

VITA

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Education

Ph.D., Geology, 1992, University of Kentucky, Lexington, Ky.

M.S., Geology, 1985, University of Kentucky, Lexington, Ky.

B.S., Geology, 1982, University of Illinois, Urbana, Ill.

Professional Experience

Geologist (V), Acting head of Energy and Minerals Section, 2023 to present. Researcher in section, 1986 to present, Kentucky Geological Survey, University of Kentucky.

Adjunct Professor, 1998-present, Department of Geological Sciences, University of Kentucky.

GLY 130–*Dinosaurs and disasters* (spring and fall semesters, 2000-2016), GLY 715–*Coal Geology* (occasionally, 1995-present). Associate Professor standing (2015).

Instructor, Earth History, spring 1985 and research assistant (1983-1984), Department of Geological Sciences, University of Kentucky

Research Assistant, Coal Section, 1982, Illinois Geological Survey, Urbana, Ill.

Research Awards and Honors (see abstract list for complete citations)

AAPG–Division Environmental Geosciences Best Poster Award, 2020, to Nuttall, B.C., Sparks, T.N., and Greb, S.F., First International Conference on Exploration and Utilization of Underground Space–Best Paper, 2020, for Bowersox, J.R., Greb, S.F., and Harris, D.C.,

Gilbert H. Cady Award, 2019, Geological Society of America, highest award of the coal (now energy) division for coal research Distinguished Achievement in Geoscience Award, 2018, Geological Soc. of Ky., for contributions to Kentucky geology.

AAPG–A.I. Leverson Memorial Award (Best overall paper), 2017, for Parris, T.M., Hackley, P.C., Greb, S.F., and Eble, C.F.,

AAPG–Division of Environmental Geosciences Best Poster Award, 2017, for Bowersox, J.R., Greb, S.F., and Harris, D.C.,

Ralph I. Miller Memorial Award-Best Energy Minerals Division AAPG Paper, 2016, for Floyd, J., and Greb, S.F.,

AAPG–Certificate of Merit, 2016, AAPG, for work on organizing committee/ field trip chair

Gordon Wood Memorial Award, 2014, AAPG, Eastern Section Meeting, London, Ontario, Canada, for contributions to energy research in eastern United States.

GSA Coal Division Best Paper Award, 2013, Geological Society of America, National Meeting, Denver, CO.

Geological Society of America Fellow, 2008, Geological Society of America, National Meeting, Houston, TX.

AAPG–Energy Minerals Division Best Poster Award, 2007, Eastern Section, to Solis and Greb

GSA Distinguished Service Award, 2007, Geological Society of America National Meeting, Denver, CO.

GSA Division of Environmental Sciences Best Paper Award, 2006, for Greb, Harris, Solis, Parris, Drahovzal, Eble, Harris, Hickman, Lake, Overfield, and Takac, 2005, “Siting coal-fired power plants in a carbon-managed future...”

John C. Frye Memorial Award-Best Environmental Awareness Publication, 2005 for Ruthven, Kiefer, Greb, and Andrews, 2003, “Geologic maps and geologic issues...” presented at GSA Annual Meeting, Salt Lake City.

GSA Coal Division Best Paper Award, 2001, Geological Society of America National Meeting, Boston, MS.

Best Cartographic Design-Single Map Product, 3rd Place, 1999, ESRI User Conference, to Anderson and others

Ralph I. Miller Memorial Award-Best Energy Minerals Division AAPG Paper, 1999, Eastern Section Meeting, American Association of Petroleum Geologists, to Greb and Williams

GSA Coal Division Best Paper Award, 1998, Geological Society of America National Meeting, Toronto

Ralph I. Miller Memorial Award-Best Energy Minerals Division AAPG Paper, 1998, American Association of Petroleum Geologists, Eastern Section Meeting, to Greb and Weisenfluh

AAPG–Certificate of Merit, 1997, American Assoc. of Petroleum Geologists, meeting organizing committee, field trip chair

Ralph I. Miller Memorial Award-Best Energy Minerals Division AAPG Paper, 1996, AAPG, Eastern Section meeting.

AAPG–Energy Minerals Division Best Poster Award, 1996, AAPG, Eastern Section, to Greb, Eble, Hower, and Phillips

AAPG–Energy Minerals Division Best Poster Award, 1989, Eastern Section Meeting, to Greb and Chesnut
Vincent E. Nelson Memorial Award, 1988, AAPG, Eastern Section Meeting
AAPG–Energy Minerals Division Best Poster Award, 1988, Eastern Section Meeting
Pirtle Academic Award, 1984, Department of Geology, University of Kentucky, Lexington, Ky.

Professional Societies and Certification

Certified Kentucky Geologist (1994 to present)
 Geological Society of America (1988 to present)
 Coal Division, Officer, Chairman (2002-2003), various offices (1997-2002), co-webmaster (2004 to present)
 Education Division, Kentucky delegate to Southeastern Education Committee (1996)
 Professional Development Committee (2012 to present)
 Sedimentology Division
 American Association of Petroleum Geologists
 Energy Minerals Division
 Society of Sedimentary Geologists
 International Association of Sedimentologists
 Geological Society of Kentucky
 Kentucky Paleontological Society

Grants and Awards

Greb, S.F. and Beck, E., 1/15/2024-1/14/2026, Midcontinent stratigraphy of the Gulf Coastal Plain: Northern Embayment-Illinois, Kentucky, and Missouri: University of Illinois subcontract from USGS, \$66,500. Regional work to standardize post-Paleozoic stratigraphic nomenclature in the upper Mississippi Embayment.
 Greb, S.F., and Eble, C.F., 8/1/2021-3/20/2024, Illinois Basin Carbon Ore, Rare Earth, and Critical Minerals (CORE CM) Initiative: University of Illinois subcontract from U.S. DOE, \$101,785/year+ \$60,000 add on in 2023-2024. Compilation of data and sample preparation for regional assessment of REEs in coal and coal byproducts in the basin.
 Eble, C.F., and Greb, S.F., 10/1/2021-9/30/2023, Mid-Appalachian Carbon Ore, Rare Earth, and Critical Minerals (Mapp-CORE CM) Initiative: University of West Virginia subcontract from U.S. DOE, \$54,800/year. Compilation of data and sample preparation for regional assessment of REEs in coal and coal byproducts in the basin.
 Greb, S.F., 10/1/2019-9/30/24, Regional initiative to accelerate CCUS development (Midwest Regional Carbon Initiative, MRCI): Battelle Memorial Institute and the Illinois State Geological Survey, from U.S. DOE, \$120,000. Compilation of data and resources for Midwest and eastern US, as well as regional basement and fault mapping to better understand potential state of stress at basement.
 Greb, S.F., 2016-2017, Kentucky Coal Education-Core and mining geology: KY Energy and Environment Cabinet, \$44, 828. Provide web content and tutorials on core description and mining geology.
 Harris, D.C., Parris, T.M., and Greb, S.F., 2016, Berea Consortium Project. UK-industry consortium to study Berea Sandstone and source rocks in eastern Kentucky, \$180,000.
 Greb, S.F., 2015-2020, Kentucky coal and energy data for NCRDS: U.S. Geological Survey, \$75,000 (\$15,000/year for 5 years).
 Greb, S.F., and Nuttall, B.C., 9/2013-2018, Kentucky part of Phase 3 regional characterization project, Midwest Regional Carbon Sequestration Partnership (MRCSP), Battelle Memorial Institute from U.S. DOE, \$400,000 (\$100,000/year for 4 years) Regional characterization of Devonian shales, and CO₂ for enhanced gas and oil recovery.
 Harris, D.C., Bowersox, R.C., and Greb, S.F., summer/2012-spring/2013, Eastern Kentucky deep well for carbon storage assessment, part of Kentucky House Bill 1 funding, State of Kentucky, \$1.2 million. Drill stratigraphic test well to collect data on potential CO₂ storage reservoirs and seals in northeastern Kentucky.
 Eble, C.F., and Greb, S.F., 7/1/2011-6/30/2012, Petrographic and geochemical examination of Pennsylvanian marine beds as a potential petroleum (gas, oil) resource in the Appalachian and Illinois basins, USGS National Grants Branch, \$26, 730. Sampling and analyses of carbonaceous Pennsylvanian shales.
 Greb, S.F., 7/1/10-7/30/11, Geologic carbon storage data in Kentucky for use in the USGS National Carbon Dioxide Sequestration Assessment (COTSA). \$50,000. Provide USGS with regional subsurface analyses and data for their national CO₂ capacity assessments. Grant PI was transferred to W. Anderson in 2011.
 Greb, S.F., 6/10/10-8/31/11, Kentucky part of Phase 3 regional characterization project, Midwest Regional Carbon Sequestration Partnership (MRCSP), Battelle Memorial Institute from U.S. DOE. \$183,404/year. Regional characterization of St. Peter Sandstone and Trenton-Black River Formations, as well as development of a regional implementation plan.
 Greb, S.F., 12/1/09-19/30/12, Kentucky part of the simulation framework for regional carbon storage infrastructure along Arches Province of the Midwestern United States, Battelle Memorial Institute from U.S. DOE. \$150,000. Sampling and analyses of Mount Simon Sandstone and Eau Claire/Conasauga Formations for regional injection modeling.
 Greb, S.F., and Eble, C.F., 7/1/07-9/30/09, Kentucky part of the Southeast Regional Carbon Sequestration Partnership Phase II Task 10 Proposal Southeast Regional Carbon Sequestration Partnership (SECARB), funded by Marshall Miller and Assoc. from U.S. DOE. \$66,668. Analyses of deep Big Lime oil fields in southeastern Kentucky and desorption, adsorption, and petrography of selected coals.
 Greb, S.F., 7/1/2007-9/30/09, Matching grant from Kentucky Governor's Office of Energy Policy, \$12,500. Awarded matching indirect funds for SECARB grant.
 Parris, T.M., Greb, S.F., and Nuttall, B.C., 7/1/07-6/30/08 (x11/30/09) Evaluation of geologic CO₂ sequestration potential and CO₂ enhanced oil recovery in Kentucky: Kentucky Department for Energy Development and Independence, Kentucky Energy and Environment Cabinet, Contract No. PO2-855-0700010071. \$163,446, Summary of geologic sequestration options across Kentucky.

- Harris, D.C., Greb, S.F., and Drahovzal, J.A., 1/1/06—6/30/06, FutureGen project for Kentucky: Kentucky Office of Energy Policy, \$200,000. Collect data and aid in evaluating and writing proposal of a Kentucky site for the U.S. DOE FutureGen initiative.
- Greb, S.F., and Eble, C.F., 10/1/2005-9/30/09, Kentucky portion of field project 2-Coal and CBM, Southeast Regional Carbon Sequestration Partnership (SECARB), Phase 2 research: Virginia Tech from U.S. DOE. \$89,338. Analyses of subsurface stratigraphy of deep coals in southeastern Kentucky and correlations into western Virginia.
- Greb, S.F., and Eble, C.F., 1/1/06-6/30/08, Matching funds for Kentucky portion of field project 2, Southeast Regional Carbon Sequestration Partnership (SECARB): Kentucky Office of Energy Policy, \$23,338. Awarded matching indirect funds for MRCSP grant.
- Greb, S.F., and Nuttall, B.C., 7/01/07-6/30/08, Shale gas production and oil shale potential in Kentucky: U.S. Geological Survey, \$5,000, NCRDS add-on to sample Devonian Ohio Shale core and outcrop for USGS analyses.
- Weisenfluh, J., and Greb, S.F., 7/01/07-6/30/08, Training workshop for NCRDS cooperative partners: U.S. Geological Survey, \$30,000, NCRDS add-on to host meeting of national partners.
- Eble, C.F., and Greb, S.F., 7/01/07-6/30/08, Geology and paleontology of the Stoney Fork Member and surrounding strata in eastern Kentucky: U.S. Geological Survey, \$5,000, NCRDS add-on for sample collection and palynological analyses.
- Greb, S.F., and Drahovzal, J.A., 10/1/2005-9/30/09, Kentucky project team part of the Midwest Regional Carbon Sequestration Partnership (MRCSP): Battelle from U.S. DOE, Phase 2 Regional Carbon Sequestration Projects, \$354,114. Manage Kentucky part of the regional team, researching subsurface stratigraphy for potential CO₂ sequestration with regional site testing.
- Greb, S.F., 1/1/06-6/30/08, Matching funds for Kentucky portion of the MRCSP-DOE project: Kentucky Office of Energy Policy, \$72,625. Awarded matching indirect funds for MRCSP grant.
- Greb, S.F., and Drahovzal, J.A., 11/1/2005-3/1/06, Preliminary geologic assessment of the Cincinnati Arch site for Phase II research, Midwest Regional Carbon Sequestration Partnership: Battelle Memorial Institute from U.S. DOE, \$10,000. Geologic evaluation for the East Bend-Cincinnati Arch area demonstration well.
- Greb, S.F., Eble, C.F., and Overfield, B., 7/01/05-6/30/10, Kentucky Coal Data for the National Coal Resources Data System, sponsored by the USGS, NCRDS program 15-808, \$75,000. Manage student data collection and input for database. Several GIS projects involving coal beds.
- Fryar, A., and Greb, S.F., 7/01/03-6/30/05, Development of a conceptual stratigraphic model for the Paducah Gaseous Diffusion Plant and vicinity: Kentucky Research Consortium for Energy and Environment-U.S. DOE, \$116, 200. Research stratigraphy and near-surface geology around plant with student for student thesis.
- Drahovzal, J.A., and Greb, S.F., 10/01/03-9/30/04, Kentucky project team part of the Midwest Regional Carbon Sequestration Partnership: Battelle Memorial Institute from U.S. DOE, Phase 1 Regional Carbon Sequestration Projects, \$64, 336. Manage Kentucky part of the regional team, researching subsurface stratigraphy (oil and gas isopachs and structure) for potential CO₂ sequestration.
- Greb, S.F., Eble, C.F., and Drahovzal, J., 7/01/02-6/30/05, Cooperative Research-Appalachian Basin Framework, sponsored by the USGS, NCRDS program 15-808, \$74, 848. Manage funds for three separate projects on Appalachian basin in eastern Kentucky (coal quality database, conodont study, coal bed study).
- Greb, S.F., and Eble, C.F., 7/01/02-6/30/05, Kentucky coal data for National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, \$45, 000 (\$15K/year). Manage student data collection and input for database. Several GIS projects involving coal beds.
- Greb, S.F., 5/29/03-6/30-03, Award to Department of Geological Sciences from University of Kentucky, \$22,200.00. UK growth fund award for night class enrollment, spring semester 2002, GLY 130 class.
- Greb, S.F., 8/01/02-12/29/02, Award to Department of Geological Sciences from University of Kentucky, \$22,365.00. UK growth fund for night class enrollment, fall semester 2001 GLY 130 class.
- Greb, S.F., 9/01/2001-3/01/2002, Geology and stratigraphy of the Breathitt Formation in Eastern Kentucky, along US Highway 23, sponsored by Hibernia Management Company, New Foundland, Canada. \$7,000. Research and construction of GIS database for sequence stratigraphic modeling as analogue to Hibernia field in Canada.
- Greb, S.F., 8/01/01-12/29/01, Award to Department of Geological Sciences from University of Kentucky. \$18,398. UK growth fund for night class enrollment, spring semester 2001, GLY 130 class.
- Greb, S.F., 1/0/01-6/30/01, Award to Department of Geological Sciences from University of Kentucky. \$18,900. UK growth fund for night class enrollment, fall semester 2000 GLY 130 class.
- Greb, S.F., and Eble, C.F., 7/01/00-6/30/02, Computerized Kentucky coal data for the National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, \$78, 000. Manage student data collection and input for database. Also, manage and research on several Kentucky coal beds with deliverable GIS database.
- Greb, S.F., Eble, C.F., and Weisenfluh, G., 7/01/00-6/30/01, Revision (add-on) to Computerized Kentucky coal data for the National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, \$15, 000. Manage student data collection and input for database. Several GIS projects involving coal beds.
- Greb, S.F., 8/01/98-9/01/98, Earth science workshop: ALPS Program, Montgomery County Education Foundation, \$1,500. Plan and teach summer earth science workshop for middle school program.
- Greb, S.F., and Eble, C.F., 4/97-4/98, Computerization of Kentucky coal resource data for National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, \$123, 949. Manage student data collection and input for database.
- Chesnut, D.R., Jr., and Greb, S.F., 11/96-12/97, Geographic Information System (GIS) program and database for coal preparation plants in Kentucky, sponsored by Tennessee Valley Authority, \$29,500. Manage and research on slurry ponds in western Kentucky with deliverable GIS database.
- Weisenfluh, G. A., and Greb, S. F., 10/95-3/97, Mineability of the Hazard No. 8 coal study, sponsored by Cypress-Cumberland Mining Co., \$27,720. Research mining geology of the coal and surrounding strata in the study area.
- Greb, S. F., 11/95-11/96, Computerized coal resource data for the National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, \$15,000. Manage student data collection and input for database.
- Weisenfluh, G. A., and Greb, S. F., 12/94-12/95, Mine Investigation of the Hazard No. 4 Rider coal study, sponsored by Unicorn Mining Co., \$12,000. Research mining geology of the coal and surrounding strata in the study area.
- Greb, S. F. and Chesnut, D. R., Jr., 11/94-95, Computerized coal resource data for the National Coal Resource Data System, sponsored by the USGS, NCRDS program 15-808, 11/95-11/96, \$15,000. Manage student data collection and input for database.

Publications

Refereed Journal or Textbook articles

- Bowersox, J.R., Greb, S.F., Shu, J., and Harris, D.C., 2021, Geomechanical properties will constrain CO₂ injection into the Lower Ordovician Rose Run Sandstone deep saline reservoir, Appalachian Basin, Kentucky, U.S.A.: *Journal of Rock Mechanics and Geotechnical Engineering*, v. 13, no. 5, p. 947–960. <http://doi.org/10.1016/j.jrmge.2021.04.010>.
- Bowersox, J.R., Greb, S.F., and Harris, D.C., 2022, Reservoir properties and CO₂ storage capacity of the Rose Run Sandstone (Lower Ordovician, Knox Group) in the central Appalachian Basin, northeast Kentucky: *Frontiers in Energy Research*, v. 10, <http://doi.org/10.3389/fenrg.2022.832969>
- Greb, S.F., DiMichele, W.A., Gastaldo, R.A., Eble, C.F., Wing, S.L., Mehner, T. and Kockner, K., 2022, Prehistoric wetlands: *Encyclopedia of Inland Waters* (second edition): Elsevier (print on demand), 3, p. 23–32, <https://doi.org/10.1016/B978-0-12-819166-8.00066-9>
- Eble, C.F., Hackley, P.C., Parris, T.M., and Greb, S.F., 2021, Organic petrology and geochemistry of the Sunbury and Ohio Shales in eastern Kentucky and southeastern Ohio, *in* Parris, T.M., ed., *Devonian Ohio Shale-Berea Sandstone Petroleum System, Appalachian Basin USA: American Association of Petroleum Geologists, Bulletin*, v. 105, no. 3, p. 493–515.
- Hackley, P.C., Parris, T.M., Eble, C.F., Greb, S.F., and Harris, D.C., 2021, Oil-source correlation studies in the shallow Berea Sandstone petroleum system, eastern Kentucky, *in* Parris, T.M., ed., *Devonian Ohio Shale-Berea Sandstone Petroleum System, Appalachian Basin USA: American Association of Petroleum Geologists, Bulletin*, v. 105, no. 3, p. 517–542.
- Parris, T.M., Hackley, P.C., Greb, S.F., Eble, C.F., 2021, Molecular and isotopic gas composition of the Devonian Berea Sandstone and implications for gas evolution, eastern Kentucky, *in* Parris, T.M., ed., *Devonian Ohio Shale-Berea Sandstone Petroleum System, Appalachian Basin USA: American Association of Petroleum Geologists, Bulletin*, v. 105, no. 3, p. 575–595.
- Greb, S.F., Harris, D.C., and Bowersox, J.R., 2021, Reservoir geology of the Berea Sandstone (Uppermost Devonian), eastern Kentucky, *in* Parris, T.M., ed., *Devonian Ohio Shale-Berea Sandstone Petroleum System, Appalachian Basin USA: American Association of Petroleum Geologists Bulletin*, v. 105, no. 3, p. 597–628.
- Greb, S.F., Nelson, W.J., and Elrick, S.D., 2020, Mining geology of the principal resource coals of the Illinois Basin: *International Journal of Coal Geology*, v. 232, p. 103589, <https://doi.org/10.1016/j.coal.2020.103589>.
- Haneberg, W.C., Wiggins, A., Curl, D.C., Greb, S.F., Andrews, W.A. Jr., Rademacher, K., Rayens, M.K., and Hahn, E.J., 2020, A geologically based indoor-Radon potential map of Kentucky: *Geohealth*, v. 4(11), p. e2020GH000263 (13 p.)
- Valian, A. Groppo, J.G., Honaker, R., Eble, C.F., Hower, J.C., and Greb, S.F., accepted, Distribution of rare earth elements in the Illinois Basin Coals: *Mining, Metallurgy, and Exploration*, v. 38(4), p.1645–1663, <http://doi.org/s42461-020-00257-y>.
- Thomas, W.A., Gehrels, G.E., Sundell, K.E., Greb, S.F., Finzel, E.S., Clark, R.J., Malone, D.H., Hampton, B.A., and Romero, M.C., 2020, Detrital zircons and sediment dispersal in the eastern Midcontinent of North America: *Geosphere*, v. 16(3), p. 1–27, <http://doi.org/10.1130/GESO2152.1>.
- Eble, C.F., Greb, S.F., Williams, D.A., Hower, J.C. and O’Keefe, J.M., 2019, Palynology, organic petrology and geochemistry of the Bell coal bed in Western Kentucky, Eastern Interior (Illinois) Basin, USA: *International Journal of Coal Geology*, v. 213, p.103264, <http://doi.org/10.1016/j.coal.2019.103264>.
- Bowersox, J.R., Greb, S.F., and Harris, D.C., 2019, Porosity and CO₂ storage capacity of the Maryville–Basal Sands section (Middle Cambrian), southern Appalachian Basin, Kentucky: *Environmental Geoscience*, v. 26, p. 21–40, <http://doi.org/10.1306/eg.06181818004>.
- LeCottonneq, A., Ventra, D., Lathion, R., Greb, S., Moscariello, A., 2019, Progradational and retrogradational trends in Pennsylvanian fluvio-deltaic successions of the Grundy Formation (Appalachian foreland, SE Kentucky): Implications for the interpretation of cyclothems of the Breathitt Group: *Southeastern Geology*, v. 53, no. 2, p. 131–169.
- Eble, C.F., Greb, S.F., Williams, D.A., Hower, J.C. and O’Keefe, J.M., 2019, Palynology, organic petrology and geochemistry of the Bell coal bed in Western Kentucky, Eastern Interior (Illinois) Basin, USA: *International Journal of Coal Geology*, v. 213, p.103264.
- Greb, S.F., Eble, C.F., and Hower, J.C., 2018, *Coal: Encyclopedia of Geochemistry*, Springer International Publishing, 20 p.
- Eble, C.F., and Greb, S.F., 2018, Geochemical, petrographic and palynologic characteristics of two late middle Pennsylvanian (Asturian) coal-to-shale sequences in the eastern Interior Basin, USA: *International Journal of Coal Geology*, v. 90, p. 99–125.
- Eble, C.F. and Greb, S.F., 2017, Compositional variability of Middle Pennsylvanian coal beds near the north-west margin of the Eastern Kentucky Coal Field, Central Appalachian Basin, USA: *Palynology*, v. 41(sup1), p. 221–246.
- Thomas, W.A., Gehrels, G.E., Greb, S.F., Nadon, G.C., Satkoski, A., and Romero, M.C., 2017, Detrital zircons and sediment dispersal in the Appalachian foreland: *Geosphere* (online GSA publication), v. 13, no. 6, p. 2206–2230.
- Jerrett, R.M., Bennie, L.I., Flint, S.S. and Greb, S.F., 2016, Extrinsic and intrinsic controls on mouth bar and mouth bar complex architecture: Examples from the Pennsylvanian (Upper Carboniferous) of the central Appalachian Basin, Kentucky, USA: *Geological Society of America Bulletin*. v. 128, no. 11-12, p.1696–1716.
- Eble, C.F., and Greb, S.F., 2016, Palynologic, petrographic, and geochemical composition of the Vancleve coal bed in its type area, Eastern Kentucky Coal Field, Central Appalachian Basin: *International Journal of Coal Geology*, v. 158, p. 1–12.
- Greb, S.F., Storrs, G.W., Garcia, W.J. and Eble, C.F., 2015, Late Mississippian vertebrate palaeoecology and taphonomy, Buffalo Wallow Formation, western Kentucky, USA: *Lethaia*, v. 49, no. 2, p. 199–218.
- Greb, S.F., 2013, Coal more than a resource: Critical data for understanding a variety of earth-science concepts: *International Journal of Coal Geology*, v. 118, p. 15–32.
- Nelson, W.J., Greb, S.F., and Weibel, C.P., 2013, Pennsylvanian subsystem in the Illinois Basin: *Stratigraphy*, v. 10, p. 41–54.
- Greb, S.F., Riley, R. A., Bowersox, J.R., Solis, M.P., Rupp, J.A., Kelley, M., Harris, D.C., and Gupta, N., 2012, Extended Abstract—Ordovician Knox carbonates and sandstones of the eastern midcontinent: Potential geologic carbon storage reservoirs and seals, *in* Derby, J.R., Fritz, R.D., Longacre, S.A., Morgan, W.A., and Sternbach, C.A., eds., *The Great American Carbonate Bank: The Geology and Economic Resources of the Cambrian—Ordovician Sauk Megasequence of Laurentia: AAPG Memoir 98*, no. 45, p. 469a–478a.
- Greb, S.F., Riley, R. A., Bowersox, J.R., Solis, M.P., Rupp, J.A., Kelley, M., Harris, D.C., and Gupta, N., 2012, Ordovician Knox carbonates and sandstones of the eastern midcontinent: Potential geologic carbon storage reservoirs and seals, *in* Derby, J.R., Fritz, R.D., Longacre, S.A., Morgan, W.A., and Sternbach, C.A., eds., *The Great American Carbonate Bank: The Geology and Economic Resources of the Cambrian—Ordovician Sauk Megasequence of Laurentia: AAPG Memoir 98*, no. 45, p. 1077-1101.
- Archer, A.W., and Greb, S.F., 2012, Hypertidal facies from the Pennsylvanian Period: Eastern and Western Interior coal basins, USA, *in* Davis, R.A., and Dalrymple, R.W., eds., *Principles of Tidal Sedimentology*: Springer Publishing, p. 421-436.

- Greb, S.F., and Archer, A.W., 2011, Apogean-perigean signals encoded in tidal flats at the fluvio-estuarine transition of Glacier Creek, Turnagain Arm, Alaska: implications for ancient tidal rhythmites: *Sedimentology*, v. 58, p. 1434–1452.
- Falcon-Lang, H.J., Heckel, P.H., Dimichele, W.A., Blake Jr., B.M., Easterday, C., Eble, C.F., Elrick, S., Gastaldo, R.A., Greb, S.F., Martino, R.L., Nelson, W.J., Pfefferkorn, H.W., Phillips, T.L., and Rosscoe, S.J., 2011, No major stratigraphic gap exists near the Desmoinesian-Missourian Stage boundary in North America: *Palaio*, v. 26, p. 125–139.
- Greb, S.F., Riley, R. A., Solano-Acosta, W., Gupta, N., Solis, M.P., Rupp, J.A., Anderson, W.H., Harris, D.C., Drahovzal, J.A., and Nuttall, B.C., 2009, Cambro-Ordovician Knox carbonates as seal and potential targets for carbon sequestration in the eastern Midcontinent U.S.A., in Grobe, M., Pashin, J.C., and Dodge, R.L., eds., *Carbon Dioxide Sequestration in Geological Media—State of the Science: American Association of Petroleum Geologists Studies 59*, 19 p.
- Hower, J.C., Greb, S.F., Kuehn, K.W., and Eble, C.F., 2009, Did the Middlesboro, Kentucky, bolide impact event influence coal rank? *International Journal of Coal Geology*, v. 79, p. 92–96.
- Martino, R.L., and Greb, S.F., 2009, Walking trails of the giant terrestrial arthropod *Arthropleura* from the Upper Carboniferous of Kentucky: *Journal of Paleontology*, v. 83, (1) p. 140–146.
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- Greb, S.F., and Cobb, J.C., 1987, *The geology of roof falls: A training guide (educational slide set)*: U. S. Dept. of Labor, Mine Safety and Health Administration, Mine Safety and Health Academy, Educational Materials and Training Films, Beckley, W.V., AV28.
- Greb, S.F., 1985, *Structural control of Carboniferous sedimentation in the Madisonville and Indian Lake Paleovalleys, western Kentucky*: University of Kentucky, Department of Geology, M.S. Thesis, 155 p.
- Greb, S.F., Baker, B., Earle, D., 1985, *Geology of the Raven Run Nature Sanctuary*: Lexington-Fayette County Department of Parks and Recreation, Raven Run Nature Sanctuary, 17 p.
- Shepherd, R.G., and Greb, S.F., 1985, *Petroleum geology of Kentucky: a primer*: University of Kentucky, Institute Mining and Minerals Research, 375 p.

College Courses Taught

- GLY 130-Dinosaurs and disasters, University of Kentucky, Earth and Environmental Sciences, spring and fall semesters, 2000-2016.
- GLY 715-Coal geology, University of Kentucky, Earth and Environmental Sciences, co-taught with Jim Hower, Cortland Eble, Jim Cobb, and Don Chesnut, alternating semesters, periodically, 1995-2015,
- GLY 511, 1 class/semester, guest lecture on sequence stratigraphy 2006-2008.
- NRC 301/NRE 301, Natural resources of Kentucky, 1 class/semester or every other semester, guest lecturer on Ky. geology and energy, Natural Resources and Environmental Science, University of Kentucky, 2005-fall 2010.
- NRE 390-Special topics in natural resources and the environment/Master Naturalists Program; 1 class/semester guest lecturer on Ky. geology and energy, Natural Resources and Environmental Science, University of Kentucky, fall 2018-present.
- ME 101-Intro to mining, 1 class/semester, Geology and coal mining, Mining Engineering Department, University of Kentucky, 1999-spring, 2003.

Graduate Committees

- Maxwell Michelson, MS, in progress, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Gustavo Martins, PhD, 2024, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Anne Harris, 2018, PhD, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Dibya Koirala, 2017, PhD, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Julie Floyd, MS, 2014, chair, Dept. of Earth and Environmental Sciences, University of Kentucky
- Trent Garrison, PhD, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Corey Black Eagle, PhD, committee, Dept. of Earth and Environmental Sciences, University of Kentucky
- Ralph Bandy, MS, 2013, chair, Dept. of Earth and Environmental Sciences, University of Kentucky
- Forrest Webb, MS, transfer, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Melissa Bishop, PhD, transfer, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Devi Udgata, PhD, 2011, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Allison Richardson, MS, working, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Marta Clepper, PhD, 2011, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Bethany Overfield, MS, 2011, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Ryan Grimm, PhD, 2009, committee member, Dept. of Geosciences, Virginia Tech
- Lehne Slater, MS, 2009, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Chris Coughenor, PhD, 2009, committee member, Biology Dept., Drexel University
- Carrie Kidd, M.S., 2009, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Brent Wilhelm, MS, 2008, committee member, Dept. of Earth and Environmental Sciences, University of Kentucky
- Josh Sexton, MS, 2006, co-chair with Allan Fryar, Dept. of Geological Sciences, University of Kentucky
- Andrew DeJoux, MSc, 2005, external committee member, University of Canterbury, Christchurch, New Zealand
- Mike Shultz, MS, 2003, committee member, Dept. of Geological Sciences, University of Kentucky
- Jesse Korus, MS, 2003, external committee member, Department of Geosciences, Virginia Tech
- Dahlem, Mathew, MS, 2003, committee member, Dept. of Geological Sciences, University of Kentucky
- Alex Stewart, MS, 2002, committee member, Dept. of Geological Sciences, University of Kentucky

Short Courses, Field trips*, and Workshops Taught **not including trips with published field guides*

- Greb, S.F., 2024, *Geology of Kentucky and Natural Bridge State Park*, UK NRE 390-Master Naturalist Program, workshop and field trip, 3/23/2024.
- Greb, S.F., 2022, *Limestone in Kentucky*: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY, 6/2022.
- Greb, S.F., 2022, *Geology of Kentucky*: UK NRE 390-Master Naturalist Program, webinar, Fall/2022
- Greb, S.F., 2019, *Limestone in Kentucky*: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY, 6/2019.
- Greb, S.F., 2019, *Geology of Kentucky*: UK NRE 390-Master Naturalist Program, lecture and field trip, 9/21-9/22/2019.
- Greb, S.F., 2018, *Limestone in Kentucky*: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY, 6/19/2018.
- Greb, S.F., 2018, *Geology of Kentucky*: UK NRE 390-Master Naturalist Program, lecture and field trip, 9/2018

- Greb, S.F., 2018, Paleontology field trip to Maysville and AA highway: Kentucky Paleontological Society, 5/26/2018.
- Greb, S.F., 2017, Berea (U. Devonian) core workshop; Kentucky chapter of the American Institute of Professional Geologists: Kentucky Geological Survey, core facility, Lexington, Kentucky, 10/6/2017.
- Greb, S.F., and Harris, D.C., 2017, Berea (U. Devonian) core, eastern Kentucky: Core Workshop, Eastern Section American Association of Petroleum Geologists, 46th Annual Meeting, Morgantown, West Virginia, 9/26/2017.
- Greb, S.F., and Harris, D.C., 2017, Berea (U. Devonian) core, eastern Kentucky: Core Workshop, KGS annual meeting, Lexington, 5/19/2017.
- Greb, S.F., 2016, Berea core workshop: Lexington, KGS core facility, Final Berea Consortium project meeting, 10/26/2016.
- Greb, S.F., 2015, Pennsylvanian facies in the Illinois Basin, core workshop: Lexington, Kentucky, KGS annual meeting, Lexington, KY
- Greb, S.F., 2014, Geology of central Kentucky and Palisades, Floracliff Nature Sanctuary, 2-day workshop and hikes, 10/10-11/2014.
- Greb, S.F., 2014, Geology of Kentucky, workshop for 4H agents, 4H annual meeting, Lexington, KY, 12/2/2014.
- Greb, S.F., 2013, Geology of Kentucky: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY, 6/15.
- Greb, S.F., 2012, Geology of the Ohio River Valley: Falls of the Ohio Earth Discovery Day, Teacher workshop, Clarksville, IN, 10/12.
- Greb, S.F., 2012, Geology of Kentucky: Kentucky Crushed Stone Association Teacher's Workshop, Georgetown College, KY, 6/13.
- Greb, S.F., 2012, Geology of the Eastern Kentucky Coal Field, core workshop sponsored by TNO at KGS core facility, 4/20/2012.
- Greb, S.F., 2011, New Madrid earthquakes, and earthquake science, Teacher Workshop, Falls of the Ohio State Park, Clarksburg, IN
- Greb, S.F., 2011, Kentucky geology and limestone: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY 6/15.
- Greb, S.F., 2010, Limestone in Kentucky: Kentucky Crushed Stone Association, Teacher Workshop, Georgetown College, KY 6/16.
- Greb, S.F., 2010, Dinosaurs: Keynote speaker at Falls of the Ohio Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN 9/18
- Greb, S.F., 2009, Earth history and limestone in Kentucky: Kentucky Crushed Stone Association, Teacher Workshop, 6/09.
- Greb, S.F., 2008, Earth history and limestone in Kentucky: Kentucky Crushed Stone Association, Teacher Workshop, 6/08.
- Greb, S.F., 2008, Fossils at the Falls of the Ohio: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/08.
- Greb, S.F., 2007, Fossils at the Falls of the Ohio: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/07.
- Greb, S.F., 2006, Earth history and fossils: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/06.
- Greb, S.F., 2005, Dinosaurs: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/05.
- Greb, S.F., and Watson, A., 2005, Geologic mapping and using geologic maps, 2005, workshop at Kentucky Science Teacher's Association annual meeting, Lexington, Ky.
- Greb, S.F., 2005, Earth history and age dating: Fayette County Science teachers workshop, 4/20/2005.
- Greb, S.F., 2004, KGS website and earth history: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/05.
- Greb, S.F., and others, 2004, Coal issues in Kentucky, teacher's workshop sponsored by UK Dept. of Education at Robinson Forest, 9/10/2004
- Greb, S.F., Kruppa, J., and Taylor, D., 2004, Change through time: Tiered Mentoring Program, Fayette County Middle School Teachers, Lexington, KY, 6/04.-
- Greb, S.F., Ruthven, C.L., and Watson, A., 2003, Understanding and using KY geologic maps: Kentucky Science Teachers Association 29th Conference and Professional Development Meeting, Lexington, KY, 11/7/03.
- Greb, S.F., 2003, Kentucky geologic maps and digital data workshop: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/20/03.
- Greb, S.F., 2003, Geology and mining issues near Robinson Forest: Part of a Teacher Workshop sponsored by the University of Kentucky, Robinson Forest, KY, 9/12/03.
- Greb, S.F. and others, 2003, Kentucky ecosystems and geology, Teacher workshop at Tracey Farmer Center, University of Kentucky, 6/16-6/20/2003.
- Greb, S.F., and others, 2003, Earth science in Kentucky, workshop for Montgomery County ALPs program, 7/7/03.
- Ruthven, C.L., and Greb, S.F., 2002, K-12 earth history activities at the Earth Science Education Network, Kentucky Geological Survey: National Science Teachers Association Annual Meeting, Louisville, KY, 10/26/02.
- Greb, S.F., 2002, Prehistoric art-bringing dinosaur and other fossils back to life: Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/21/02.
- Greb, S.F., 2002, Kentucky Geology workshop: Teacher Workshop, Falls Fossil Festival, Falls of the Ohio State Park, Clarksburg, IN, 9/21/02.
- Greb, S.F., and Ruthven, C.L., 2001, Web-based fossil and earth history activities on the Earth Science Education Network, Kentucky Geological Survey: Kentucky Science Teachers Association meeting, Lexington, KY, 11/2/01.
- Greb, S.F., 2001, Weathering and erosion: Kentucky Department of Education, Region 8 Teacher's Workshop, Natural Bridge State Resort Park, KY, 10/20/01.
- Greb, S.F., 2001, Kentucky earth science: 1-day workshop for Montgomery County Schools at KGS, 7/23/2001.
- Greb, S.F., 2001, Fossils as evidence of ancient life and other earth history core content: Lewis County Teachers Workshop, Lewis County, KY, 5/17/01.
- Greb, S.F., Andrews, W.A., Chesnut, D.R., Jr., Eble, C.F., Hower, J.C., and Nutall, B., 2000, Coal assessment workshop—Western Kentucky coals: Short course to mining professionals held at the Days Inn, Madisonville, KY, 3/8.
- Greb, S.F., 2000, Oil and gas geology of Pound Gap area. Field trip for eastern Kentucky petroleum geologists, 7/2000.
- Greb, S.F., 2000, Geology of Cumberland Falls. Field trip for Mid-Atlantic section of Association for Education of Science Teachers, 9/16/2000.
- Nutall, B., Chesnut, D.R., Jr., and Greb, S.F., 1999, Coal-bed Methane in Kentucky: Petroleum Technology Transfer Council, KGS, and the Kentucky Society of Professional Geologists, University of Kentucky, Lexington, KY.
- Greb, S.F., 1999, The Earth Science Education Network: Short course for Kentucky Department of Education, District Science Consultants, Lexington, University of Kentucky, 1/19/1999.
- Greb, S.F. 1999, Earth Science and the Web: Kentucky Department of Education, Instructional Technology Leaders University, Carrollton, KY, 7/13/99.
- Greb, S.F., 1999, Earth Science for Appalachian Rural Systemic Initiative Science Partners: University of Kentucky, Appalachian Rural Systemic Initiative short course, Lexington, KY.
- Greb, S.F., 1999, Adventures in Learning Program-Earth Science: Montgomery County Educational Foundation, 6/28-7/22, 1999. Summer workshop for middle school children.
- Greb, S.F., 1998, Adventures in Learning Program-Science (ALPS): Montgomery County Educational Foundation, summer, 1998. 1-week summer workshop for middle school children.
- Weisenfluh, G.A., Greb, S.F., Chesnut, D.R., Jr., Thacker, E., Eble, C.F., and Andrews, W.A., 1998, Coal assessment seminar workshop—Lower Elkhorn coal bed: Kentucky Geological Survey and University of Kentucky OISTL, Holiday Inn, Prestonsburg, Ky.

- Greb, S. F., and Howell, P.D., 1997, Earth science in Kentucky: Kentucky Education Technology Conference, Using the Web to teach geology, Louisville, KY, 3/8/97.
- Greb, S. F., 1996, Geology of Kentucky for Kentucky educators: Kentucky Science Teacher's Association Meeting, Lexington, KY, 11/8/96.
- Greb, S. F., 1996, Teacher's workshop—Earth history in Kentucky: Falls of the Ohio State Park, Clarksville, IN, 9/28/96.
- Weisenfluh, G. A., Greb, S. F., and Eble, C. F., 1993, Applied geology for underground coal mining and property evaluation: University of Kentucky OISTL, Jenny Wiley State Park, KY, 6/24-25/93.
- Greb, S. F., 1993, Coal Science: National Coal Association's Kentucky Coal Issues Workshop, Paintsville, KY, 4/27/93.
- Greb, S. F., Weisenfluh, G. A., Eble, C. F., and Chesnut, D. R., Jr., 1992, Applied geology for underground coal mining and property evaluation: University of Kentucky OISTL and Elkhorn Coal Co., Jenny Wiley State Park, KY, 4/26-4/28/92.
- Greb, S. F., 1992, Coal Science: National Coal Association's Kentucky Coal Issues Workshop, Paintsville, KY, 11/4/92.
- Greb, S. F., 1991, Coal Science: National Coal Association's Teacher's Workshop, Jenny Wiley State Park, KY, 10/24/91.
- Greb, S. F., 1991, Coal Science: National Coal Association's Teacher's Workshop, Madisonville, KY, 9/26/91.
- Greb, S. F., 1991, Coal Science: Pike County Coal Association's Teacher's Workshop, Pikeville, KY, 6/28/91.
- Cobb, J. C., and Greb, S. F., 1990, Applied geology for underground coal mining and property evaluation, University of Kentucky OISTL and Kentucky Geological Survey, Lexington, KY, 5/10/90.
- Cobb, J. C., Weisenfluh, G. A., and Greb, S. F., 1987, Applied geology for underground coal mining and property evaluation, University of Kentucky, Institute for Mining and Minerals Research, Lexington, KY, 9/21-9/22/87.

K-16 Education Outreach Activities (non-workshop)

- KGS open house: Kentucky fossils and earth history exhibits and activities (1995?-present; every year during earth science week)
- KGS education committee chair (1995? to present). Coordinate KGS outreach to schools (school visits to KGS, staff visits to schools, loans of materials to schools, science fair judging, etc.)
- State finals 4-H rock and mineral collection judging chair (1995 to present)
- Annual presentations to Kentucky Paleontological Society (1993?-present)
- Annual to semi-annual presentations at Falls of the Ohio State Park (1999?-present).
- Talks to school groups at schools or visiting KGS (1986-present)
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- Co-chair Earth and Space Science, 2002, Intel International Science Fair, Louisville, KY.
- Keynote speaker at AETS annual meeting, 2000, Cumberland Falls, Kentucky, "Misconceptions in earth-science education—Sometimes its all in the wording."
- Science consultant to the Kentucky Department of Education, Kentucky Virtual High School, for development of a virtual high school earth and space science curriculum for the State of Kentucky (2001).
- Science consultant to the Kentucky Department of Education, Core Content Committee (summer, 1999).
- Member of Committee on Earth Science Educational Outreach, Eastern Section of American Association of Petroleum Geologists, 1998-??
- Science consultant to the Kentucky State Historical Museum, 1998, Frankfort, Kentucky. Helped plan and provided materials for a geology display of Kentucky rocks and minerals based on reports of a turn-of-the century display. In 1992, helped plan and provided art work for displays of Kentucky fossils.
- Kentucky's Earth Science Education Representative to the Southeastern Section of the Geological Society of America, 1996-?, Geological Society of America.
- Science consultant and Volunteer, Lexington Children's Museum, Lexington, KY, 1993-2000.
- Science Advisory Committee Member, 1991-1995, Living Arts and Science Center, Lexington, KY.

Some Artistic Achievements

- Fielding C.F., Frank, T.D., and Isbell, J. L., ed., 2008, Geological Society of America Special Publication 441, Cover art.
- Pashin, J.C., and Gastaldo, R.A., 2004, AAPG Studies, no. 51, Cover art.
- Petersen M.S., and Rigby, J. K., 1998, Interpreting Earth History—A manual in historical geology, 5th edition: Dubuque, Iowa, W. C. Brown. 6th ed., Cover art and numerous illustrations.
- Geotimes, 1994, cover art, v. 39, no.3.
- Rocks and Minerals, 1994, cover art, vol. 69, no. 3.
- Petersen M.S., and Rigby, J. K., 1993, Interpreting Earth History—A manual in historical geology, 5th edition: Dubuque, Iowa, W. C. Brown. Cover art and numerous illustrations.
- Rocks and Minerals, 1992, Dinosaur art and artists, vol. 67, no. 2. Interviewed as a featured artist, cover art.
- Silver Oddy Award (publishing award), 1991, to Odyssey Magazine at University of Kentucky for cover art by Greb, S.F., Progression of Life Poster.
- Chesnut, D. R., Jr., and Ettensohn, F. R., Jr., 1990, Hombergian (Chesterian) echinoderm paleontology and paleoecology, Kentucky: Bulletins of American Paleontology, v. 95, no. 330, 12 scientific illustrations.
- Peterson, M. S., and Rigby, J. K., 1990, Interpreting Earth History—A manual in historical geology: Dubuque, Iowa, W. C. Brown Publishers. Cover art (different cover than 1993, 5th edition cover).
- Earth Science Magazine, 1988, The progression of life, v. 41, no. 3, cover art.
- American Scholastic Press Association Outstanding Cartoon Award, 1984, for editorial cartoons, Kentucky Kernel, University of Kentucky, Lexington, Ky.