

# DATA SOURCES FOR DEEP-SEATED GLACIAL LANDSLIDES

- **GEOMORPHOLOGY**: USGS TOPO MAPS, LIDAR , AERIAL PHOTOS
- **GEOLOGY**: PUBLICATIONS - REPORTS, MAPS, FILES  
(Federal/State/Local)
- **SOILS INFO**: NRCS-SCS, LOCAL FORESTERS (Timber Companies),  
CONTRACTORS
- **HISTORICAL INFORMATION** : LOCAL SOURCES (Gov. Agencies,  
Foresters, Tribes, Contractors, Land Owners)
- **GEOTECHNICAL INFO**: REGIONAL/LOCAL REPORTS  
(Site Development)
- **HYDROGEOLOGIC INFO**: Publications, Water Well Records,  
Rainfall Data (NOAA/Local), Monitoring Data (USGS, Tribes,  
Fisheries)
- **SITE RECON** : NOTHING REPLACES BOOTS ON THE GROUND
- **MODELING** : COMPUTER PROGRAMS (Surface & Groundwater Recharge, Slope  
Stability)

# SOIL CONSERVATION SERVICE FROM USDA NATURAL RESOURCE CONSERVATION SERVICE:

[HTTP://WEBSOILSURVEY.NRCS.USDA.GOV/APP/](http://websoilsurvey.nrcs.usda.gov/app/)

The screenshot displays the Web Soil Survey web application interface. At the top, there is a navigation bar with the following links: [Contact Us](#), [Subscribe](#), [Archived Soil Surveys](#), [Soil Survey Status](#), [Glossary](#), [Preferences](#), [Link](#), [Logout](#), and [Help](#). Below this is a secondary navigation bar with buttons for [Area of Interest \(AOI\)](#), [Soil Map](#), [Soil Data Explorer](#), [Download Soils Data](#), and [Shopping Cart \(Free\)](#).

The main content area is divided into two sections. On the left is a sidebar with a search bar and a list of navigation options under the heading "Area of Interest Interactive Map":

- Search
- Area of Interest
- Import AOI
- Quick Navigation
  - Address
  - State and County
  - Soil Survey Area
  - Latitude and Longitude
  - PLSS (Section, Township, Range)
  - Bureau of Land Management
  - Department of Defense
  - Forest Service
  - National Park Service
  - Hydrologic Unit

The right section is the "Area of Interest Interactive Map" itself. It features a map of the Pacific Northwest region of the United States, showing soil survey areas outlined in red and yellow. The map includes state boundaries for Washington (WA), Oregon (OR), Idaho (ID), and Montana (MT). Major highways are visible, including Interstates 5, 90, 15, 17, 205, 30, 5, 10, and 12, as well as State Routes 101, 12, 28, 30, 306, 396, 42, 52, 58, 72, 74, 78, 87, 102, 103, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

At the bottom of the page, there is a footer with the following text: [FOIA](#) | [Accessibility Statement](#) | [Privacy Policy](#) | [Non-Discrimination Statement](#) | [Information Quality](#) | [USA.gov](#) | [White House](#)

# WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES GEOLOGIC INFORMATION PORTAL

[HTTP://WWW.DNR.WA.GOV/RESEARCHSCIENCE/TOPICS/GEOSCIENCESDATA/PAGES/GEOLOGYPORTAL.AS](http://www.dnr.wa.gov/researchscience/topics/geosciencesdata/pages/geologyportal.as)

PX

The screenshot shows a web browser window displaying the Washington State Department of Natural Resources Geologic Information Portal. The browser's address bar shows the URL: <http://www.dnr.wa.gov/ResearchScience/Topics/Geosc>. The page features a blue header with the DNR logo and navigation links. A search bar is located in the top right. Below the header is a navigation menu with categories like HOME, RECREATION & PUBLIC INFORMATION, BUSINESS & PERMITS, SCIENCE & ENVIRONMENT, CONTACT DNR, and ABOUT DNR. The main content area includes a welcome message, a section for user guides, and a list of interactive maps. On the right side, there are sections for CONTACTS, FILES, and RELATED LINKS.

**WASHINGTON STATE DEPARTMENT OF Natural Resources**

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**HOW CAN WE IMPROVE THIS WEBSITE? TAKE A BRIEF SURVEY.**

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Home > Science & Environment > Topics > Geosciences Data > Washington State Geologic Information Portal

### WASHINGTON STATE GEOLOGIC INFORMATION PORTAL

Are you looking for our [geoscience data and collections](#) page? Visit [geoscience data and collections](#) for information on data (including GIS data) available online, as well as other sources for geoscience data.

**Welcome To The Washington State Geologic Information Portal!**  
Through this online service offered by the Washington Division of Geology and Earth Resources, you can access interactive earth science mapping, data, and related information. More types of geologic information will be added to the information portal in the future, so please visit regularly to see what's new. You may also [subscribe to our mailing list](#) or [visit our blog](#) to receive announcements of new additions to the portal, as well as notification of our publications releases.


#### HELP WITH USING THE INTERACTIVE MAP PORTAL

For the user's convenience, we offer user guides in both written and video formats:


- [View The Quick Portal Tool Index Online](#)
- [Download The Full Portal User's Guide \(PDF\)](#)
- [View Our Interactive Map Tutorials:](#)
  1. [Part 1: Introduction](#)
  2. [Part 2: Viewing and Printing](#)
  3. [Part 3: FAQs part 1](#)
  4. [Part 4: FAQs part 2](#)

#### INTERACTIVE MAPS


Using our interactive maps, you can create, save, and print custom maps, find out more information 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. Please note that because of the volume of data available through these interactive maps, data loading and identification operations may not be instantaneous; we thank you for your patience.



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#### FILES

 [Geologic Information Portal User Guide \(635KB PDF\)](#)

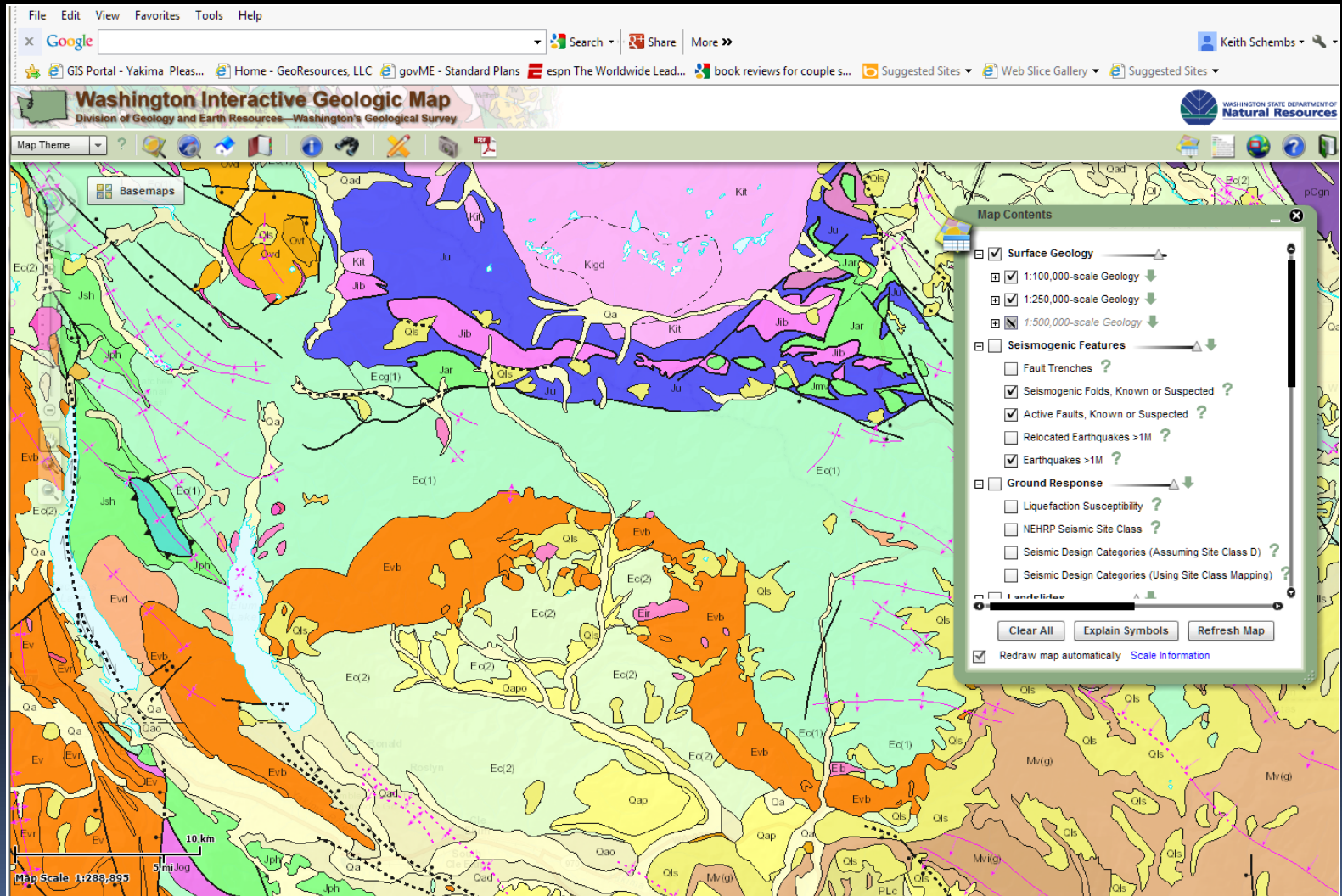
#### RELATED LINKS

- [Geology & Earth Sciences](#)
- [Geoscience Data](#)
- [Geologic Mapping](#)
- [Geologic Hazards](#)
- [Publications of the Geology and Earth Resources Division](#)



# WASHINGTON INTERACTIVE GEOLOGIC MAP – DIVISION OF GEOLOGY AND EARTH RESOURCES – WASHINGTON'S GEOLOGIC SURVEY

[HTTPS://FORTRESS.WA.GOV/DNR/GEOLOGY/?THEME=WIGM](https://fortress.wa.gov/dnr/geology/?theme=wigm)



# SUBSURFACE GEOLOGY INFORMATION SYSTEM – DIVISION OF GEOLOGY AND EARTH RESOURCES – WASHINGTON’S GEOLOGIC SURVEY

[HTTPS://FORTRESS.WA.GOV/DNR/GEOLOGY/?THEME=SUBSURF](https://fortress.wa.gov/dnr/geology/?theme=subsurf)

Map Contents

Identify (SubSurface Points Only)

Points found 1

Point Data for Point 52812		Document Information	
Point ID	52812	Document ID	9557 <a href="#">PDF</a>
Document ID	9557	Document Type	Report
Point Name	409	Source Name	Robinson and Noble
Point Type	Monitoring well	Author Name	Robinson & Noble Inc.
Latitude	47.36792	Document Name	Cov. Water Dist. Witte Rd Wellhead Protection Plan
Longitude	-122.01229	Document Date	10/31/1998
Location Confidence	Low	Project Type	Utility
Point Depth	45	Project Address	Multi
Point Elevation	555		
Elevation from DEM	0		
Elevation Source	From cross section		
Author Name	Robinson & Noble Inc.		
Point Date	1/1/1900		
Boring Method	Unknown		
Contractor	Unknown		

Map Scale: 1:18,056

# GEOLOGY MAPS BY SCALE – WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

[HTTP://WWW.DNR.WA.GOV/RESEARCHSCIENCE/TOPICS/GEOLOGICHAZARDSMAPPING/PAGES/GEOLOGY\\_MAPS\\_BY\\_SCALE.ASPX](http://www.dnr.wa.gov/researchscience/topics/geologicahazardsmapping/pages/geology_maps_by_scale.aspx)

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Home > Science & Environment > Topics > Geologic Hazards & Mapping > Geology Maps by Scale


### GEOLOGY MAPS BY SCALE

Here surface geology maps are indexed by the most commonly used scales:

- [1:500,000](#)
- [1:250,000](#) (quadrants)
- [1:250,000](#) (1"x2" quadrangles)
- [1:100,000](#)
- [1:24,000](#)
- [Other scales](#)


Click on the links below each map to download the surface geology maps as PDF files.

STATEWIDE (1:500,000 SCALE)



[Washington State \(1:500,000\)](#)

STATE QUADRANTS (1:250,000 SCALE)



[NW \(1:250,000\)](#) [NE \(1:250,000\)](#)  
[SW \(1:250,000\)](#) [SE \(1:250,000\)](#)

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1" X 2" QUADRANGLES (1:250,000 SCALE)


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### FILES

 [Publications of the Washington Division of Geology and Earth Resources \(as of April 16, 2014\)](#) (1,210KB PDF)

 [DGER Maps Online Index \(Dec. 2013\)](#) (231KB XLS)

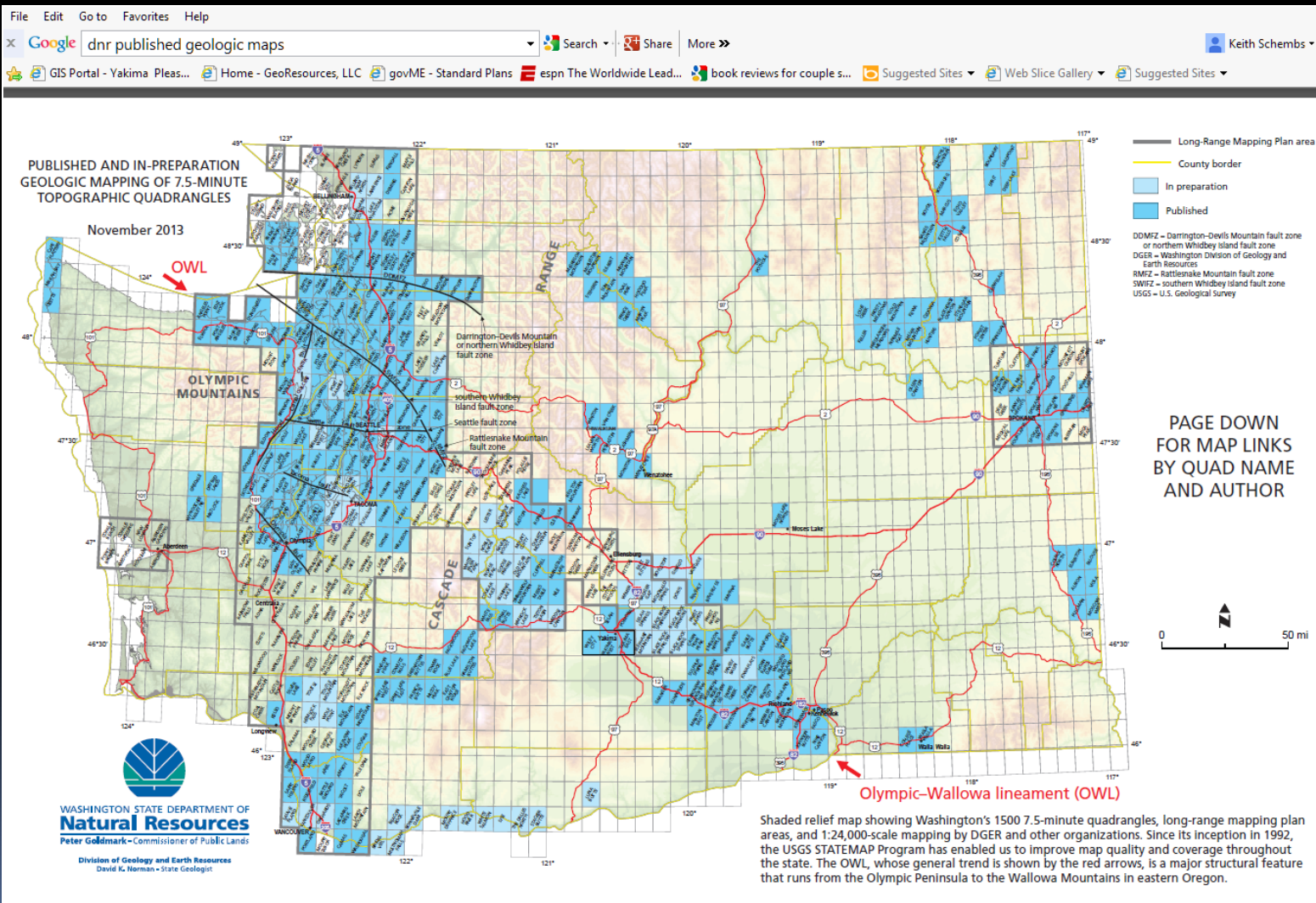
### RELATED LINKS

- [Geology Maps Online](#)
- [Geologic Hazard Maps Online](#)
- [Geologic Resource Maps Online](#)
- [Interactive Map Menu Page](#)



# PUBLISHED AND IN-PREPARATION GEOLOGIC MAPPING OF THE 7.5 MINUTE TOPOGRAPHIC QUADRANGLES IN WASHINGTON STATE

[HTTP://WWW.DNR.WA.GOV/PUBLICATIONS/GER\\_24K\\_MAPPING\\_STATUS.PDF](http://www.dnr.wa.gov/publications/ger_24k_mapping_status.pdf)



# WATER WELLS FROM DEPARTMENT OF ECOLOGY WATER RESOURCES WEBSITE: [HTTPS://FORTRESS.WA.GOV/ECY/WATERRESOURCES/MAP/WCLSWEBCONSTRUCTIONMAPSEARCH.ASPX](https://fortress.wa.gov/ecy/waterresources/map/wclswebmap/wellconstructionmapsearch.aspx)

The screenshot displays the 'Well Logs' web application interface. At the top, the browser address bar shows the URL: <https://fortress.wa.gov/ecy/waterresources/map/wclswebmap/wellconstructionmapsearch.aspx>. The page header includes the Department of Ecology logo and the title 'Well Logs'. A navigation menu contains links for Home, Map Search, Text Search, Forms, Site Info, Contact Us, and Water Portal.

The main interface is divided into a search panel on the left and a map area on the right. The search panel, titled 'Well Logs Map Menu', includes the following sections:

- Search Options:** Legend/Layers, Help
- Map Navigation:** Zoom In, Zoom Out, Full State, Pan, Select Wells
- Filters:**
  - County: [Dropdown]
  - City: [Dropdown]
  - Watershed (WRIA): [Dropdown]
  - Clear Map Highlight
- Township/Range/Section:**
  - Township: [Dropdown]
  - Range: [Dropdown]
  - Section: [Dropdown] (optional)
  - Clear, Zoom
- Address/Location:**
  - [Text Input]
  - Clear, Zoom

The map area shows a topographic map of Washington state with county boundaries overlaid. The current map view is centered on the coordinates Lat/Long: 48.5964, -115.5377. The current scale is 1:4,622,324. The map shows major cities like Vancouver, Seattle, and Portland, and various geographical features like the Olympic Mountains and the Cascade Range.