Trevor A. Contreras
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Trevor Contreras is a Licensed Geologist in Washington State. He holds a masters degree in geological sciences from the University of Oregon (2004). His thesis work concentrated on using geophysical techniques to characterize aquifers in southwestern Oregon. Trevor is currently mapping along Hood Canal where he is studying the glacial history, landslides, groundwater, and tectonics of the area. He has been the principle investigator on three 7.5-minute quadrangles in the past three years, investigating how the Seattle fault zone connects to the Saddle Mountain fault zone near Lake Cushman. Previously, he spent two years in the Geological Hazards Section studying landslides and earthquake hazards.

Trevor has a background in water well construction, groundwater resources, and drilling techniques from his time with the Washington Department of Ecology. Additionally, he has experience with various shallow geophysical techniques, including magnetotellurics, magnetics, and various seismic techniques. At the Oregon Department of Transportation, he monitored landslides and conducted geotechnical exploratory drilling throughout southwestern and central Oregon.

Trevor's outside interests include stone sculpture and teaching introductory geology classes at South Puget Sound Community College.

RESEARCH INTERESTS

Neotectonics of the Puget Lowland
Geologic mapping of Washington
Structures and stratigraphy of Washington

CURRENT PROJECTS

Geologic mapping of the Lofall 7.5-minute quadrangle
Active fault arrangement in the Puget Lowland

EDUCATION

B.S. Geology, University of Oregon, Eugene, 1998
M.S. Geology, University of Oregon, Eugene, 2004
Licensed Geologist, State of Washington, 2007

PROFESSIONAL WORK EXPERIENCE

Mapping and Hazard Geologist, Washington State Department of Natural Resources
Division of Geology and Earth Resources, Olympia, WA (2007–present)

Hydrogeologist, Washington State Department of Ecology, Olympia, WA (2004–2007)

Geologist, Oregon Department of Transportation, Salem, OR (1999–2000)

SELECTED PUBLICATIONS

Barnett, E. A.; Sherrod, B. L.; Kelsey, H. M.; Czajkowski, J. L.; Walsh, T. J.; Contreras, T. A.; Davis-Staunton, K.; Schermer, E. R.; Carson, R. J., 2009, Active faulting along the Saddle Mountain fault zone, southeast Olympic Mountains, WA [abstract]: Eos (American Geophysical Union Transactions), v. 90, no. 52, Suppl., S51B-1404.

Cakir, Recep; Walsh, T. J.; Contreras, Trevor, 2011, Seismic and geotechnical site characterization at four earthquake strong motion sites in Washington State: FastTIMES, v. 16, no. 3, p. 13-24. [http://www.eegs.org/portals/2/FastTimeFiles/ft1603_Sep2011_high_r02.pdf]

Cakir, Recep; Walsh, T. J.; Contreras, T. A.; Stanton, Kelsay; Sarikhan, Isabelle, 2009, Two-dimensional multi-channel analysis of surface waves (MASW) imaging at two paleoseismic trench sites in Washington [abstract]. *In* Northwest Scientific Association, The Pacific Northwest in a changing environment—Northwest Scientific Association 81st annual meeting; Program with abstracts: Northwest Scientific Association, p. 9.

Contreras, T. A.; Legorreta Paulin, Gabriel; Czajkowski, J. L.; Polenz, Michael; Logan, R. L.; Carson, R. J.; Mahan, S. A.; Walsh, T. J.; Johnson, C. N.; Skov, R. H., 2010, Geologic map of the Lilliwaup 7.5-minute quadrangle, Mason County, Washington: Washington Division of Geology and Earth Resources Open File Report 2010-4, 13 p., 1 plate, scale 1:24,000. [http://www.dnr.wa.gov/Publications/ger_ofr2010-4_geol_map_lilliwaup_24k.zip]

Contreras, T. A.; Sarikhan, I. Y.; Polenz, Michael; Powell, Jack; Skov, Rian, 2009, Collecting, analyzing and sharing large volumes of digital photos during geological disasters—Methods developed from landslide reconnaissance flights following the January 2009 storm in western Washington State [abstract]: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 136.

Contreras, T. A.; Weeks, S. A.; Perry, B. B., 2012, Analytical data from the Holly 7.5-minute quadrangle, Jefferson, Kitsap, and Mason Counties, Washington—Supplement to Open File Report 2011-5: Washington Division of Geology and Earth Resources Open File Report 2011-6, 16 p. [http://www.dnr.wa.gov/Publications/ger_ofr2011-6_holly_supplement.pdf]

Contreras, T. A.; Weeks, S. A.; Stanton, K. M. D.; Stanton, B. W.; Perry, B. B.; Walsh, T. J.; Carson, R. J.; Clark, K. P.; Mahan, S. A., 2012, Geologic map of the Holly 7.5-minute quadrangle, Jefferson, Kitsap, and Mason Counties, Washington: Washington Division of Geology and Earth Resources Open File Report 2011-5, 1 sheet, scale 1:24,000, with 13 p. text. [http://www.dnr.wa.gov/Publications/ger_ofr2011-5_geol_map_holly_24k.zip]

Czajkowski, J. L.; Walsh, T. J.; Contreras, T. A.; Davis-Stanton, Kelsay; Kelsey, H. M.; Schermer, E. R.; Carson, R. J., 2009, Active faulting along a newly-found segment of the Saddle Mountain fault zone, southeastern Olympic Mountains, WA—A paleoseismic trenching study [abstract]: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 479.

Polenz, Michael; Contreras, T. A.; Czajkowski, J. L.; Legorreta Paulin, Gabriel; Miller, B. A.; Martin, M. E.; Walsh, T. J.; Logan, R. L.; Carson, R. J.; Johnson, C. N.; Skov, R. H.; Mahan, S. A.; Cohan, C. R., 2010, 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: Washington Division of Geology and Earth Resources Open File Report 2010-5, 27 p. [http://www.dnr.wa.gov/Publications/ger_ofr2010-5_lilliwaup_skokomish_valley_union_suppl_24k.pdf]

Polenz, Michael; Czajkowski, J. L.; Legorreta Paulin, Gabriel; Contreras, T. A.; Miller, B. A.; Martin, M. E.; Walsh, T. J.; Logan, R. L.; Carson, R. J.; Johnson, C. N.; Skov, R. H.; Mahan, S. A.; Cohan, C. R., 2010, Geologic map of the Skokomish Valley and Union 7.5-minute quadrangles, Mason County, Washington: Washington Division of Geology and Earth Resources Open File Report 2010-3, 21 p., 1 plate, scale 1:24,000. [http://www.dnr.wa.gov/Publications/ger_ofr2010-3_geol_map_skokomish_valley_union_24k.zip]

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Polenz, Michael; Sarikhan, Isabelle; Legorreta Paulin, Gabriel; Logan, R. L.; Walsh, T. J.; Kaler, G. Z.; Young, A. C.; Sarah, Alexis; Contreras, T. A., 2009, Landslide hazard maps for Washington marine shores—Tools for public and private decision making [abstract]: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 520-521. [http://www.dnr.wa.gov/ResearchScience/Topics/GeologicHazardsMapping/Pages/landslides.aspx]

Sarikhan, Isabelle; Contreras, T. A.; Polenz, Michael; Kaler, G. Z.; Czajkowski, J. L.; Walsh, T. J.; Powell, Jack, 2009, Landslide emergency response—Findings and lessons learned by the Washington Geological Survey's response to the December 3, 2007 and January 7–9, 2009 storms [abstract]: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 497.

Sarikhan, Isabelle; Norman, Dave; Contreras, T. A., 2009, Washington Geological Survey embarks on a statewide landslide precipitation forecasting model [abstract]: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 521.

Sarikhan, I. Y.; Contreras, T. A., 2009, Landslide field trip to Morton, Glenoma, and Randle, Lewis County, Washington: Washington Division of Geology and Earth Resources Open File Report 2009-1, 13 p. [http://www.dnr.wa.gov/Publications/ger_ofr2009-1_landslide_field_trip.pdf]

Sarikhan, I. Y.; Contreras, T.A.; Stanton, K. M. D.; Polenz, Michael; Walsh, T. J.; Cakir, Recep, 2009, Washington geologic survey's landslide response to the January 7–8th, 2009 storm [abstract]. *In* Northwest Scientific Association, The Pacific Northwest in a changing environment—Northwest Scientific Association 81st annual meeting; Program with abstracts: Northwest Scientific Association, p. 58.

Sarikhan, I. Y.; Stanton, K. D.; Contreras, T. A.; Polenz, Michael; Powell, Jack; Walsh, T. J.; Logan, R. L., 2008, Landslide reconnaissance following the storm event of December 1–3, 2007, in western Washington: Washington Division of Geology and Earth Resources Open File Report 2008-5, 16 p. [http://www.dnr.wa.gov/ResearchScience/Topics/GeologicHazardsMapping/Pages/landslides_dec07storm.aspx]

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