

Curriculum Vita

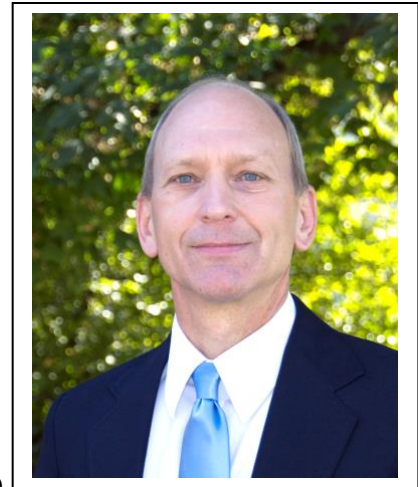
JEFFREY G. SKOUSEN

Jan 2020

Professor of Soil Science Extension Land Reclamation Specialist

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<http://extension.wvu.edu/natural-resources/land-reclamation>



Educational Background:

- Ph.D.** Texas A&M University, Range Science Department. 1985. GPA 3.6 (A=4.0).
Dissertation: Inter-seeding to Modify Reclaimed Bermudagrass Pastures on Lignite Mine Soils.
- M.S.** Brigham Young University, Botany and Range Science Department. 1982. GPA 3.6 (A=4.0).
Thesis: Restoring Big Game Range in Utah.
- B.S.** Brigham Young University, Botany and Range Science Department. 1981.
- A.S.** Brigham Young University, Music Department, Piano Technology. 1981.

Awards and Offices:

- 1991 Junior Faculty Certificate of Merit, WVU Chapter of Gamma Sigma Delta.
1993 Conservation Education Award, Monongahela Soil Conservation District.
1993 Outstanding Faculty Teaching and Advising, West Virginia University Agriculture and Forestry Council.
1993 Honorary State FFA Degree, West Virginia Future Farmers of America Organization.
1994 University Beginning Service Award (Heebink), West Virginia University.
1996 Honorary American FFA Degree, National Future Farmers of America Organization.
1997 Outstanding Service Award, College of Agriculture and Forestry, West Virginia University.
1999 Reclamation Researcher of the Year, American Society for Surface Mining and Reclamation.
2001 Outstanding Service to Chapter, WVU Chapter of Gamma Sigma Delta.
2001 Outstanding Service Award, WVU Division of Plant and Soil Sciences.
2002 Outstanding Research Award, WVU Division of Plant and Soil Sciences.
2004 Senior Faculty Certificate of Merit, WVU Chapter of Gamma Sigma Delta.
2006 Lifetime Conservation Service (Frank Glover Award), Monongahela Conservation District.
2009 Outstanding Researcher, Division of Plant and Soil Sciences, West Virginia University.
2009 Outstanding Teacher, Division of Plant and Soil Sciences, West Virginia University.
2011 Honorary American FFA Degree, National FFA Association.
2013 Outstanding Researcher, College of Agriculture, Natural Resources and Design, West Virginia University.
2014 Heebink University Career Service Award. West Virginia University.
2015 Golden Auger Award, WV Assoc. of Professional Soil Scientists
2015 WT Plass Lifetime Achievement Award, American Society for Mining and Reclamation.
2016 VIP Award, West Virginia Future Farmers of America Organization.
2017 Outstanding Service Award, WVU Division of Plant and Soil Sciences
2017 Outstanding Service Award, College of Agriculture, Natural Resources and Design, West Virginia University.
2019 Soil Science Applied Research Award, Soil Science Society of America.

- 1991 President, American Society for Surface Mining and Reclamation.
1994 President, Soil and Water Conservation Society, West Virginia Chapter.
1996 President, Gamma Sigma Delta, West Virginia University Chapter.
1996-02 Associate Editor, Journal of Environmental Quality, Soil Sci. Soc. Am., Madison, WI.
2004 President, American Society of Mining and Reclamation.
2004-18 Editor, Reclamation Matters, American Society of Mining and Reclamation.

Funded Proposals-Grants:

Principal Investigator: Total 30

- 1 1983-85 **Reclamation of Lignite Overburden in Texas.** Texas Utilities Generating Company. \$70,000.
- 2 1986-87 **Update of AMD Bulletin.** Surface Mine Drainage Task Force. \$6,000.
- 3 1986-89 **Sludge Applied to Reclaimed Minesoils.** Anker Energy Corp. \$1,500.
- 4 1987-88 **Methods of Measuring Forage Production on Minesoils.** USDI-Office of Surface Mining. \$18,700.
- 5 1988-91 **Reclamation of Abandoned Mine Lands.** USDI - National Mine Land Reclamation Center. \$85,000.
- 6 1989-90 **Organization of the 7th ASSMR Meeting.** WVU Water Research Institute. \$13,781.
- 7 1989-90 **Organization of the 1990 ASSMR Conference.** USDI-Office of Surface Mining. \$15,000.
- 8 1989-90 **Preparation and Mailing of Conference Program.** USDI-Bureau of Mines. \$21,450.
- 9 1989-97 **Land Application of Wastewater Sludges.** WV Division of Environmental Protection. \$270,000.
- 10 1989-97 **Evaluation of Reclamation Technologies.** USDI, National Mine Land Reclamation Center. \$510,000.
- 11 1991-93 **Treatment of Wastewater on Mined Lands.** WVU Extension Service. \$40,000.
- 12 1993-96 **Treatment of AMD by Anoxic Limestone Drains/Wetlands.** USDI-Bureau of Mines. \$182,000.
- 13 1993-95 **Wetland Plant Selection for Wastewater Treatment.** WVU Extension Service. \$44,460.
- 14 1993-97 **Remining as a Strategy to Reduce AMD.** USDI, National Mine Land Reclamation Center. \$95,000.
- 15 1996-97 **Hydraulic Conductivity of Ash Mixtures and Effects on AMD.** Anker Energy Corporation. \$22,694.
- 16 1996-98 **Open Limestone Channels for AMD Treatment.** USDI, National Mine Land Reclamation Ctr. \$167,000.
- 17 1997-98 **Growth of Forages in Hydraco Ash.** Patriot Mining Co. \$2,500.
- 18 1998-01 **Tree Growth on Reclaimed Mountaintop Removal Land in Southern West Virginia.** Arch Coal. \$25,000.
- 19 1998-99 **Evaluation of Reclamation Projects.** WV Division of Environmental Protection. \$69,500.
- 20 1999-01 **Prediction of AMD by Acid-Base Accounting.** OSM-ADTI. \$70,000.
- 21 2000-01 **Evaluation of WVDEP Passive Treatment Systems.** WV Division of Environmental Protection. \$40,000
- 22 2001-16 **Reforestation Practices on Mountaintop Surface Mines in West Virginia.** Arch Coal, \$250,000.
- 23 2002-07 **Native Plants for Highway Planting.** WV Division of Highways. \$475,000.
- 24 2006-13 **Tree Survival and Growth in Amended Topsoil Substitutes.** ICG-Eastern, \$65,000.
- 25 2008-10 **Hardwood Tree Growth Using FRA in West Virginia.** OSMRE, \$36,500.
- 26 2011-14 **Using Coal Combustion Products for Reclamation in Korea.** MIRECO of Korea, \$90,000.
- 27 2013-14 **Planting Bioenergy Crops at MWV and The Wilds.** NEWBio, \$20,000.
- 28 2015-17 **Tree and Shrub Plantings on Reclaimed Lands.** OSMRE, \$140,000.
- 29 2016-18 **Mine Soil Health.** NRCS, \$68,897.
- 30 2018-23 **Liming Acid Soils in Monongahela National Forest.** US Forest Service, \$219,000.

Co-Investigator: Total 39

- 1 1990-93 **Metals Removal from AMD using Ammonia/Wetlands.** Sexstone, PI. USDI/NMLRC. \$78,694.
- 2 1991-93 **Characterization of Minesoil for Wastewater.** Sencindiver, PI. WVU Water Research Inst. \$208,000.
- 3 1991-93 **Chemical Risk Assessment of Sediments in Mining.** Renton, PI. USDI/Bureau of Mines. \$179,657.
- 4 1991-93 **Hydrologic Modeling for Watershed Restoration.** Fletcher, PI. USDI/NMLRC. \$142,483.
- 5 1991-95 **Use of Mined Lands for Horticultural Crops.** Bearce, PI. Pocahontas Land Corporation. \$100,000.
- 6 1994-97 **Corridor H and Blackwater River Restoration.** Stout, PI. USEPA, Region 3. \$450,000.
- 7 1995-99 **Horticultural Crops on Reclaimed Minesoils.** Bearce, PI. Mingo Co Development Authority. \$78,440.
- 8 1995-96 **Restoration of Ecosystem Function Following Disturbance.** McGraw, PI. EPSCoR. \$50,000.
- 9 1997-01 **Aluminum Tolerance in Fungi.** Cumming, PI. National Science Foundation. \$327,470.
- 10 1998-99 **Iron Coating on Limestone and Limestone Dissolution.** McDonald, PI. NMLRC. \$32,000.
- 11 1998-00 **Acid Mine Drainage Closeout Strategy for the Alton Site.** WV Division of Environmental Prot. \$173,000.
- 12 1999-00 **Acid Drainage Technology Initiative Technical Program.** Ziemkiewicz, PI. USDI/OSM. \$200,000.
- 13 1999-01 **Quality of Soils on Mountaintop Removal Sites.** Sencindiver, PI. Arch Coal. \$30,000.
- 14 1999-00 **Mountaintop Mining Impacts on Terrestrial Habitats.** P. Wood, PI. EPA. \$182,000.
- 15 2000-01 **Reclamation of McCarty Highwall.** Ziemkiewicz, PI. EPA and WVDEP. \$125,000
- 16 2000-02 **Passive Treatment Using Steel Slag: Greens Run.** Ziemkiewicz, PI. WVDEP, EPA. \$172,000.
- 17 2000-02 **Remediation of Phosphate Soils with AMD Sludge.** Bhumbla, PI. WVDEP. \$134,000.
- 18 2000-01 **Monongahela Basin Mine Pool.** Ziemkiewicz, PI. USDOE-NETL. \$679,000.
- 19 2000-03 **Establishing Commercial Hardwoods on Mined Land.** Gorman, PI. Anker Energy. \$5,500.
- 20 2002-03 **Design Manual for AML Reclamation.** Ziemkiewicz, PI. USDOE-Geological Survey. \$26,000.
- 21 2000-05 **Remediation Measures for Highway Construction.** Fortney, PI. WV Division of Highways. \$528,000.
- 22 2004-06 **OSM Technology Transfer.** Ziemkiewicz, PI, USDI-OSM. \$140,000.
- 23 2000-10 **Acid Drainage Technology Initiative Technical Program.** Ziemkiewicz, PI. USDI-OSM. \$300,000.
- 24 2004-06 **WV221-Muzzleloader Club AMD Project.** Ziemkiewicz, PI. WVDEP. \$5,500.

- 25 2004-06 **WV223-Lower Cheat Watershed Passive Treatment Installation.** Ziemkiewicz, PI. WVDEP, \$325,000.
- 26 2008-10 **Soil Hydrologic Group for Minesoils Using FRA in Appalachia.** OSMRE, \$70,500.
- 27 2008-14 **Switchgrass Plantings on Mined Land for Biofuel.** WVDEP, \$200,000.
- 28 2008-10 **Re-Introducing Chestnut on Reclaimed Surface Mines.** OSMRE-TACF, \$200,000.
- 29 2009-12 **OSM Cooperative Agreement.** Ziemkiewicz, PI. USDI-OSM. \$200,000.
- 30 2010-14 **Biomass Production at Alton Project.** Gutta and Herd, PI. WVDEP, \$180,000.
- 31 2011-13 **Poultry-based Biochar Industry Road Map.** Anderson, PI. Blue Moon Fund, \$130,000.
- 32 2011-14 **Appalachian Research Initiative/Environmental Science.** Craynon, PI, VPI. \$5M. My share \$200,000.
- 33 2012-17 **NEWBio Consortium.** Richard, PI, Penn St. USDA-CAP, \$10M. My share \$275,000.
- 34 2014-15 **Woody Biomass on Mined Lands.** Schuler, PI, WV DOE, \$28,500.
- 35 2014-18 **Nutrient Management Interns.** McDonald, PI. NRCS. \$260,000. My share \$0.
- 36 2015-19 **Appalachian Freshwater Initiative.** Anderson, PI. EPSCoR, \$5.5M. My share \$100,000.
- 37 2016-18 **Spoil Type Effect on Discharge Water Quality at Reclaimed Mines.** Hass, PI, OSMRE, \$111,723.
- 38 2018-21 **Plant-Microbe Interactions on Bioenergy Crop Yield.** Freedman, PI. USDA-NIFA, \$750,000.
- 39 2018-21 **Regional Education Program in Land Reclamation.** Burns, PI. USDA-NIFA, \$631,000.

Professional and Research Experience:

12/85-now - **Extension Specialist-Land Reclamation and Professor.** Division of Plant and Soil Sciences, West Virginia University. Appointment is 65% Extension, 20% Teaching, and 15% Research.

Extension duties include providing information and consultation to coal mine operators, consultants, and regulatory agencies on acid mine drainage control and treatment, proper handling and placement of overburden materials during mining, revegetation of acid mine soils, hydrology of geologic/soil systems, and other reclamation issues. I coordinate the 4-H and FFA Land Judging Program in West Virginia. I participate in proper disposal and application wastewater sludge to lands, and work in various soil conservation and water quality activities in the State.

Teaching duty involves two classes: 1) ENVP 155, "Elements of Environmental Protection," and 2) AGRN 455, "Reclamation of Disturbed Soils". Both courses are taught every winter semester (January-May). Guest lectures and field trips for other classes are provided as needed.

Research duties include projects on mining practices, acid mine drainage control and treatment, chemical and passive treatment systems, wetlands, acid soils, AML reclamation and revegetation, highway construction and revegetation, reforestation, biomass growth on mined lands for biofuel, and treatment of wastewater and disposal of sludge (see list above).

Service duties include serving on Extension planning and development committees, various College and Division committees, and graduate student committees.

7/82-12/85 - **Graduate Research Fellow.** Range Science Department, Texas A&M University. Responsible for proposing, designing and conducting research on a revegetation system for lignite surface mines.

3/80-7/82 - **Biological Aide.** Big Game Range Forage Revegetation Project, Utah Division of Wildlife Resources. Planting, testing and evaluation of native and introduced grasses, forbs, shrubs, and trees, and their suitability for seeding on range improvement projects and other disturbed areas.

7/81-5/82 - **Graduate Research Assistant.** Botany and Range Science Department, Brigham Young University. Assisted in various research projects including Utah Lake ecological study, and ecosystem resources inventory for central Utah.

Professional Affiliations:

- American Society of Agronomy
- American Society for Mining and Reclamation
- Mine Drainage Task Force
- Soil Science Society of America
- Soil and Water Conservation Society
- West Virginia Association of Professional Soil Scientists

Interests and Hobbies:

- Church service
- Farming and forestry work
- Golf, tennis, softball, and other sports
- Member of the Piano Technicians Guild; piano tuning, repair and rebuilding
- Music: Pianist and Organist

Teaching Experience:

Reclamation of Disturbed Soils. (3 semester hours). Instructor. West Virginia University. This course integrates and applies the sciences of soils, geology, hydrology, chemistry, and biology to land disturbances (primarily in the context of surface mining) and reclamation. Course topics include history of mining and reclamation, coal resources and regions, mining methods, planning and assessing land disturbance impacts, overburden analysis and acid-base accounting, handling and placement of geologic materials, replacing soils, revegetating disturbed areas, evaluating water quality and other hydrologic problems, controlling and treating acid mine drainage, and developing productive post-mining land uses after reclamation. Problem sets provide a mathematical basis for designing and constructing remediation strategies including mining costs, coal mining income, mine design, flow calculations and pond sizing, watershed hydrology, overburden analysis, lime and fertilizer application rates and costs, and chemical and passive treatment design and cost. Three 1-hour lectures weekly. Taught since 1986. Two field trips.

Elements of Environmental Protection. (3 semester hours). Instructor. West Virginia University. This course provides an overview of many topics in environmental science with emphasis on current environmental issues and problems. We discuss land, water, and air resources, and scientific principles dealing with matter, energy, nutrients, ecosystems, and humans. We also explore ecological, societal, political, and economic concepts as they pertain to natural environments and man's impact on the earth's resources. We investigate our own perceptions of environmental integrity and rethink our own involvement in pollution activities. Mathematical exercises provide the skills to help understand significant environmental problems. Three 1-hour lectures weekly. Two field trips. Taught since 1998.

Principles of Soil Science Laboratory. (1 semester hour). Coordinator. West Virginia University. Three laboratory periods are taught each semester. I recruit and train three undergraduate or graduate students to teach, demonstrate, test and grade the students in the lab. Taught in 2016 and 2017.

Principles of Soil Science. (4 semester hours, lecture and laboratory). Instructor. West Virginia University. Soils are a fundamental natural resource for ecosystems and I try to teach an understanding of their physical, chemical, and biological properties. These properties are related to plant growth, land use and management, and environmental protection. Topics include rock classification and parent materials, soil formation and classification, texture, structure, density, soil water, clay mineralogy, soil acidity and liming, soil organisms, plant nutrients, fertilizers, erosion, reclamation, and pollution. Taught 1991-1997.

Principles of Ecology. (1 semester hour). Instructor. Texas A&M University. Responsibility for lecturing a 3-hour laboratory period each week on various topics in Ecology and methods for measuring vegetation and animal populations. 1983.

Range Watershed Management. (1 semester hour). Instructor. Texas A&M University. Responsibility for teaching 2 laboratory periods of 3 hours each per week. Topics included rainfall monitoring, infiltration, and runoff; erosion and sedimentation; collection and analysis of water pollution in Texas. 1983.

Instructor and Coordinator. Missionary Training Center, Brigham Young University. Duties involved lecturing, counseling and training adult missionaries, and conduction seminars and workshops. 7/1978 through 5/1980.

Graduate Student Education:

Graduate Students Advised: 37

Graduate Student Committees: 75

Publications:

Books, Book Chapters, Editor of Proceedings and Magazines: Total 35

- 1 Skousen, J. 2004-2019. Editor. Reclamation Matters. Spring and Fall, 30 issues, American Society of Mining and Reclamation. Lester Publications, Gainesville, FL. <http://ces.ca.uky.edu/asmr/Magazine.htm>
- 2 Skousen, J. 1990-2019. Editor. 29 issues. Proceedings of the West Virginia Mine Drainage Task Force Symposiums. Morgantown, WV. <http://wvmdtaskforce.com/>
- 3 Skousen, J., P. Ziemkiewicz, and L. McDonald. 2019. Acid mine drainage: sources and treatment in the United States. In: Encyclopedia of Water: Science, Technology, and Society. Wiley Publishers, New York.
- 4 Skousen, J., C. Zipper, L.M. McDonald, J.M. Hubbart, and P. Ziemkiewicz. 2018. Sustainable reclamation and water management practices. Chapter 21. In: J. Hirschi (ed.), Advances in Productive, Safe, and Responsible Coal Mining. Woodhead Publishing Series in Energy. Sawston, Cambridge, UK.
- 5 Skousen, J., and C. Zipper. 2018. Post-mining land use options in the Appalachian coal mining region of the USA. Paper 14-105. In: From Start to Finish – A Life-of-Mine Perspective. Australian Institute of Mining and Metallurgy, Carlton, Australia.
- 6 Skousen, J., C. Zipper, J. Burger, C. Barton, and P. Angel. 2017. Chapter 3: Selecting materials for mine soil construction when establishing forests on Appalachian mined lands. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 3-1 – 3-10.
- 7 Sweigard, R., J. Burger, C. Zipper, J. Skousen, C. Barton, and P. Angel. 2017. Chapter 4: Low compaction grading to enhance reforestation success on coal surface mines. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 4-1 – 4-8.
- 8 Strahm, B., R. Sweigard, J. Burger, D. Graves, C. Zipper, C. Barton, J. Skousen, and P. Angel. 2017. Chapter 5: Loosening compacted soils on mined lands. In: Adams, Mary Beth, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 5-1 – 5-6.
- 9 Burger, J., V. Davis, J. Franklin, C. Zipper, J. Skousen, C. Barton, and P. Angel. 2017. Chapter 6: Tree-compatible ground covers for reforestation and erosion control. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 6-1 – 6-8.
- 10 Groninger, J., J. Skousen, P. Angel, C. Barton, J. Burger, and C. Zipper. 2017. Chapter 8: Mine reclamation practices to enhance forest development through natural succession. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 8-1 – 8-7.
- 11 Burger, J., C. Zipper, P. Angel, N. Hall, J. Skousen, C. Barton, and S. Eggerud. 2017. Chapter 10: Establishing native trees on legacy surface mines. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 10-1 – 10-12.
- 12 French, M., C. Barton, B. McCarthy, C. Keiffer, J. Skousen, C. Zipper, and P. Angel. 2017. Chapter 12: Reestablishing American Chestnut on mined lands in the Appalachian coalfields. In: Adams, MB, ed. The Forestry Reclamation Approach: guide to successful reforestation of mined lands. Gen. Tech. Rep. NRS-169. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 12-1 – 12-9.
- 13 Zipper, C., C. Barton, J. Franklin, J. Skousen, P. Angel, and J. Burger. 2015. Best practices for forest restoration when reclaiming surface coal mines. Chapter 23. In: Responsible Mining: Sustainable Practices in the Mining Industry. Society of Mining, Metallurgy, and Exploration, Englewood, CO.

- 14 Skousen, J., and J. Jacobs. 2014. Stream characterization for acid mine drainage. Chapter 9. In: Jacobs, J., J. Lehr, and S. Tesla (eds.), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation*. John Wiley & Sons, New York.
- 15 Skousen, J., C. Mains, and J. Jacobs. 2014. Biological sampling and inventory process. Chapter 14. In: Jacobs, J., J. Lehr, and S. Tesla (eds.), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation*. John Wiley & Sons, New York.
- 16 Skousen, J., P. Ziemkiewicz, and J. Jacobs. 2014. Acid generation and drainage workshop: example calculations and solved problems. Chapter 27. In: Jacobs, J., J. Lehr, and S. Tesla (eds.), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation*. John Wiley & Sons, New York.
- 17 Skousen, J. 2014. Overview of acid mine drainage treatment with chemicals. Chapter 29. In: Jacobs, J., J. Lehr, and S. Tesla (eds.), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation*. John Wiley & Sons, New York.
- 18 Zipper, C., and J. Skousen. 2014. Passive treatment of acid mine drainage. Chapter 30. In: Jacobs, J., J. Lehr, and S. Tesla (eds.), *Acid Mine Drainage, Rock Drainage, and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention, and Remediation*. John Wiley & Sons, New York.
- 19 Odenheimer, J., J. Skousen, and L.M. McDonald. 2013. Predicting total dissolved solids release from overburden in Appalachian coal fields. p. 255-265. In: Craynon, J. (ed.), *Environmental Considerations in Energy Production*. Soc. Mining, Metallurgy and Exploration, Inc. Englewood, CO. 540 pp.
- 20 Skousen, J., and C. Zipper. 2013. Reclamation of disturbed coal mined lands. Chapter 11. p. 407-477. In: Bise, C. (ed.), *Modern American Coal Mining: Methods and Applications*. Society of Mining, Metallurgy and Exploration, Inc. Englewood, CO. 576 pp.
- 21 Skousen, J., and G.F. Vance. 2012. Groundwater: Pollution from Mining. *Encyclopedia of Environmental Management*. CRC Press, Taylor and Francis LLC.
- 22 Skousen, J. 2004. *Acid Mine Drainage: Sources and Treatment in the United States*. *Encyclopedia of Water*. John Wiley & Sons, New York.
- 23 Barnhisel, R., and J. Skousen. 2004. Editors. *Proceedings of the 25th West Virginia Surface Mine Drainage Task Force Symposium and the 21st National Conference of the American Society of Mining and Reclamation, April 18-22, 2004*, Morgantown, WV, 754 pp.
- 24 Skousen, J., and G. Vance. 2003. Surface water pollution from mining activities. P. 956-960. In: *Encyclopedia of Water Science*, B.A. Stewart and T. Howell, editors. Marcel Dekker, Inc., New York.
- 25 Vance, G., and J. Skousen. 2003. Groundwater pollution from mining activities. P. 363-368. In: *Encyclopedia of Water Science*, B.A. Stewart and T. Howell, editors. Marcel Dekker, Inc., New York.
- 26 McDonald, L.M., Q. Sun, J.G. Skousen, and P.F. Ziemkiewicz. 2001. Water quality prediction model in open limestone systems. p. 279-282. In: H. Xie, Y. Wang, and Y. Jiang (Eds.) *Computer Applications in the Mineral Industries*. A.A. Balkema Publ, Lisse.
- 27 Skousen, J. 2000. Static Tests for Coal Mining Acid Mine Drainage Prediction in the Eastern U.S. In: Kleinmann, R.L.P. (Ed.), *Mine Water Quality Prediction by the Acid Drainage Technology Initiative Coal Prediction Workgroup*. Acid Drainage Technology Initiative (ADTI) of the U.S. Office of Surface Mining. Published by the National Mine Land Reclamation Center, Morgantown, WV.
- 28 Skousen, J., C. Mains, and R. Hamilton. 2000. You can't judge a stream by its color. Handbook to accompany a video by the same title. Published by the WVU Extension Service, Morgantown, WV.
- 29 Skousen, J.G., A.J. Sexstone, and P.F. Ziemkiewicz. 2000. Acid mine drainage control and treatment. Chapter 6. In: *Reclamation of Drastically Disturbed Lands*. Agronomy No. 41. American Society of Agronomy and American Society for Surface Mining and Reclamation. Madison, WI.
- 30 Sobek, A.A., J.G. Skousen, and S.E. Fisher. 2000. Chemical and physical properties of overburdens and spoils. Chapter 4. In: *Reclamation of Drastically Disturbed Lands*. Agronomy No. 41. American Society of Agronomy and American Society for Surface Mining and Reclamation. Madison, WI.
- 31 Skousen, J., A. Rose, G. Geidel, J. Foreman, R. Evans, and W. Hellier. 1999. Handbook of technologies for avoidance and remediation of acid mine drainage. Acid Drainage Technology Initiative (ADTI) of the U.S. Office of Surface Mining. Published by the National Mine Land Reclamation Center, WVU, Morgantown, WV.
- 32 Skousen, J.G., and P.F. Ziemkiewicz. 1996. *Acid mine drainage control and treatment*. 2nd Ed. National Mine Land Reclamation Center and West Virginia University, Morgantown, WV. 254 pp.
- 33 Skousen, J., A. Sexstone, K. Garbutt, and J. Sencindiver. 1994. Acid mine drainage treatment with wetlands and anoxic limestone drains. Chapter 12. p. 263-281. In: D.A. Kent (ed.), *Applied Wetlands Science and Technology*. CRC Press/Lewis Publishers, New York, NY. 436 pp.
- 34 Skousen, J., J. Sencindiver, D. Samuel (Eds.). 1990. *Proceedings of the 1990 Mining and Reclamation Conference and Exhibition*. 2 Vols. West Virginia University. Morgantown, WV. 615 pp.
- 35 Skousen, J.G., J.C. Sencindiver, and R.M. Smith. 1987. A review of procedures for surface mining and reclamation in areas with acid-producing materials. WVU Energy and Water Research Center. Publication EWRC 871. Morgantown, WV.

Journal Articles: Total 89

- 1 Caterino, B., J. Schuler, S. Grushecky, and J. Skousen. 2020. Early growth and survival of shrub willow on newly reclaimed mine soil. *New Forests*. DOI 10.1007/s11056-020-09776-4
- 2 Dallaire, K., and J. Skousen. 2019. Early tree growth in reclaimed mine soils in Appalachia USA. *Forests* 10:549. DOI 10.3390/f10070549
- 3 Skousen, J., P. Ziemkiewicz, and L. McDonald. 2019. Acid mine drainage formation, control and treatment: approaches and strategies. *Extractive Industries and Society* 6:241-249. DOI 10.1016/j.exis.2018.09.008
- 4 French, M., C. Barton, B. McCarthy, C. Keiffer, J. Skousen, C. Zipper, and P. Angel. 2018. Re-establishing American chestnut on mined lands in the Appalachian coalfields. *J. Environmental Solutions for Oil, Gas, and Mining*: 4(1) 11-19. DOI 10.3992/2377-3545-4.1.11
- 5 Monteleone, A., J. Skousen, J. Shuler, L. McDonald, R. Williams, I. Holaskova. 2018. Survival and growth of 20 species of trees and shrubs on Appalachian surface mines. *Land Degrad. Develop.* DOI 10.1002/ldr.2962.
- 6 Scagline-Mellor, S., T. Griggs, J. Skousen, E. Wolfrum, I. Holaskova. 2018. Switchgrass and giant miscanthus biomass and theoretical ethanol production from reclaimed mine lands. *BioEnergy Research* 11:562-573. DOI 10.1007/s12155-018-9915-2.
- 7 Skousen, J., K. Dallaire, S. Scagline-Mellor, A. Monteleone, L. Wilson-Kokes, J. Joyce, C. Thomas, T. Keene, C. DeLong, T. Cook, D. Jacobs. 2018. Plantation performance of chestnut hybrids and progenitors on reclaimed Appalachian surface mines. *New Forests*. DOI 10.1007/s11056-018-9643-7.
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