



To: IRA Granting Committee; David Daniels (Instructionally Related Activities Coordinator); Christina Smith (Communication Program Chair); Scott Frisch (University Studies Program Chair); Jim Meriwether (Dean of Arts & Sciences)

From: Tracylee Clarke, Associate Professor of Environmental Communication, Communication Program

Re: IRA Grant Report #888: Travel Experience (UNIV 391: Environmental Policy in Alaska)

Date: April 9, 2018

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This document provides a report and assessment of Instructionally Related Activities (IRA) grant funding used to support curriculum development and travel to Alaska with 14 students, one faculty and one guide to study environmental policy development. What follows is a description of the course curriculum, travel activities, use of funding, and assessment of student learning as it relates to learning outcomes. Faculty and student evaluations of the course and travel events are also included.

## **I. Course Overview**

This course focused on the process of environmental decision-making and policy development under the National Environmental Policy Act (NEPA) in Alaska. NEPA establishes environmental policy for the United States, provides an interdisciplinary framework for federal agencies as they assess and disclose environmental impacts, and contains “action-forcing” procedures to ensure that federal agency decision-makers take environmental factors into account and conform to environmental regulations. Using Alaska as a context, students engaged in discussions of current environmental issues and environmental policy development facing Alaska and our nation. Specific environmental issues addressed included; subsistence, climate change, climate migration, water quality / rights, land management, cultural resources and indigenous rights, oil and gas development, and alternative energy production. Student learning outcomes included:

- ✓ Comprehend the origins, legislative history and process of NEPA;
- ✓ Articulate issue driven policy formation in the context of current Alaska environmental issues;
- ✓ Identify how NEPA interacts with other environmental laws such as the Endangered Species Act (sec. 7), the Clean Water Act (sec. 404) and the Alaska National Interests Lands Conservation Act (ANILCA);
- ✓ Understand NEPA public engagement and stakeholder involvement specifically with Native Alaskans and Indigenous Communities in Alaska.

## II. Travel Experience

To contextualize course discussion on environmental policy in Alaska, students traveled to Fairbanks, Alaska over spring break (March 17<sup>th</sup>-March 25<sup>th</sup>, 2018). We participated in academic lectures by faculty at the University of Alaska Fairbanks, multiple resource management agencies and local nonprofits focused on addressing environmental issues. To compliment lectures, we also engaged in cultural experiences and outdoor activities.

### A. Academic Lecture Presentations @ The University of Alaska Fairbanks

To better understand current environmental issues and environmental policy development in Alaska, we met with a number of faculty and toured relevant facilities at the University of Alaska Fairbanks.

**Dr. Eugénie Euskirchen**, Associate Research Professor, Institute of Arctic Biology, University of Alaska Fairbanks spoke to students about climate change, permafrost and shrubification of Alaska's Tundra. Discussion also included the role of science in policy decision- making specific to climate change and climigration.

**Dr. Karen Taylor**, Associate Professor of Communication, University of Alaska Fairbanks spoke to students about her research focused on network analysis for environmental policy development specifically within Alaskan Natives and indigenous communities.

**Dr. Terry Chapin**, Professor Emeritus of Ecology, Department of Biology and Wildlife, Institute of Arctic Biology at the University of Alaska Fairbanks presented on climate change policy and communicating science and policy to various audiences.

In addition to faculty research presentations, students visited the **Large Animal Research Station at the University of Alaska (LARS)** where they learned about Muskox and Caribou. And finally, students took a tour of the **Geophysical Institute at the University of Alaska** where they learned about permafrost and the geophysical and technical challenges related to climate change underscored by changing political dynamics.

### B. Federal Resource Agency Presentations

To compliment academic research presentations, we also met with various government agencies and nonprofit organizations specializing in environmental policy development and project implementation.

Students spent a morning with members of the **Central Yukon and Eastern Yukon Bureau of Land Management** to learn about land management issues under NEPA, ANILCA focused on the use of traditional ecological knowledge (TEK) in collaborative policy development and implementation of subsistence rights for local Alaskans and Native communities. Students also spent a morning with representatives from the **Arctic National Wildlife Refuge and the Yukon Flats National Wildlife Refuge of the US Fish & Wildlife Services** to learn about the Endangered Species Act, the impacts of

climate change on Alaskan wildlife and the role of the FWS in environmental policy development. A visit to the **Cold Climate Housing Research Center** helped students understand how the environment impacts local citizens and the current challenge of permafrost thaw. Finally, students traveled to **Denali National Park** and met with two resource specialists to learn about human impact on park land specifically vehicle use as it relates to wolf and moose populations.

## B. Cultural Experiences

To further understand the impact of environmental policy and to appreciate environmental issues and the nuances of living in Alaska, students engaged in a number of cultural activities and outdoor experiences including **dog-sledding, snowboarding, snowshoeing, sledding, snow-machining, hiking and cross-country skiing**. These tours were led by local groups who took the opportunity to discuss living in Alaska and the changing environment. Students also spent an afternoon learning about the culture of Alaska at the University of Alaska **Museum of the North**, an afternoon at **Chena Hot Springs** and multiple evenings enjoying the **aurora borealis**.

## III. Assessment of Student Learning

To meet student learning outcomes, assignments included academic article outlines, an exam covering course material, experiential journal entries to engage reflection and assess student's ability to link experiences to course readings, an environmental research policy paper focused on Alaska, and a presentation at Sage Research Forum to present policy findings. Student paper and Sage presentation titles include:

- *The Greening of the Arctic: The Impacts of Shrubification in Alaska*
- *A.N.I.L.C.A.: Alaska's Kryptonite*
- *Effectively Communicating Climate Change Science and Policy*
- *Increased Tourism Impacts on Wildlife in Denali National Park*
- *Alaska as "The Last Frontier": Wilderness Policy Development and Preserving the Last of our Wilderness*
- *The History and Practice of Subsistence under the Alaska National Interest Lands Conservation Act (ANILCA)*
- *Alaskan Subsistence Policy and the Impacts of Climate Change*
- *Permafrost: Alaska's Methane Bomb*
- *Implications of Permafrost on Indigenous Communities in Alaska*
- *Community Activism as a Tool for Environmental Policy Change in Alaska*
- *Policy Facilitated Ecological Adaptation in Alaska*
- *Traditional Ecological Knowledge: Alaska's Greatest Untapped Resource and How It Affects Policy*
- *Climigration: Alaska's Environmental Eviction Notice*
- *Subsistence by Oil and Gas Development in Relation to Alaskan Native Sovereignty*

## IV. Course and Travel Experience Evaluations

### A. Student Evaluation of Course

Upon their return to the lower 48, students participated in a focus group to assess their experience. Several themes emerged in their evaluation of the course and experiential activities. These themes presented below are supported by student quotes:

#### Understanding of Course Content (Environmental Policy Development)

*“Before departing on this trip, my knowledge and experience with anything involving policy was limited. I had no idea how complex and intricate the processes were. After the trip to Fairbanks, I feel that I’ve gained a great understanding of the importance of environmental policy, and I’ve seen its effects first hand. The Alaskan environment was the perfect place to further my knowledge and experience a way of life different than I’ve known.”*

*“The visit to Alaska has given me more knowledge about environmental policy and has allowed me to view the complexity of environmental conflict first hand.”*

*“Not only did it give me a real life representation of the concepts we have been discussing all semester, it also made me care about the people we met along the journey. Going there made the environmental issues from class have personal significance increasing my level of investment.”*

#### Professional Development & Career Opportunity

*“This motivated me to get involved in resource management and a potential career opportunity with Fish and Wildlife. Personally, I would advocate to current policy in California and implement successful policies that reflect the spirit of Alaskan conservation Burt implement in the lower 48. This course has single-handedly shifted my interest in managing resources in a way that incorporates the spirit of Alaskan stewardship of their Natural resources.”*

*“This trip to Alaska has definitely made me question my future career (in a good way). I pictured myself working for the government, specifically in social services, but the research we have done in this class has shown me how intrinsically tied environmental plus social justice are. I’m attending USC’s Price School of Public Policy in the fall where I plan on studying policy regarding homelessness in Los Angeles with a focus on race and gender. Many of the articles from this class exposed me to an incredibly interesting area- political ecology.”*

*“Prior to the trip I know I wanted to focus on conservation biology, but I wasn’t sure how I’d be able to make a career or it. On the trip, we had the privilege of meeting with the fish and wildlife services. Due to their informative presentation on their services and impacts, I decided I wanted to pursue a career working for the fish and wildlife services.”*

*“Hearing the perspectives of the Bureau of Land Management. The U.S. Fish and Wildlife and the National Parks Service on how they manage environmental issues in person inspired me to pursue research in environmental policy and want to make a difference in the environment.”*

*“Meeting with people from the BLM and USFW inspired me to dive deeper into my own research and strive to pursue my career with an environmental policy resource agency”*

*“My experiences during the university 391 trip to Alaska, has motivated me to seek a career in environmental science. This experience was very moving in that I got to see the effects of climate change, hear the stories first hand by those affected, and apply the knowledge I had gained from my courses. I would like to continue my academic career with an emphasis in environmental chemistry so that I may make a difference in our future.”*

*“Prior to meeting employees of Fish and Wildlife service and the BLM, I had no clue how to pursue a career in these fields. Thanks to CI and Tracylee Clarke, I have added a new idea to my “possible legitimate career options” list!”*

### Personal Growth

*“You learn who are based on the environments you’re in and the occurrences that happen within. I believe that the incredible experiences and knowledge taught in Alaska further increased my understanding of life and the needed resources required to survive adequately.”*

*“Our trip to Alaska with Dr. Clarke allowed us to step outside our comfort zone of southern California into the wild to gain a new appreciation for wilderness and the policies in place to protect it.”*

### B. Faculty Evaluation of Course

I have taken students on dozens of university trips and this experience in Alaska was by far the most rewarding. Students were engaged, gracious and respectful during all class and travel activities. Factors that contributed to this dynamic include the strict screening process of applicants, rigorous and clearly communicated expectations, and the logistical set up of staying together at a cabin sharing all meals. Time together created a sense of community and respect. This course was an incredible amount of work to organize but my efforts were highly rewarded.

I was struck at how generous faculty at the University Alaska and resource agency personnel were with their time and willingness to engage with my students about their careers and current projects. They were honored to be asked about their work and proud to discuss their role in policy development in Alaska. Their passion for their roles, the environment, and their home state of Alaska was apparent and contagious.

## V. Budget

This travel research experience was funding through both IRA grant contribution (\$19,962) and student course fees (\$650 per student x 14 students = \$9100) for a total budget of **\$29,062**. Total cost and expenditures came to \$29427.80. Breakdown is outlined below:

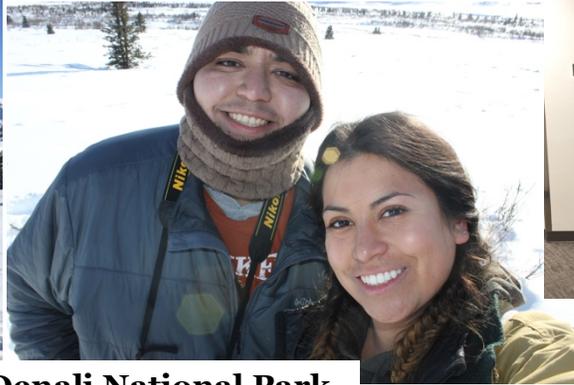
<b>Cost</b>	<b>Item</b>	<b>Price</b>
Air Travel	Airline Tickets	\$12483.30
	Airline Baggage Fees	\$675.00
	Airport Roadrunner Shuttle	\$124.20
Lodging	Air BnB	\$4024.05
Transportation in Alaska	Vehicle Rentals	\$1964.04
	Gas	\$383.62
	University Parking	\$24.50
Food	Communal Eating	\$1736.37
Guide Assistance	Stipend	\$1200
Thank You Items for Presenters	CI Shirts & Water Bottles	\$326.72
Cultural Experiences	Dogsledding	\$1040
	Snowmobiling	\$2472
	Chena Hot Springs	\$240
	Cross Country Ski Rental	\$222
	Snowshoe Rental	\$54
	Aroura Viewing Experience	\$1600
	Museum of the North	\$192
	Snowboarding	\$666
<b>Total Expenses:</b>		<b>\$29427.80</b>

## VI. Student Attendance by Major

Students participating in this trip represented Environmental Communication, Political Science, Environmental Science and Resource Management, Biology and Chemistry. The following table outlines each student by major and year.

<b>Name</b>	<b>Major</b>	<b>Grade Level</b>
Philip Patino	ESRM & Environmental COMM	Senior
Bradley Garcia	Environmental COMM	Senior
Kalani Villegas	Environmental COMM	Senior
Kaylee Maddux	Environmental COMM	Junior
Robyn Gorecki	Environmental COMM	Senior
Adrienne Ashley	Environmental COMM	Senior
Hailee Nolte	Global Studies & Environmental COMM	Senior
Sophia Velasco	Environmental COMM	Junior
Sophie Orellana	Biology	Senior
Mia Fernandez	Political Science ((Environmental focus)	Senior
Kayla Zeppeiro	Chemistry (Environmental focus)	Junior
Christian Lefay	Environmental COMM	Senior
Hunter Riegert	Environmental COMM	Junior
Noah Williams	Environmental COMM	Senior

**VII. Sample of Tip Pictures**



**Denali National Park**



**US Fish & Wildlife**



**Large Animal Research Center**



**Cultural Experiences**



**Aurora Borealis**



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**Course Description:** This course focuses on the process of environmental decision-making and policy development under the National Environmental Policy Act (NEPA) in Alaska. NEPA establishes environmental policy for the United States, provides an interdisciplinary framework for federal agencies as they assess and disclose environmental impacts, and contains “action-forcing” procedures to ensure that federal agency decision-makers take environmental factors into account and conform to environmental regulations. Using Alaska as a context, students will engage in discussions of current environmental issues and environmental policy development facing Alaska and our nation. Specific environmental issues to be addressed include, water quality / rights, land management, cultural resources and indigenous rights, oil and gas, and alternative energy production.

**Required Readings:** Assigned research articles on Canvas (see article list below).

**Student Learning Outcomes:** Upon completion of this course, students will

- ✓ Comprehend the origins, legislative history and process of NEPA;
- ✓ Articulate issue driven policy formation in the context of current Alaska environmental issues;
- ✓ Identify how NEPA interacts with other environmental laws such as the Endangered Species Act (sec. 7) and the Clean Water Act (sec. 404);
- ✓ Understand NEPA public engagement and stakeholder involvement specifically with Native Alaskans and Indigenous Communities in Alaska.



## COURSE POLICIES & PROCEDURES

**Attendance, Participation and Professionalism:** All class sessions and the trip to Alaska is mandatory and your full participation is vital to your role as a learner. When interacting with agency or community members, you are representing CSUCI and should be respectful, professional and articulate.

**Late Work and Missed Assignments:** Be prepared to turn in your assignments on the day assigned. I will not accept late work.

**Assignment Formatting:** Papers must use APA formatting, typed with 12-point font, double-spaced, 1-inch margins with a page#.

**Academic Honesty:** All students are expected to complete assignments in this course as their own work. If academic dishonesty occurs, an incident report will be filed with the Dean of the Faculty, the Provost, and the Vice-President for Student Affairs. You will receive a failing grade on the assignment and course.

**Disabilities:** Students with disabilities needing accommodation should make requests to Disability Accommodation Services.

## COURSE ASSIGNMENTS

Assignments	Points
1. Article Outlines (10 @ 5 pts. ea)	50
2. Reflective Journal / Experience Response (3 entries @ 25 pts. ea.)	75
3. Exam	50
4. Policy Analysis / Issue Paper	100
5. Sage Forum Presentation	50
<b>Total</b>	<b>350</b>

### Reading Outlines: Weekly article reading outlines (10 total):

- Bronen, R. (2013). Climate-induced displacement of Alaska Native communities. *Washington DC: Brookings Institution (US)*.
- Brown, G. G., & Donovan, S. (2013). Escaping the national forest planning quagmire: using public participation GIS to assess acceptable national forest use. *Journal of Forestry*, 111(2), 115-125.
- Carothers, C., Brown, C., Moerlein, K., López, J. A., Andersen, D., & Retherford, B. (2014). Measuring perceptions of climate change in northern Alaska: pairing ethnography with cultural consensus analysis. *Ecology and Society*, 19(4).
- Cochran, P., Huntington, O. H., Pungowiyi, C., Tom, S., Chapin, F. S., Huntington, H. P., ... & Trainor, S. F. (2013). Indigenous frameworks for observing and responding to climate change in Alaska. In *Climate Change and Indigenous Peoples in the United States* (pp. 49-59). Springer, Cham.
- Diamond, J., Swanson, G., & Mengerink, K. (2012). Rights and Roles: Alaska Natives and Ocean and Coastal Subsistence Resources. *Fla. A & M U L Rev.*, 8, 219.
- Dongoske, K. E., Pasqual, T., & King, T. F. (2015). Environmental Reviews and Case Studies: The National Environmental Policy Act (NEPA) and the Silencing of Native American Worldviews. *Environmental Practice*, 17(1), 36-45.
- Goodyear, J., Beach, B., & Clusen, C. (2012). Environmental risks with proposed offshore oil and gas development off Alaska's North Slope. *Natural Resources Defense Council, NRDC Issue Paper IP*, 12-08.
- Harper, B., & Harris, S. (2011). Tribal environmental justice: vulnerability, trusteeship, and equity under NEPA. *Environmental Justice*, 4(4), 193-197.
- Iverson, J. (2013). Funding Alaska Village Relocation Caused by Climate Change and Preserving Cultural Values During Relocation. *Seattle J. Soc. Just.*, 12, 561.
- Keil, K. (2014). The Arctic: A new region of conflict? The case of oil and gas. *Cooperation and Conflict*, 49(2), 162-190.
- Loring, P. A., Gerlach, S. C., & Penn, H. J. (2016). "Community work" in a climate of adaptation: responding to change in rural Alaska. *Human ecology*, 44(1), 119-128.
- Meek, C. L. (2013). Forms of collaboration and social fit in wildlife management: A comparison of policy networks in Alaska. *Global Environmental Change*, 23(1), 217-228.
- Moerlein, K., & Carothers, C. (2012). Total environment of change: impacts of climate change and social transitions on subsistence fisheries in northwest Alaska. *Ecology and Society*, 17(1).
- Rawlings, A. (2015). Erosion-induced community displacement in Newtok, Alaska and the need to modify FEMA and NEPA to establish a relocation framework for a warming world. *Seattle J. Envtl. L.*, 5, i.
- Richmond, L. (2013). Incorporating indigenous rights and environmental justice into fishery management: comparing policy challenges and potentials from Alaska and Hawaii. *Environmental management*, 52(5), 1071-1084.
- Shearer, C. (2012). The political ecology of climate adaptation assistance: Alaska Natives, displacement, and relocation. *Journal of Political Ecology*, 19(2012), 174-83.
- Tan, W. E., & Tsai, Y. T. (2010). After the Ice Melts: Conflict resolution and the international scramble for natural resources in the Arctic Circle. *J. Pol. & L.*, 3, 91.
- Wilkinson, D. A. (2011). Using Section 404 (c) of the Clean Water Act to Prohibit the Unacceptable Environmental Impacts of the Proposed Pebble Mine. *Seattle J. Envtl. L.*, 2, 181.
- Wright, T. (2015). Essentially Reasonable: Why the Ninth Circuit's Decision in Native Village of Point Hope Strays from the Purpose of NEPA. *BC Envtl. Aff. L. Rev.*, 42, 94.

**Reflective Journal:** Students will be given journal prompts during our trip to Alaska for a guided reflective writing exercise. Students must complete 3 journal entries (500 words ea.).

**Policy Analysis / Issue Paper:** Students will write a 15-page research paper analyzing an environmental issue in Alaska from a NEPA policy development perspective.

**Sage Forum Presentation:** Students will present their policy analysis research at the 2020 Sage Forum.

**Exam:** There will be one in-class exam covering material from articles and lectures.

**CLASS SCHEDULE (Wednesday evenings, Spring 2020)**

Wednesday	Topic	Assignment Due
Jan 29	Orientation & Introduction to NEPA	–
Feb 5	Legislative History / Process Overview	2 article outlines (choose 2 of 3)
Feb 12	Current Policy Issues in Alaska	Newspaper articles
Feb 19	NEPA Public Engagement & Stakeholder Involvement	2 article outlines (choose 2 of 3)
Feb 26	NEPA & Cultural Resource Management	2 article outlines (choose 2 of 3)
Mar 4	Contextualizing NEPA / Issue Driven Policy Formation	2 article outlines (choose 2 of 3)
Mar 11	Native American Sovereignty	2 article outlines (choose 2 of 3)
Mar 18	Exam & Trip Details & Prep	Exam
<b>Spring Break Trip to Alaska: Saturday, March 21 to Saturday, March 28</b>		
Apr 1	Trip in-class follow up & policy paper workshop	Journal Entries
Apr 8	In class workshop	Policy Paper Outline
Apr 15	In class workshop	Policy Paper
Apr 22	In class workshop	Draft Presentation
Apr 29	Research Presentation Rehearsal	Final Presentation
May 16	Sage Forum Presentation ( <i>Saturday commitment</i> )	Sage Presentation