

CHARLES B. YUILL

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School of Design and Community Development
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I. BACKGROUND

A. EDUCATION

University of Wyoming, Laramie, Wyoming. - Geology.
Pennsylvania State University, State College, Pennsylvania. - Landscape Architecture - BSLA.
University of Massachusetts, Amherst, Massachusetts.
M.L.A. in Landscape Architecture and Planning.
Doctoral Program in Forest Ecology - West Virginia University (1991-1997). Research focus: Forest Inventory in the Central Appalachians Using Geographic Data: Landscape Ecology Approaches. Studies terminated prior to completion of final examination and dissertation.

B. TEACHING EXPERIENCE

Associate Professor of Landscape Architecture and Environmental Design
Program Coordinator – Landscape Architecture and Environmental Design (2010 to date). School of Design and Community Development – West Virginia University.
Davis Michael Professor of Design and Community Development 2017 to 2022.

Division of Resource Management and the Natural Resource Analysis Center (NRAC), West Virginia University. 1990 to date. Co-founder and Associate Investigator.

C. CURRENT ENVIRONMENTAL PLANNING INTERESTS

Focus is primarily in community planning, design and engagement with emphasis on public participation utilizing traditional engagement tools such as charrettes, meetings, and surveys with emerging methods utilizing computer simulations, visualizations and in-the-field visitor/user response measurement observation and devices. Landscape assessment and characterization, historic / cultural resource management, and environmental restoration are also major practice and research areas. Land and water management project visual/scenic and perceptual aspects have been a major aspect of my research and consulting activities as well. Research in these areas extends back to the 1970's with research projects and publications focused in forest management visual assessments; limits of acceptable change studies in wilderness areas; change assessments for metropolitan landscapes; and landscape modeling and visualization for numerous applications and landscape types in the eastern United States as well as the west and Canada.

- Utilizing high resolution / high fidelity data capture and modeling methods in cultural resource and landscape archaeologic studies focusing on examining the roles that remains, ruins and traces can play in historic resource documentation and interpretation in the landscape.
- Environmental visualization utilizing realistic science based methods.
- Brownfield and other disturbed landscape documentation, planning and design.

D. EXPERIENCE AND BACKGROUND

Remote sensing and digital image processing multispectral sensing using high resolution cameras to LANDSAT and MODIS satellite data sources.

Plans and designs for sites with difficult environmental conditions including coal and metal mines, wetlands, unstable stream channels, steep slopes, subsidence, and invasive species.

Project types ranged from intensive site surveys to statewide mapping projects in Maine, West Virginia, Wyoming and Pennsylvania.

Airborne LIDAR including basic processing for forest characterization, cultural and heritage resource documentation, and urban planning and design applications.

Terrestrial LIDAR focusing on heritage and archeological investigations as well as applications to stream and wetland restoration.

Designed and constructed two remote sensing systems – one based on GPS linked digital video cameras and the other a high resolution framing camera. The video system was successful enough that three such systems were built for USGS and were deployed around the country.

Hyperspectral remote sensing including HYDICE, AVIRIS, CASI, and AISA systems, and ground spectrometer data collection on projects ranging from vegetation mapping to urban soils characterizations.

High-end environmental visualization using a range of software and information gathering techniques for applications ranging from mine restoration to heritage and cultural resource documentation.

Research at West Virginia University / The Natural Resource Analysis Center often relies on the significant hardware resources present in the lab include an airborne Lidar system, terrestrial scanners, a hyperspectral camera and a photogrammetric camera all of which I can operate and process data for.

Currently exploring the use of multi-spectral sensors for deployment on very small footprint / altitude UAV platforms for high spatial and spectral resolution remote sensing.

E. PROFESSIONAL/CONSULTING EXPERIENCE

Founder and Environmental Planner – Site Analytics. 2014 to the present. Focus on applying technologies such as drone based imaging, airborne and terrestrial Lidar, and remote sensing to solving complex site and regional environmental problems.

Partner and Environmental/Restoration Designer, Origin4Design. 2008 to 2011. Focus on environmental restoration, heritage and cultural resource planning, community planning, and site design. Also focuses on technology applications such as GIS, remote sensing, and LIDAR studies - both aerial and ground based. Additional focus on integrating BIM and emerging data collection methods such as laser scanning. Completed a number of urban design projects in Pittsburgh PA and Charleston WV.

GIS and Visualization Researcher - November 2005 - October 2007. RDS. (Research and Development Systems) for the Energy Infrastructure and Security Research Group, National Energy Technology Laboratory, US Department of Energy. Researched data (primarily GIS related) and visualization methods to support assessments of energy infrastructure vulnerabilities and response planning to natural and manmade hazards.

General Partner and Visualization Specialist, ShipShaper, LLP. 2004 - 2009. ShipShaper integrated various computer based visualization tools with laser scanning and close-range photogrammetry in documenting as-is and as-built conditions in ships, oil platforms, other industrial facilities and historic / cultural resource structures and sites.

Senior Environmental Planner, Spatial Analytics, LLC. 1996 to 2004. Morgantown WV. Project involvements include land cover mapping from remote sensing, environmental visualization in support of impact assessment efforts, GIS applications development, decision support / GIS programming, and environmental assessments.

Restoration / Reclamation Designer - Skelly and Loy, Harrisburg, Pennsylvania. Analysis, design and planning for development of reclamation plans and environmental control schemes. Detailed site planning, land use studies, environmental surveys, resource inventories and environmental impact studies.

Analyst - The Maine State Planning Office, Augusta, Maine. Coordinated development of a statewide resource data management system planning effort. Conducted state of the art survey of geographic information systems, computer graphics programs. Completed statewide GIS needs assessments and system design efforts.

Environmental Planner - Center for Natural Areas, South Gardiner, Maine. Served as GIS and environmental planning consultant.

Planner/Designer - Resource Assessment and Planning Associates, Amherst, Massachusetts. Community planning studies, landscape assessment, site planning and environmental policy studies.

II. PAPERS, PUBLICATIONS AND PRESENTATIONS

Yuill, Charles B. and Stefania Stanascia. "Adapting Landscape Character Assessment (LCA) for supporting greenways planning in the proposed Appalachian Geopark." Abstract accepted for presentation at the 6th Fabos Conference on Landscape and Greenways Planning. Amherst MA. March 2019.

Yuill, Charles B. "Historic Landscape Characterization for a proposed Geopark in the USA." 5th International Landscape Archaeology Conference. New Castle, UK. September 18, 2018.

Stanascia, Stefania and Charles B. Yuill. "Mountaintop Removal Mining and the Narrative of Conflict." In *Landscapes of Conflict* – Delanue, S. and R. Dufor editors. ECLAS Conference 2018. Ghent Belgium. Conference Proceedings, Ghent, University College Ghent. ISBN 9789491564130. September 2018.

Yuill Charles B. and Wennie Tabib. "Aerial and Ground-based Remote Sensing for Archaeological and Cultural Resource Assessments in support of the Proposed Appalachian Geopark." International Aerial Archaeology Conference, Venice Italy. September 12, 2018.

Yuill, Charles B. "Landscape Archaeology and Historic Landscape Characterization in a Landscape of Intensive Energy Development." CELA 2018, Blacksburg VA. March 22, 2018.

Stanascia, Stefania and Charles Yuill. "Reflections on Mountaintop Mining as Industrial Heritage". *Change Over Time*. Vol 7.1 ISSN 2153-053X. 2018.

Yuill, Charles B., Stefania Stanascia, and Peter M. Butler. "Landscape archaeology and historic landscape characterization in a landscape of intensive energy resource development: the Anthropocene and the Appalachian Mountains, USA." ECLAS 2017- European Council of Landscape Architecture Schools Annual Meeting. University of Greenwich, London, Great Britain. September 10 – 13th, 2017.

Yuill, Charles B. and Peter M. Butler. "Integrating 3D digital documentation methods for cultural resource identification and documentation in a heavily forested mountainous landscape." USDI National Center for Preservation Technology and Training (NCPTT). National Park Service Meeting April 18 – 21 2017. New Orleans LA.

Butler, Peter M. and Charles B. Yuill. "Revealing Integrated Industrial Narratives through digital visualization of a Historic Cultural Landscape in Appalachia" Annual Meeting Association of American Geographers. April 5 to 10, 2017. Boston MA.

Stanascia, Stefania and Charles B. Yuill. "Reflections on Mountaintop Mining as Industrial Heritage." Published *Change Over Time: An International Journal of Conservation and the Built Environment*. December 2017. University of Pennsylvania, Philadelphia, PA.

Stanascia Stefania and Charles Yuill. "Reflections on Mountaintop Mining; the Anthropocene; and the Concept of Solastalgia," *Planum*. The Journal of Urbanism. Proceedings of the 19th Conference of the Italian Urban Studies Society "Cambiamenti. Responsabilità e strumenti per l'urbanistica al servizio del Paese," Catania, June 16–18, 2016.

Butler, Peter and Charles Yuill "Appalachian Landscape and Architecture through the Lens of Extraction" 3rd International Landscape Archaeology Conference. Rome – 2014. Refereed article published online November 2016. 3rd Landscape Archaeology Conference.

Yuill, Charles B. and Peter M. Butler." Phenomenological Perspectives as Frameworks for Interdisciplinary Studies of Historic Landscapes Integrating Landscape Architecture, Public History, and Landscape Archeology". 2016 Conference of the Council of Educators in Landscape Architecture. Logan Utah March 23 to 26, 2016

Kyber, Ashley, Charles Yuill, and Peter Butler. "In-situ community design- transdisciplinary storefront as performative space" CELA 2016. . Logan Utah March 23 to 26, 2016

Butler, Peter, and Charles Yuill. "Revealing integrated industrial narratives through digital reconstruction of a historic cultural landscape" CELA 2016. . Logan Utah March 23 to 26, 2016

Yuill, Charles B. "Integrating Landscape Heritage, Public History, and Landscape Archeology with high precision surveying utilizing airborne and terrestrial Lidar, drone platformed imagery and high fidelity visualization: Industrial and Landscape Archeology in the Central Appalachians – USA."ARQUEOLOGICA 2.0 - 8th International Congress on Archaeology, Computer Graphics, Cultural Heritage and Innovation. Seville Spain. September 2016. Abstract and summary paper published.

Yuill, Charles B. and Peter M. Butler. "Addressing the Challenges of Landscape Archaeology in the Central Appalachians of the USA with a Multi-sensor Data Collection Strategy". Aerial Archeology Research Group International Meeting. Santiago de Compostela (Spain). September 3, 2015.

Kyber, Ashley, Charles Yuill, and Peter Butler, "The Beltline District Storefront: Your neighborhood your future, a realtime university engagement program in Fairmont WV." Community Development Society, Lexington KY. July 21, 2015

Yuill, Charles, Peter Butler, and Michael Strager. The concept of the Anthropocene: considerations for environmental resources, communities and cultural heritage in the central Appalachians. CELA 2015. Manhattan, Kansas, March 24-28, 2015.

Butler, Peter and Charles Yuill "US Steel and Gary WV- a cultural landscape study in corporate paternalism" CELA 2015. Manhattan, Kansas, March 24-28, 2015.

Maxwell Aaron. E., Michael. P. Strager, Timothy. A. Warner, Nicholas. P. Zegre and Charles B. Yuill "Comparison of NAIP orthophotography and RapidEye satellite imagery for mapping of mining and mine reclamation." GIScience and Remote Sensing. July 2014.

Yuill, Charles B. and Peter Butler. "Remnants, Remains, Ruins and Traces: Documenting, Managing and Interpreting Culturally Significant Landscapes within the Context of an Active Industrial Landscape". CELA Annual Conference, Baltimore, Md. March 2014.

Maxwell, A., M. Strager, T. Warner, C. Yuill, and N. Zegre," Mapping of mining and mine reclamation: A comparison of NAIP orthophotography and RapidEye satellite imagery". *ASPRS 2014 Annual Conference*, 23-28 March, Louisville, KY. 2014

Maxwell, A., M.P. Strager, C.B. Yuill and T. Petty." Mapping Mine Land Disturbance in the Southern Coalfields of West Virginia". Journal of Environmental Management. June 2013.

Maxwell, A., M.P. Strager, C.B. Yuill. Modeling Critical Forest Habitat in the South Central Appalachians, USA. International Journal of Ecology - Focus Issue on Landscape Ecology. September 2012.

Yuill, Charles, Peter Butler, Rebecca Mizikar, Laura Patterson and Mark Dietrich, "Laser Scanning within a Comprehensive Visualization Environment for Heritage Documentation" Architectural Research Centers Consortium. Detroit MI, April 2011.

Mizikar, Rebecca, Charles Yuill, Laura Patterson, and Mark Dietrich, "The Value of Laser Scanning for Historic Buildings: Two Case Studies". Smartdoc Heritage Annual Meeting University of Pennsylvania, Philadelphia. November 2010.

Strager, Michael .P. Jerald Fletcher, Jackie Strager, Charles Yuill, Robert Eli, Todd Petty and Samuel Lamont. "Watershed Analysis with GIS: The Watershed Characterization and Modeling System Software Application". Computers and Geosciences, Vol 36, pp. 970 976. 2010.

Yuill, Charles B. and Michael Hasenmyer. "Integrating Geomorphic Landforming with Environmental Visualization for Supporting Coal Mine Reclamation in the Eastern Coalfields." Geomorphic Reclamation and Natural Stream Design at Coal Mines: An Interactive Forum. Bristol, VA. April 29, 2009.

Yuill, Charles B. "Land Status and Trends and Alternative Land Use Futures for the Little Kanawha River Basin in West Virginia." Regional Research Institute Working Paper. Final revision submission August 2008,

Yuill, Charles B. "Environmental Visualization Opportunities for Creative Landforming in Surface Mine Reclamation." USDI Office of Surface Mining Research Review Meetings, Stonewall Jackson Lake State Park, WV. July 29-30, 2008.

Yuill, Charles B., "Coupling GIS and High Fidelity Environmental Visualization." West Virginia Annual GIS Meeting, Charleston, WV. June 11, 2008.

Yuill, Charles B. "Environmental Visualization Approaches for the Faro Mine Closure Project." Government of the Yukon Visualization Peer Review Meetings .Vancouver B.C., March 13-14, 2008.

Maskey, Vishakha, Michael P. Strager, and Charles B. Yuill. "An Alternatives Futures Analysis for the Little Kanawha River Watershed in West Virginia." WI 133 Annual Meeting, Big Island of Hawaii. February 17-20,2008.

Zhang, X., Wang P., Zou, L. Lin, G., Fletcher, J.J. and Yuill, C., " Cultivated land changes and driving force analysis by satellite remote sensing in the Yellow River Delta of China". Proceedings of SPIE International Society for Optical Engineering., volume 6697. 2007.

Hasenmyer, M.G. and C.B.Yuill. "An Emerging Pedagogy for Design Visualization: Case Studies of Historic and Cultural Preservation Through Laser Scanning." Council of Educators in Landscape Architecture (CELA). Penn State University, State College PA. August 2007.

Yuill, Charles B., James E. Smith, Zenovy Wowczuk and Franz Pertl. "OCULUS - A Flexible Multi-Sensor Platform for Situational Awareness, Emergency Assessments and Counter-Narcotics Remote Sensing Applications." Paper prepared for ASPRS 2007 Annual Meeting. Orlando, FL. April 2007

Yuill, Charles B. and Michael Hasenmyer. "Integration of GIS Analysis Methods, Visualization and Landform Manipulation Tools for Land Reclamation within the Watershed Characterization and Modeling System (WCMS)." National Interactive Forum on Geomorphic Reclamation- Putting a New Face on Mining Reclamation. September 12 14, 2006. Farmington, New Mexico

Yuill, Charles B. and Michael Hasenmyer, "GIS as a Foundation for Multiform Landscape Visualization." 2006 ESRI International Conference Proceedings, San Diego, CA. August 7-11,2006

Michael Strager, Charles Yuill and Chris Schaney. "A Predictive Model for Invasive Species Mapping Using Spatial Technologies." ASPRS 2005 Annual Conference. Baltimore MD. March 7-11. 2005

Michael Strager, Chris Schaney, Charles Yuill. "Integration of Spatial Technologies for Cost Effective Invasive Species Management". Geotec 2005 Annual Conference February 13-16, 2005 Vancouver, BC

Strager, Michael and Charles Yuill. "A Land Preservation Framework for the Cacapon Watershed of West Virginia. ". " GIS in the Appalachians, Morgantown, WV. May 10, 2004.

Zhao, G.X., G. Lin., J.J.Fletcher and C. Yuill. "Cultivated Land Changes and Their Driving Forces - A Satellite Remote Sensing Analysis in the Yellow River Delta, China". Pedosphere, volume 14 issue 1. February 2004.

Robards, John, Michael Strager and Charles Yuill. "Integrating Geographic Information Systems and Remote Sensing for Invasive Plant Species Mapping and Monitoring." GIS in the Appalachians, Morgantown, WV. May 10, 2004.

Strager, Jacquelyn and Charles Yuill, "The Landscape Analyst and Gap Analysis: Focusing Existing GIS Capabilities Towards a Regional Gap Analysis for the Central Appalachians." 13th Annual National Gap Analysis Meeting, Fort Collins, CO. October 6-9, 2003.

Yuill, Charles B. "High-resolution Digital Imagery for Mining Impact Assessment Studies in the Central Appalachians," Appalachian Remote Sensing Conference, Morgantown, WV. May 14, 2003.

Yuill, Charles B. and Michael Strager. "Integration of Remote Sensing, Spatial Analysis and Urban Growth Models for Assessing the Environmental Impacts of Mountaintop Mining in the Central Appalachians." ASPRS Annual Meeting, Anchorage AK. May 4 11,2003.

Strager, Michael, Jerald Fletcher, Charles Yuill, Ge Lin, and Annie Morris. "A Multivariate Statistical Approach for Stream Flow Modeling in West Virginia." ASPRS Annual Meeting, Anchorage, AK. May 4-11, 2003.

Strager, Michael, Charles Yuill and Peter Claggett. "Integrating Local Preferences and Spatial Data to Prioritize Lands for Protection in the Cacapon Watershed, WV." Geo Tec 2003 Annual Meeting. Vancouver, BC Canada. March 16-19, 2003.

Yuill, Charles B. and Jackie Strager. "Using GAP Analysis Data in an Assessment of the Potential Impacts of Future Mountaintop Mining in Appalachia." National GAP Analysis Program 12th Annual Meeting. Shepardstown WV. July 31 - August 3, 2002.

Strager, Jacquelyn M. and Charles Yuill. "GAP Analysis of Special Features: Case Study of Amphibians and Mammals of West Virginia's Caves." National GAP Analysis Program 12th Annual Meeting. Shepardstown WV. July 31 - August 3, 2002.

Pacuri, D., L. Gribko, T. Warner and C.B. Yuill. "Determination of An Optimal Spatial Resolution of Remotely Sensed Images for Mixed Appalachian Forests." Third International Conference on Geospatial Information in Agriculture and Forestry. Denver, CO, November 2001.

Fortney, R. H., C.B. Yuill, W. Ravenscroft, and J. A. Gillilan. " Upper Ohio River Floodplain Characterization and Change, 1954 to 2000." Annual Meeting Proceedings American Society of Civil Engineers, Chicago, IL. August 2001.

Strager, M., P. Claggett, E. Clifton, J. Fletcher, P. Kinder, D. Klemage, R. Pomponio, T. Schroder, M. Sherald, J. Strager, and C.B. Yuill. "Landscape Assessment Tools: Integrating Science and Data for Decision Support." 2001 ESRI International Conference Proceedings, San Diego, CA. July 8-12, 2001.

Yuill, Charles B. and J.M. Strager. " West Virginia's Forest Lands: Distribution and Change 1915 - 1994. USGS BRD National Gap Analysis Meeting, San Antonio, TX. August 6, 2000.

Strager, J.M. and C.B. Yuill. "West Virginia's Butterflies: A Gap Analysis of Biodiversity." USGS BRD National Gap Analysis Meeting. San Antonio, TX. August 6, 2000.

Strager, J.M., C.B. Yuill and P.B. Wood. "Landscape Based Riparian Habitat Modeling for Amphibians and Reptiles Using ARC/INFO GRID and Arc View GIS." 2000 ESRI International Conference Proceedings, San Diego, CA. June 26 - 30,2000.

Strager, M.P., and C.B. Yuill. "Integrated Decision Support Tools for Abandoned Mine Reclamation and Watershed Planning". National Association of Abandoned Mined Land Programs 1999 Annual Meeting Proceedings. Champion, PA. August 22- 25, 1999.

Pacuri, D., L.S. Gribko, T.A.Warner, T.H.Wilson, and C.B.Yuill. "Optimal Spatial Resolutions for Appalachian Hardwood Forest Imaging". Fourth International Airborne Remote Sensing Conference - Canadian Symposium on Remote Sensing. Ottawa, Ontario, Canada. June 24, 1999.

Strager, M.P., C.B. Yuill, and J.J. Fletcher, "Specialized Tools for Watershed Management and Analysis". American Society of Photogrammetry and Remote Sensing, Annual Conference Proceedings. Portland, Oregon, May 17-20. 1999.

Straeger, Michael P., J. Fletcher, C. B. Yuill, and J. M. Rowe. "A Watershed Characterization and Management System for Water Quality Modeling in Central Appalachia". Paper - 1998 Mid-Atlantic Users Group Meeting for ESRI. November 16, 1998.

Yuill, Charles B. "Videography and Other Innovative Remote Sensing Technologies for Ecological Studies". Invited Paper - Ecological Society of America Annual Meeting. Baltimore. July 29, 1998.

Rowe, Jacquelyn M., Fletcher, J. J. and Yuill, C. B. "Providing Customized GIS Resources for Watershed-based Citizen Groups". ESRI Users Conference, San Diego, CA. July 27-31, 1998.

Strager, M. P., Fletcher, J. J. and Yuill, C. B. "Hydrologic Modeling of Acid Mine Drainage in West Virginia". ESRI Users Conference, San Diego, CA. July 27-31, 1998.

Yuill, Charles B. "Adapting TNC's Vegetation Alliances for Use with Remotely Sensed Data". Published Paper - 7th Annual National Gap Analysis Investigators Meeting. Santa Barbara, CA. July 24, 1998.

Strager, M. P., Fletcher, J. J., and Yuill, C. B. "Hydrologic Modeling of Acid Mine Drainage in the Cheat River Watershed." Annual Acid Mine Drainage Conference Proceedings, Pittsburgh, PA. October 17-19, 1997.

Strager, M. P., Yuill, C. B., and Fletcher, J. J. "A Decision Support System for Wetland Wildlife Management". GIS/LIS 97. Cincinnati, Ohio. October 15-18, 1997.

Yuill, Charles B. "Spatial Sorting: A Brute Force Approach to Classifying Clustered Satellite Data". Proceedings 7th Annual Gap Analysis Principal Investigators Meeting. Reston, VA. August 4-8, 1997.

Rowe, Jacquelyn M. and Yuill, C. B. "Landscape Level Habitat Modeling for Amphibians and Reptiles in West Virginia". Poster presentation at 7th Annual Gap Analysis Investigators Meeting. Reston, Va. August 4-8, 1997.

Rowe, J. M., S. A. Perry, and C. B. Yuill. 1996. "The Use of Geographic Information Systems (GIS) in Biodiversity Assessment and Management of Stream Fish in West Virginia". 126th Annual meeting of the American Fisheries Society, Dearborn, MI. August 25-29, 1996.

Rowe, J. M., S. A. Perry, and C. B. Yuill. 1996. "A Landscape Approach to Assess the Relationship of Watershed Attributes to Fish Communities". Ecological Society of America and the Society for Conservation Biology. Providence, RI. August 11-14, 1996.

Gervin, Janette C., Hugh Bloemer, James Brumfield, Joseph Langdon, and Charles B. Yuill. "Determination of Forest Communities in a Temperate Mountainous Forest Using Remote Sensed and Ancillary Data of Varying Spatial Scales". International Society of Photogrammetry and Remote Sensing. Tromslo, Norway. August 1-4, 1996.

Bloemer, Hugh, James Brumfield, Janette C. Gervin, Joseph Langdon, and Charles B. Yuill. "A Comparative Analysis of Very High Resolution Multi Spectral Sensor Systems in Feature Extraction for Mountainous Terrain". International Society of Photogrammetry and Remote Sensing. Tromslo, Norway. August 1-4, 1996.

Brannon, Ree, Charles B. Yuill, Timothy Warner, and Sue Perry. "Mapping Plant Community Alliances in the Central Appalachian Mountains: Spatial Sorting of an Unsupervised Classification of Multi Temporal Landsat Thematic Mapper Data". American Society for Photogrammetry and Remote Sensing Annual Meeting Proceedings. Baltimore, MD. April 6-10, 1996.

Strager, M. P., J. J. Fletcher, T. T. Phipps and Charles Yuill. "A Compromise Programming Model to Select Acid Mine Drainage Affected Watersheds for Reclamation". 1995 Meeting of the American Agricultural Economics Association, Indianapolis, IN. August 1995.

Qi Dai, J. J. Fletcher, T. T. Phipps and Charles Yuill. "Development of a GIS Decision Support System for Water Quality Policy Analysis". 1995 Meeting of the American Agricultural Economics Association, Indianapolis, IN. August 1995.

Brannon, Ree, Charles Yuill and Sue Perry. "A Biodiversity Assessment Methodology for the Central Appalachians". 1995 Meeting - American Society for Photogrammetry and Remote Sensing, Charlotte, NC. February 1995.

Bloemer, H. H. L., J. O. Brumfield, J. C. Gervin, J. A. Langdon, C. B. Yuill. "A Laboratory without Walls for Advanced Resources Planning Systems for Mountainous Terrain". Third International Symposium on High-Mountain Remote Sensing and Cartography. National Research Council and National Space Agency. Mendoza, Argentina. November 11, 1994.

Bloemer, H. H. L., J. O. Brumfield, J. C. Gervin, J. A. Langdon, C. B. Yuill. "Interpretation and Optimization in Geobiophysical Modeling in the Biosphere and Hydrosphere with Emphasis on Mountain Terrain". Third International Symposium on High-Mountain Remote Sensing and Cartography. National Research Council and National Space Agency. Mendoza, Argentina. November 11, 1994.

Yuill, Charles B., Ree Brannon, Sue A. Perry. "Application of Multi-scale Remote Sensing, Ecological Units Mapping, and Ancillary Landscape Data into a Biodiversity Analysis Framework". Federal Geographic Technology Conference, GIS World Education and Training Institute and Federal Computer Week. Washington, DC. September 26-28, 1994.

Brannon, Ree, Charles B. Yuill, Sue A. Perry. "Ecological Land Units, GIS, and Remote Sensing". National Conference on Environmental Problem Solving with Geographic Information Systems, USEPA Region 5. Cincinnati, Ohio. September 21-23, 1994.

Brannon, Ree., Charles B. Yuill, Sue A. Perry. "Remotely-Sensed Ecological Land Units: Gap analysis in West Virginia". Global to Local: Ecological Land Classification, Thunder Bay, Ontario, Canadian Forest Service, Ontario Ministry of Natural Resources and IUFRO. August 14-18, 1994.

Bloemer, H.L.H., J.O. Brumfield and Charles Yuill. "Computer Software and Hardware Architectural Designs, Systems Engineering and Strategic Implementation for Geobiophysical Modeling Affects of Global Change on Resource Evaluations in Developing Nations". East African Journal of Economic Development. Nairobi, Kenya. January, 1994.

Yuill, Charles B. and Steven Hollenhorst. "Integrating Social and Environmental Concerns for Wilderness Area Planning in the Eastern United States Using a Geographic Information System, Global Positioning and Computer Aided Design" American Society for Photogrammetry and Remote Sensing Annual Meeting Proceedings, New Orleans. February 1993.

Yuill, Charles B. "Remote Sensing Innovations in Forest Pest Management" USDA Forest Service Cooperative Pest Management Program Annual Meeting. Morgantown, WV, November, 1992.

Green, Ken and Charles B. Yuill. "Development of a Wellhead Protection Management System for Existing and Future Public Water Supplies in the West Virginia Eastern Panhandle." 1992 Soil Conservation Society of America Annual Meeting. Baltimore, Maryland. September 1992.

Yuill, Charles B. "Gap Analysis for West Virginia." Forest Ecology and Landscape - Level Research in the Appalachians. USDA Forest Service Meeting, Elkins, WV. March 24, 1992.

Twery, Mark J., Gregory Elmes and Charles Yuill, "Predicting Species Composition from Topography Using an Intelligent Geographic Information System." Artificial Intelligence Applications. May 1991.

Twery, Mark J., Gregory Elmes and Charles Yuill, "Scientific Exploration with an Intelligent GIS: Predicting Species Composition from Topography." IUFRO International Meeting Proceedings, Montreal, Canada. August 1990.

Yuill, Charles B., Mark Twery, Gregory Elmes, and Thomas Millette, "Prototyping the Design of An Intelligent GIS with HyperCard." American Society of Photogrammetry and Remote Sensing Annual Meeting, Denver, Colorado. March 1990.

Twery, Mark, Gregory Elmes, Charles B. Yuill, "Using GIS to Assess Gypsy Moth Hazard". American Society of Photogrammetry and Remote Sensing Annual Meeting. Denver, Colorado. March, 1990.

Hicks, Ray R., David Fosbroke, Shrivankat Kosuri, and Charles Yuill. "The West Virginia University Forest: The Hazards of Hazard Rating." USDA Forest Service Annual Gypsy Moth Review. East Windsor, CT. January 1990.

Elmes, Gregory and Charles B. Yuill, "Knowledge Based GIS on the Macintosh Computer: A Component of the Gypsies Project." USDA Gypsy Moth Research Review, East Windsor, Ct. January 1990.

Armstrong, Donald and Charles B. Yuill, "The Abandoned Mines of the New River Gorge: Health and Safety Hazards and Important Cultural Resources." Third Biennial International Linear Parks Conference, Ashville, North Carolina. September 1989.

Elmes, Gregory and Charles B. Yuill, "Developing a Knowledge-based Geographic Information System for Gypsy Moth Management." GIS 89 - Towson State University, Towson, Maryland. June 1989.

Yuill, Charles B., Donald Armstrong, "An Abandoned Mine Land Inventory for the New River Gorge National River." New River Symposium, Radford, Virginia. April 1989.

Yuill, Charles B. and Margaret Weesner, "Abandoned Mine Land Inventory and Geographic Information System Development at New River Gorge National River," Fifth Triennial Conference on Research in the National Parks. Tucson Arizona. November 1988.

Yuill, Charles B., "The Role of Micro-computers in a Natural Resources Data Management System for West Virginia," National Forestry Micro-Computer Software Symposium, West Virginia University, Morgantown, West Virginia, July 1, 1986.

Yuill, Charles B., "A Land Use Decision Methodology For Mined Lands in Appalachia". Project abstract - in Restoration and Management Notes - University of Wisconsin Arboretum, Volume 1, No. 2, Winter 1983.

Yuill, Charles B., "Land Use Planning for Coal Mined Lands." Paper presented at National Conference on Energy Resource Management - Center for Earth Resource Management Applications Annual Meeting. San Francisco, California. August 1983.

Yuill, Charles B. and William Ettinger. "Sand and Gravel Pit Reclamation in Louisiana: Creation of Wetlands Habitat and its Integration into Undisturbed Bayou." Wildlife Values in Gravel Pits Symposium Proceedings, University of Minnesota Press, December 1982.

Yuill, Charles B., "A Land Use Decision Methodology for Mined Lands in Appalachia." Annual Meeting - Council of Educators in Landscape Architecture. Blacksburg, Virginia. Fall 1982.

Yuill, Charles B. and Spencer Joyner. "Assessing Visual Resources and Development Suitability in Metropolitanizing Landscapes" Proceedings - Our National Landscape National Conference on Methods for Analysis and Management of the Visual Resource, LakeTahoe. 1979.

Yuill, Charles B., Michael Frakes, and William Gorton. "Content Requirements for State and Indian Tribe Reclamation Plans," Second National Abandoned Mine Lands Conference Proceedings. Tucson, 1979.

Yuill, Charles B., "Revegetation - Chapter 14," in A Compliance Manual - Methods for Meeting OSM Requirements, McGraw-Hill, 1979. (book chapter).

Yuill, Charles B., Robert Mallory and Nicholas Dines. "A Planning and Decision Model for the Aesthetics of Surface Mine Reclamation," in Wali, M.K. (ed.) Ecology and Coal Resource Development, Pergamon Press, 1979. (book chapter).

Yuill, Charles B., "New Planning Tools for Land Reclamation," West Virginia, Kentucky, Ohio Annual ASLA Meeting Presentation 1978.

Yuill, Charles B., Julius Fabos and Ervin Zube. Landscape Planning Bibliography, Council of Planning Librarians, 1976.

III. SELECTED MAJOR RESEARCH AND CONSULTING STUDIES

Greening America's State Capitals. USEPA. 2012.

Terrestrial Laser Scanning and 3D modelling at Falling Water. The Western Pennsylvania Conservancy, 2012.

Predicting the 25 year future extent of Coal Mining in the Appalachian and Illinois Coal Basins. The Nature Conservancy. 2013.

Impacts of Mountaintop Mining and Valley Fills in Southern West Virginia – USEPA Region III. 2009 – 2011.

Impacts of Coal Bed Methane Exploration and Extraction in a Watershed of the High Arid Plains of Wyoming – US Department of Energy – 2008 – 2010.

Valuing Forest and Managed Timberlands in West Virginia. West Virginia Department of Tax and Revenue – 2008 – 2012.

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