Executive Summary

Our project focuses on assessing and measuring non-economic loss and damage (NELD) from climate change or other environmental stress as experienced by marginalized communities. The project and methodology was built in partnership with the Bad River Band of Lake Superior Chippewa in northern Wisconsin. Our project team has conducted ethnographic interviews with tribal members in order to identify potential adverse health impacts, reduction in biodiversity, loss of indigenous knowledge, as well as the loss of identity or sense of place resulting from the destruction of culturally important landscapes or built sites. Along with collecting oral histories, we are exploring the feasibility of developing a methodology to assess non-economic loss and damage.

Sharing the stories of a vulnerable community threatened by climate change will help anticipate future non-economic loss, and thereby inform adaptation and mitigation strategies that minimize the consequences. Gathering and sharing stories will not only inform policymakers, but will provide the community itself with an archive of oral histories regarding the community’s relationship to the landscape.

We have completed our summer fieldwork collecting these stories and will now be turning to analysis and report writing.

Progress Towards Milestones

In the Dow Distinguished Award proposal, our project milestones were outlined as follows,
- Develop partnership with Bad River Band of Lake Superior Chippewa
- Develop field work methodology
- Conduct field work in community
- Comprehensive analysis of academic research and field data collected
- Summarize research and field work in final paper and presentation

The following details our progress towards each milestone:

**Develop partnership with Bad River Band of Lake Superior Chippewa**

We made initial contact with the Tribal Heritage Officer and Climate Change Coordinator in March 2017. We traveled to the Bad River Reservation in April 2017, to meet with administration, receive their feedback on the project, and receive approval to engage in the community. While the project aims to utilize non-economic loss and damage concepts and frameworks, we were committed to creating a project that was culturally appropriate, relevant, and added value to the tribe’s current efforts in climate change adaptation and cultural preservation.

Our project proposal (Appendix A) was presented to the Bad River Tribal Council and approved in late April 2017.

**Develop Field Work Methodology**

The data collection and interview structure were developed to assess participants’ overall connection to the environment and past and current involvement in traditional practices. These include wild rice harvesting, hunting, gathering, and other practices that involve the use of natural resources on the reservation and within the ceded territories. The Bad River Reservation Seventh Generation Climate Change Monitoring Plan was referenced to identify specific species at risk and practices of cultural importance to the community. The demographics form (Appendix B) outlines the specific information collected from each participant.

In addition to collecting information about traditional practices, the semi-structured interview sought to measure current or potential personal, family, or cultural loss and damage due to climate change and environmental stress.
Before initiating any interviews, we went through the University of Michigan Institutional Review Board (IRB) process to ensure that our work conformed to federal, state, and university policies regarding the protection of human subjects. The IRB notified us that this project was exempt from ongoing IRB review (IRB Number: HUM00128659).

Conduct Fieldwork in the Community

Our project team conducted fieldwork on Bad River Reservation from July 19-August 27. During this period, we facilitated semi-structured interviews with members of the Bad River tribe. The Interview Guidelines (Appendix C) were used to ensure that facilitation was culturally sensitive and maintained a consistent approach. Each of the interview subjects reviewed a project overview and signed a consent form (Appendix D).

We recorded interviews with 20 subjects, which exceed our initial goal of 12-15. Our subjects were a mix of men and women, elders and non-elders, all of whom lived on the reservation or within a 10 mile radius.

Along with interviews, we attended community events and met with professionals working in the fields of tribal heritage, tribal leadership and administration, and natural resource management on the reservation and with the Great Lakes Indian Fish & Wildlife Commission (GLIFWC).

Comprehensive analysis of field data

The analysis of the collected data is still a work in progress. During the fall semester (September 01 - October 31), the project team will dedicate time to research and synthesizing the field data.

We have logged all of our demographic form data into a spreadsheet for further analysis. The interview recordings are being summarized and thematically coded to support the final paper. The audio and video files will be returned to the tribe in December 2017 after analysis is complete.

We have developed 13 themes for our interview coding, as follows:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation &amp; Resilience</td>
<td>Perceived ability to adapt to changes and adverse events</td>
</tr>
<tr>
<td>Relationship to the Environment</td>
<td>Reciprocity, connection of all species to one another;</td>
</tr>
<tr>
<td></td>
<td>stewardship of the land; specific ties to Bad River Reservation;</td>
</tr>
<tr>
<td></td>
<td>giving tobacco in gratitude</td>
</tr>
<tr>
<td>Cultural Importance of Wild Rice</td>
<td>Migration story, how rice is used and shared, ceremonies for self,</td>
</tr>
<tr>
<td></td>
<td>family, or community</td>
</tr>
<tr>
<td>Cultural Importance of Water</td>
<td>Sloughs, waterfalls, rivers, lakeshore</td>
</tr>
<tr>
<td>Cultural Importance of Fish</td>
<td>Species: walleye, brook trout, perch; methods - spearing, netting,</td>
</tr>
<tr>
<td></td>
<td>hook and line</td>
</tr>
<tr>
<td>Cultural Importance of Trees</td>
<td>Species: birch, maple, ash, cedar; Practices: baskets, canoe,</td>
</tr>
<tr>
<td></td>
<td>knocking sticks, sugaring</td>
</tr>
<tr>
<td>Cultural Importance of Plants</td>
<td>Medicinal and edible, roots and berries, sage, sweetgrass</td>
</tr>
<tr>
<td>Cultural Importance of Game</td>
<td>Species: moose, deer, rabbit,</td>
</tr>
<tr>
<td>Cultural Importance of Birds</td>
<td>Species: duck, swan, owl, eagle</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Cultural Importance of Other Species</td>
<td>Catchall category: turtle, muskrat, mosquito, clam</td>
</tr>
<tr>
<td>Cultural Impact of Adverse Event</td>
<td>Expected cultural impact (sense of loss, loss of teachings) from mining, pipeline, unsustainable harvesting, or climate change or environmental stressor</td>
</tr>
<tr>
<td>Other Impacts of Adverse Events</td>
<td>Economic, physical health, mental health, subsistence living, food sovereignty</td>
</tr>
<tr>
<td>Sovereignty</td>
<td>Treaty rights, access to off-reservation resources, politics, social justice</td>
</tr>
</tbody>
</table>

**Summarize research and field work in final paper and presentation**

As part of the Dow Sustainability Fellowship requirements, a final paper, poster and presentation will be prepared and completed in the Fall 2017 semester. The work on the final paper and presentation are ongoing and deadlines are included in the future project plan.

**Future Project Plan**

The following chart gives the timeline of our project and gives a status of the steps we have completed so far.

**Project Timeline:**

<table>
<thead>
<tr>
<th>Action / Milestone</th>
<th>Timeline / Deadline</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete literature review and analysis</td>
<td>Ongoing</td>
<td>In progress</td>
</tr>
<tr>
<td>Initial on-site partnership-building &amp; field work</td>
<td>April 01-30</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop template and script for fieldwork</td>
<td>April 30</td>
<td>Completed</td>
</tr>
<tr>
<td>IRB Approval</td>
<td>July 19</td>
<td>Completed</td>
</tr>
<tr>
<td>On-site field work</td>
<td>July 19 - August 27</td>
<td>Completed</td>
</tr>
<tr>
<td>Data analysis, research and report writing</td>
<td>September 01-October 31</td>
<td>In progress</td>
</tr>
<tr>
<td>Submit Distinguished Award Progress Report</td>
<td>September 13</td>
<td>Completed</td>
</tr>
<tr>
<td>Project Posters Due</td>
<td>November 06</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Poster Presentations</td>
<td>November 18</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Final report due</td>
<td>November 28</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Final presentation</td>
<td>December 11</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Provide communities with oral histories archive</td>
<td>December 18</td>
<td>Not Completed</td>
</tr>
</tbody>
</table>
The remaining tasks include the data analysis and submitting our final paper and presentation.

Deliverables include the oral history archive and final report.

Oral History Archive

We will be providing the Bad River Band with the video and audio footage we collected from our interviews. We have some additional minor processing to complete and will organize the material in collaboration with the Tribal Heritage office to maximize the usefulness and sustainability of the archive.

Bad River’s current climate change monitoring plan identifies loss of cultural heritage as a potential risk. However, the plan does not elaborate on the specific cultural heritage traditions or the magnitude of their importance to the community. We believe that the inclusion of personal reflections or stories from members of the community will be useful in explaining the potential risks to cultural heritage from climate change when dealing with non-tribal members, such as funding bodies, government agencies and the general public. Bad River will be in a position to use clips from these oral histories in social media, website, or other campaigns on environmental issues of concern to the community.

We continue to work with our faculty advisor and the Climate Analytics group on the implications of our research and potential frameworks for analysis.

Final Report

Our final report will include a description an overview of non-economic loss and damage research, an overview of the Bad River Band and its traditions as they relate to the environment, our methodology, our findings, and implications for future research and implications for the tribal community.
Appendix A

Preliminary Research Proposal to the
Bad River Band of Lake Superior Chippewa

Background Statement

Most climate change research and assessments focus on measuring the potential economic loss from changes in the environment. We want to focus on the potential non-economic losses from climate change or other environmental stressors. These are items that cannot be monetized -- factors like adverse health impacts, reduction in biodiversity, loss of knowledge and language, as well as the loss of identity or sense of place resulting from changes in culturally important landscapes or built sites.

These factors are characterized by the fact that their potential loss makes a substantial and permanent difference to the well-being of those affected. These factors are not effectively addressed in national or international policy frameworks, although researchers and policy-makers have begun to recognize their importance.

Goals/Objectives

The aim of this project is to develop a framework to assess potential non-economic loss and damage from climate change. The framework will be informed through the collection of stories from people that actively experience and understand the impacts of climate change on their daily lives. These measures of non-economic loss and damage can then be used to develop or prioritize adaptation measures that minimize these losses. At a minimum, the framework and assessment will help inform policymakers of the importance of these cultural and social factors to climate change adaptation planning and effectiveness.

Team Introduction

The project team represents graduate students from five University of Michigan - Ann Arbor schools. The following is a list of team members and our faculty advisor. We have included more detailed bios in Appendix.

- Katie Proudman, Social Work
- Stephanie Dooper, Higher Education
- Adam Osielski, Law
- Sarah Swanz, Information
- Ansha Zaman, Natural Resource Management & Environmental Science
- Dr. Stuart Kirsch, Faculty Advisor, Department of Anthropology, LS&A

We have received funding for this project through the Dow Sustainability Fellowship program, operated through University of Michigan Graham Sustainability Institute. Nonetheless, this is a student-directed and self-determined project. We have devised the project objective and scope ourselves. We plan to share our final report with the Graham Institute at a year-end presentation, but we will consult with tribal leadership before any presentation of sensitive materials.

Methodology

With your guidance, we would like to learn about the potential impact of climate change and environmental stressors from members of the community. We can do so through a variety of methods: survey of community leaders and experts, focus group meetings, attending community meetings, and/or one-on-one interviews with community members.

We have attached the topics of our potential questions in the Appendix. These are semi-structured questions that allow participants to respond freely based on their knowledge and experience. Anyone is free to decline to be interviewed. We can offer food for focus groups and small gifts (<$20) as thank-yous for participation.

We would not record (audio or video) any interview without the participant’s consent and each participant is free to stop the interview at any time. We would not take photographs or videos of any places, ceremonies, or activities that you direct us not to. Any recordings we do take would be shared with you.
Due to our own academic schedules, we are free to visit the Bad River Reservation for about six weeks from mid-July to the end of August. We will work with you to plan our visits.

During the fall, we would work on analyzing the data we acquired and writing up our report. We expect to complete our report by mid-November.

Possible Deliverables to Community

- Archive of oral histories to record and showcase how the landscape of Bad River reservation and watershed is evolving due to climate change. This could be videos to post on your website or the Great Lakes Commons website (http://www.greatlakescommons.org). Or we can set up a private archive available only to tribal members if you do not want to make it public. We can also help catalog existing recordings.

- Add value to Bad River Band’s ongoing climate adaptation and mitigation planning. We can align our questions with the objectives of the Seventh Generation Climate Change Monitoring Plan. We would agree to comply with your data sharing or confidentiality policy.

- We understand that some teenagers are working video production. We would be happy to have them along if they wanted to learn more. We can also offer photography or basic computer lessons to them.

- We will provide you with regular updates on our activities as often as you instruct and we consult with tribal leadership before publication of our final report.

Miigwech - Thank you, we look forward to hearing from you.
We ask that you complete this form so that we get an impression of the people participating in our focus groups or individual interviews. Your individual information will not be shared outside the research group. Summary information from all participants may be used in our final report. Thank you for your participation.

1). What is your gender?
- □ Female
- □ Male
- □ Two Spirit
- □ Gender non-conforming

2). What is your age?
- □ 16-17
- □ 18-29
- □ 30-39
- □ 40-49
- □ 50-59
- □ 60 and over

3). Tribal Membership
- □ Bad River Band
- □ Other (Please specify:__________)
- □ Non-member

4). Are you currently living on Bad River Reservation?
- □ Yes                   □ No
If no, please indicate location or approximate distance from the reservation:________________________________________

5). How many months per year are you on reservation?
- □ More than 6 months
- □ Fishing Season
- □ Summer Only
- □ Rice Season
- □ Weekends Only
- □ Only for Ceremonial Events

6). Do you participate in any of the following? Check all that apply.

Have Done Before
- □ Hunt (gun)
- □ Hunt (bow)
- □ Fish (hook and line)
- □ Fish (netting)
- □ Fish (spearing)
- □ Trapping
- □ Maple sugaring
- □ Gathering balsam boughs
- □ Gathering sweetgrass
- □ Collecting berries/roots
- □ Wild Rice (manomin) harvesting
- □ Harvesting plants for medicinal use
- □ Harvesting edible plants
- □ Birch bark harvesting

Still Currently Do (within past 12 months)
- □ Hunt (gun)
- □ Hunt (bow)
- □ Fish (hook and line)
- □ Fish (netting)
- □ Fish (spearing)
- □ Trapping
- □ Maple sugaring
- □ Gathering balsam boughs
- □ Gathering sweetgrass
- □ Collecting berries/roots
- □ Wild Rice (manomin) harvesting
- □ Harvesting plants for medicinal use
- □ Harvesting edible plants
- □ Birch bark harvesting
Interview Guidelines
Climate Change NELD Project

The following outlines sample questions for the facilitation of the Climate NELD interviews and oral histories. The document is for internal use by University of Michigan Climate NELD team and was developed in partnership with Bad River Tribal leadership, Tribal Heritage Office and Department of Natural Resources.

Pre-recording
- Receive Project Overview and sign Participation Consent
- Complete Participant Demographics Form
- Ensure that participant understands that their participation is voluntary.

Sample Interview Questions *subject to change based on interview content*

Background
- Please tell us your name and age.
- How long have you lived on Bad River Reservation?
- Did you grow up on the reservation?
- What is your current job / role in the community?
- Have you seen any changes to the environment -- the land, the water, the weather, plants and animals -- during your lifetime?
- Have you lost or altered any experiences or connections to the environment as a result these changes

Species Checklist
- Do you eat wild rice? Do you know how to harvest wild rice?
  - If the wild rice did not grow, how would you feel about that?
  - Tell us how you felt during the year(s) when you were not able to harvest wild rice.
  - How important is it that your ricing sticks are made of cedar from the reservation or ceded territory?
- Do you eat walleye? Do you know how to fish? What type of fishing (gun, net, spear)? What species do you catch?
  - If there were no more walleye to be caught here, how would you feel about that?
- Do you eat maple sugar or syrup harvested from Bad River? Do you know how to harvest sugar?
  - If the sugaring trees moved north, where would you get your sugar/syrup?
  - How is the season? How many taps do you get? Changes to methods over time?
- Do you harvest birch bark, or, purchase/receive gifts of birch bark items made from local artisans?
  - If the birch tree wasn’t able to grow here anymore, how would you feel about that?
- Do you [insert from checklist as appropriate]? Do you know how to [harvest, fish, hunt]?
- If there were no more [deer, sweetgrass, etc], how would you feel about that?
- What values do you find and develop through these activities?
  - Do you have any memories that illustrate this?

Open-Ended Questions
- How far would you be willing to travel to get wild rice or maple sugar/syrup if the plant life moved north, *beyond the ceded territories*?
- What things in the environment are most important to you? How do you protect them?
- What are places (one place) on the reservation you would like to keep pristine? Why?
- How much would Bad River have to change for it to longer feel like Bad River to you?
- Do you think you would ever move away from Bad River? What would that mean to you?
Appendix D
Climate Change Student Project Overview

Introduction to Climate Change Project

We are a team of students from University of Michigan who are studying how changes to the environment might impact your way of life. Changes to the environment -- or climate change -- might mean changes in temperature and rain and snow levels, changes in the availability of fish and game, changes in plants or crops, or changes in water quality. The Bad River Band has long been looking at these changes and developed a Seventh Generation Climate Change Monitoring Plan.

We have developed the research project in partnership with the Tribal Heritage Protection Office and Department of Natural Resources. Our project was approved by the Bad River Tribal Council in April 2017.

What is Non-Economic Loss from Climate Change?

Most climate change research focuses on measuring the potential economic loss from changes in the environment -- the money a fisherman might lose if there are no more fish in the lake. We want to focus on the potential non-economic losses from climate change or other environmental stressors. These are things that you cannot put a dollar amount on -- things like knowledge and language or the loss of identity or a sense of place that comes from changes in culturally important landscapes. These factors are not always addressed in planning documents, and yet their potential loss can make a permanent difference to the wellbeing of a community.

What are we asking from you?

- We would like to collect stories from people like you through focus groups or interviews and ask you questions about your relationship to the environment and how it has changed.

- We would like to speak with you for about an hour. You do not have to answer all of our questions and you are free to end the interview at any time. We understand there might be information you do not wish to share with non-tribal members.

- With your permission, we would like to make a recording of our conversation. The recording will help us with our analysis after our time at Bad River Reservation. We will archive our interviews with the Tribal Heritage Protection Office and you will be able to access them there at any time.

If you would like to participate, we will ask you to complete the consent form on the other side.
Consent Form

The aim of this project is to develop a framework to assess potential non-economic loss and damage from climate change. The framework will be informed through the collection of stories from people that actively experience and understand the impacts of climate change on their daily lives. We would like to ask you questions about your relationship to the environment and how it has changed.

We would like to speak with you for about an hour. With your permission, we would like to make a video recording of our conversation. You do not have to answer all of our questions and you are free to end the interview at any time.

The Bad River Band of Lake Superior Chippewa will keep the recording and will have the rights to use, reproduce, and publish the recording for any lawful purpose according to its policies.

What we have learned from you may become part of our written report, but we will not publish any report without first obtaining the approval from tribal leadership.

If you would like to participate in our study, please sign below to indicate that you understand:

(1) The general topic of the questions that will be asked
(2) That your story will be recorded
(3) How your story will be used by the researchers

___________________________________
Name (printed)

___________________________________
Name (signed)

Interviewer Name: ______________________

If you have any questions about this project, please contact any of the following:

- Edith Leoso, the Tribal Heritage Protection Officer, (715) 682-7123 x 1662
- Devon Brock-Montgomery, the Climate Change Coordinator, (715) 682-7123 x 1589 or Climate@badriver-nsn.gov
- Stephanie Dooper, Student Researcher, (270) 313-8511 or climate-neld@umich.edu
EDUCATION

University of Michigan, Ann Arbor, MI
- M.A. in Higher Education, GPA 4.0
- Dow Sustainability Fellow
- CSHPE Donald H. and Elizabeth F. Runck Scholarship
- Outdoor Adventure Trip Leader; Women’s Club Soccer Team Member

University of Louisville, Louisville, KY
- B.A. in Political Science; B.A. in Liberal Studies, Honors Scholar, 3.9 GPA
- Certificate in Peace, Justice & Conflict Transformation
- Minor in Spanish; Minor in Latin American and Latino Studies
- Summer Study Abroad, Universidad de Complutense, Madrid, Spain

WORK EXPERIENCE

CRLT, Engineering Education Research Program Coordinator, University of Michigan
- Jan. 2017 – Present
  ▪ Assist with planning the annual Engineering Education Research Poster Fair and developing on-going resources for diversity, equity and inclusion in instructional practices.

Student Engagement Ambassadors Program Assistant, University of Michigan
- Aug. 2016 – Present
  ▪ Enhance learning in student development, engaged pedagogy, and programmatic support.
  ▪ Supervise undergraduate students to develop and implement library initiatives and events.

Athletics Academic Mentor, University of Michigan
  ▪ Served as a mentor for at-risk student-athletes. Met regularly with the student to help develop the skills necessary to be an independent learner.

Legislative Intern at KY House of Representatives, Frankfort, KY
- Jan. – Apr. 2016
  ▪ Interned with Kentucky House Representative, Tommy Thompson.
  ▪ Learned about the legislative process and attended House sessions and committee meetings.

Cardinal Host, President’s Office, University of Louisville
  ▪ Represented the Office of the President at various events and helped work these events.

Kentucky Governor’s Scholar Program Resident Advisor Bellarmine & NKU University
  ▪ Taught a bi-weekly seminar, led activities, and chaperoned field trips.

RESEARCH EXPERIENCE

Non-Economic Loss and Damage
- Jan. 2017 – Present
  ▪ Developing a methodology for assessing and measuring non-economic loss and damage from climate change as experienced by vulnerable communities.
  ▪ Gathering oral histories from climate change refugees to provide a platform for sharing their experience of the impact of climate change.

Transportation Policy, Amsterdam, The Netherlands
- Aug. 2015
  ▪ Conducted field research on the use of bikes as transportation, explored policies that would increase ridership, and analyzed methods that would create more bike sustainable cities.

Real Food Challenge, Louisville, Kentucky
- Jan. – May 2015
  ▪ Explored the complexities of the food system to determine if food was local, ecologically sound, humane, and fair.

Indigenous Multi-Cultural Education, Osorno, Chile
- May – June 2014
  ▪ Conducted research with the Center for Local and Regional Development (CEDER).
  ▪ Explored the multi-cultural education systems of the Mapuche, a local indigenous tribe
  ▪ Taught English at a multi-cultural elementary school

PUBLICATION

COMMUNITY ENGAGEMENT EXPERIENCE

Habitat for Humanity, President, University of Louisville  
Aug. 2012 – May 2016
- Initiated the first U of L student led, built, and financed Habitat home in Louisville, KY
- Cycled from Seattle to San Francisco advocate and fundraise for this home
- Organized first U of L Habitat alternate winter break trip to Tucker, GA
- Participated in a Global Village trip in Santiago, Chile
- Habitat for Humanity Youth Leadership Conference, Co-Presenter
- Habitat on Hill: Habitat for Humanity Advocacy Conference Attendee & Youth Scholar

The Roosevelt Institute Campus Chapter, Founder and President, University of Louisville  
Jan. 2014 – May 2016
- Founded this chapter at my University that focuses on writing public policy
- Areas of concentration include: education, economic development, defense and diplomacy, equal justice, healthcare, and energy and environment
- Roosevelt Institute Leadership Summit, Attendee

Freshman LEAD, Director, University of Louisville  
- Planned and executed meetings focused on critical thinking, reflection and leadership
- Mentored students as they implemented their own service projects on campus and in the community

Clinton Global Initiative University, Campus Representative, University of Louisville  
Aug. 2014 – Aug. 2015
- Encouraged and supported my peers to create their own projects in response to challenges in the world in the areas of education, health, environment, poverty alleviation and peace and human rights.
- Clinton Global Initiative Conference Attendee (March 2014 & 2015)

i2a Committee, Student Representative, University of Louisville  
Aug. 2014 – May 2016
- Served as the student representative for the Ideas to Action Committee. Focus on critical thinking, community engagement and perspective of students.

Community Engagement Awards, Selection Committee, University of Louisville  
June 2016
- Helped select applicant recipients based on community outreach, impact, and sustainability endeavors

HONORS/AWARDS

Dow Sustainability Fellow, University of Michigan  
Jan. – Dec. 2017
- Prestigious fellowship that fosters interdisciplinary collaboration to create a project that encompasses the three pillars of sustainability: environmental, social and economic

Ross Leaders Academy, University of Michigan, Stephen M. Ross School of Business  
Nov. 2016
- Competitive leadership program that prepares students on enhancing their executive presence, creating their personal vision, coaching and development, and transformational leadership

Liberal Studies Outstanding Graduate, University of Louisville  
May 2016
- Awarded to one graduating student who excelled in the program and demonstrated leadership

Kentucky Derby Festival Royal Court Member, Louisville, KY  
May 2016
- Competitive scholarship program to serve as an ambassador for the state and the KY Derby

Kentucky Colonel, Frankfort, KY  
May 2016
- Awarded to individuals for their public service and their work for the advancement of Kentucky

Harry S. Truman Scholarship Finalist  
March 2015
- Nationally competitive scholarship for students committed to public service

Etscorn International Summer Research Award, University of Louisville  
April 2013 & 2015
- Award focused on furthering academic research and creating multi-disciplinary understanding

Outstanding Community Engagement Award, University of Louisville  
October 2014
- Awarded to one student each year for their continued commitment to the community
- Received this award for my continuous efforts with Habitat for Humanity

Office of Student Involvement Abraham Lincoln Award, University of Louisville  
Mar. 2014
- Award for innovation and persistence for University programs. Was the first recipient of this award

Yocom Scholarship for a Commitment to Public Service, University of Louisville  
May 2013
- Awarded to a student dedicated to community service and being an agent of change

PROFESSIONAL DEVELOPMENT

American College Personnel Association (ACPA), Member, Conference Attendee  
March 2017
Certificate in Conflict Analysis through the U.S. Institute of Peace  
January 2014
Adam Osielski  
711 Dewey St., Ann Arbor, MI 48104 | 202-669-7317 | osielski@umich.edu

EDUCATION

UNIVERSITY OF MICHIGAN LAW SCHOOL  
Juris Doctor (expected 2018)  
Ann Arbor, MI  
2015 – Present

- Leadership: Articles Editor – Michigan Journal of Environmental & Administrative Law (MJEAL)  
  Speakers Chair – Michigan Energy Law Association (MEnergy)
- Pro Bono Work: Environmental Crimes Project, Unemployment Insurance Clinic

UNIVERSITY OF NOTRE DAME  
Bachelor of Arts in French, Supplementary Major in Theology  
South Bend, IN  
1998 – 2002

- Study Abroad Program: Université Catholique de l’Ouest in Angers, France (2000–2001)

EXPERIENCE

MILLER & CHEVALIER CHARTERED  
Litigation Department  
Washington, DC  
Summer 2016

- Conducted research and drafted memos on a variety of topics related to government contracts litigation, white collar and internal investigations, and ERISA and employee benefits litigation
- Took lead on client interaction, case development and research for landlord-tenant pro bono project
- Participated in firm trainings, business development and practice area meetings with partners and senior associates

ENERGY CENTRAL, S.A.  
Co-Founder | Managing Director  
Port-au-Prince, Haiti  
2011 – Present

- Founded solar energy company that generated over $600,000 in revenue during most recent 12 months of operation
- Designed and implemented 20+ photovoltaic power systems for private businesses, government institutions (Haitian National Police) and international organizations (French Red Cross, OXFAM)
- Wrote financial reports, business plans and presentations to attract private capital investments of over $210,000
- Created 6 full-time jobs and trained staff to meet National Electric Code standards through weekly training sessions
- Presented to Haitian Minister of Energy and 6-member panel of government officials and business leaders to promote solar integration, leading to reconsideration of tax laws to increase adoption of renewable energy

THE HAITIAN PROJECT, Louverture Cleary School  
Board of Directors  
Croix-des-Bouquets, Haiti  
2014 – Present

- Advised board on $1.4M budget planning and facility management during quarterly meetings, resulting in plans to break ground on new science building in Summer 2016 and ensuring on-schedule seismic renovations

Resident Advisor | Facilities Manager  
2011 – 2014

- Advised administrative and maintenance staff and maintained mechanical systems at 350+ student boarding school
- Interpreted dozens of management meetings between U.S. and Haitian staff to develop 5-year strategic plan

Lead Volunteer  
2002 – 2004

- Translated 20+ legal documents to accelerate processes for adoptions from Missionaries of Charity orphanage
- Directed and supervised team of 8 volunteers throughout year-long commitments at Haitian boarding school
- Taught English classes for secondary students ages 12 – 21 yrs. and led students in campus work projects

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS  
Commercial Electrician  
Washington, DC  
2005 – 2011

- Conceptualized and implemented electrical infrastructure to meet project goals on historic preservation sites (Georgetown Public Library), government agency headquarters (National Institutes of Health), and other renovations and new constructions ranging from $1 – 20M+
- Graduated as valedictorian from 5-year apprenticeship program
- Represented IBEW Local 26 for Obama Presidential visit to DC headquarters for discussion of U.S. nuclear energy policy; also represented Local 26 at 2009 U.S. Department of Energy Solar Decathlon

ADDITIONAL

Honors  
Dow Sustainability Fellowship (2017)  
January 2017 – Present

Languages  
Fluent in Haitian Creole, proficient in French and Spanish

Interests  
Delivering the perfect speech, finding the perfect joke; piano- and trumpet-playing; huge fan of Kurt Vonnegut and Carl Sagan
Katherine E. Proudman
1220 W. Stadium Blvd, Apt 3 • Ann Arbor, MI 48103 • kproud@umich.edu

Education

University of Michigan
Ann Arbor, MI
Master of Social Work
Clinical Social Work with Children and Families
Global Activities Scholars Program

University of Vermont
Burlington, VT
Bachelor of Science in Wildlife Biology
May 2008

Social Work Experience

Ang Mo Kio Family Service Centre (AMKFSC)
Singapore
Clinical Case Manager, Intern
40 Hours/Week, May 2017 to August 2017
- Conducted home visits to complete bio-psycho-social and mental health assessments.
- Managed continuum of care for clients with severe and persistent mental illness.
- Facilitated individual counseling and group psychoeducation, support and therapeutic interventions.
- Support community outreach efforts to de-stigmatize help-seeking behavior and build awareness for mental health resources in Singapore.

Advocating Opportunity
Toledo, OH
Client Advocate, Intern
16 Hours/Week, August 2016 to May 2017
- Facilitate trauma-informed social work interventions for victims of sex and labor trafficking.
- Implement education and support programming for families impacted by trafficking, interpersonal violence, and abuse.
- Advocate for client access to legal counsel, housing, food, mental health counseling, medical care and other community resources.
- Support the development and implementation of organization’s goal-setting, empowerment and whole person advocacy curriculum.

Clinical Training & Certifications

- Candidate, Addictions Certificate Program (90-hour) April 2017 to Present
- Motivational Interviewing (16-hour) July 2017
- TF-CBT (10-hour) January 2017

Social Work Volunteer Activities

- Mompower Child Team Member, Starfish Family Foundation September 2017 to Present
- Mental Health Screener, American Indian Health and Family Services April 2016 to Present
- Women’s Empowerment Mentor, Wedu Global June 2015 to Present
Katherine E. Proudman

Other Relevant Experience

**Progression / Chiang Mai Rock Climbing Adventures**  
Chiang Mai, Thailand  
*Program Director*  
40 Hours/Week, August 2011 to August 2016

- Manage the implementation of global citizenship and outdoor experiential education programming for youth and adult participants in Thailand.
- Oversee the design of curriculum for the over 4,000 individuals in Progression/CMRCA experiences annually including open space conferences, training retreats and leadership development seminars.
- Recruit, train and mentor a program delivery team of 20 local and foreign Coordinators, Guides and Educators from SE Asia, North America, and Europe.
- Foster ongoing partnerships and assess needs of ethnic minority communities (Hmong, Karen, Lahu, etc), schools, non-profits, and international organizations.
- Manage annual budget, staff professional development programs, logistics, and risk management systems.

**JUMP! Foundation**  
Beijing, China  
*Senior Facilitator*  
40 Hours/Week, April 2012 to August 2016

- Facilitate youth empowerment, leadership development, and community building programs for international school students, ages 8 - 18 in Singapore, Thailand, China and Indonesia.
- Train Junior JUMP! Facilitators to gain confidence and create a positive impact on their community.
- Assist in creating long-term relationships with school administration and identifying the key connections between traditional and experiential education practices.

**Major League Soccer**  
New York, NY  
*Coordinator, Community Relations*  
40 Hours/Week, August 2008 to July 2011

- Supported the community outreach efforts of all 18 Major League Soccer clubs and players.
- Managed all preparation and on-site logistics of community service projects in MLS markets in the U.S. and Canada.
- Supported the nation-wide launch of MLS’ United We Serve campaign in partnership with President Obama and Corporation for National & Community Service.
- Created MLS WORKS Greener Goals, Major League Soccer’s environmental platform.
- Raised funds and awareness for MLS WORKS charitable partners (UN Foundation, U.S. Fund for UNICEF, Grassroot Soccer, America SCORES).
- Managed the brand awareness of MLS WORKS online, on national broadcast and in MLS stadiums by drafting website content, creating print marketing materials, and distributing public service announcements.

**Awards & Leadership Activities**

- Dow Masters Sustainability Fellowship  
  January 2017
- Asian Leadership Institute / Team Up Certified Facilitator  
  January 2016
- Wilderness First Responder (SOLO Wilderness Medicine)  
  June 2014
- Chair, University of Vermont Program Board  
  August 2006 – May 2008
- Chair, Focus the Nation Steering Committee  
  August 2006 – May 2007
- Chair, Campus Activities Team  
  August 2005 – May 2006
SARAH P. SWANZ

540 Thompson St., Ste. 3140 spswanz@umich.edu
Ann Arbor, MI 48104 (202) 352-0736

EDUCATION

University of Michigan School of Information, Ann Arbor, MI
Master of Science in Information, May 2018
Concentration: Cultural Heritage Protection
Dow Sustainability Fellow 2017
Society of American Archivists, Student Chapter Officer

Duke University School of Law, Durham, NC
J.D. and LL.M. in Comparative & International Law, 1997

Middlebury College, Middlebury, VT
B.A. in History, 1993

CERTIFICATIONS

Post-Graduate Program in Art Crime and Cultural Heritage, Summer 2016
The Association for Research into Crimes against Art, Amelia, Italy

Cambridge Certificate in English Language Teaching to Adults, April 2016
International House, Montañita, Ecuador

Certificate in International Law, Cultural Heritage and the Arts, June 2015
Tulane University School of Law – Siena University, Siena, Italy

Certificate in Front-End Web Development, April 2014
Betamore Academy, Baltimore, MD

EMPLOYMENT HISTORY

Materiell (formerly CMS Advertising Group), Arlington, Va.
Project Manager and Strategist (part-time), April 2013 – December 2015
• Worked with clients to determine objectives and requirements and to establish scope for client web design and development projects.
• Coordinated between client and web designers and developers, monitored progress and quality, and managed client feedback.
• Provided business and legal advice regarding employment, government contracting, and intellectual property issues.

Richards Kibbe & Orbe LLP, Washington, D.C.
• Conducted internal investigations for investment managers and public companies related to financial fraud, insider trading, corruption, anti-money laundering, trade sanctions, and other securities law violations.
• Represented pro bono an Algerian national challenging his detention at the United States Naval Station in Guantanamo Bay in a petition for habeas corpus and negotiated his release back to Algeria.

• Represented senior executives and financial institutions in connection in government and regulatory investigations (Department of Justice, Securities and Exchange Commission, NASD) regarding financial fraud, bribery, and other securities law violations.

• Represented pro bono a Kosovo homosexual in successful application for asylum.

O'Melveny & Myers LLP Washington, D.C.
• Represented former Enron CEO Jeffrey Skilling in all civil litigation and regulatory and criminal investigations relating to Enron’s demise.

• Conducted internal investigation into sales practices on behalf of the Audit Committee of publicly-held food service company.

• Represented investment bank in connection with SEC and NASD investigations into analyst conflict of interest issues.

Bryan Cave LLP, Washington, D.C.

Gibson Dunn & Crutcher LLP, Washington, D.C.

The Honorable Frederic N. Smalkin, U.S. District Court for the District of Maryland,
Law Clerk, August 1997 – August 1998, Baltimore, MD

American Management Systems, Arlington, VA

VOLUNTEER ACTIVITIES
• UM English Language Institute, Conversation Circle (Fall 2016 – present)

• Lawyers Committee for Cultural Heritage Protection (2012 – present)

• Reading Partners, Literacy Tutor, Baltimore, MD (2015 – 2016)

• Guest Lecturer, MiddCore (social entrepreneurship program), Middlebury College, 2013

• Guest Lecturer, Business Ethics, Colby-Sawyer College, 2005

INTERNATIONAL EXPERIENCE
Lived in France (3 yrs.); Germany (3 yrs.); Japan (4 yrs.); and Hong Kong (1 yr.)
Languages studied: French, Japanese, German, and Arabic
EDUCATION

University of Michigan School of Natural Resources and Environment, Ann Arbor, MI
Master of Science, Sustainable Systems May 2018
Dow Sustainability Fellow

Smith College, Northampton, MA
Bachelor of Science, Engineering Science May 2014
Honors in Engineering, Cum Laude, Tau Beta Kappa member

RESEARCH EXPERIENCE

Research Assistant
International Renewable Energy Agency (IRENA), Bonn, Germany (Jan 2017 – present)
• Develop a framework to assess necessary steps that need to be taken to transitions synchronous power systems to systems that can operate entirely with 100% variable renewable energy (VRE). The framework will examine potential timeframe and costs associated with such transitions.
• Conduct literature review of the current context of where we currently stand in terms of technical and institutional transitions. Survey technical and policy experts at IRENA and Argonne National Laboratory.

Dow Sustainability Fellow
University of Michigan, Graham Sustainability Institute, Ann Arbor, MI (Jan 2017 – present)
• Collaborate with Climate Change Coordinator for Bad River Band of Lake Superior Chippewa on climate adaptation and mitigation planning for the region.
• Conduct interviews and collect oral histories to assess the impacts of climate change in the region as experienced and understood by tribal members.

Independent Study, Johnson Research Laboratory
University of Michigan, School of Natural Resources and Environment, Ann Arbor, MI (Jan 2017 – present)
• Assess heating and daylighting energy savings potential of building integrated photovoltaics for integration within facades.
• Build mathematical model to optimize energy savings performance of BIPV and present a final research paper.

PROFESSIONAL EXPERIENCE

Product Manager
• Managed deployment team of four implementation managers and oversaw the development of over five critical features in a software development product.
• Built successful interpersonal relationships with clients over long term projects which resulted in an average 4 out of 5 client satisfaction level rating.

US Dept. of Agriculture, Natural Resources and Conservation Service, Amherst, MA (Sept. 2013 – May 2014)
Project Manager, Senior Capstone Design Project
• Developed condensed reports to convey highly technical data on toxicity of silage waste to small farmers.
• Proposed a design and implementation plan for the NRCS- USDA to administer silage waste filtration systems.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Dhaka, Bangladesh (June 2013 – Aug. 2014)
Sustainable Development Intern
• Conducted surveys on user satisfaction levels for solar water pump projects in rural areas in Bangladesh.
• Presented an impact assessment report resulting in re-orientation of the project by the executive board members

SKILLS, ACTIVITIES AND LEADERSHIP
Technical: ArcGIS, R Studio, Python Programming, AutoCAD, Solid Works and MATLAB
Campus Leadership: Resident Advisor, Smith College (2014); Academic Track Leader, University of Michigan (2017)