

## **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 management. Over a decade of experience in teamwork, leadership, facilitation and educational instruction utilizing creative approaches. Proficiency in relevant technical computer software including ArcGIS, SAS and database programs like SQL, Access and Excel.

### **Education**

**Virginia Polytechnic Institute and State University**, Blacksburg, VA

*Masters of Science Agricultural 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**

**Delaware Department of Agriculture**, Dover, DE

*Nutrient Management Program Administrator*

2016

- Oversees the daily operations of the Nutrient Management Program, including 4 full-time and 2 part-time staff.
- Regulate developers and implementers of nutrient management plans to limit excess nutrient application.
- Implement General Permits for concentrated animal feeding operations from permit conditions to individual farm notices of intent.
- Manage manure relocation and nutrient management planning cost share programs totaling over \$1million of private and public funds
- Coordinate the DE NM Commission of government appointees in operations, enforcement of program laws and regulations.
- Managing requests/complaints from the general public over the agricultural community
- Maintain government and university staff involved in program outreach and education of the latest science and technical standards.

**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 and documenting bet professional judgement.
- Serve as technical reviewer for manure management expert panels, including manure to energy and incorporation best 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.

**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.

**Professional Accreditation, Association and Recognition**

Certified Nutrient Management Planner	2014- Curr
Member CSA-ASA-SSSA	2008- Curr
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