Shawn T. Grushecky

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Education and Training

West Virginia University	Forest Resources Science, 2011	Ph.D
West Virginia University	Forest Resources Science (Wildlife Res.), 1995	M.S.
West Virginia University	Wildlife Resources, 1993	B.S.

Professional Experience

2023 – Pres	Associate Professor, Energy Land Management
2016 -2023	Assistant Professor and Program Coordinator, WVU Energy Land Management
2003-2016	Associate Director, WVU Appalachian Hardwood Center

Recent Grants

1. Talan, D., O. Sanyal, F. Lima, and S. Grushecky 2024. Critical mineral extraction from coal acid mine drainage via solid-phase biochar adsorption. US DOI OSMRE. $200,000 (announced)

2. Grushecky, S.T., J. Schuler and D. McGill. 2024. Using West Virginia State Forests as Examples of Impactful Invasive Management. USDA Forest Service $425,000 (announced)

3. Grushecky, S.T. and J. Schuler. 2024. Carbon Environmental Management System. $231,455

4. Wang, J., D. Bhattacharyya, S. Grushecky, Z. Liu, and J. Schuler. 2022. Integrated life cycle and techno-economic assessments of central Appalachian legacy mine sites for biomass development and waste coal utilization. US. DOE. $400,000

5. Kinder, P., M. Strager and S. Grushecky. 2022. NRAC 452-Machine Enabled Targeting and Eradication of Autumn Olive (Elaeagnus umbellata) on Reclaimed Mine Lands. US DOI – Office of Surface Mining. $200,000

6. Wang, J.X. N. Anderson, R. Bergman, C. Bolding, D. Ciolkosz, Z. Freedman, S. Grushecky, J. Hu, E. Johnstonbaugh, J. Leahy, J. Schuler, T. Volk. 2020. Mid-Atlantic Sustainable Biomass Consortium (MASBio).

U.S. Department of Agriculture, National Institute of Food and Agriculture (USDA NIFA), 2020. $10,000,000

7. Strager, M., P. Kinder, and S.T. Grushecky. 2019. Unmanned Aerial Systems for Pipeline Inspection, Monitoring, and Landscape Analysis. US DOT – Pipeline & Hazardous Materials Safety Administration. $264,957

RECENT PUBLICATIONS

1. Hu, W.; Wang, J.; Hu, J.; Schuler, J.; Grushecky, S.; Jiang, C.; Smith, W.; Nan, N.; Sabolsky, E.M. Combustion Behaviors, Kinetics, and Thermodynamics of Naturally Decomposed and Torrefied Northern Red Oak (Quercus rubra) Forest Logging Residue. Energies 2024, 17, 1607. https://doi.org/10.3390/en17071607

2. Brown, D.J., S.C. Knopka, S.T. Grushecky, S.F. Owen, J.W. Edwards. 2023. Influence of natural gas pipeline right-of-ways on eastern red-backed salamander occurrence in the Northern Appalachians. Journ. Fish & Wildlf Manage 10.3996/JFWM-22-032

3. Mesa, A. N., Strager, M. P., Grushecky, S. T., & Kinder, P. 2023. Using Unmanned Aerial Vehicles to Evaluate Revegetation Success on Natural Gas Pipelines. Environmental Management, 1-11.

4. Hu, W., Wang, J., Hu, J., Schuler, J., Grushecky, S., Nan, N., W. Smith & Jiang, C. 2023. Thermodegradation of naturally decomposed forest logging residues: Characteristics, kinetics, and thermodynamics. Bioresource Technology, 376, 128821. https://doi.org/10.1016/j.biortech.2023.128821

5. Vance, J., Wang, J., Zhang, X., Grushecky, S., & Spinelli, R. 2023. Chipping operations and chip quality from mixed hardwood forests for bioenergy. International Journal of Forest Engineering, 1-13. https://doi.org/10.1080/14942119.2023.2187677

6. MacKenzie, A., W. E. Veselka, P. Kinder, M. P. Strager, S. T. Grushecky, J. A. Hubbart, and J. T. Anderson. 2023. Restoring a first order stream and adjacent riparian wetlands in West Virginia: Integrating lessons from wetland science and practice. Wetland Science and Practice 41(2):61-69 (*Technical Report*)

7. Grushecky, S.T., K. Harris, M. Strager, J. Wang, and A. Mesa. 2022. Land Cover Change Associated with Unconventional Oil and Gas Development

in the Appalachian Region. Environ Manage. 70(5), 869-880 DOI: 10.1007/s00267-022-01702-y

8. Grushecky, S.T. Zinkhan, C., Strager, M., and T. Carr. 2022. Energy production and well site disturbance from conventional and unconventional natural gas development in West Virginia. Energy, Ecology and Environment https://doi.org/10.1007/s40974-022-00246-5

9. Strager, M. P. Kinder, and S. Grushecky. 2021. Utilizing unmanned aerial vehicles to predict surface runoff. Reclamation Matters, Spring 2021: 14-20.

10. González, J. J., Quesada, H., Adhikari, S., Bond, B., & Grushecky, S. 2020. Design of a Total Revenue Forecasting Tool to Estimate the Economic Output of Hardwood Logs. Forest Products Journal, 70(4), 439-447 (JAN 2021)

RECENT PRESENTATIONS

1. Grushecky, S.T. 2024. Gob and Go: Mining Refuse in Appalachia. May 2024 WV Woodland Stewards Seminar.

2. Grushecky, S.T, J. Schuler, J. Wang, and K. McCandless. 2024. The Restoration Challenge: Approaches to Mining Refuse in Appalachia. 2024 Appalachian Land Institute. April 5-6, Pittsburgh, PA.

3. Grushecky, S.T. 2023. MASBIO and Biochar. West Virginia State University Agricultural Research and Extension Biochar and Biochar Production workshop. Oct. 21, 2023. WVDA Lakin State Farm grounds

4. Kohrs, K., S.T. Grushecky, and J. Schuler. 2023. Second year impacts of biochar and compost additions on tree growth in a stream restoration project. Forest Carbon Management in Central Appalachia Conference, September 25-27, 2023, Morgantown, WV. Poster Presentation.

5. Baker, J., D. Brown, S. Grushecky, S. Owen, J. Schuler, and J. Edwards. 2023. Preliminary Findings on a Relationship Between Percent Soil Organic Matter and Salamander Relative Abundance [Poster presentation]. Proceedings of the 2023 Forest Carbon Management in Central Appalachia Conference. West Virginia University, 25–27 September 2023, Morgantown, West Virginia, USA.

6. Kohrs, K., S.T. Grushecky, J. Schuler, M. P. Strager, and R. Burns. 2023. Modeling Surface Mine Use for Potential Bioenergy Crop Development. EnerGIS 2023 Conference, September 21, 2023, Canonsburg, PA

7. Kohrs, K., S.T. Grushecky, and J. Schuler. 2023. Second year impacts of biochar and compost additions on tree growth in a stream restoration project. Year 3 Annual Meeting for Mid-Atlantic Sustainable Biomass for Value-added Products Consortium, September 11-13, 2023, State College, PA. Poster Presentation

8. Smith, A., J. Schuler, R. Chandran, and S. Grushecky. 2023. Screening herbicides to control weeds in newly established willow biofeedstock plantations. MASBIO Annual Meeting, State College, PA, September 11-13, 2023

9. Kohrs, K., S.T. Grushecky, and J. Schuler. 2023. Second year impacts of biochar and compost additions on tree growth in a stream restoration project. 2023 Forest Products Society International Conference, June 6-8 2023, Morgantown, WV Poster Presentation

10. Grushecky, S.T. 2023. MASBIO: Energizing the Mid-Atlantic Bioeconomy. Forest Resource Association Annual Meeting. May 24, 2023, Morgantown, WV.

11. Grushecky, S.T. 2023. Carbon Markets and NetZero 101. 2023 Appalachian Land Institute. Mar 21-22, Pittsburgh, PA.

12. Hass, A., S. T. Grushecky, T. Volk, H. Payne, J. Schuler, C. Bolding, D. Ciolkosz, J. Wang, and M. Ramsey. 2022. Educating future producers and users of biochar in the Mid-Atlantic region. North American Biochar & Bioenergy Conference. Aug 8-11, Morgantown, WV.

13. Grushecky, S.T., D. McGill, M. Jacobsen, and E. Thomchik. 2022. MASBIO: Energizing the MidAtlantic bioeconomy. North American Biochar & Bioenergy Conference. Aug 8-11, Morgantown, WV.

14. Grushecky, S.T. and J. Schuler. 2022. Biochar & compost blends as a soil amendment in restoration tree plantings. North American Biochar & Bioenergy Conference. Aug 8-11, Morgantown, WV.

15. Schuler‡, J., Z. Freedman, S. Grushecky, and J. Skousen. 2022. Early results of biochar amendments in biomass plantings in the Mid-Atlantic region. North American Biochar & Bioenergy Conference. Aug 8-11, Morgantown, WV.

TEACHING AND UNDERGRADUATE EDUCATION

Courses Taught

1. ENLM 150: Introduction to Energy Land Management
2. ENLM 200: Principles of Energy Land Management
3. ENLM 220: Energy Production and Operations
4. ENLM 450: Energy Land Management Strategic Planning/Capstone
5. ENLM 491: Energy Land Management Professional Field Experience
6. ENLM 493B: Midstream Energy and Water.
7. ENLM 493B: Nature-based Land Development

Graduate Students as Major Advisor

1. F. Zinkhan. 2017. Trust Asset Manager, Cushman & Wakefield
2. D. Tiberi. 2019. Conservation Technician, Delaware DNR
3. M. Sterne. 2019. Production Planner. Newport News Shipbuilding
4. K. Kulp. 2019. Logistics Analyst. Enterprise Resource Plan (ERP)
5. M. Boothe. 2020. Analyst. Pikewood Energy
6. K. Harris. 2020. Forester. Landmark Forestry
7. S. Knopka. 2021. Natural Resource Specialist. USDA Forest Service
8. T. Knox. 2021. Plant administrator. XCL Midstream
9. S. Anderson, 2022, Morris Mountaineer Mineral Management
10. Mesa, 2022. Research Manager, WVU Natural Resources Analysis Center
11. K. Kohrs, 2024. GIS Specialist at Gateway Area Development District

Post-Docs Mentored

Michael Vanderberg, Forest Engineer, BLM.