

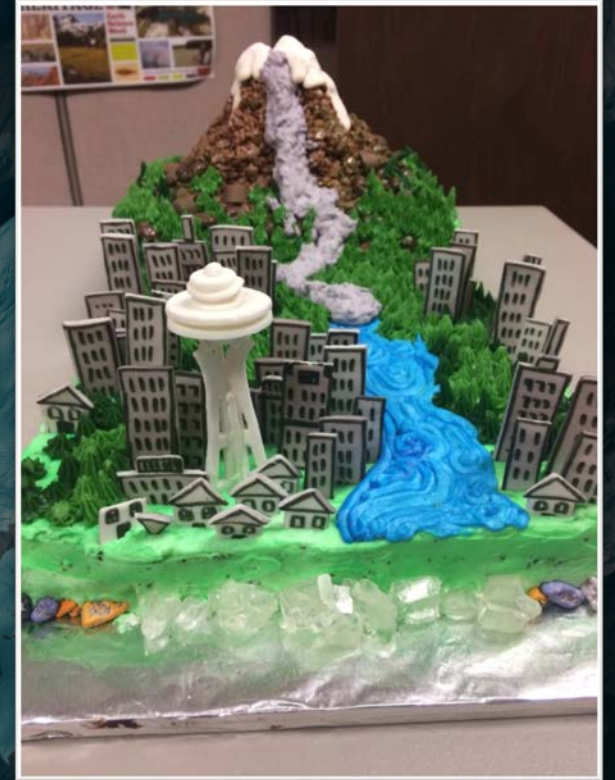
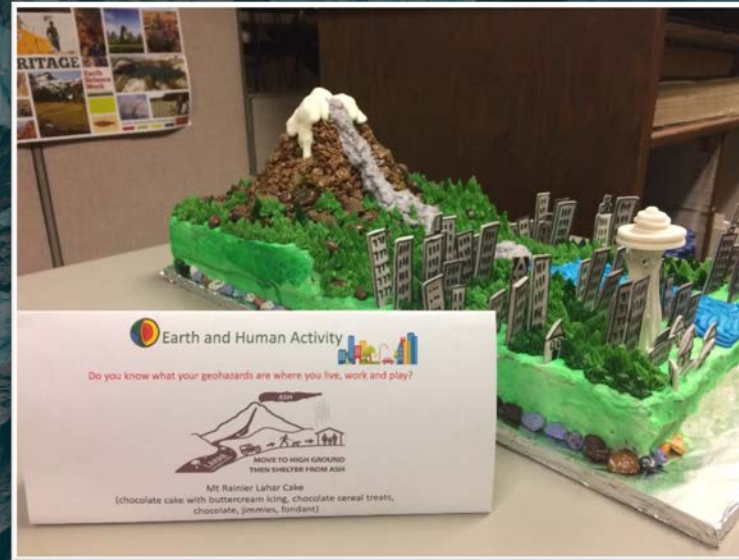
Government Publications

By Stephanie Earls
Washington Geology Library
Washington Geological Survey



Agenda

- My background
- Washington
Geology Library
- Resources I use
- Additional
Resources
- Case studies



How did I end up here?



- BS Geology — University of Utah (SLC, UT)
- MLIS — University of Washington (Seattle, WA)



What my job entails



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

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Washington Geology Library

Washington Geology Library | 1111 Washington St SE, MS 47007, Olympia, WA 98504-7007 | Ph: 360-902-1473 | Fax: 360-902-1785 | stephanie.earls@dnr.wa.gov | Hours: Monday-Thursday, 8:00 a.m. - 4:30 p.m., excluding [state holidays](#). About Us: [Click here...](#)

Featured Titles





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TsuInfo Alert
prepared by the Washington State Department of Natural Resources on behalf of the
National Tsunami Hazard Mitigation Program
a state-federal partnership funded through the National Oceanic and Atmospheric Administration (NOAA)

FEBRUARY 2017 Volume 19, Number 1

National Tsunami Hazard Mitigation Program Annual Meeting Recap
By Dr. Rocky Lopes, NTHMP Administrator

84 of the nation's tsunami, geological, earthquake, and coastal hazard experts convened in Portland, Oregon, January 30 - February 3, 2017. Eight concurrent and sequential meetings were held.

SUBCOMMITTEE MEETINGS (JANUARY 30, 2017): The NTHMP Mapping and Modeling Subcommittee (MMS) met for a lengthy day. Led by Co-Chairs Dr. Dmitry Nicol'sky (University of Alaska/Fairbanks) and Marie Eble (NOAA Pacific Marine Environmental Lab), the members discussed: MMS-related outcomes from the current NTHMP Strategic Plan; the FEMA HAZUS model; Post-tsunami protocols; model benchmarking guidelines for NTHMP inundation maps; inundation zones for certain communities; MMS Landslide Modeling Workshop; and more modeling activities. Meeting notes and presentations are available.

The NTHMP Mitigation and Education Subcommittee (MES) meeting was led by Co-Chairs Gala Gulascik, Dr. Laura Kong, and Kevin Miller. Besides conducting routine subcommittee business, presentations were given on Wayfinding Techniques and Technology by Dr. Althea Rizzo and EERI School Earthquake Safety Initiatives by Ian Robertson (remotely). Strategic planning and other discussions rounded out the meeting's conversations.

The NTHMP Warning Coordination Subcommittee (WCS) was led by Co-Chairs Dr. Chip McCreery, Dr. Althea Rizzo, and Paul Whitmore. An ambitious presentation of updates on WCS action items, activities, stakeholder input, events of 2016, TWC products, and the new tsunami.gov website were discussed.

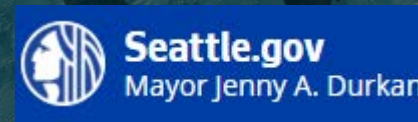
SUBCOMMITTEE COLLABORATION MEETING (JANUARY 31, 2017): A six-hour meeting of the MES and MMS was facilitated by Dr. Rocky Lopes. Discussions on what

(Continues on Page 3)



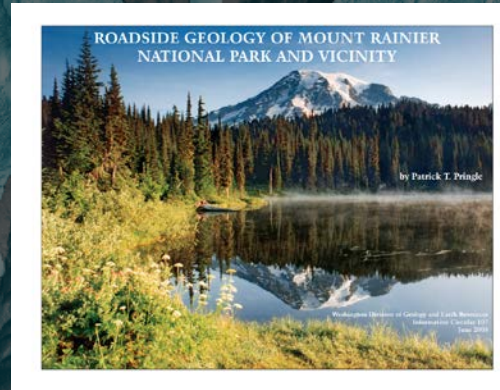
Government Publications (Mostly available for free)

- Federal/National-USGS, BLM...
- State, Provincial, and National Geological Surveys
- Data Centers-NCEI, NEIC
- States
- Counties
- Cities
- IGOs-UNESCO



Types of Government Publications

- Books/Reports
- Legal documents
- Maps
- Data – GIS, LIDAR
- Online Tools
- Story Maps

A screenshot of the "Geology GIS Data and Databases" website. It features a 3D topographic map of a mountainous region. Below the map, there is text and a table of data.

Looking for agency wide GIS data? Check here.

Here you will find geologic data in Geographic Information Systems (GIS) and other formats. Most of the data provided here are in the Esri ArcGIS 10.0 or 9.3.1 file geodatabase format. If you do not own GIS software that can use the geodatabase, Esri provides ArcGIS Desktop, free software that is capable of viewing these data. Unfortunately we cannot offer data in shapefile format at this time. There are several open-source GIS software packages that can convert geodatabases into shapefile format.

Link to our web services: https://gis.dnr.wa.gov/cta/1/next/services/Public_Geology

Much of this data is also downloadable from our Geologic Information Portal.

SURFACE GEOLOGY	
Download	Date
1:24,000 scale	file gdb Sept. 2017
1:100,000 scale	file gdb Nov. 2016
1:250,000 scale	file gdb Jun. 2016
1:500,000 scale	file gdb Jun. 2010

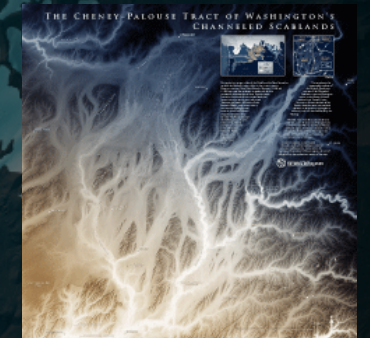
HAZARDS AND ENVIRONMENTAL GEOLOGY	
Download	Date
Seismogenic Features (Faults and Earthquakes)	file gdb Feb. 2018
Seismic Source Catalog	file gdb Sept. 2017
Simplified Volcanic Hazards	file gdb May 2016
Landslide Completion	file gdb Jan. 2019
Landslide Inventory (Beginning 2017)	file gdb Jan. 2019
Ground Response	file gdb Jun. 2010
Tsunami Hazard	file gdb Apr. 2019
Hazardous Minerals	file gdb Jun. 2015

A screenshot of the "The National Geologic Map Database" website. It features a globe icon and text describing the database.

The National Geologic Map Database

Developing a distributed archive of standardized geoscience information for the nation.


Map Catalog | Bibliography | Metadata | Software



Story Maps

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES
WASHINGTON GEOLOGICAL SURVEY

Washington Geological Survey



The Bare Earth

How lidar in Washington State exposes geology and natural hazards

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES
WASHINGTON GEOLOGICAL SURVEY


Washington's Ice Age Floods

Washington Geological Survey



A Blockade of Ice

Missoula Floods

During the last ice age, between 15,000 and 13,000 radiocarbon years ago, the Purcell Trench Lobe of the Cordilleran Ice Sheet formed an ice dam in the Clark Fork valley, blocking the Clark Fork River and creating Glacial Lake Missoula.



Creation of Glacial Lake Missoula



WA Geologic Information Portal AKA - User Friendly GIS Tool

The screenshot displays the Washington Geologic Information Portal interface. At the top, the Washington Department of Natural Resources logo is on the left, followed by the text "Washington Geologic Information Portal", navigation options "2D 3D Help", and a search bar containing "Find address or place".

The main map area shows a geologic map of a region in Washington, with labels for "Renton", "Kent", "Sewin Hill", and "Sawin Hill".

On the left side, a "Table of Contents" panel is open, listing various data layers. The "Ground Response to Earthquakes" layer is selected and expanded, showing sub-layers: "Liquefaction Su...", "NEHRP Seismic", "Seismic Design", and "Seismic Design". A "Transparency" slider is visible, set to approximately 50% between 0 and 100%. A "Download" button is highlighted in yellow.

On the right side, an "Identify" panel is open, showing "Liquefaction Susceptibility" with a legend for "low", "low", and "moderate to high". The "Feature Information" section displays "Liquefaction Susceptibility: low".

At the bottom, a scale bar indicates "Scale: 1:1,155,581" and coordinates "Lat: 46.4833 Long: -122.5650". A toolbar at the bottom contains icons for map navigation and tool functions.



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science for a changing world Association of American State Geologists

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Home Catalog Lexicon MapView New Mapping Standards Comments



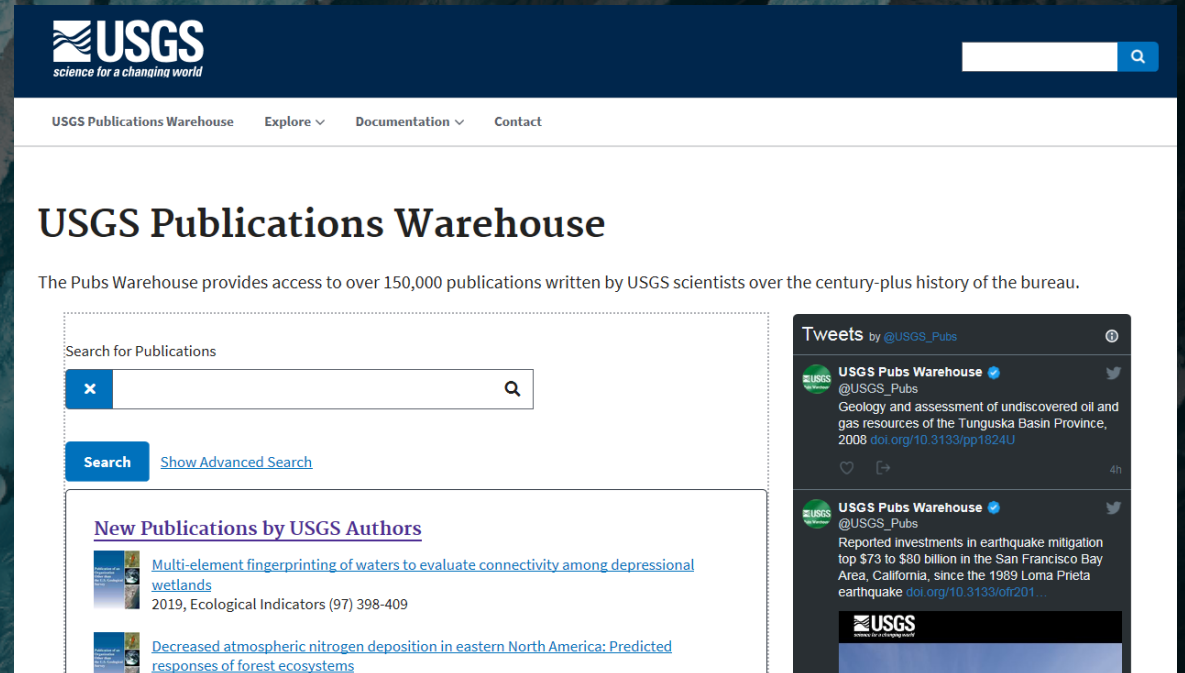
The National Geologic Map Database

Developing a distributed archive of standardized geoscience information for the nation.

- Map Catalog**
Find over 90,000 products from over 600 publishers
- Stratigraphy**
Find geologic names, charts, and guidelines
- MapView**
Discover geologic maps through our map interface
- TopoView**
Access the Historical Topographic Map Collection

ACCESSIBILITY FOIA PRIVACY POLICIES AND NOTICES

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Supported by the National Cooperative Geologic Mapping Program
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New Publications by USGS Authors

- [Multi-element fingerprinting of waters to evaluate connectivity among depressional wetlands](#)
2019, Ecological Indicators (97) 398-409
- [Decreased atmospheric nitrogen deposition in eastern North America: Predicted responses of forest ecosystems](#)

Tweets by @USGS_Pubs

- USGS Pubs Warehouse** @USGS_Pubs
Geology and assessment of undiscovered oil and gas resources of the Tunguska Basin Province, 2008 doi.org/10.3133/pp1824U
- USGS Pubs Warehouse** @USGS_Pubs
Reported investments in earthquake mitigation top \$73 to \$80 billion in the San Francisco Bay Area, California, since the 1989 Loma Prieta earthquake doi.org/10.3133/ofr201...



USDA-NRCS Web Soil Survey

USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

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Area of Interest (AOI) | **Soil Map** | Soil Data Explorer | Download Soils Data | Shopping Cart (Free)

Printable Version | Add to Shopping Cart

Search

Map Unit Legend

Marion County, Indiana (IN097)

Marion County, Indiana (IN097)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ua	Udorthents, cut and filled	54.4	14.9%
UfA	Urban land-Fox complex, 0 to 3 percent slopes	213.2	58.4%
UfC	Urban land-Fox complex, 6 to 12 percent slopes	15.6	4.3%
Ug	Urban land-	36.7	10.1%

Soil Map

Scale (not to scale)



Additional Resources

The screenshot shows the Washington State Law Library website. At the top, there is a navigation bar with links for Forms, Court Directory, Opinions, Rules, Courts, Programs & Organizations, and Resources. Below this is a search bar and a list of services. A large image of a courtroom interior is featured. The main heading is "Washington State Law Library" with a mission statement: "The Washington State Law Library's mission is to promote reliable access to legal information and provide expert legal reference assistance." There are sections for "Hours" and "Location". At the bottom, there is a "SEARCH THE CATALOG" section with a search box and a "ASK A LIBRARIAN" section with contact options like phone, chat, email, and an online form.

The screenshot shows the govinfo website. The header includes "govinfo" and navigation links for Browse, About, Developers, Features, Help, and Feedback. The main heading is "Discover U.S. Government Information". There is a search bar with "nuclear waste" entered and a "SEARCH" button. Below the search bar are five filter buttons: "A to Z" (Browse documents by alphabetical order), "Category" (Browse documents in specific collections), "Date" (Browse documents within a timeframe or date range), "Committee" (Browse documents by the issuing committee), and "Author" (View documents by government authors). The "Recent Publications" section lists "Congressional Record Daily Digest", "Federal Register Table of Contents", and "House Calendar". The "Features" section highlights "September 11 Observance" with a "Federal Calendar" link and a description: "September 11, 2019 - Remembering those who lost their lives during the September 11, 2001 attacks on the U.S."

The screenshot shows the United States Census website for Phoenix city, Arizona. The header includes "United States Census" and a search bar with "Phoenix city, Arizona" entered. The main heading is "Phoenix city, Arizona". Below this is a map of Phoenix and a description: "Phoenix city, Arizona is a city, town, place equivalent (CDP), or township located in Arizona. Phoenix city, Arizona has a total area of 517.5 square miles." There are four key statistics displayed: "POPULATION 1,574,421", "MEDIAN HOUSEHOLD INCOME \$52,080", "POVERTY RATE 20.9%", and "EMPLOYMENT RATE 61.5%". The "People and Population" section is highlighted.

The screenshot shows the Federal Register website. The header includes "FEDERAL REGISTER" and "The Daily Journal of the United States Government". There is a search bar with "nuclear waste" entered and a "Document Search" button. Below the search bar is a table of results. The "PUBLICATION DATE" section shows 11 documents from the past 30 days, 47 from the past 90 days, and 184 from the past 365 days. The "TYPE" section shows 4,399 Notices, 917 Rules, 831 Proposed Rules, and 8 Presidential Documents. A specific document is highlighted: "Supplemental Notice Concerning U.S. Department of Energy Interpretation of High-Level Radioactive Waste by the Energy Department on 06/10/2019". The document text includes: "... the treatment and storage of nuclear wastes, including all containers, casks, buildings ..., management, and ultimate disposal of nuclear wastes; and (4) the establishment of ... covered defense nuclear".



Canadian Resources

Government of Canada / Gouvernement du Canada

Search the website

Canada.ca - Natural Resources Canada

Natural Resources Canada

Committed to improving the quality of life of Canadians by ensuring the country's abundant natural resources are developed sustainably, competitively and inclusively.

Featured: [New Oil and Gas Sector Emissions Reduction Fund](#)

Most requested

- [COVID-19 resources for Canada's natural resources sectors](#)
- [Canadian Wildland Fire Information System](#)
- [Fuel consumption ratings search tool](#)
- [Choosing the right vehicle](#)
- [Trans Mountain Expansion project](#)
- [Non-Destructive Testing certification](#)
- [Earthquakes Canada](#)
- [Origins of names for provincial and territorial capitals](#)

<h4>Energy efficiency</h4> <p>Homes, buildings, industry, transportation, products, EnerGuide, ENERGY STAR</p>	<h4>Minerals and mining</h4> <p>Exploration, resources, production, innovation, explosives, regulations</p>	<h4>Forests and forestry</h4> <p>Sustainability, research, industry and trade, boreal, wildfires, insects, transformation</p>
<h4>Energy sources and distribution</h4> <p>Oil, gas, renewables, fossil and alternative fuels, electricity, nuclear, uranium, co-ops</p>	<h4>Climate change</h4> <p>Green future, infrastructure programs, impacts and adaptations</p>	<h4>Public consultations</h4> <p>Insight and information for the development of policies and programs</p>
<h4>Maps, tools and publications</h4> <p>Atlas of Canada, land surveys, air photos, satellite images, positioning, software</p>	<h4>Science and data</h4> <p>Research programs, centres and labs, intellectual property, partnerships, analysis</p>	<h4>Domestic and international markets</h4> <p>Transportation fuel prices, lumber, pulp and panel prices, minerals and metals markets</p>
<h4>Indigenous natural resources</h4> <p>Land claims in the North, participation in mining activities, partnerships</p>	<h4>Funding, grants and incentives</h4> <p>Programs for research, development and project demonstration in Canada</p>	<h4>Simply Science</h4> <p>Natural Resources Canada online science magazine. Articles, podcasts, videos</p>

BRITISH COLUMBIA

Home > Farming, natural resources and industry > Mineral Exploration & Mining > British Columbia Geological Survey >

Publications

The British Columbia Geological Survey is custodian of all public provincial geoscience data. Reports and maps produced since 1895 can be searched for, and downloaded from, our publication catalogue.

Search publication catalogue

The Survey currently publishes geological Papers, Open Files, GeoFiles, Geoscience Maps, and Information Circulars.

- #### Papers

Reserved for reviews and final thematic or regional works. Geological Fieldwork, our annual review of field activities and current research, is released as the first Paper of each year.
- #### Geoscience Maps

The British Columbia Geological Survey's vehicle for publishing final maps.
- #### Open Files

Present the interim results of ongoing research, particularly mapping projects.
- #### GeoFiles

Enable rapid release of extensive data tables from ongoing geochemical, geochronologic and geophysical work. GeoFiles serve the same function as data repositories provided by many journals, providing immediate access to raw data from specific projects.
- #### Information Circulars

Provide accessible geoscience information to a broad audience in government, industry and the general public. Included are the annual Provincial Overview of Exploration and Mining in BC, and the Coal Industry Overview.
- #### Digital Geoscience Data

Current versions of digital datasets that are regularly updated.

Énergie et Ressources naturelles Québec | SIGÉOM | Système d'information géominère of Québec | INTERACTIVE MAP

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THE DATA

Download | WMS service

Address, place, postal code... | By coordinates | By mining title | By document | Customized territory

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- Deposits
 - Metallic deposits
 - Non-metallic deposits
 - Construction materials and industrial slates
- Mining activity
 - Mining titles
 - Active Mining Titles
 - Mining Title Applications
 - Major Restrictions
 - Minor Restrictions
 - Mines and projects
 - Bedrock geology
 - Drilling
 - Mineral Potential
 - Geochemistry
 - Geophysics
 - Quaternary geology
 - Aggregates
 - EXAMINE reports
 - Priority environments
 - Ministry geoscientific works
 - Previous years
 - Current year
 - Photos
 - Geochronology
 - State of geoscientific knowledge
 - Geological heritage
 - References
 - NTS mapsheet
 - Municipalities
 - Regional county municipalities
 - Administrative regions

Map showing metallic deposits in Québec. Pop-up for Metallic deposit: Name of ore body: Flipper, Stage: Indice, aucun travail/Showing, no work, Chemical element: Cuivre/Copper.

Canadian GIS and Geospatial Resources

Canadian Data | Geomatics Sector News | GIS Education | Conferences / Events

Canadian Open Data and Free Geospatial Data Resources

Canadian Data | BC Data | Alberta Data | Saskatchewan Data | Manitoba Data | Ontario Data | Québec Data | New Brunswick Data | Nova Scotia | PEI Data

Newfoundland and Labrador | North West Territories | Nunavut Data | Yukon Data | Canadian LIDAR Data | Vintage Maps

Canadian Open Data and Free Geospatial Data Resources: Almost anyone in the geospatial community would agree that a major part of any GIS project would be the data sets involved. The data can be in the form of vectors, rasters, aerial photography or statistical tabular data and most often the data component can be very costly or labor intensive. But it doesn't always have to be that way, as there are plenty of great resources available that offer free Canadian open data that you can use with your geomatics projects to generate geospatial products. In fact more and more are popping up all over the web and some cities like Ottawa are even having contests to help promote the use of their data.

Over the past few years we have been highlighting and promoting various cities and provinces in Canada that have done a great job providing Open Geospatial Data and geospatial applications to the public. During that time there has been plenty of great praise, feedback and emails regarding these efforts in helping to promote Canadian geospatial data and ensuring that everybody in the geomatics community knows where to find data for their projects.

We started this page in 2010 as a way to collaborate links to all Canadian Open Data (sites that offer data downloads at no cost and without restrictions), free geospatial data, online web mapping applications and other sources of geospatial information (including National, Provincial and Municipal levels).

If you know of any other Canadian open data that we have not listed here then let us know so we can include that information here. In the mean time start using some of these great data resources available in Canada to generate geospatial products.

[page last updated May 2020]

Note: Recently this page has become a real community driven page, and we would like to thank all the very helpful people in the geospatial community (especially all the great map librarians out there!) who continue to provide us with updates and new information (and report dead links) about Canadian open data and free geospatial data resources to promote.

And special thanks to all the Canadian Colleges and Universities that continue to support our initiatives by sharing our site with their students and alumni.

Together we can raise the profile of Canadian geographic information and help more people understand the vast geography of Canada.



Case study 1

Assessing geologic risk for:

- Communities
- Cities
- Counties
- States



2014 Oso Landslide



1980 Mt. St. Helens Eruption



Case study 2

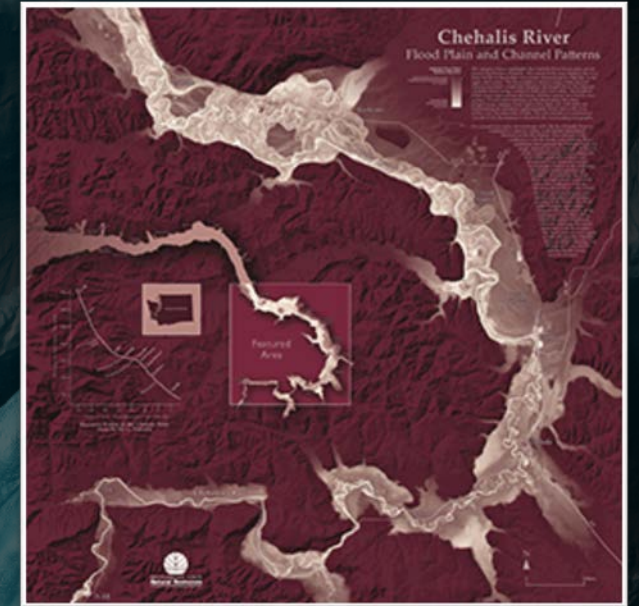
Developer wants to build a new housing complex but needs to demonstrate that water resources exist.



Case study 3

Navigable Water Ways

- What's the definition of navigable?
- Who owns the water and land beneath a river?
- What laws impact use of water ways?

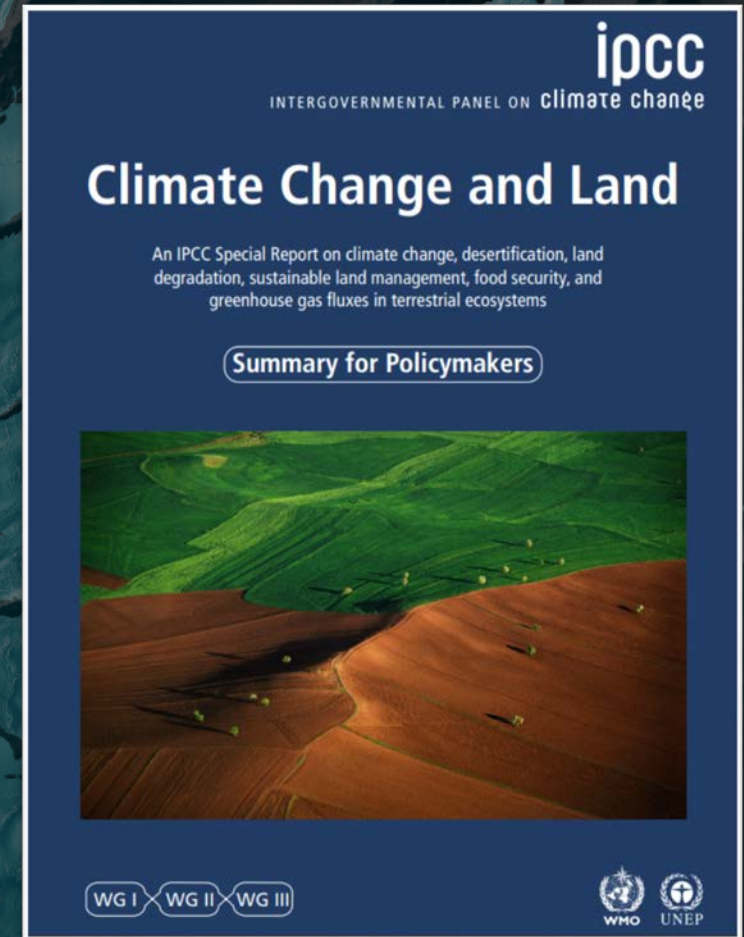


Columbia River Gorge

Case study 4

Climate Change

- Current legislation
- Current studies
- Climate Scientists
 - NOAA
 - Academics
 - IGOs-UNEP, IPCC



Liability

Washington Geologic Information Portal

2D 3D Help olympia wa

Scale: 1:144,448
Lat: 47.1216 Long: -123.1272

Table of Contents

Search layers: Search by name and tags Clear

- Seismogenic Faults
- Relocated Earthquakes >1M
- Earthquakes >1M
- Ground Response to Earthquakes
- Liquefaction Susceptibility
- NEHRP Seismic Site Class
- Seismic Design Categories (Assuming Site Class)
- Seismic Design Categories (Using Site Class M)
- Landslide Data
- Tsunami

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Olympia Real Estate

Listings Market Insights

Price No min to No max Filters

Showing 21 of 542 Homes Sort

LISTED BY REDFIN

\$325,000
7315 Henderson Ct SE
Olympia, WA 98501

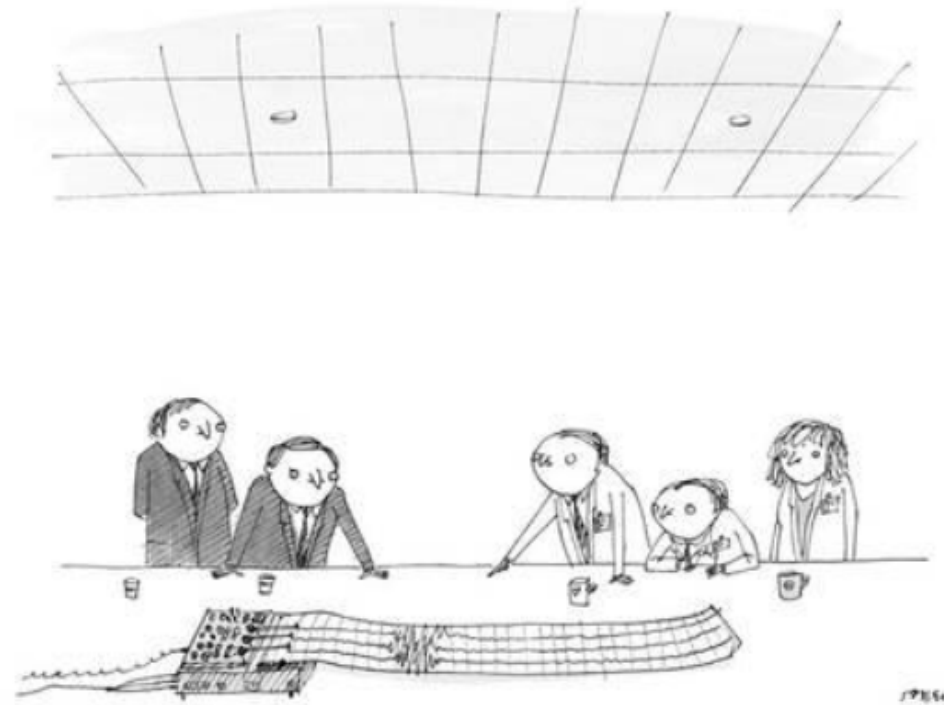
3 Beds 1.75 Baths 1,654 Sq. Ft.
Listing provided by NWMLS



A hobby of mine...



"We're in Japanese waters, that's for sure."



"This sudden spike shows where we think the earthquake is lying."



The Great Wave
off Kanagawa
By Hokusai

Contact Me!



Stephanie Earls

360-902-1473

stephanie.earls@dnr.wa.gov

