

RUTH AYN HOCKER, P.E., D.WRE

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Lancaster, PA 17602
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EDUCATION

Master of Engineering in Environmental Engineering

Pennsylvania State University – Capital College, Middletown, Pennsylvania

Bachelor of Science in Civil Engineering Technology

Pennsylvania College of Technology, Williamsport, Pennsylvania

Associate of Applied Science in Surveying Technology

Pennsylvania College of Technology, Williamsport, Pennsylvania

Associate of Science in Mathematics

Luzerne County Community College, Nanticoke, Pennsylvania

LICENSURE

Professional Engineer (P.E.)

Commonwealth of Pennsylvania, License PE078222

EMPLOYMENT HISTORY

Stormwater Program Manager

City of Lancaster, Pennsylvania

August 2014-present

- Manage stormwater program for City of Lancaster, including implementation of City of Lancaster's Green Infrastructure Plan and Stormwater Management Fee Program
- Manage sustainability program for City of Lancaster, including greenhouse gas inventory assessment, energy conservation programming, climate resiliency preparation, and multi-modal transportation planning.
- Manage wastewater collection program for City of Lancaster, including oversight of repair/replacement, cleaning/jetting, and televising all gravity sewer conveyance system and appurtenances
- Manage complex grant projects to support innovative implementation of green infrastructure plans, climate resiliency initiatives, urban forestry management, and planning
- Ensure compliance with State and Federal regulatory clean water requirements
- Prepare, update, and implement ordinances, policies, and procedures to ensure regulatory compliance and superior customer service
- Supervise review of permit application submissions and issuance of stormwater permits in accordance with City ordinance
- Supervise review and processing of stormwater management fee credit and appeal applications
- Established Adopt-A-BMP program in partnership with City Solid Waste and Recycling Program to reduce public maintenance costs and encourage public education and involvement

Senior Scientist

Chesapeake Bay Foundation, Pennsylvania Office

June 2013-August 2014

- Responsible for scientific support of policy initiatives and working with local governments, businesses and concerned citizens on watershed protection and restoration within the Chesapeake Bay watershed in Pennsylvania
- Provided technical environmental and engineering review of federal, state, and local policy documents, proposed regulations, and permitting procedures

Senior Water Resources Engineer

Meliora Design, LLC

December 2011-June 2013

- Senior engineer responsible for initiation, development, oversight, and completion of sustainable site/civil water resources projects
- Coordinated permitting requirements and quality control for submissions to regulatory agencies.
- Author and technical content lead of Low Impact Development Manual and new stormwater regulatory program for the City of Chattanooga, TN.
- Provided expert testimony on behalf of environmental advocacy groups.

Civil Engineer Manager (General), Chief, Project Development (Engineering) Section

Commonwealth of PA, Pennsylvania Dept. of Environmental Protection, Bureau of Abandoned Mine Reclamation
March 2011-December 2011

- Responsible for planning and programming of projects to reclaim abandoned mine lands
- Initiated and supervise the performance of field investigations by subordinate staff
- Initiated and coordinated the efforts of subordinate staff in the development of design plans and specifications for the reclamation of abandoned mine lands, exploratory drilling, water supply replacement, and well-drilling projects
- Initiated and reviewed site investigations to provide recommendations to resolve problems associated with mine reclamation , acid mine drainage, and water supply replacement and treatment
- Initiated, coordinated and reviewed the preparation of design scopes of work for abandoned mine land and acid mine drainage abatement projects
- Initiated, coordinated and reviewed the preparation of Environmental (Impact) Assessments, and identify the presence and extent of wetlands
- Coordinated the participation of staff involvement and partnering with local, state, and federal officials, watershed associations and other interested parties in the planning, development, and implementation of watershed rehabilitation plans and projects

Civil Engineer Manager (Transportation), Acting Chief, Pavement Management Section

Commonwealth of PA, Pennsylvania Dept. of Transportation, Bureau of Maintenance and Operations
January 2011-March 2011 (*concurrent with Senior Civil Engineer (Transportation) position*)

- Initiated and supervised the performance and engineering analyses of subordinate staff
- Performed engineering evaluation and analysis of pavement conditions to determine policy needs

Senior Civil Engineer (Transportation)

Commonwealth of PA, Pennsylvania Dept. of Transportation, Bureau of Maintenance and Operations
July 2010-March 2011

- Monitored Life-Cycle Cost Analysis policy implementation to promote fair competition and cost savings
- Oversaw alternate pavement type bidding policy compliance to promote competitive bidding
- Performed annual Quality Assurance evaluations of District Pavement Management Engineers
- Reviewed pavement designs as designated and made recommendations to the U.S. Federal Highway Administration
- Served as Department liaison to the U.S. Federal Highway Administration and other entities, including pavement and material industry associations such as APC, ACPA, PAPA, PCA, PACA
- Provided guidance to district Pavement Management Engineers in the application of policy and design procedures
- Attended scoping and design field views and oversaw sufficient correction of all pavement issues
- Assisted with research efforts regarding pavement performance, materials, construction, and long term maintenance
- Provided technical expertise for ongoing improvements to pavement design criteria, life cycle cost analyses, and implementation of alternate pavement type bidding policy
- Prepared and reviewed scopes of work for innovative pavement projects
- Coordinated interaction between Central Office, Engineering Districts, County Maintenance, and Federal Highway Administration staff to advance knowledge of pavement policies, design requirements, materials innovations, and research studies
- Established Life-Cycle Cost Analysis and Alternate Bidding workgroup to evaluate needs and initiate updates

Senior Civil Engineer (Hydraulic)

Commonwealth of PA, Pennsylvania Dept. of Environmental Protection, Bureau of Watershed Management
April 2008-July 2010

- Administered oversight, technical review, and coordinated completion of Act 167 Stormwater Management Program requirements in thirty-four counties
- Served as stormwater liaison for Coastal Zone Management Program in Lake Erie watershed
- Coauthored General and Individual NPDES Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (NPDES MS4 permit PAG-13)

Project Manager

Navarro & Wright Consulting Engineers, Inc.
October 2006-January 2008

- Managed commercial and residential land development projects of various sizes through all phases of design
- Supervised a team of two design professionals and three draftspersons
- Provided in-house training on NPDES permitting requirements for construction activities, post-construction stormwater BMP design, and erosion and sedimentation control permitting

Project Designer

Raudenbush Engineering, Inc., Middletown, Pennsylvania
January 2006-October 2006

- Managed small commercial land development projects
- Designed stormwater conveyance and management facilities
- Completed NPDES and Section 404/Chapter 105 Joint permit applications
- Performed construction management on industrial storm drain replacement project in karst geology

Project Designer I

Morris & Ritchie Associates, York, Pennsylvania
April 2005-December 2005

- Created erosion and sedimentation control plans for residential land development projects
- Analyzed and designed stormwater conveyance and stormwater management facilities
- Performed preliminary sewage planning for large scale residential land development projects

Transportation Engineer I

Buchart-Horn, Inc., York, Pennsylvania
May 2004-April 2005

- Completed hydraulic and hydrologic studies for bridge replacement projects
- Designed stormwater management water quality controls to comply with NPDES requirements

PUBLICATIONS

Graduate Research

“Streambank Stability: Modeling Channel Evolution and Pollutant Transport in an Urban Stream”. M. Eng. Paper, Pennsylvania State University – Capital College, Middletown, Pennsylvania. 2007.

Journal Publications

“Geographic Variability of Rainfall Erosivity Estimation and Impact on Construction Site Erosion Control Design.” S. E. Clark, A. Allison, and **R. A. Sitler**. *Journal of Irrigation and Drainage Engineering*. American Society of Civil Engineers, July 2009.

Conference Proceedings and Other Publications

“Achieving Water Quality Goals with Green Infrastructure.” C. Katzenmoyer, **R. Hocker**, K. Graybill, D. Smith. *Keystone Water Quality Manager*. Pennsylvania Water Environment Association, January/February/March 2017.

“Green Infrastructure Maintenance Cost Research Summary.” Contributing Author. Municipal Water Infrastructure Council of the Environmental and Water Resources Institute of the American Society of Civil Engineers. September 2016.

“Integrating Green Infrastructure with Public Works Projects to Reduce Combined Sewer Overflows and Stormwater Runoff in Lancaster City, Pa” **R. Hocker**, B. Marengo, C. Katzenmoyer, A. Potts. *2016 World Environmental & Water Resources Congress*. American Society of Civil Engineers, Florida, May 23-26, 2016.

“Utilizing Planning Methods in the Public Works Department.” **R. Hocker**, K. Graybill. *2015 Annual Conference*. PA Chapter of the American Planning Association, Pennsylvania, October 18 – 20, 2015.

“Integrating Green Infrastructure with Public Works Projects to Reduce Combined Sewer Overflows and Stormwater Runoff in Lancaster City, PA.” **R. Hocker**, B. Marengo, C. Katzenmoyer, A. Potts. *2015 Pennsylvania Stormwater Management Symposium*. Villanova Urban Stormwater Partnership, Pennsylvania, October 14 – 15, 2015.

“Green Infrastructure Update.” **R. Hocker** *Lancaster Native Plant and Wildlife Festival*. Habitat Manheim Township, Pennsylvania, April 25, 2015.

"Restoring the Chesapeake Bay – Curbing Urban Runoff." **R. Hocker**. 2014GreenCON, Millersville University, Pennsylvania, March 18, 2014.

"Quantifying the Water Quality Rainfall event." **R. Hocker** and S.E. Clark. 2013 Pennsylvania Stormwater Management Symposium, Villanova Urban Stormwater Partnership, Pennsylvania, October 17 – 18, 2013.

"Cost Benefit Analysis of Sustainable Stormwater Solutions for the Little Conestoga Creek Watershed, Lancaster County, Pennsylvania." (**R. Hocker**). *Lancaster Watersheds*. June 2013. Online <www.lancasterwatersheds.org>

"Review and Analysis of the Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas, and Solution Mining Regulatory Program Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs and the Draft New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from High-Volume Hydraulic Fracturing." **R.A. Sittler** and M.C. Adams. *Technical Memorandum*, Natural Resources Defense Council, New York, December 30, 2011.

"Impact of the Rainfall Event Method on the Water Quantity Capture Efficiency of Bioretention Devices." **R.A. Sittler** and S.E. Clark. 2011 Low Impact Development Symposium, Pennsylvania, September 27, 2011. CD-ROM

"Special Experimental Project No. 14 (SEP 14) Alternate Pavement Type Bidding Initial Report." (**R. Sittler**) Pennsylvania Department of Transportation and Federal Highway Administration. *Federal Highway Administration*. February 2011.

"Impact of Bioretention Design of the Calculation Method for the 95th Percentile Rain Event." **R. Sittler** and S.E. Clark. 2011 World Environmental & Water Resources Congress. American Society of Civil Engineers, California, May 24, 2011. CD-ROM

"Geographic Variability of Rainfall Erosivity Estimation and Impact on Construction Site Erosion Control Design." **R. Sittler**, A. Allison and S.E. Clark. 2009 Pennsylvania Stormwater Management Symposium. Villanova Urban Stormwater Partnership, Pennsylvania, October 14 – 15, 2009. CD-ROM

"Looking Upstream and Into the Watershed for the Big Picture of Stream Health." C. Y. Siu, S. E. Clark, **R. Sittler** and K. Baker. 2009 World Environmental & Water Resources Congress. American Society of Civil Engineers' Environmental & Water Resources Institute, Missouri, May 17 – 19, 2009. CD-ROM

"Streambank Stability: Modeling Channel Evolution and Pollutant Transport in an Urban Stream." **R. Sittler** and S.E. Clark. 2007 Pennsylvania Stormwater Management Symposium. Villanova Urban Stormwater Partnership, Pennsylvania, October 17 – 18, 2007. CD-ROM

TEACHING EXPERIENCE

Lecturer, School of Science, Engineering, and Technology

Pennsylvania State University – Capital College
August 2015-present

- Prepared and delivered lectures and other instructional material in hydraulic design (ENVE 417)

Adjunct Faculty, Mechanical Engineering Technology and Civil Engineering Technology

Harrisburg Area Community College
August 2008-December 2008

- Prepared and delivered lectures and other instructional material in kinematics and dynamics
- Prepared and delivered lectures and other instruction in AutoCAD drafting

Invited Speaker

Penn State Harrisburg
March 2007-present

- Prepare and deliver lectures and technical instruction in AutoCAD, Erosion Control and NPDES Permitting, HEC-HMS, HEC-RAS, SWMM, WinSLAMM, and Win-TR55

OTHER DESIGN EXPERIENCE

Lead Civil/Water Resources Engineer, Kapsowar Mission Hospital Master Plan

Engineering Ministries International – Kapsowar, Kenya
September 2016-December 2016

- Served as lead civil/water resources engineer for master plan and conceptual drawing development for rural hospital campus in northwestern Kenya

AWARDS AND RECOGNITION

Diplomate, Water Resources Engineer

American Academy of Water Resources Engineers
2017

Distinguished Service Award

Pennsylvania Society of Land Surveyors, South Central Chapter
2008

OTHER ACTIVITIES/POSITIONS HELD

Local Government Representative, Urban Stormwater Workgroup

Chesapeake Bay Program
January 2016-present

Chair, Municipal Water Infrastructure Council

American Society of Civil Engineers, Environmental Water Resources Institute
October 2016-present

Secretary / Treasurer

Suburban Lancaster Sewer Authority
January 2017-present

Municipal Representative

Suburban Lancaster Sewer Authority
August 2016-present

Industry Advisor / Program Mentor

Thaddeus Stevens College of Technology, Water Environment Technology Program
July 2015-present

Associate Member

American Society of Civil Engineers
January 2010-present

Secretary, Municipal Water Infrastructure Council

American Society of Civil Engineers, Environmental Water Resources Institute
February 2015-October 2016

Vice President

Engineers Without Borders Central PA Chapter
July 2012-December 2013

Chapter Secretary / Webmaster

Pennsylvania Society of Land Surveyors, South Central Chapter
January 2006-December 2010

Councilor, 2nd Ward

Middletown Borough Council, Middletown, Pennsylvania
October 2006-March 2008

Authority Secretary/Treasurer

Middletown Borough Authority, Middletown, Pennsylvania
July 2006-March 2008