

Geologic Atlas of the City of Alexandria, Virginia and Vicinity - References

- Aleinikoff, J.N., Horton, J.W., Drake, A.A. Jr., and Fanning, C. Mark, 2002, SHRIMP and conventional U-Pb ages of Ordovician granites and tonalities in the Central Appalachian Piedmont: Implications for Paleozoic tectonic events: *American Journal of Science*, v. 302, p. 50-75. <http://www.ajsonline.org/content/302/1.toc>
- Andreasen, D.C., 1999, The geohydrology and water-supply potential of the lower Patapsco aquifer and Patuxent aquifers in the Indian Head-Bryans Road area, Charles County, Maryland: Maryland Geological Survey Report of Investigations 69, 120 p. http://www.mgs.md.gov/publications/report_pages/RI_69.html
- Andreasen, D.C., and Mack, F.K., 1998, Evaluation of the geohydrology and water-supply potential of the lower Patapsco and Patuxent aquifers in the Indian Head-Bryans Road area, Charles County, Maryland: Maryland Geological Survey Open-File Report 98-02-9, 50 p.
- Bassler, R.S., 1940, Geological exhibits in the National Zoological Park: Smithsonian Annual Report-1939, Publication 3565, p. 265-279.
- Bleuer, N.K. 1991, The Lafayette Bedrock Valley System of Indiana-Concept, form, and fill stratigraphy, *in* Melhorn, W.N. and Kempton, J.P., eds., *Geology and hydrology of the Teays-Mahomet Bedrock Valley System*: Boulder, Colorado, Geological Society of America Special Paper 258, p. 51-77. <http://specialpapers.gsapubs.org/content/258>
- Blodgett, R.H., and Stanley, K.O., 1980, Stratification, bedforms and discharge relations of the Platte braided river system, Nebraska: *Journal of Sedimentary Petrology*, v. 50, p. 139-148. <http://jsedres.sepmonline.org/content/50/1.toc>
- Bobyarchick, A.R., 2015, Structural analysis of the original Everona fault excavation and Cenozoic deformation in the Mountain Run fault zone, central Virginia, *in* Horton, J.W., Jr., Chapman, M.C., and Green, R.A., eds., *The 2011 Mineral, Virginia, Earthquake and Its Significance for Seismic Hazards in Eastern North America*: Geological Society of America Special Paper 509, p., 391-406, doi: 10.1130/2015.2509(22). <http://specialpapers.gsapubs.org/content/509>
- Brenner, G.J., 1963, Spores and pollen of the Potomac Group of Maryland: Maryland Geological Survey Bulletin 27, 215 p. http://www.mgs.md.gov/output/reports/BULL/BULL_27.pdf
- Bromery, R.W., Galat, G.A., and Chandler, E.J., 1963, Aeromagnetic map of the Quantico Quadrangle, Prince William and Stafford Counties, VA: U.S. Geological Survey Geophysical Investigation Map 391, scale 1:24,000. <http://pubs.er.usgs.gov/publication/gp391>
- Building Seismic Safety Council, 2000, NEHRP recommended provisions for new buildings and other structures, FEMA 368. Washington, D.C., Fed. Emergency Management Agency.
- Building Seismic Safety Council, 2003, NEHRP recommended provisions for new buildings and other structures, FEMA 450, ch. 3: Washington, D.C., Federal Emergency Management Agency. http://c.ymcdn.com/sites/www.nibs.org/resource/resmgr/BSSC/nehrrp2003_P3A.pdf

City of Alexandria, Virginia, 1976, Map of marine clay areas: Department of Transportation and Environmental Services, scale 1:12,000

http://www.alexandriava.gov/uploadedFiles/gis/info/Marine%20clay%20Areas_clean.pdf

Coler, D.G., Samson, S.D., and Hibbard, J.P., 1998, New constraints on the age and Nd isotopic composition of the Chopowamsic terrane, VA: Geological Society of America Abstracts with Programs, v. 30(7), p. A-125.

Daniels, D.L., 1980, Geophysical-geological analysis of Fairfax County, VA: U.S. Geological Survey Open-File Report 80-1165, 64 p.

Darton, N.H., 1947, Sedimentary formations of Washington, D.C. and vicinity: U.S. Geological Survey map, scale 1:31,680.

Darton, N.H., 1950, Configuration of the bedrock surface of the District of Columbia and vicinity: U.S. Geological Survey Professional Paper 217, 42 p. plus 4 plates.

<http://pubs.er.usgs.gov/publication/pp217>

Darton, N.H., 1951, Structural relations of Cretaceous and Tertiary formations in part of Maryland and Virginia: Geological Society of America Bulletin, v. 62, p. 745-780.

<http://gsabulletin.gsapubs.org/content/62/7.toc>

Davis, A.M., Southworth, C.S., Reddy, J.E., and Schindler, J.S., 2001, Geologic map database of the Washington, D.C. area featuring data from three 30 x 60 minute quadrangles: Frederick, Washington West, and Fredericksburg: U.S. Geological Survey Open-File Report OF-2001-227. http://ngmdb.usgs.gov/Prodesc/proddesc_51791.htm

Drake, A.A., Jr, 1985, Tectonic implications of the Indian Run Formation—a newly recognized sedimentary mélange in the northern Virginia Piedmont: US Geological Survey Professional Paper 1324, 12 p. <http://pubs.er.usgs.gov/publication/pp1324>

Drake, A.A., Jr., and Froelich, A.J., 1986, Geologic Map of the Annandale Quadrangle, Fairfax County, Virginia: U.S. Geological Survey Geologic Quadrangle Map GQ-1601, scale 1:24,000. <http://pubs.er.usgs.gov/publication/gq1601>

Drake, A.A., Jr., and Froelich, A.J., 1997, Geologic Map of the Falls Church Quadrangle, Fairfax and Arlington Counties and the City of Falls Church, Virginia: U.S. Geological Survey Geologic Quadrangle Map GQ-1734, scale 1:24,000.

<http://pubs.er.usgs.gov/publication/gq1734>

Drake, A.A., Jr., and Lyttle, P.T., 1981, The Accotink Schist, Lake Barcroft Metasandstone, and Popes Head Formation—keys to an understanding of the tectonic evolution of the northern Virginia Piedmont: U.S. Geological Survey Professional Paper 1205, 16 p.

<http://pubs.er.usgs.gov/publication/pp1205>

Drake, A.A., Jr., Nelson, A.E., Force, L.M., Froelich, A.J., and Lyttle, P.T., 1979. Preliminary Geologic Map of Fairfax County, Virginia. U.S. Geological Survey Open-File Report 79-398. Scale 1:48,000. <http://pubs.er.usgs.gov/publication/ofr79398>

Fisk, H.N., 1944, Geological investigation of the alluvial valley of the lower Mississippi River: Mississippi River Commission, Vicksburg, Mississippi, 78 p.

Fisk, H.N., 1947, Fine grained alluvial deposits and their effects on Mississippi River activity: Mississippi River Commission, Vicksburg, Mississippi, 82 p.

Fisk, H.N., 1952, Mississippi River Valley geology: relation to river regime: Transactions of the American Society of Civil Engineers, v. 117, p. 667-682.

Fleming, A.H., 2005, The hydrogeology of Green Spring Garden Park: unpublished field investigation and report prepared for the Virginia Native Plant Society and Fairfax County Park Authority, 14 p.

Fleming, A.H., and Drake, A.A., Jr., 1998, Structure, age, and tectonic setting of a multiply-reactivated shear zone in the Piedmont in Washington, D.C., and vicinity: Southeastern Geology, v. 37 (3), p. 115-140.

Fleming, A.H., Drake, A.A., Jr., and McCartan, Lucy, 1994, Geologic Map of the Washington West Quadrangle, District of Columbia, Montgomery County, Maryland, and Arlington County, Virginia: U.S. Geological Survey Geologic Quadrangle Map GQ-1748, scale 1:24,000. http://ngmdb.usgs.gov/Prodesc/proddesc_277.htm

Fleming, A.H., and Fleming, G.P., 2010, Hydrogeologic setting of a floristically distinctive ground-water slope wetland along the fall zone in northern Virginia: Geological Society of America Abstracts with Programs, v. 42, no. 1, p. 106.
https://gsa.confex.com/gsa/2010NE/finalprogram/abstract_168565.htm

Fleming, A.H., and Self, S., 2010, Is the Sykesville Formation a large, ignimbrite-filled intracaldera complex? A reinterpretation of the mid-Atlantic Piedmont's most enigmatic rock unit: Geological Society of America Abstracts with Programs, v. 42, no. 1, p. 54.
https://gsa.confex.com/gsa/2010NE/finalprogram/abstract_168562.htm

Follmer, L.R., 1982, The geomorphology of the Sangamon surface - spatial and temporal attributes, *in* C. Thorn, ed., Space and Time in Geomorphology: Binghamton Symposia in Geomorphology, Int'l Series 12, Allen and Unwin, London, p. 117-146.

Follmer, L.R., 1983, Sangamonian and Wisconsinan pedogenesis in the Midwestern United States, *in* S.C. Porter, ed., Late Quaternary Environments of the United States, v.1, The Late Pleistocene: Univ. Minnesota Press, Minneapolis, p. 138-144.
<http://www.jstor.org/stable/10.5749/j.ctttsjvr>

Force, L.M., 1975, Preliminary geologic map of the Coastal Plain of Fairfax County, Virginia: U.S. Geological Survey Open-File Report 75-415, 2 plates, scale 1:48,000.

Force, L.M., and Moncure, G.M., 1978, Origin of 2 clay mineral facies of the Potomac Group in the middle Atlantic States: U.S. Geological Survey Journal of Research v.6(2), p 203-214.
<http://pubs.usgs.gov/journal/1978/vol6issue2/report.pdf>

Froelich, A.J., 1978, Map showing planar and linear features of Fairfax County, Virginia: U.S. Geological Survey Open-File Report 78-443, scale 1:48,000.
<https://pubs.er.usgs.gov/publication/ofr78443>

Froelich, A.J., 1985, Folio of geologic and hydrologic maps for land-use planning in the Coastal Plain of Fairfax County, Virginia, and vicinity: U.S. Geological Survey Miscellaneous Investigations Series Map (IMAP) I-1423, scale 1:100,000.
<http://pubs.er.usgs.gov/publication/i1423>

Froelich, A.J., Johnston, R.H., and Langer, W.H., 1978, Preliminary report on the ancestral Potomac River deposits in Fairfax County, Virginia, and their hydrogeological significance: U.S. Geological Survey Open-File Report 78-544, 38 p.
<http://pubs.er.usgs.gov/publication/ofr78544>

Geological Society of America, 2012, Geological Time Scale: Walker, J.D., Geissman, J.W., Bowring, S.A., and Babcock, L.E., compilers, Boulder, CO.
<http://www.geosociety.org/science/timescale/>

Glaser, J.D., 1969, Petrology and origin of Potomac and Magothy (Cretaceous) sediments, middle Atlantic Coastal Plain: Maryland Geological Survey, Report of Investigations 11, Baltimore, MD, 102 p. http://www.mgs.md.gov/reports/RI_11.pdf

Glaser, J.D., 2003, Geologic map of Prince Georges County, Maryland: Maryland Geological Survey, scale 1:62,500.

Haase, J.S., Nowack, R.L., Cramer, C.H., Boyd, O.S., and Bauer, R.A., 2011a, Earthquake scenario ground motions for the urban area of Evansville, Indiana: U.S. Geological Survey Open-File Report 2011-1260, 17 p. <https://pubs.er.usgs.gov/publication/ofr20111260>

Haase, J.S., Choi, Y.S., Nowack, R.L., Cramer, C.H., Boyd, O.S., and Bauer, R.A., 2011b, Liquefaction hazard for the region of Evansville, Indiana: U.S. Geological Survey Open-File Report 2011-1203, 37p. <https://pubs.er.usgs.gov/publication/ofr20111203>

Hallberg, G., 1986, Pre-Wisconsin glacial stratigraphy of the central plains regions of Iowa, Nebraska, Kansas, and Missouri, in Sibrava, V., Bower, G.Q., and Richmond, G.M., eds., Quaternary glaciations in the northern hemisphere: Quaternary Science Reviews, v.5, p. 11-15. <http://www.sciencedirect.com/science/journal/02773791/5>

Heimgartner, D., 1995, Geologic investigation of a ductile shear zone in the northern Piedmont of Virginia: Fairfax, Virginia, George Mason University, Department of Geography and Earth System Science, unpublished senior thesis, 23 p., plus 21 figures.

Hickey, L. J., and J. A. Doyle, 1977, Early Cretaceous Fossil Evidence for Angiosperm Evolution. *The Botanical Review*, 43(1):3-104, 3 tables, 70 figures.

Hitchcock, C., Givler, R., De Pascale, G., and Dulberg, R., 2008, Detailed mapping of artificial fills, San Francisco Bay area, California: William Lettis Associates, Final Technical Report, National Earthquake Hazards Reduction Program, U.S. Geological Survey Award Number 07HQGR0078
<http://earthquake.usgs.gov/research/external/reports/07HQGR0078.pdf>

Holzer, T.L., Bennett, M.J., Noce, T.E., Padovani, A.C., and Tinsley, J.C., II, 2002, Liquefaction hazard and shaking amplification maps of Alameda, Berkeley, Emeryville, Oakland, and Piedmont, California: A digital database: U.S. Geological Survey Open-file Report 2002-296. http://pubs.usgs.gov/of/2002/of02-296/of02-296_1.1.pdf

Holzer, T.L., Padovani, A.C., Bennett, M.J., Noce, T.E., Tinsley, J.C., 2005, Mapping NEHRP VS30 Site Classes: Earthquake Spectra, Vol. 21, p. 353-370. doi:10.1193/1.1895726
<http://earthquakespectra.org/doi/abs/10.1193/1.1895726>

Hopson, C.A., 1964, The crystalline rocks of Howard and Montgomery Counties, *in* The Geology of Howard and Montgomery Counties, Maryland: Baltimore, Maryland Geological Survey, p 27 - 215.

http://www.mgs.md.gov/publications/report_pages/County_Reports.html

Horton, J.W., Drake, A.A., Jr., and Rankin, D.W., 1989, Tectonostratigraphic terranes and their Paleozoic boundaries in the central and southern Appalachian, in Dallmeyer, R.D., ed., Terranes in the circum-Atlantic Paleozoic orogens: Geological Society of America Special Paper 230, p. 213-245. <http://specialpapers.gsapubs.org/content/230>

Horton, J.W., Aleinikoff, J.N., Drake, A.A. Jr., and Fanning, C.M., 1998, Significance of middle to late Ordovician volcanic-arc rocks in the central Appalachian Piedmont, Maryland and Virginia: Geological Society of America Abstracts with Programs, v. 30(7), p. A-125.

Horton, J.W., Jr., Chapman, M.C., and Green, R.A., 2015, The 2011 Mineral, Virginia, earthquake, and its significance for seismic hazards in eastern North America—Overview and Synthesis, *in* Horton, J.W., Jr., Chapman, M.C., and Green, R.A., eds., The 2011 Mineral, Virginia, Earthquake and Its Significance for Seismic Hazards in Eastern North America: Geological Society of America Special Paper 509, p., 1-25, doi: 10.1130/2015.2509(01). <http://specialpapers.gsapubs.org/content/509>

Hough, S.E., 2012, Initial assessment of the intensity distribution of the 2011 Mw 5.8 Mineral, Virginia, earthquake: Seismological Research Letters, v. 83, p. 649-657, doi:10.1785/0220110140. <http://srl.geoscienceworld.org/content/83/4/649>

Hueber, F.M., 1982, Megaspores and a Palynomorph from the Lower Potomac Group in Virginia: Smithsonian Contributions to Paleobiology, number 49, 69 p. <https://repository.si.edu/handle/10088/1972>

Huffman, A.C., 1975, The geology of the crystalline rocks of northern Virginia in the vicinity of Washington, D.C: Washington, D.C., George Washington University, unpublished Ph.D. dissertation, 129 p.

Jacobeen, F.H., Jr., 1972, Seismic evidence for high-angle reverse faulting in the Coastal Plain of Prince Georges and Charles Counties, MD: Maryland Geological Survey Information Circular 13, 21 p.

Johnston, P.M., 1961, Geology and ground-water resources of Washington, D.C. and vicinity – well records and data tables: U.S. Geological Survey Open-File Report 61-79.

Johnston, P.M., 1964, Geology and ground-water resources of Washington, D.C. and vicinity: U.S. Geological Survey Water Supply Paper 1776, 98 p., scale 1:62,500. <http://pubs.usgs.gov/wsp/1776/report.pdf>

Johnston, R.H., and Froelich, A.J., 1977, Maps showing lithofacies and inferred subsurface distribution of channel-fill sands in the Potomac Group in Fairfax County, VA: U.S. Geological Survey Open-File Report 77-287, 7 p., 1 map, scale 1:48,000 <http://pubs.er.usgs.gov/publication/ofr77287>

Johnston, R.H., and Larson, J.D., 1977, Potentiometric surface maps and water-level change map, 1960-1976, for the lower aquifer of the Cretaceous Potomac Group in Fairfax County, VA: U.S. Geological Survey Open-File Report 77-284, 7 p., 3 maps, scale 1:48,000 <http://pubs.er.usgs.gov/publication/ofr77284>

Keith, A.A., and Darton, N.H., 1901. Description of the Washington quadrangle (DC-MD-VA): U.S. Geological Survey Atlas, Folio 70, 7 pp, scale 1:62,500

<http://pubs.er.usgs.gov/publication/qf70>

Keyes, C.R., 1895, Origin and relations of central Maryland granites: U.S. Geological Survey 15th Annual Report, p. 685-740. <http://pubs.er.usgs.gov/publication/ar15>

Kunk, M.J., Wintsch, R.P., Naeser, C.W., Naeser, N.D., Southworth, C.S., Drake, A.A., Jr., and Becker, J.L., 2005, Contrasting tectonothermal domains and faulting in the Potomac terrane—Virginia—Maryland—discrimination by ⁴⁰Ar/³⁹Ar and fission-track thermochronology: Geological Society of America Bulletin, v. 117, no. 9-10, p. 1347-1366.

<http://gsabulletin.gsapubs.org/content/117/9-10.toc>

Langer, W.H., 1978, Surface materials map of Fairfax County, Virginia: U.S. Geological Survey Open-File Report 78-78, 9 p., 1 plate, scale 1:48,000.

Langer, W. H., and Obermeier, S.F., 1978, Relationship of landslides to fractures in Potomac Group deposits, Fairfax County, Virginia: U.S. Geological Survey Open-File Report 78-779, 37 p.

Litwin, R.J., Smoot, J.P., Pavich, M.J., Markewich, H.W., Brook, G., and Durika, N.J., 2013, 100,000-year-long terrestrial record of millennial-scale linkage between eastern North American mid-latitude paleovegetation shifts and Greenland ice-core oxygen isotope trends: Quaternary Research, v. 80, p. 291-315.

<http://www.sciencedirect.com/science/article/pii/S0033589413000513>

Mack, F.K., 1962, Ground water supplies for urban and industrial development in Anne Arundel County: Maryland Geological Survey Bulletin 26, 90 p.

http://www.mgs.md.gov/publications/report_pages/BULL_26.html

Mack, F.K., 1966, Ground water in Prince Georges County: Maryland Geological Survey Bulletin 29, 101 p. http://www.mgs.md.gov/publications/report_pages/BULL_29.html

Martin, A.J., Southworth, S., Collins, J.C., Fisher, S.W., and Kingman, E.R., III, 2015, Laurentian and Amazonian sediment sources to Neoproterozoic– lower Paleozoic Maryland Piedmont rocks: Geosphere, v. 11, no. 4, p. 1042–1061, doi: 10.1130/GES01140.1

McCartan, Lucy, 1989a, Geologic map of Charles County, Maryland: Maryland Geological Survey, scale 1:62,500.

McCartan, Lucy, 1989b, Atlantic Coastal Plain sedimentation and basement tectonics southeast of Washington, D.C.: American Geophysical Union, 28th International Geological Congress, field trip guidebook T214, Washington, D.C., 25 p.

<http://onlinelibrary.wiley.com/book/10.1029/FT214>

McGee, W.J., 1885, Geologic formations underlying Washington and vicinity: Rept. Health Officer of the District of Columbia for the year ending June 30, 1885, by Dr. S. Townsend, p.19-21, 23-35.

Miall, A.D., 1977, A review of the braided river depositional environment: Earth Science Reviews, v. 13, p. 1-62. <http://www.sciencedirect.com/science/journal/00128252/13/1>

Mixon, R.B., and Newell, W.L., 1976, Preliminary investigation of faults and folds along the inner edge of the Coastal Plain in northeastern Virginia: U.S. Geological Survey Open-File Report 76-330. <http://pubs.er.usgs.gov/publication/ofr76330>

Mixon, R.B., and Newell, W.L., 1977, Stafford fault system: structures documenting Cretaceous and Tertiary deformation along the Fall Line in northeastern Virginia: *Geology*, v. 5, p. 437-440. <http://geology.gsapubs.org/content/5/7.toc>

Mixon, R.B., and Newell, W.L., 1978, The faulted Coastal Plain margin at Fredericksburg, VA: Reston, Virginia, Tenth Annual Virginia Geology Field Conference Guidebook, October 13-14, 1978, Virginia Academy of Sciences, 50 p.

Mixon, R.B., and Newell, W.L., 1982, Mesozoic and Cenozoic compressional faulting along the Atlantic Coastal Plain margin, Virginia, in Lyttle, P.T., ed., *Central Appalachian Geology: Geological Society of America, Northeast and Southeast Sections Annual Meeting Field Trip Guidebook: Falls Church, Virginia, American Geological Institute*, p. 29-54.

Mixon, R.B., Powars, D.S., and Daniels, D.L., 1992, Nature and timing of deformation of upper Mesozoic and Cenozoic deposits in the inner Atlantic Coastal Plain, Virginia and Maryland, in Gohn, G.S., ed., *Proceedings of the 1988 U.S. Geological Survey Workshop on the Geology and Geohydrology of the Atlantic Coastal Plain: U.S. Geological Survey Circular 1059*, p. 65-73. <https://pubs.er.usgs.gov/publication/cir1059>

Mixon, R.B., Pavlides, L., Powars, D.S., Froelich, A.J., Weems, R.E., Schindler, J.S., Newell, W.L., Edwards, L.E., and Ward, L.W., 2000, Geologic map of the Fredericksburg 30 x 60 minute quadrangle, Virginia and Maryland: U.S. Geological Survey Investigation Map I-2607, scale 1:100,000, 34 p. <https://pubs.er.usgs.gov/publication/i2607>

Mixon, R.B., Southwick, D.L., and Reed, J.C., Jr., 1972, Geologic map of the Quantico Quadrangle, Prince William and Stafford Counties, VA, and Charles County, MD: U.S. Geological Survey Geologic Quadrangle Map GQ-1044, scale 1:24,000. http://ngmdb.usgs.gov/Prodesc/proddesc_10589.htm

Naeser, N., Naeser, C., Southworth, S., Morgan, B., and Schultz, A., 2004, Paleozoic to recent tectonic and denudation history of rocks in the Blue Ridge province, central and southern Appalachians—evidence from fission-track thermochronology: *Geological Society of America Abstracts with Program*, v. 36, no.2, p. 114. https://gsa.confex.com/gsa/2004NE/finalprogram/abstract_69646.htm

Newell, W.L., Prowell, D.C., and Mixon, R.B., 1976, Detailed investigation of a Coastal Plain-Piedmont fault contact in northeastern Virginia: U.S. Geological Survey Open-File Report 76-329.

Obermeier, S.F., ed., 1984, *Engineering Geology and Design of Slopes for Cretaceous Potomac Deposits in Fairfax County, Virginia, and Vicinity: U.S. Geological Survey Bulletin 1556*, 88 p. <http://pubs.usgs.gov/bul/1556/report.pdf>

Obermeier, S.F., 1979, Slope stability map of Fairfax County, Virginia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1072, scale 1:48,000 <http://pubs.usgs.gov/mf/1072/plate-1.pdf>

Obermeier, S.F., 1996, Use of liquefaction-induced features for paleoseismic analysis - An overview of how seismic liquefaction features can be distinguished from other features and how their regional distribution and properties of source sediment can be used to infer the location and strength of Holocene paleo-earthquakes: *Engineering Geology*, 44(1-4): 1-76. <http://www.sciencedirect.com/science/article/pii/S0013795296000403>

Obermeier, S.F., 1998, Liquefaction evidence for strong earthquakes of Holocene and latest Pleistocene ages in the states of Indiana and Illinois, USA: *Engineering Geology*, 50: 227-254. <http://www.sciencedirect.com/science/article/pii/S0013795298000325>

Obermeier, S.F., and Langer, W.H., 1986, Relationships between geology and engineering characteristics of soils and weathered rocks of Fairfax County and vicinity, Virginia: U.S. Geological Survey Professional Paper 1344, 30 p. <https://pubs.er.usgs.gov/publication/pp1344>

Obermeier, S.F. et al., 1991, Evidence of Strong Earthquake Shaking in the Lower Wabash Valley from Prehistoric Liquefaction Features: *Science*, 251(4997): 1061-1063.

Pavrides, L., Bobyarchick, A.B., Newell, W.L., and Pavich, M.J., 1983, Late Cenozoic faulting along the Mountain Run fault zone, central Virginia Piedmont: *Geological Society of America*, abstracts with programs, v. 15, p. 55.

Petersen, M.D., Moschetti, M.P., Powers, P.M., Mueller, C.S., Haller, K.M., Frankel, A.D., Zeng, Yuehua, Rezaeian, Sanaz, Harmsen, S.C., Boyd, O.S., Field, Ned, Chen, Rui, Rukstales, K.S., Luco, Nico, Wheeler, R.L., Williams, R.A., and Olsen, A.H., 2014, Documentation for the 2014 update of the United States national seismic hazard maps: U.S. Geological Survey Open-File Report 2014-1091, 243 p., <http://dx.doi.org/10.3133/ofr20141091>.

Powers, D.S., Catchings, R.D., Horton, J.W., Jr., Schindler, J.S., and Pavich, M.J., 2015, Stafford fault system: 120 million year fault movement history of northern Virginia, *in* Horton, J.W., Jr., Chapman, M.C., and Green, R.A., eds., *The 2011 Mineral, Virginia, Earthquake and Its Significance for Seismic Hazards in Eastern North America*: Geological Society of America Special Paper 509, p. 407-431, doi: 10.1130/2015.2509(23). <http://specialpapers.gsapubs.org/content/509>

Robison, C. R., and C. N. Miller, Jr., 1977, Anatomically Preserved Seed Cones of the Pinaceae from the Early Cretaceous of Virginia: *American Journal of Botany*, v. 64(6), p. 770-779, 16 figures.

Seiders, V.M., and Mixon, R.B., 1981, Geologic map of the Occoquan Quadrangle and part of the Fort Belvoir Quadrangle, Prince William and Fairfax Counties, Virginia: U.S. Geological Survey Miscellaneous Investigations Map MI-1175, scale 1:24,000. http://ngmdb.usgs.gov/Prodesc/proddesc_9006.htm

Simmons, R.H., 2015, Remnant Natural Areas in Parks, Waterways, and Undeveloped Sites in the City of Alexandria, Virginia: Beauregard Street Corridor: Natural Resources Technical Report 12-2, Natural Resources Division, Department of Recreations, Parks, and Cultural Activities, City of Alexandria, Virginia, 30 p. <http://www.alexandriava.gov/uploadedFiles/recreation/parks/RemnantNaturalAreasBeauregardStreetCorridor2.pdf>

Smith, N.D., 1970, The braided stream depositional environment: comparison of the Platte River with some Silurian clastic rocks: Geological Society of America Bulletin, v. 81, p. 2993-3014. <http://gsabulletin.gsapubs.org/content/81/10.toc>

Smith, N.D., 1971, Transverse bars and braiding in the lower Platte River, Nebraska: Geological Society of America Bulletin, v. 82, p. 3407-3420. <http://gsabulletin.gsapubs.org/content/82/10.toc>

Smith, N.D., 1972, Some sedimentological aspects of planar cross-stratification in a sandy braided river: Journal of Sedimentary Petrology, v. 42, p. 624-634. <http://jsedres.sepmonline.org/content/42/3.toc>

Soil Survey Staff. 1999, Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys, 2nd edition: Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436, 754 p. <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/class/taxonomy/>

Southwick, D.L., Reed, J.C., Jr., and Mixon, R.B., 1971, The Chopawamsic Formation – A new stratigraphic unit in the Piedmont of northeastern Virginia: U.S. Geological Survey Bulletin 1324-D, p. D1 - D11. <http://pubs.er.usgs.gov/publication/b1324D>

Southworth, S., Drake, A.A., Jr., Brezinski, D., Wintsch, R., Kunk, M., Aleinikoff, J., Naeser, C., and Naeser, N., 2006, Central Appalachian Piedmont and Blue Ridge tectonic transect, Potomac River corridor, in Pazzaglia, F.J., ed., Excursions in geology and history: field trips in the middle Atlantic states: Geological Society of America Field Guide 8, p. 135-167. <http://fieldguides.gsapubs.org/content/8/135.abstract>

Stephenson, D.A., Fleming, A.H., and Mickelson, D.M., 1988, Glacial Deposits, in Back, W. and others, eds., Hydrogeology: Boulder, Colorado, Geological Society of America, The Geology of North America, v. O-2, p. 301-314.

Stephenson, R.W., 1981, The cartography of northern Virginia—1608 to 1915: Fairfax County, VA Office of Comprehensive Planning, History and Archaeology section, 145 p.

Sterrett, R., and Edil, T.B., 1982, Ground water flow systems and stability of slope: Ground Water, v. 20(1), p. 5-14.

U.S. Army Corps of Engineers, 1993, Bryans Road regional water supply study for Charles County, Maryland: US Army Corps of Engineers Baltimore District, 68 p.

U.S. Geological Survey, 1917, Washington and vicinity, scale 1:31,680

US Geological Survey, 1989, The severity of an earthquake - a U.S. Geological Survey General Interest Publication: U.S. GOVERNMENT PRINTING OFFICE: 1989-288-913. <http://pubs.usgs.gov/gip/earthq4/severitygip.html>

US Geological Survey, 2011, Community Internet Intensity Map and Related Data of the August 23, 2011 Mineral, Virginia earthquake: <http://earthquake.usgs.gov/earthquakes/dyfi/events/se/082311a/us/index.html>

U.S. Geological Survey, 2016, Earthquake hazards website: <http://earthquake.usgs.gov/>

Virginia Division of Mineral Resources, 1993, Geologic Map of Virginia: Charlottesville, VA, Division of Mineral Resources, scale 1:500,000.

<https://www.dmme.virginia.gov/commerce/ProductDetails.aspx?ProductID=1280>

Virginia Department of Transportation, Materials Division, 2007-2008, Woodrow Wilson Bridge Geotechnical Information Database (pilot project), Virginia Statewide Geotechnical Database Management System (GDBMS) http://gis.virginiadot.org/GDBMS_menu.asp, visited several times between November, 2007 and January, 2008. WWB site now inactive.

Ward, L.F., 1894, The Potomac Formation: U.S. Geological Survey 15th Annual Report, 1893-1894, p. 313-397. <http://pubs.er.usgs.gov/publication/ar15>

Wilson, J.M., and Fleck, W.B., 1990, Geology and hydrologic assessment of Coastal Plain aquifers in the Waldorf area, Charles County, Maryland: Maryland Geological Survey Report of Investigations No. 53, 138 p.

http://www.mgs.md.gov/publications/report_pages/RI_53.html

Zoback, M.L., 1992, Stress field constraints on intraplate seismicity in eastern North America: Journal of Geophysical Research, v. 97, no. B8, p. 11,761-11,782.

<http://onlinelibrary.wiley.com/doi/10.1029/92JB00221/abstract>