30 p. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 2.  | Washington iron ores, a summary report, by S. L. Glover. 1942. 23 p. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 3.  | Mineral resources of the Wenatchee–Ellensburg–Yakima region, by S. L. Glover. 1942. 13 p. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 4.  | Coal and coal mining in Washington, by S. H. Green. 1943. 41 p., 3 figs. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 4R. | Coal and coal mining in Washington, by S. H. Green. 1947. 41 p., 3 figs. [Revision of RI 4.] [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 5.  | Memorandum report on iron ores of the Cle Elum district, Washington, by Carl Zappfe. 1944. 27 p., 2 pl., 5 figs. [ <a href="#">ONLINE</a> ]                               | Out of print |  |  |  |
| 6.  | Relation of geology to mineralization in the Morton cinnabar district, Lewis County, Washington, by J. H. Mackin. 1944. 47 p., 2 pl., 13 figs. [ <a href="#">ONLINE</a> ] | Out of print |  |  |  |
| 7.  | Manganese deposits of the Olympic Peninsula, Washington, by S. H. Green. 1945. 45 p., 5 pl., 1 fig. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |

### Division of Geology

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| 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. [ <a href="#">ONLINE</a> ]                  | Out of print |  |  |  |
| 2.  | Oil and gas possibilities of western Whatcom County, by S. L. Glover. 1935. 69 p., 1 pl., 1 fig. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 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. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 4.  | Preliminary report on petroleum and natural gas in Washington, by S. L. Glover. 1936. 24 p., 1 pl. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 5.  | Preliminary report on magnesite deposits of Stevens County, Washington, by W. A. G. Bennett. 1941. 25 p., 2 pl., 1 fig. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 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.] [ <a href="#">ONLINE</a> ] | Out of print |  |  |  |
| 7.  | Character and tonnage of the Turk magnesite deposit, by W. A. G. Bennett. 1943. 22 p., 1 pl., 1 fig. [ <a href="#">ONLINE</a> ]  | In print     |  |  |  |
| 8.  | The Buckhorn iron deposits of Okanogan County, Washington; Results of a magnetic survey, by W. A. Broughton. 1943. 21 p., 1 pl., 4 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 9.  | Inventory of mineral properties in Chelan County, Washington, by M. T. Huntting. 1943. 63 p., 1 pl. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 10. | The Blewett iron deposit, Chelan County, Washington (with preliminary tonnage estimates), by W. A. Broughton. 1943. 17 p., 1 pl., 2 figs. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 11. | Stratigraphic aspects of the Blewett–Cle Elum iron ore zone, Chelan and Kittitas Counties, Washington, by R. L. Lupper. 1944. 63 p., 2 pl. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 12. | Economic aspects of the Blewett–Cle Elum iron ore zone, Chelan and Kittitas Counties, Washington, by W. A. Broughton. 1944. 42 p., 7 pl., 14 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 13. | Dolomite resources of Washington, by W. A. G. Bennett. 1944. 35 p., 12 pl., 2 figs. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 14. | Some magnetite deposits of Stevens and Okanogan Counties, Washington, by W. A. Broughton. 1945. 24 p., 5 pl., 1 fig. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |

### Division of Mines and Geology

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| 15. | Pumice and pumicite occurrences of Washington, by Ward Carithers. 1946. 78 p., 6 pl., 7 figs. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 16. | Origin and occurrence of gem stones in Washington, by S. L. Glover. 1949. 32 p. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |
| 17. | Perlite and other volcanic glass occurrences in Washington, by M. T. Huntting. 1949. 32 p. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 18. | Molybdenum occurrences of Washington, by C. P. Purdy Jr. 1954. 118 p., 13 pl., 4 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 19. | A stratigraphic section in the Yakima Basalt and the Ellensburg Formation in south-central Washington, by J. H. Mackin. 1961. 5 p., 9 pl., 4 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 20. | Geological interpretation of airborne magnetometer and scintillometer survey—Mt. Bonaparte, Bodie Mountain, Curlew, Aeneas, and Republic quadrangles, Okanogan and Ferry Counties, Washington, by Hunting Geophysical Services, Inc. 1960. 34 p., 25 pl., 2 figs. [ <a href="#">ONLINE</a> ] | Out of print |  |  |  |
| 21. | Stratigraphy of Eocene rocks in a part of King County, Washington, by J. D. Vine. 1962. 20 p., 3 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 22. | Tertiary geologic history of western Oregon and Washington, by P. D. Snavely Jr. and H. C. Wagner. 1963. 25 p., 23 figs. [ <a href="#">ONLINE</a> ]  | Out of print |  |  |  |
| 23. | Mineralogy of black sands at Grays Harbor, Washington, by G. W. Thorsen. 1964. 29 p., 6 figs. [ <a href="#">ONLINE</a> ]   | Out of print |  |  |  |

### Division of Geology and Earth Resources

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| 24. | Mount St. Helens ash—Properties and possible uses, by W. S. Moen and G. B. McLucas. 1981. 60 p., 28 figs. [ <a href="#">ONLINE</a> ]                                | In print     |  |  |  |
| 25. | A cross section of a Nevada-style thrust in northeast Washington, by J. R. Snook, H. E. Lucas, and M. J. Abrams. 1981. 9 p., 2 figs. [ <a href="#">ONLINE</a> ]     | Out of print |  |  |  |
| 26. | Coastal wells of Washington, by W. W. Rau and C. R. McFarland. 1982. 4 sheets. [ <a href="#">ONLINE</a> ]   | In print     |  |  |  |
| 27. | Geology of the Grande Ronde lignite field, Asotin County, Washington, by K. L. Stoffel. 1984. 79 p., 1 pl., scale 1:48,000, 71 figs. [ <a href="#">ONLINE</a> ]     | In print     |  |  |  |
| 28. | Tin, tungsten, and molybdenum geochemistry of parts of Stevens and Spokane Counties, Washington, by B. B. Bunning. 1985. 57 p., 30 figs. [ <a href="#">ONLINE</a> ] | In print     |  |  |  |

## ■ REPORTS OF INVESTIGATIONS ■

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| <p>29. Mima Mounds—An evaluation of proposed origins with special reference to the Puget Lowland, by A. L. Washburn. 1988. 53 p., 13 figs. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p>37. Landslide and liquefaction maps for the Long Beach Peninsula, Pacific County, Washington—Effects on tsunami inundation zones of a Cascadia subduction zone earthquake, by S. L. Slaughter, T. J. Walsh, Anton Ypma, K. M. D. Stanton, Recep Cakir, and T. A. Contreras. 2013. Three color sheets: 44.5 x 36 in., scale 1:18,000, plus 27 p. text. [<a href="#">ONLINE</a>]</p> | In<br>print |
| <p>30. Geology of the Upper Proterozoic to Lower Cambrian Three Sisters Formation, Gypsy Quartzite, and Addy Quartzite, Stevens and Pend Oreille Counties, northeastern Washington, by K. A. Lindsey, D. R. Gaylord, and L. H. Groffman. 1990. 37 p., 29 figs. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p>38. Landslide and liquefaction maps for the Ocean Shores and Westport peninsulas, Grays Harbor County, Washington—Effects on tsunami inundation zones of a Cascadia subduction zone earthquake, by S. L. Slaughter, T. J. Walsh, Anton Ypma, and Recep Cakir. 2014. Three color sheets: 39 x 36 in., scale 1:18,000, plus 26 p. text. [<a href="#">ONLINE</a>]</p>                 | In<br>print |
| <p>31. Paleontology and stratigraphy of Eocene rocks at Pulali Point, Jefferson County, eastern Olympic Peninsula, Washington, by R. L. Squires, J. L. Goedert, and K. L. Kaler. 1992. 27 p., 3 pl., 7 figs. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p><b>Washington Geological Survey</b></p>  |             |
| <p>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. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p>39. Landslide inventory, susceptibility, and exposure analysis of Pierce County, Washington, by K. A. Mickelson, K. E. Jacobacci, T. A. Contreras, A. Biel, and S. L. Slaughter. 2017. 26 p. text, 2 ESRI geodatabases, and 1 Microsoft Excel file. [<a href="#">ONLINE</a>]</p>   | Web<br>only |
| <p>33. Late Pleistocene stratigraphy in the south-central Puget Lowland, Pierce County, Washington, by R. K. Borden and K. G. Troost. 2001. 33 p., 29 figs., 3 tables. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p>40. Landslide inventory and susceptibility of the Columbia Gorge in Clark, Skamania, and Klickitat Counties, Washington, by K. A. Mickelson, K. E. Jacobacci, T. A. Contreras, W. Gallin, and S. L. Slaughter. 2018. 11 p. text and 2 ESRI geodatabases. [<a href="#">ONLINE</a>]</p>  | Web<br>only |
| <p>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.<br/><i>Superseded by Report of Investigations 35.</i></p> | Out of<br>print | <p>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. [<a href="#">ONLINE</a>]</p>  | Web<br>only |
| <p>35. Digital landslide inventory for the Cowlitz County urban corridor, Washington, by K. W. Wegmann. 2006. Consists of a GIS inventory of landslides as ESRI shapefiles with associated metadata, digital photographs of individual landslides, 1:24,000-scale landslide inventory maps for 7.5-minute quadrangles in the inventory area, and a 24 p. text. 1 CD-ROM. [<a href="#">ONLINE</a>]<br/><i>Supersedes Report of Investigations 34.</i></p>  | In<br>print     | <p>42. Landslide inventory of western Whatcom County, by K. A. Mickelson, T. A. Contreras, W. N. Gallin, K. E. Jacobacci, and S. L. Slaughter. 2020. 7 p. text and 1 ESRI geodatabase. [<a href="#">ONLINE</a>]</p>   | Web<br>only |
| <p>36. Earthquake-induced landslide and liquefaction susceptibility and initiation potential maps for tsunami inundation zones in Aberdeen, Hoquiam, and Cosmopolis, Grays Harbor County, Washington, for a M9+ Cascadia subduction zone event, by S. L. Slaughter, T. J. Walsh, Anton Ypma, K. M. D. Stanton, Recep Cakir, and T. A. Contreras. 2013. Two color sheets: 36 x 43 in. and 36 x 28 in., scale 1:18,000, plus 39 p. text. [<a href="#">ONLINE</a>]</p>   | In<br>print     | <p>43. Landslide inventory of portions of Snohomish County, Washington by K. A. Mickelson, T. A. Contreras, M. D. Allen, K. E. Jacobacci, E. M. Richard, W. N. Gallin, Kara Fisher, and Gabriel Legoretta Paulin. 2022. 7 p. text. [<a href="#">ONLINE</a>]</p>   | Web<br>only |

## ■ REPRINTS ■

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| <p>1. Ringold Formation of Pleistocene age in type locality, the White Bluffs, Washington, by R. C. Newcomb. 1958. 14 p. [<a href="#">ONLINE</a>]</p> <p>2. Pleistocene sequence in southeastern part of the Puget Sound lowland, Washington, by D. R. Crandell, D. R. Mullineaux, and H. H. Waldron. 1958. 15 p. [<a href="#">ONLINE</a>]</p> <p>3. Tertiary stratigraphic papers, southwestern Washington: McIntosh formation, Centralia-Chehalis coal district, Washington, by P. D. Snavelly, Jr., W. W. Rau, Linn Hoover, Jr., and A. E. Roberts; Lyre formation (redefinition), northern Olympic Peninsula, Washington, by R. D. Brown, Jr., P. D. Snavelly, Jr., and H. D. Gower; Twin River formation (redefinition), northern Olympic Peninsula, Washington, by R. D. Brown, Jr., and H. D. Gower. 1959. 50 p. [<a href="#">ONLINE</a>]</p> <p>4. Nickel-gold ore of the Mackinaw mine, Snohomish County, Washington, by Charles Milton and D. J. Milton. 1959. 22 p. [<a href="#">ONLINE</a>]</p> <p>5. What are the prospects in Washington State?, by F. H. Wurdien; and Puget Sound area has several prospective oil and gas basins, by J. Q. Anderson. 1959. 10 p. [<a href="#">ONLINE</a>]</p> | <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> | <p>6. Geology of the Jumbo Mountain nickel deposit, Snohomish County, Washington, by J. W. Mills. 1960. 4 p. [<a href="#">ONLINE</a>]</p> <p>7. Mineralogy and geochemistry of the Read magnetite deposit, southwestern Stevens County, Washington, by W. A. G. Bennett; and Ludwigite from the Read magnetite deposit, Stevens County, Washington, by W. T. Schaller and A. C. Vlisidis. 1962. 13 p. [<a href="#">ONLINE</a>]</p> <p>8. Emplacement of the Twin Sisters Dunite, Washington, by D. M. Ragan. 1963. 16 p. [<a href="#">ONLINE</a>]</p> <p>9. Mineral and water resources of Washington, by the U.S. Geological Survey and others. 1966. 436 p. [<a href="#">ONLINE</a>]</p> <p>10. Washington mineral deposits, by M. T. Huntting. 1966. 7 p. [<a href="#">ONLINE</a>]</p> <p>11. The search for hot rocks—Geothermal exploration, Northwest, by J. E. Schuster. 1973. 3 p. [<a href="#">ONLINE</a>]</p> <p>12. Geology of Washington, by the U.S. Geological Survey. 1978. 51 p., 1 pl. [<a href="#">ONLINE</a>]</p> <p>13. An assessment of the oil and gas potential of the Washington outer continental shelf, by S. P. Palmer and W. S. Lingley, Jr. 1989. 83 p., 12 pl. [<a href="#">ONLINE</a>]</p> | <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> <p>Web only</p> |
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## ■ RESOURCE MAPS ■

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| <p>1. Rock aggregate resource lands inventory map for Clark County, Washington, by C. N. Johnson, S. P. Palmer, and J. L. Poelstra. 2005. 36 x 36 in. color sheet, scale 1:100,000. [<a href="#">ONLINE</a>]</p> <p>2. Rock aggregate resource lands inventory map for Yakima County, Washington, by S. P. Palmer, J. L. Poelstra, and C. N. Johnson. 2005. 38 x 36 in. color sheet, scale 1:200,000. [<a href="#">ONLINE</a>]</p> | <p>In print</p> <p>In print</p> | <p>3. Potential growing areas for wine grapes in the Yakima Valley, Washington, by D. K. Norman, A. J. Busacca, and Wade Wolfe. 2009. 48 x 36 in. color sheet, scale 1:110,000. [<a href="#">ONLINE</a>]</p> | <p>In print</p> |
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## ■ TOPOGRAPHIC MAPS ■

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| <p>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).] [<a href="#">ONLINE</a>]</p> <p>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).] [<a href="#">ONLINE</a>]</p> <p>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).] [<a href="#">ONLINE</a>]</p> | <p>Web only</p> <p>Web only</p> <p>Web only</p> |
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## ■ MISCELLANEOUS REPORTS ■

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Quick report for the Ledgewood–Bonair landslide, Whidbey Island, Island County, Washington, by Stephen Slaughter, Isabelle Sarikhan, Michael Polenz, and Tim Walsh. 2013. [7 p.] <a href="#">[ONLINE]</a>	Web only	Mount St. Helens—A bibliography of geoscience literature, 1882–1986, by C. J. Manson, C. H. Messick, and G. M. Sinnott. 1987. 205 p. <a href="#">[AUTHOR]</a> <a href="#">[SUBJECT]</a>	Web only
Strategies for establishing a Washington State post-earthquake information clearinghouse: A report to the Washington Emergency Management Division, by T. J. Walsh and Recep Cakir. 2013. [20 p.] <a href="#">[ONLINE]</a>	Web only	Notes on division history, by J. E. Schuster. 1986. 9 p. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	Gems and minerals of Washington, by Bob Pattie. 1985. 1 sheet, scale 1:443,520. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	Washington's coal—History and future development potential, by Raymond Lasmanis and H. W. Schasse. 1982. 24 p. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	Forest Slope Stability Project, Phase II, by A. J. Fiksdal and M. J. Brunengo. 1981. 2 v. <a href="#">[ONLINE]</a>	Web only
Liquefaction susceptibility mapping for selected urban areas in the central Puget Sound region, Washington—Final technical report, by S. P. Palmer, W. J. Perkins, and W. P. Grant. 2004. 1 v. <a href="#">[ONLINE]</a>	Web only	Forest Slope Stability Project, Phase I, by A. J. Fiksdal and M. J. Brunengo. 1980. 18 p., 7 pl. <a href="#">[ONLINE]</a>	Web only
Holocene geologic history and sedimentology of the Duwamish and Puyallup valleys, Washington, by S. P. Palmer. 1997. 32 p. <a href="#">[ONLINE]</a>	Web only	A pre-1980 eruption description of Mount St. Helens, by the Washington Division of Geology and Earth Resources. 1980. 10 p. <a href="#">[ONLINE]</a>	Web only
Reconnaissance geology of the Matheny Ridge–Higley Peak areas, Olympic Peninsula, Washington, by W. S. Lingley, Jr., R. L. Logan, T. J. Walsh, W. J. Gerstel, H. W. Schasse. 1996. 31 p., 1 pl., scale 1:62,500. <a href="#">[ONLINE]</a>	Web only	Bibliography of Snohomish County geology, with an index to geologic mapping, by S. J. Simpson. 1979. 81 p., 6 pl. <a href="#">[ONLINE]</a>	Web only
Capitol campus greenhouse soil stability investigation status report, by S. P. Palmer and W. J. Gerstel. 1995. 1 v. <a href="#">[ONLINE]</a>	Web only	Photographic guide keyed to 15-minute quadrangles [supplement to OFR 79-2. An assessment of the uranium potential in the Ellensburg Formation, south-central Washington], by P. C. Milne. 1979. [47 p.] <a href="#">[ONLINE]</a>	Web only
Petroleum potential and probability of renewed mineral-rights leasing in the Columbia Basin, Washington, by W. S. Lingley, Jr. 1995. 43 p. <a href="#">[ONLINE]</a>	Web only	A learning guide on the geology of the Cispus Environmental Center area, Lewis County, Washington, by J. E. Schuster. 1973. 53 p. <a href="#">[ONLINE]</a>	Web only
Cyanide heap leaching—A report to the Legislature, by D. K. Norman and R. L. Raforth. 1994. 28 p. <a href="#">[ONLINE]</a>	Web only	Geothermal energy—Questions and answers, by J. E. Schuster. 1972. 4 p. <a href="#">[ONLINE]</a>	Web only
Fundamentals of blasting and reclamation workshop, by A. E. Teller. 1994. <a href="#">[ONLINE]</a>	Web only	Holden tailings [Holden mine, Chelan County], by G. W. Thorsen. 1970. 20 p. <a href="#">[ONLINE]</a>	Web only
Index of geotechnical studies of the Washington State capitol campus and vicinity, by R. A. Christie. 1993. 4 p., 1 pl. <a href="#">[ONLINE]</a>	Web only	Landslide of January 1967 which diverted the North Fork of the Stillaguamish River near Hazel [Snohomish County], by G. W. Thorsen. 1970. 8 p. <a href="#">[ONLINE]</a>	Web only
General geology and paleontology of the Harsha 7.5 quadrangle, by P. K. Spencer. 1992? 14 p. <a href="#">[ONLINE]</a>	Web only	Surface-mined land reclamation act training session, by M. T. Huntting, D. M. Ford, and John Griffiths. 1970. 1 v., 76 p. <a href="#">[ONLINE]</a>	Web only
Thunder Creek basin, Skagit County—Report of DNR Study Team, by Jerry Thorsen. 1989. 33 p. <a href="#">[ONLINE]</a>	Web only	Ghost town references, by the State of Washington Board of Natural Resources. 1968? 3 p. <a href="#">[ONLINE]</a>	Web only
The Culver System in Washington State, by J. E. Schuster. 1988. <a href="#">[ONLINE]</a>	Web only	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. <a href="#">[ONLINE]</a>	Web only
Guide to production of 1:100,000-series open file reports, by Bill Phillips. 1988. 17 p. <a href="#">[ONLINE]</a>	Web only	State mineral production near record level in 1966, by M. T. Huntting. 1967? 9 p. <a href="#">[ONLINE]</a>	Web only
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. <a href="#">[ONLINE]</a>	Web only	Mine production record set in 1965, by M. T. Huntting. 1966? 3 p. <a href="#">[ONLINE]</a>	Web only
		Mining developments and future needs of Washington, by M. T. Huntting. 1965. 6 p. <a href="#">[ONLINE]</a>	Web only
		State mineral production at all time high in 1964, by M. T. Huntting. 1965? 4 p. <a href="#">[ONLINE]</a>	Web only
		“Firsts,” 1957–1964—Division of Mines and Geology, by M. T. Huntting? 1964? 2 p. <a href="#">[ONLINE]</a>	Web only



## ■ MISCELLANEOUS REPORTS ■

*Miscellaneous Reports are available online only.*

Mine resource programs—Present and future, by M. T. Huntting. 1964. 3 p. <a href="#">[ONLINE]</a>	Web only	Preliminary surveys for highway salvage archeology in the State of Washington—A final report, by Bruce Stallard. 1958. 23 p. <a href="#">[ONLINE]</a>	Web only
Origin of Dry Falls [Grant County], by V. E. Livingston, Jr. 1964. 4 p. <a href="#">[ONLINE]</a>	Web only	Mining in Washington, by C. P. Purdy, Jr. 1953. 3 p. <a href="#">[ONLINE]</a>	Web only
Tumtum Mountain [Clark County]—A potential source of feldspar, by W. A. G. Bennett. 1964. 5 p. <a href="#">[ONLINE]</a>	Web only	Steilacoom gravel, by S. H. Green and M. T. Huntting. 1948. 9 p. <a href="#">[ONLINE]</a>	Web only
Annotated bibliography of Washington clays, by W. H. Reichert. 1963. 19 p. <a href="#">[ONLINE]</a>	Web only	A factual review of mining developments in the State of Washington in 1947, by S. H. Green. 1947. 4 p. <a href="#">[ONLINE]</a>	Web only
Dolomite and andalusite deposits of northern Stevens County, by W. S. Moen and W. A. G. Bennett. 1963. 4 sheets, scale 1:62,500. <a href="#">[ONLINE]</a>	Web only	Preliminary report on the mines and prospects of the upper Methow region, Okanogan and Whatcom Counties, by Ward Carithers. 1946. 40 p. <a href="#">[ONLINE]</a>	Web only
A set of Washington rocks and minerals for schools, by Washington Division of Mines and Geology; Washington State Superintendent of Public Instruction. 1963. 13 p. <a href="#">[ONLINE]</a>	Web only	An outline of mining laws of the State of Washington, compiled and annotated, by M. H. Van Nuys. 1940. 55 p. <a href="#">[ONLINE]</a>	Web only
State Department of Conservation has record year [1962], by M. T. Huntting. 1963. 7 p. <a href="#">[ONLINE]</a>	Web only	<i>Superseded by Bulletin 41.</i>	
Preliminary report on mineral resources of the Cougar Lake limited area [Yakima County], by W. S. Moen. 1962. 9 p. <a href="#">[ONLINE]</a>	Web only	Oil and gas studies by the Division of Geology, by S. L. Glover. 1936. 8 p. <a href="#">[ONLINE]</a>	Web only
Mineral exploration in Washington—1960, by M. T. Huntting. 1961? 2 p. <a href="#">[ONLINE]</a>	Web only	Report of natural resources survey from October 1, 1933, to March 1, 1935, by T. B. Hill. 1935. 30 p. <a href="#">[ONLINE]</a>	Web only
Washington mineral industry—1960, by M. T. Huntting. 1961? 5 p. <a href="#">[ONLINE]</a>	Web only	Colloidal fuel, by M. C. Butler. 1934. 9 p. <a href="#">[ONLINE]</a>	Web only
		Mining in the Pacific Northwest, by L. K. Hodges. 1897. 183 p. <a href="#">[ONLINE]</a>	Web only

## ■ OTHER PUBLICATIONS ■

*Other publications are available online only.*

### 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 2021. [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

Information on fossil and mineral collecting in Washington, includes [Fossils in Washington](#), [Gems and Minerals of Washington](#), and [Mineral Checklist](#).

### 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]