

VINITAS CONSULTANTS, LLC

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PROFESSIONAL EXPERTISE:

- Hydric soils/wetlands research studies; hydric soils determinations; ordinary high water mark determinations
- Soils, surficial geology, and agriculture
- Site evaluation for wine grape production; vineyard design; pre-sale & pre-purchase land evaluation
- Soils and geologic studies for seismic and geochronological investigations

PROFESSIONAL POSITIONS:

- 2006-present Vinitas Consultants, LLC, Bingen, WA**, consulting soil scientist & geologist, owner
2008-present Co-Owner, Volcano Ridge Vineyard, The Dalles, OR, 23ac wine grapes, 160 ac ranch
2013 - 2014 Director, Center for Enology & Viticulture, Walla Walla Community College, WA
2006 - 2008 Contract Geologist, Colorado Geological Survey, Hygiene, CO
1982 - 2006 Professor of Soil Science and Geology, Department of Crop and Soil Sciences; Affiliate Professor of Geology, Department of Geology, Washington State University, Pullman, WA (1982-87 Asst. Prof.; 1988-1995 Assoc. Prof)
2003 - 2004 Visiting Professor, Dept. of Soil & Crop Sci., Colorado State Univ., Fort Collins, CO
1990 - 1991 Visiting Scientist, INRA Centre de Grignon, Thiverval-Grignon, FRANCE and Università degli Studi di Milano, ITALY
1977 - 1982 Graduate Research Assistant and Instructor, Dept. of Land, Air & Water Resources, Univ. of California, Davis
1974 - 1977 Field Geologist, U.S. Geological Survey, Menlo Park, CA

SELECTED CONSULTING PROJECTS:

- 2018 Arlen Foster, Mitchell, SD**: Defense against NRCS claim of Swampbuster Act violation
2018 Wesley Beutler, Dayton, ID: Defense against NRCS claim of Swampbuster Act violation
2018 Ritchey Toevs, Aberdeen, ID: Successful defense against Swampbuster Act violation
2016-2018 Tim Weidert, Walla Walla Valley, WA: Land evaluation, parcel quality ratings, and assistance with marketing and sale, 6,000 acres of potential vineyard/orchard land with 1,500 irrigated acres
2016-2017 Kennewick Irrigation District, Benton City, WA: Site evaluation for vineyard development, parcels totaling 400 ac, Columbia Valley American Viticultural Area
2012, 2016-18 Acquest Dev. & Wm Huntress, Buffalo NY: Expert witness for defense of EPA/DOJ wetlands lawsuit
2015-2018 Royal Slope Winegrowers: Petition Development and Submission for American Viticultural Area, and **Goose Gap Area Winegrowers**: Petition for Goose Gap AVA
2015 Bavaro Farming, Inc., Waterford, CA: Wetland del. for 245 ac orchard development
2015-2016 Epperson Assoc., LLC, Salt Lake City, UT: Hydric soils determinations for wetland delineation, 2400-acre new Utah prison site
2015 Wendling Quarries, Inc., DeWitt, IA: Mississippi River Ordinary High Water Mark Determination, Wendling Quarries Gateway Sand Pit, Camanche, IA. U.S. Army, Corps of Engineers dropped Navigable-Waters of the U.S. claim against Client upon review of Vinitas report
2014-2015 Hughes Investments, HJ Silvercreek, L.P.: Hydric soils investigation, Park City, UT
2014-2015 Three Monkeys, LLC: Soils and site evaluation for multi-million dollar vineyard development, 280 acre parcel, Red Mountain AVA, Benton City, WA
2013 Thomas Hribar Trucking, Sturtevant, WI: Hydric soils investigation for defense against state DNR charges of wetland filling, 35-acre area
2012-2013 Natomas Meadows, LLC, West Valley City, UT: Soils/wetland pre-development study, 130-acre parcel & 80-acre parcel

- 2011-2016** **Winegrowers of the Lewis-Clark Valley, ID-WA:** Petition to US Dept of Treasury, TTB to establish the Lewis-Clark Valley American Viticultural Area
- 2011-2012** **Rich and Henderson, P.C., Easton MD:** Hydric soils determinations for litigation defense, 400-acre horse ranch, Delmarva Peninsula
- 2009-2010** **BHW Law and Jim Seibe Law:** Defense expert witness for federal criminal trial, disputed wetland destruction; defendant acquitted all charges, Coeur d'Alene, ID
- 2009-2010** **Kennewick Irrigation District:** Pre-sale viticultural land assessment of 10 parcels totaling 800 acres, Benton City, WA (sold at auction in 2014 for \$17.7 million)
- 2007-2009** **Colorado Geological Survey:** Private contractor, evaluation of earthquake hazard risk, Anton, CO (USGS NEHERP Grant), Great Plains, CO and contractor responsible for geologic quadrangle mapping (USGS StateMap Program), CO
- 2005-2006** **A.J. Bredburg and Associates:** Soils and geologic investigation for wetland delineation, 140-acre Kelly Farm, Bonney Lake, WA
- 2002** **State of Idaho Attorney General:** Determination of natural and ordinary high water mark for State v. Fed. Govt. lawsuit on jurisdiction of islands in the Snake River
- 1992-2000** **State of Idaho Department of Lands and Attorney General:** interpretation of surficial deposits and soils, wetland and ordinary high water mark litigation including high-profile cases for Lake Coeur d'Alene and Priest Lake, ID
- 1994** **State of Idaho Natural Resources Division and Attorney General:** potentially arable lands survey/water rights litigation, Nez Perce Nation
- 1988-1989** **Idaho Forest Industries, Coeur d'Alene, ID:** interpretation of surficial deposits and soils to determine ordinary high water mark; IFI successful in litigating Idaho claim of jurisdiction

EDUCATION:

Ph.D.	Soil Science	1982	University of California, Davis
M.S.	Soil Science	1979	University of California, Davis
B.S.	Geology w/Honors	1973	University of California, Santa Cruz

SELECTED GRANT AND CONTRACT SUPPORT AT WSU:

National Science Foundation (5 grants as PI or Co-PI); Battelle Pacific Northwest Laboratories (3 contracts as PI or Co-PI); U.S. Environmental Protection Agency (2 grants as Co-PI); U.S.D.A. Agricultural Research Service (9 grants as Co-PI); U.S.D.A. Forest Service (2 contracts as CoPI); U.S.D.A. Natural Resources Conservation Service (4 contracts as co-PI); Washington Conservation Commission (1 contract as PI); National Aeronautics and Space Administration (1 grant as collaborator). Total of teaching and research grants 1982-2005: >\$2,000,000.

SELECTED RESEARCH PUBLICATIONS:

- Stevenson, B. A., E. F. Kelly, E. V. McDonald, and A. J. Busacca. 2005. The stable carbon isotope composition of soil organic carbon and pedogenic carbonates along a bioclimatic gradient in the Palouse region, Washington State, USA. *Geoderma* 124:37-47.
- Chandler, David, Shawn Blaesing-Thompson, and Alan Busacca. 2004. Geospatial Assessment of Agricultural Lands Critical to Air Quality on the Columbia Plateau, Washington State. *Journal of Soil and Water Conservation*. (in press).
- Busacca, A.J., J. Beget, D. R. Muhs, H. Markewitch, N. Lancaster, and M. Sweeney. 2003. Eolian Sediments. pp. 275-310. In A.R. Gillespie, S.C. Porter, and B.F. Atwater (eds), *The Quaternary Period in the United States. Developments in Quaternary Science 1*. Elsevier Press, Amsterdam, 830p.
- Meinert, L. D., and A. J. Busacca. 2000. Geology and wine 3: Terroirs of the Walla Walla Valley appellation, southeastern Washington State, USA. *Geoscience Canada* 27(4): 149-171.
- McCool, D. K., and A. J. Busacca. 1999. Measuring and modeling soil erosion and erosion damages. pp. 23-56, In E. L. Michalson, R. I. Papendick, and J. E. Carlson (eds.) *Conservation Farming in the United States*. CRC Press, New York.
- Boling, Maureen., Bruce Frazier, and Alan Busacca. 1998. General Soil Map, Washington. Department of Crop and Soil Sciences, Washington State University, Pullman. 1:750,000.
- Crowe, E. A., A. J. Busacca, J. P. Reganold. and B. A. Zamora. 1994. Correlation of vegetation zones to soil characteristics in Vernal Pools in the Channeled Scabland of eastern Washington. *Great Basin Naturalist* 54(3):234-247.