

## SEAN DUBOIS

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### Education

**University of Wisconsin-Madison**  
**Nelson Institute for Environmental Studies**  
Environment and Resources MS student  
GPA: 3.9

*September 2012-  
Present*

**University of Michigan**  
**Bachelor of Science with Distinction**  
**Literature, Science & the Arts and Natural Resources & Environment**  
Double Major:  
- High Honors in Earth Systems Science Concentration  
- Concentration in the Environment

*September 2007-  
April 2011*

#### Key Courses taken:

Atmospheric, Oceanic and Space Science 350- Atmospheric Thermodynamics  
Environment 375- Environmental and Resource Economics  
Environment 391- Sustainability and the Campus  
Environment 401- Modeling Human-Environment Systems  
Environment 404- Cars, Energy & Chemistry  
Environment 407- Sustainable Cities  
Geological Sciences 320- Earth Systems Evolution  
Geological Sciences 321- Earth Systems Dynamics  
Geological Sciences 325- Environmental Geochemistry  
Geological Sciences 341- Ecosystem Science of the Rockies (taken at a field camp in Jackson Hole, Wyoming)  
Geological Sciences 409- Earth Systems Modeling  
Geological Sciences 452- Paleooceanography  
Geological Sciences 477- Hydrogeology  
Math 156, 255, 256- Applied Honors Calculus II, III, IV  
Physics 140/141, 240/241- General Physics I & II and respective labs

GPA: 3.685

University Honors Student (5 semesters)

## Research Experience

### Research Assistantship

December 2011-  
Present

- Research assistant on project “Measurement of ecosystem metabolism across climatic and vegetation gradients in California for the 2013/2014 NASA AVIRIS/MASTER airborne campaign”
- Examine ecosystem photosynthesis rates via airborne remote sensing, flux tower data, and ground-based spectrometry; data will be incorporated into the development of an ecosystem model
- Results will determine feasibility and methods for studying regional-scale photosynthesis from combined visible-near infrared-shortwave infrared and thermal infrared imagery.

### Honors Thesis

- Modeling ice sheets during the Paleozoic under various parameters
- Research is unique as I added a complex ocean model in order to observe how ocean currents affect ice creation and ablation, as opposed to a simple ocean model that only transfers heat via diffusion.
- Results will help to model and better understand our current Earth’s change in total ice volume under changing parameters, such as atmospheric carbon levels.

2010-2011

## Work History

### United States Environmental Protection Agency

2011-2012

#### *Fellowship through Oak Ridge Institute for Science and Education*

- Quality Assurance Officer for Great Lake Restoration Initiative grants
- Review and approve quality documents for Great Lakes projects in New York and other Great Lake states.
- Assist with field sampling conducted throughout NJ and NY, including testing of NYC water supply and Barnegat Bay, NJ.

### University of Michigan Museum of Natural History

2009- 2011

#### *Paleontology Preparation Lab*

- Title: Assistant Preparer
- Preparing and casting prehistoric whale and dinosaur fossils.

### Environment Illinois

#### *Environmental Campaign Staff and Field Trainer*

2008

- A non-profit organization designed to protect the quality of the environment and public interest on environmental issues. Specifically in 2008, the project was restoration of the Clean Water Act (which had recently been reinterpreted, allowing lower polluting regulations on rivers and other waterways).
- Worked as Campaign staff and Field trainer, raising money for the organization and training new employees.

### River Forest Park District

2006-2007

#### *Camp Counselor*

- Worked as a counselor and supervisor for various youth sports camps offered by the Park District.
- Volunteered as a youth boys head coach in the River Forest Park District’s basketball league.

## Awards and Scholarships

- Nelson Institute Student Travel Grant** *2013*
- Funding for travel to present at the Global Land Project 2014 Open Science Meeting in Berlin, Germany
- Alexander Goetz Instrument Support Program** *2013*
- ASD inc. instrument program for graduate students
  - Designed to provide instrumentation and for one year for students involved in innovative remote sensing and field spectroscopy research, and stipend to cover publication or presentation of research costs
- Goldring Family Foundation Field/International Experience Award** *2009*
- Financial award for students involved in off-campus field research, awarded by merit through the Program in the Environment
  - Received award for summer field course at Camp Davis in Jackson Hole, Wyoming
- National Merit Special Scholarship** *2007- 2011*
- Four year scholarship awarded by merit through the National Merit Scholarship Corporation, sponsored by an outside corporation

## Volunteer Work and Group Affiliations

- Menominee Student Outreach** *2012-2013*
- Designed courses to educate high school and college Menominee Nation students during weekend retreat
  - Focus on modern climate issues and familiarizing the students with scientific research and methods.
- Alternative Spring Break** *2008- 2010*
- Designed to allow students, during the week of Spring Break, to volunteer on projects to improve housing and interact with the people and communities they are serving.
  - In 2008, rebuilt homes in a rural poverty area of Cranks Creek, KY.
  - In 2009, built new house for Habitat for Humanity in Meridian, MS, a city hit by recent hurricanes and a challenged by a population influx after Hurricane Katrina.
  - In 2010, site leader for the trip to New Orleans, working with an organization helping those affected by poverty and damage from Hurricane Katrina.
- Ann Arbor Farmer's Market** *2009*
- Expanded knowledge of the Markets resources and products through distribution of literature.
  - Helped customers and farmers during Market hours.
- Intramural Sports** *2007-2013*
- Manager of IM outdoor and indoor soccer teams and basketball team.

**Appalachian Service Project**

- Brings groups of students to a rural poverty setting in southeast Kentucky to help rebuild houses for people that have no other means to repair their homes.
- 2004 and 2005: worked as a site participant on this trip through local youth ministry.
- 2006 and 2007: worked as student leader on the trip, organizing the construction and becoming focal point for the family being helped.

*2004-2007*