Christopher F. Brosch, CNMP
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Interested in challenges of environmental sciences with a focus on nutrients in soils especially as affected by agriculture.

A focused background in soil nutrient and water quality science, with experience in field, laboratory, and modeling experiments. Deadline oriented, self-motivating, logical employee. Over a decade of experience in teamwork, leadership, facilitation and educational instruction utilizing creative approaches utilizing the MS Office suite. Some familiarity in relevant technical computer software including ArcGIS, SAS and database programs like SQL, Access and Excel.

Education

Virginia Polytechnic Institute and State University, Online
Masters of Science Environmental Science 2015
Project: *Relative Phosphorus and Nitrogen Loss Efficiencies Based on Nutrient Management Planning using Rainfall Simulation*

University of Maryland, College Park, MD
Bachelor of Science Natural Resource Sciences: Conservation of Soil, Water and Land 2006

Professional Experience

Virginia Tech & VA Dept. of Conservation and Rec., Richmond, VA and Annapolis, MD
Faculty Special Project Associate - Modeling Support Specialist II 2012-2015

- Populate and QA/QC semi annual Nutrient Management Plan BMP data for all Virginia plans meeting state standards and criteria to local, state and national water quality programs.
- Chair Nutrient Management Expert Panel under the Agriculture Working group for the Chesapeake Bay Program partnership and produced three scientifically defensible reports summarizing relevant literature.
- Serve as technical reviewer for manure management expert panels, including manure to energy and incorporation practices.
- Commented on guidance, policies, grants and scientific reports related to Agricultural policy and BMP effectiveness estimates based on technical merit for Virginia agencies.
- Assist in development of cloud based database system with a software interface for nutrient management plan tracking in Virginia using a web client to track data and verify plan writing.

Water Stewardship Inc, Annapolis, MD
Science Advisor 2012

- Assessed and verified BMP implementation and effectiveness on scores of farms in the Shenandoah Valley resulting in Continuous Improvement Plans.
- Advised farmers and producers on management practices to mitigate nutrient and sediment pollution consistent with state goals for reaching the Chesapeake Bay TMDL.
- Evaluated proprietary tools for consistency with suite of Chesapeake Bay Program Watershed Models using statistical analysis.
- Wrote and submitted grant progress activity and final reports based on privacy protected data.

University of Maryland and Chesapeake Bay Program, Annapolis and College Park, MD
Graduate Research Assistant; Faculty Extension Assistant 2006-2012

- Communicated complex relational databases from Scenario Builder and CAST to audiences of diverse backgrounds and various sizes.
- Updated extensive documentation on technical models estimating non-point source pollution and abatement.
- Lead work groups, expert panels and webinars on agricultural management and models.
- Provided technical support to senior officials in preparation of reports and briefings to US EPA, USDA, State regulatory and conservation agencies.

Joint Global Climate Change Institute, College Park, MD 2004-2005
Technical Intern

- Constructed and published national database of crop rotations based on county surveys of land use:
  - Rosenberg, NJ. *A Biomass Future for the North American Great Plains: Toward Sustainable Land Use and Mitigation of Greenhouse Warming.* Netherlands: Springer, 2007.
- Prepared databases in Microsoft Access and ArcGIS for use in watershed and national level models for carbon sequestration.

Duke University Talent Identification Program, Beaufort, NC 2006
Teaching Assistant

- Lectured 20 college level students on oceanographic concepts relevant in earth sciences such as pedology, erosion,

soil and water chemistry, waves and tides using a variety of delivery methods.
- Formulated curriculum materials to meet lesson objectives, incorporating experiential learning where possible.
- Utilized teaching methods that encouraged critical thinking, problem solving, and independent learning.
- Organized field trips for hands-on labs conducting salinity, phosphate and nitrate testing on water samples.

Professional Accreditation, Association and Recognition

Certified Nutrient Management Planner	2014- Curr
Member CSA-ASA-SSSA	2008-2012
North-eastern Branch Outstanding Senior	2007
Tri-Societies National Student Recognition Award	2007
Member Mid-Atlantic Association of Professional Soil Scientists	2009-2013
Senior Scholarship	2006