

Matthew Borr

Education

Master of Arts:

Geography, May 2010
University of Maryland, College Park
College Park, Maryland
GIS/Remote Sensing/Biogeography

Bachelor of Science:

Geography – Natural Resources/Analysis/GIS, April 2006
Minor: Biological Sciences
Western Michigan University
Kalamazoo, MI

Associate of Applied Science:

Graphic Design, April 1997
Kalamazoo Valley Community College
Kalamazoo, MI

Skills

Extensive knowledge of Environmental Issues in biodiversity conservation, land use, and sustainability
Research Planning and Communication
Geographic/Spatial Analysis
GIS/Remote Sensing/GPS Software
Cartographic and Visual information design
Ecological Restoration Techniques/Invasive Species Management
Extensive knowledge of Ecological/Biological Processes and field techniques

Experience

Great Lakes Center for Maritime Research April 2011-present
Michigan Heritage Water Trails
Lake Michigan Water Trails
Western Michigan University
Kalamazoo, MI

- Created interactive online GIS application using ArcGIS Server for the purpose of planning water trail usage and information dissemination
- Created full set 33 of maps for navigation and location purposes on Lake Michigan
- Utilizing databases to provide information for online mapping users to locate amenities and places of interest, also using spatial databases to compute trip travel

- times
- Designed and implemented a website framework containing kayak trail information

Kalamazoo Valley Community College
Western Michigan University

April 2011-present

Instructor

Kalamazoo, MI

- Teaching Introductory Biology, Physical Geography, World Environmental Problems and Issues
- Instruct at a variety of scales – from cellular level to large scale landscape biogeographical concepts
- Use conservation and ecology using geographic concepts extensively in lectures/labs
- Integration of GIS and Remote Sensing Technologies into Geography and Biology Classes
- Instructor in substitute role for Intro to GIS

Health Data Research, Analysis and Mapping (HDReAM)

April 2013-present

Western Michigan University

Lead GIS Website Designer/Programmer

Kalamazoo, MI

- Construct and maintain Online GIS website that disseminates maps to the community in a consumer-friendly format. Mapping and analysis, as well as online geospatial database development for interactive online mapping,

Potomac Conservancy
2010

June 2010-November

Silver Spring, MD

- Gathered and provided research on environmental issues, agriculture, water quality, and ecological restoration within the Potomac River Basin.
- Analyzed and synthesized data and statistics from multiple sources (journal literature, interviews, and internet sources)
- Used ArcGIS to create databases and maps for the purpose of presenting scientific data for policymakers and potential donors

University of Maryland, College Park
2010

July 2007-January

College Park, MD

- Research assistant – Provided spatial analysis and cartographic support for boreal fire/carbon emission projects and fire ecology in Alaskan interior
- Gathered, refined, and documented datasets from research and data obtained from various sources. Managed complex databases for GIS analysis
- Created and implemented a statistical study using correlations and regression models
- Took lead in the collection of data through sampling techniques in burned areas in Alaska.
- Teaching assistant – Led labs and discussion for undergraduate geography classes

Smithsonian Environmental Research Center
2007

September 2006-January

Edgewater, MD

- Assisted scientists in Ecological Modeling and Spatial Analysis using GIS tools
- Gathered, refined, and documented datasets from research and data obtained from various sources
- Created and implemented a statistical study in habitat suitability and pollution effects using correlations and regression models
- Presented results of independent project to an audience

Great Lakes Center for Maritime Research
2007

August 2005-July

Michigan Heritage Water Trails

Kalamazoo, MI

- Redesigned Heritage Water Trails website to promote ease of use in obtaining information and finding individual water trails; also updated visual design
- Created interactive maps to facilitate water trail usage
- In process of designing interactive applications for water trail users for better planning when inquiring from remote locations

Papers and Presentations

HDRReAM Website at <http://www.wmich.edu/hdream/gis-server/index.html>

“Developing and implementing a multi-modal trail in the Lake Michigan region” David Lemberg, Matthew S. Borr 2012. Presentation/Paper

“Soil moisture limitations on monitoring boreal forest regrowth using spaceborne L-band SAR data” Eric S. Kasischke, Mihai A. Tanase, Laura L. Bourgeau-Chavez, Matthew S. Borr, *Remote Sensing of Environment*, 115:1 (227-232) 17 January 2011

“Identification of Vegetation Regrowth Trajectories in Burned Areas in the Interior of Alaska using MODIS Imagery” Papers from the Annual Meeting of the Association of American Geographers - 2009. Presentation/Paper

“State of the Nation's River, 2010” Potomac Conservancy - 2010 Paper

“Identifying Coastal Shoreline Land Use and Submerged Aquatic Vegetation in Estuaries of the Chesapeake Bay using a GIS” Smithsonian Environmental Research Center - 2006 Presentation/Paper

I am currently active in research in Javascript programming and data visualization for online map dissemination and analysis, using ArcGIS Server. Currently active in visualization and spatial analysis of drug use for a local company (paper in progress). I am maintaining and researching a database and map collection for Lake Michigan kayaking trails. I in active research in the integration of GIS and remote sensing processes and products in order to introduce and enhance education and skill sets at WMU and KVCC. My expertise is in data visualization, spatial analysis, biogeography,

and Land Use/Land Cover Change analysis and prediction.