

RACHAEL HELTZ HERMAN, CFM

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EDUCATION & CERTIFICATION

STATE UNIVERSITY OF NEW YORK COLLEGE at FREDONIA
B.S. Interdisciplinary Studies in Environmental Science May 2003
MINORS: Geographic Information Systems (GIS) & Anthropology

ASSOCIATION OF STATE FLOODPLAIN MANAGERS
Certified Floodplain Manager (CFM) March 2006

PROFESSIONAL HIGHLIGHTS

CENTER FOR GEOSPATIAL INFORMATION TECHNOLOGY at VIRGINIA TECH,
BLACKSBURG VA

Environmental GIS Manager: May 2004 - Present
GIS Project Assistant: January 2004 - April 2004
Research Assistant: August 2003- January 2004

GIS EXPERTISE AND REPORTS

FEMA Floodplain Map Modernization

- Cooperating Technical Partner (CTP) For Montgomery County, Radford City, and Giles County, Virginia with Virginia Department of Conservation and Recreation, in progress.

Floodplain Plans

- FEMA Map Modernization Management Support (MMMS) For the Commonwealth of Virginia with Virginia Department of Conservation and Recreation, in progress.
- Floodplain Management Plan For the Commonwealth of Virginia with Timmons Group and Virginia Department of Conservation and Recreation, 2005.
- Virginia Floodplain Management Business Plan with Virginia Department of Conservation and Recreation, 2004.
- Virginia Floodplain Mapping Needs Assessment with Virginia Department of Conservation and Recreation, 2004.

Hazard Mitigation Plans

- Commonwealth of Virginia State Hazard Mitigation Plan with Virginia Department of Emergency Management, 2004.
- Several locality specific All Hazard Mitigation Plans and Disaster Resistant University Plans.

PRESENTATIONS AND TRAINING

- *GIS Mapping for Local Hazard Mitigation Plans.* Virginia 2005 GIS Conference. Richmond, Virginia. 2005.
- *Roanoke County ArcGIS Training.* Developed course material and co-taught a 2-day course on basic GIS concepts using ArcGIS . 2003.
- *Hazard Mitigation Planning.* Region 2000 Regional Commission Steering Committee. Lynchburg, Virginia. Developed material and co-taught a one-day class on FEMA's Hazard Mitigation Planning Process. Lynchburg, Virginia. 2004.
- *Floodplain Mapping Updates in Virginia.* Virginia 2004 GIS Conference. Roanoke, Virginia. 2004.

- *GIS Techniques for Floodplain Mapping Updates in Virginia*. Virginia Lakes and Watershed (VLWA) 2005 Conference. Norfolk, Virginia. 2005.
- *ArcGIS Tool for Floodplain Data Management – Flood Management Plan for the Commonwealth of Virginia*. Virginia 2004 GIS Conference. Roanoke, Virginia. 2004.
- *Floodplain Mapping Updates in Virginia*. Virginia Tech 2004 Office of Geographic Information Systems (OGIS) Symposium, Blacksburg, Virginia. 2004.

SUPPLEMENTAL WORK EXPERIENCE

PROJECT ASSISTANT Research Foundation at SUNY Fredonia, Fredonia New York, 2003

- Researched, designed, and mapped soil parent materials for Chautauqua County, New York using ArcGIS, NY DOT raster images, NRCS Soil Survey and STATSGO database. Developed template and mapping criteria for the final deliverables.
- Research completed for Dr. Michael Wilson Geosciences professor at SUNY Fredonia.

INTERN Great Lakes Water Consortium, Buffalo, New York, 2002

- Sampled Lake Ontario using instrumentation such as a TLC meter, Secchi disk, GPS unit and ArcView with the main objective to locate and model a plume coming from the Niagara River.
- Worked with graduate and undergraduate students from various colleges and universities for three weeks.

INTERN Natural Resource Conservation Service & Soil and Water Conservation District, East Aurora, New York, 2002

- Digitized riparian stream buffers and created a database of tax parcel owners that fell within the buffer zone. Informational mailings sent about the Federal Riparian Buffer Project to tax parcel owners.
- Gained field experience with surveying and stream inspections with the Soil and Water Conservation District.
- Interned for 117+ hours under the direction of John Whitney.

INTERN Nussbaumar and Clarke GIS Consulting Firm, Buffalo, New York Spring 2002

- Gained Practical experience in ESRI's software and applications.
- Registered and digitized tax parcel maps of the City of Dunkirk, Town of Dunkirk, Village of Fredonia and Town of Sheridan.
- Interned for 150+ hours under the direction of Dr. Ann Deakin GIS Coordinator at SUNY Fredonia.

DIRECTED STUDY Capture and Quantification of Atmospheric Nutrients from Roofs and Pavements in Chautauqua County, NY SUNY Fredonia, New York, 2001

- Obtained grants from the Dean of Natural Sciences SUNY Fredonia Geosciences Department.
- Performed research under the direction of Dr. Michael Wilson Geosciences professor at SUNY Fredonia. Work published, along with a poster presentation, in the Annual Research and Creative Endeavors Exposition.

BOTANICAL TRAINING Erie Community College Western New York Flora, Hamburg New York, 2001

- Located, dissected, and site identified local species of plants from Western New York.
- Final portfolio consisting of a Herbarium of 150 + local plants.

**BOTANICAL TRAINING Buffalo and Erie County Botanical Gardens, Buffalo, New York
2000**

- Participated in a series of four classes, included descriptions of plants, anatomy, tropical rainforests, succulents, orchids, herbs, plant families' etc.