

## Ohio Parks and Recreation Association Foundation, Grant Report

Rachael Vannatta

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### I. Summary of Project Objectives and Participating Agency

This project was designed and completed in fulfillment of a Master of Science in Environment and Natural Resources at The Ohio State University. The research asked two primary questions: (1) How do U.S. national park units frame the opportunity for collaboration with federally recognized Indigenous peoples in park foundation documents?, and (2) What factors, or combinations of factors, affect U.S. national park collaboration with federally recognized Indigenous peoples as written into park foundation documents? From these research questions, three project objectives were met:

- (1) Developed a reliable and valid qualitative codebook representing major management themes in U.S. national park foundation documents for use by any researcher.
- (2) Determined the extent to which Indigenous peoples were represented across different management themes within the text of U.S. national park foundation documents through qualitative content analysis using MAXQDA software.
- (3) Categorized national parks according to their *potential* for collaboration with federally recognized Indigenous peoples, informed by MAXQDA qualitative content analysis.

### II. Description of Project Activities and Final Timeline

The development and execution of this project occurred from August 2020 through May 2022 and included the following steps: 1) an initial review of the academic literature, 2) gathering of all foundation documents for units deemed as National Parks from online sources or directly from parks when not available online, 3) development of codes for use in data collection (i.e., the codebook), 4) testing for intercoder reliability, and 5) coding the foundation documents and data analysis. The literature reviewed concerned (public lands) natural resource management, boundary work, cooperative management, community-based conservation, and collaborative management, among other adjacent topics. Once the study topic was narrowed to collaborative management with Indigenous peoples and that the foundation documents would best answer the desired research questions and methodologies, the study area was narrowed to national parks in the continental U.S.

Foundation documents, or general management plans published as part of the 2016 National Park Service (NPS) Centennial, were sourced from NPS websites, npshistory.com, and by reaching out to national parks through their website contact form. In all, 45 foundation documents (representing 46 national park units in the continental U.S.) were obtained. Then, a codebook considering relevant academic literature and the

content of the foundation documents (e.g., cultural landscapes, natural landscapes, visitor landscapes) was drafted. To properly conduct intercoder reliability testing (i.e., assessing how well each label or ‘code’ applied to the text across different researchers), an independent researcher was necessary.

The funds provided by the Ohio Parks and Recreation Association (OPRA) Foundation were used to hire an independent undergraduate research assistant who was heavily involved in finalizing the qualitative codebook in MAXQDA and coding approximately half of the foundation documents (during the data processing phase). The final timeline of activities funded by the Foundation research grant are included below.

<i>Date</i>	<i>Task</i>	<i>Description</i>
December 2021 – January 2022	Intercoder Reliability Testing: <i>Training of research assistant</i>	The primary student researcher trained the hired undergraduate assistant to be familiar with the funded research, including research questions, objectives, and methodologies.
February – March 2022	Intercoder Reliability Testing: <i>Coding and revisions in collaboration with hired research assistant</i>	The primary student researcher worked closely with the hired undergraduate assistant to assess the reliability of the codebook – the primary student research assessed intercoder reliability in MAXQDA. There were a total of 5 rounds of reliability testing and revisions before the desired intercoder agreement of 80 percent was reached.
March 2022	Full coding of foundation documents & external data gathering	Upon reaching a ‘reliable’ threshold from intercoder reliability testing, the primary student researcher and undergrad student assistant coded all foundation documents in MAXQDA. Documents were split between the primary research and the research assistant.
March – April 2022	Data Analysis	The primary student researcher compiled data and performed appropriate analyses.
May 2022	Thesis defense and final submission	The primary researcher successfully defended thesis research and submitted the completed thesis to the OhioLINK repository.
Summer 2022	Research Wrap-Up and additional presentation prep	The primary student researcher drafted and submitted the OPRA Grant Report and supported preparation of the undergraduate student research assistant to present on this work at the October 2022 SACNAS National Diversity in STEM Conference in San Juan, Puerto Rico.

### III. Evaluation of Outcomes and Impact

This research examined different ways of conceptualizing collaboration in a natural resource context and developed a set of six categories of collaboration between park (not just national park) personnel and Indigenous peoples. These six categories were determined in relation to four themes: culture, partnerships, Indigenous Knowledge, and shared goals & objectives. During coding of the national park foundation documents, each park was then assessed in relation to these themes to determine which category they adhered to according to (potential for) collaboration with Indigenous peoples. This information was then used to develop a model (using Qualitative Comparative Analysis methodologies) looking at the different combinations of factors that could enhance or inhibit park collaboration with Indigenous peoples (e.g., geographic proximity to Native American reservations). The results of this study inform practitioners and natural resource managers of key elements of collaboration and highlight which parks could potentially serve as a model of how collaboration with Indigenous peoples may be modeled while recognizing the autonomy, diversity, and sovereignty of Indigenous peoples.

### IV. Description of Subsequent Plans

Though this research has concluded, the undergraduate student research assistant hired with the Foundation funds received additional funding (from a subsequent grantor) to attend the 2022 Society for the Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) National Diversity in STEM Conference in Puerto Rico (<https://www.sacnas.org/conference>). The undergrad assistant will present his role in this research during a poster session, including the results of the coding process.

The primary (graduate student) researcher is currently working for the Appalachian Trail Conservancy as a Visual Resources Technician for the summer 2022 season and wishes to secure a full-time position in natural resource management and/or GIS in the coming months.

### V. Summary of Expenses Incurred

Funds received from the OPRA Foundation were used to pay the research assistant an hourly wage of \$15 per hour plus fringe benefits (as outlined below). A total of \$899.13 funds were expended with a balance of \$103.87 remaining of the total \$1,003 awarded.

Object Class	Budget	Expended	Balance
Salaries and Wages	\$888.00	\$806.40	\$81.60
Fringe Benefits	\$115.00	\$92.73	\$22.27
Facilities & Administration	\$0.00	\$0.00	\$0.00
<b>Direct Total</b>	<b>\$1,003.00</b>	<b>\$899.13</b>	<b>\$103.87</b>
<b>Direct + Indirect Total</b>	<b>\$1,003.00</b>	<b>\$899.13</b>	<b>\$103.87</b>

VI. Copies of Promotional Materials

(1) Job Description/Position Announcement (p. 5)

(2) Masters Thesis Defense Presentation (pp. 6-9)

# RESEARCH POSITION IN THE ENVIRONMENTAL SOCIAL SCIENCES

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Interested in environmental and social justice, nature-based outdoor recreation (e.g., hiking, fishing, camping, birdwatching, hunting), and/or public lands management? Want to learn more about research in the environmental social sciences?

We have a job for you! We seek a detail-oriented, self-motivated undergraduate student for a part-time research position. **All undergraduate students are welcome to apply, including students with work-study permission.** We also welcome applications of students from backgrounds and identities often underrepresented in the sciences, such as those who identify as Black, Indigenous, or other Persons of Color (BIPOC), since this research aims to support underrepresented populations through improved recreational opportunities and co-management of public lands with Indigenous peoples.

This *hybrid* position (meaning some duties will be performed *on-campus* and some can be done *remotely*) in the [School of Environment and Natural Resources](#) will assist [Dr. Alia Dietsch](#) and graduate student [Rachael Vannatta](#) with two funded research projects: (1) the National Wildlife Refuge (NWR) Visitor Survey ([go.osu.edu/NVSresults](https://go.osu.edu/NVSresults)) and (2) co-management of U.S. National Parks with Indigenous populations as part of a master's thesis. Duties include, but are not limited to, working with and filing away data collected by mail as part of the NWR Visitor Survey and coding of text (i.e., National Park foundation documents) using the software, MAXQDA. **Additional duties may be determined by student research & professional interests, including work toward an honor thesis if desired.**

**QUALIFICATIONS:** Must be an enrolled student at OSU and have working knowledge of (proficiency using) Microsoft Word & Excel. No experience with text-analysis in MAXQDA is necessary. An interest in or experience with using ArcGIS and RStudio is a plus.

## Job Information

*Number of Positions:* 1

*Hours per Week:* 10-15

*Specific Hours:* on-campus (M-F); remote (flexible)

*Start Date:* **ASAP**

*End Date:* can extend into Spring 2022

*Pay Rate:* \$12.00/hour

*Address:* on-campus (Kottman Hall)

## Contact Information

To apply for the job, send a single email to both Dr. Alia Dietsch at [dietsch.29@osu.edu](mailto:dietsch.29@osu.edu) and Rachael Vannatta at [vannatta.24@osu.edu](mailto:vannatta.24@osu.edu) that includes:

- 1) your cover letter describing why you would be great for this position and
- 2) your resume/CV attached.

Please email us with any questions as well.

We look forward to working with you!



This research is funded by The U.S. Fish and Wildlife Service (FWS) National Wildlife Refuge System and the Ohio Parks and Recreation Association Foundation.

# A New Age of Natural Resource Management

## (Re)envisioning the role of U.S. National Parks

Rachael Vannatta

In fulfillment of Master's of Science Degree  
The Ohio State University  
Advisor: Alia Dietsch, PhD  
05/04/2022



1

### Land Acknowledgement

The land The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, and Ojibwe peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greenville and the forced removal of tribes through the Indian Removal Act of 1830. I/We want to honor the resiliency of these tribal nations and recognize the historical contexts that have and continue to affect the Indigenous peoples of this land.

2

### Central Concepts

**Indigenous** – acknowledging problematic histories of other terms

**Indigenous Knowledge (IK)** – intergenerational “cumulative body of knowledge practice, and belief” (Berkes 2000, p. 1252)

3

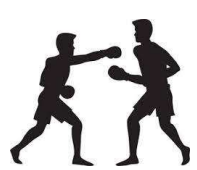
### Introduction

- Separation of people and nature, particularly Indigenous populations
- The modern protected area movement & exclusionary management
- Global shifts recognizing need for integration of Indigenous populations and natural resource management

4


### Theory & Perspectives

**Boundary Work Theory**



Western Scientific Knowledge      Indigenous Knowledge

**Collaborative Management**



(Fisher, 1988; Gieryn, 1983; Ross et al., 2009)      (Berkes, 2009; Plummer & Fennell, 2007; Tipl & Welch, 2006)

5

### Proposed Categories of Collaboration

	Name	Category Summary
Less Collaborative ↓ More Collaborative	Informing	Government engages in one-way communication
	Consultation	Ad hoc; benefits to government
	Coordination	Appears to be but is not quite collaborative
	Cooperation	Beginnings of collaborative management
	Delegative Authority	Indigenous power in decision-making
	Indigenous Control	Indigenous control over decisions

6



### Methods: Qualitative Content Analysis

- 1- Develop a qualitative codebook
- 2- Intercoder Reliability Testing
- 3- Final Codebook
- 4- Connections to Collaboration

Culture (Ross et al., 2011)

Partnerships (Conley & Moots, 2003; Plummer & Fitzgibbon, 2004)

Knowledge (Kimmerer, 2013; Whyte, 2013)

Shared Goals & Objectives (Armitage et al., 2020; Nel et al., 2013)

13

### Results: Park Categorization

Category	Culture	Partnerships	Knowledge	Shared Goals & Objectives	Parks in Category
Informing	-	-	-	-	BLCA, DRTO
Consultation	✓	-	-	-	BISC, NOCA, SHEN, ZION
Coordination	✓	✓	-	-	ACAD, ARCH, BIBE, CANY, CARE, CAVE, CHIS, CONG, CUVA, EVER, GRSM, GRTE, GUMO, JOTR, LAVO, MACA, MORA, PEFO, PINN, REDW, ROMO, SEKI, VOYA, WICA, YELL, YOSE
Cooperation	✓	✓	✓	-	CRLA, GRBA
Delegative Authority	✓	✓	✓	✓	BADL, BRCA, DEVA, GLAC, GRCA, GRSA, ISRO, MEVE, OLYM, SAGU, THRO
Indigenous Control	✓	✓	✓	✓	

**Takeaways:**  
 -Red: Most parks (26/45) are coordination  
 -Green: Some parks (13/45) are collaborative

14

### Methods: Qual. Comparative Analysis

RQ2: What factors, or combinations of factors, affect U.S. national park collaboration with federally recognized Indigenous populations? (Qualitative Comparative Analysis)

- 1- Input Variables → Collaboration with Indigenous populations
- 2- The Truth Table
- 3- Minimization

15

### Methods: QCA Input Variables

- Adjacent to other **federally managed lands** (ADJFED)
- Adjacent to **federally recognized Indigenous Res.** (ADJRES)
- **Cultural connections** in park purpose statement (CCxPPURP)
- Park **budget** per capita (PERCAP)
- **National monument** status prior to park est. (NM)
- **Wilderness designation** within park boundaries (WILD)

16

### Results: The Truth Table

Combo #	ADJFED	ADJRES	CCxPPURP	PERCAP	NM	WILD	OUT	a	incl	PRI	cases
18	0	0	0	2	0	1	1	1	1	1	1 ISRO
62	1	1	0	1	0	1	1	1	1	1	1 MEVE
67	1	0	0	2	1	0	1	1	1	1	1 GRBA
110	2	1	0	1	0	1	1	1	1	1	1 OLYM
112	2	1	0	1	1	1	1	1	1	1	1 BADL
133	2	1	1	1	0	0	1	1	1	1	1 GLAC
135	2	1	1	1	1	0	1	1	1	1	1 GRCA
132	2	0	1	1	1	1	1	2	1	1	1 DEVA, GRSA
99	2	0	0	0	1	0	0	2	0.5	0.5	0.5 BRCA, CARE
105	2	0	0	1	0	0	0	3	0.33	0.33	0.33 CRLA, WICA, YELL
106	2	0	0	1	0	1	0	3	0.33	0.33	0.33 SEKI, THRO, YOSE
108	2	0	0	1	1	1	0	3	0.33	0.33	0.33 CAVE, LAVO, SAGU

**Takeaways:**  
 -Green: Truth Table explains 9 of 13 parks coded as collaborative  
 -Red: 4 collaborative parks have characteristics that overlap with 7 parks coded as not collaborative  
 -All contradictory parks are coordination

17

### Results: Minimization

ADJFED	ADJRES	CCxPPURP	PERCAP	NM	WILD	UNIT
2	1	1	1	na	0	GLAC, GRCA
2	1	0	1	na	1	OLYM, BADL
2	0	1	1	1	1	DEVA, GRSA
1	1	0	1	0	1	MEVE
1	0	0	2	1	0	GRBA
0	0	0	2	0	1	ISRO

**Takeaways:**  
 -Adjacency to federal lands (ADJFED) matters  
 -Designations (NM, WILD) could provide a framework for recognition  
 -Park budget per capita could help mitigate the absence of other variables

18



### Summary of results

- Majority of national parks were coded as *not collaborative* with Indigenous populations, most in **coordination**
- HOWEVER, 7 of these parks had similar characteristics of those that *were* coded as collaborative (i.e., contradictions)
- Adjacency of parks to other units matters, particularly adjacency *outside* of DOI and/or with *multiple* adjacent units, with one exception (ISRO)
- Parks coded as collaborative had either wilderness designation or national monument designation (or both), with one exception (GLAC, GRCA)
- All combinations had budget per capita within or above one standard deviation of the mean

19

### Limitations

- Foundation Documents may not always be an indicator of what is actually happening
  - Example: Shared goals & objectives may be limited in scope; coding only captured in small sections of one type of management document
- Does not account for whether Indigenous populations want to, or are able to, be involved in collaborative processes
  - Example: Documents not developed with Indigenous input

20

### Final Takeaways

- What does this mean for future management?
  - Provided a framework that can be applied to other (global) contexts and management documents
  - Be more proactive about *inclusionary* approaches & acknowledge *exclusionary* histories
  - Ground truthing park management *practices* (paper vs. practice)

21

### Thank you!

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22