

AARON J. ENRIQUEZ

Postdoctoral Fellow, Department of Economics, University of Alaska Anchorage

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RELEVANT EXPERIENCE

- Broad research fields include environmental and natural resource economics, nonmarket valuation, dynamic optimization, and behavioral economics.
- Experience conducting stated and revealed preference nonmarket valuation projects from start to finish, including survey pretesting, survey design and administration, statistical/econometric analysis, and public outreach.
- Experience estimating and projecting recreation demand, including predicting changes in social welfare from a) site closures and b) changes in site quality.
- Experience conducting bioeconomic analysis from start to finish, including estimating biological growth functions, linking changes in species population sizes to changes in economic benefits and damages, and using dynamic models to determine welfare-maximizing management strategies.
- Experience planning and leading focus groups and in-depth stakeholder interviews, as well as conducting domestic and international fieldwork.
- Member of multiple interdisciplinary and transdisciplinary research teams.
- Proficient in the use of programming and mathematical/statistical software: R, Mathematica, MATLAB, Stata, QGIS, ArcGIS, LaTeX, Qualtrics, Microsoft Excel.

EDUCATION

University of Wyoming

Laramie, WY

» PhD, Economics

May 2021

College of Business

- **Dissertation:** [Bioeconomic Analysis and Nonmarket Valuation of Grizzly Bears in the Greater Yellowstone Ecosystem](#)
- **Committee:** Dr. David Finnoff (*chair*), Dr. Stephen Newbold (*co-chair*), Dr. Jason Shogren, Dr. David Aadland, Dr. Carlos Martínez del Rio (*outside member*)

» MS, Economics, Environment and Natural Resources

Aug 2017

College of Business, Haub School of Environment & Natural Resources

» BS, Biology, Honors Program (*summa cum laude*)

May 2015

College of Arts & Sciences

» BS, Economics (*summa cum laude*)

May 2015

College of Business

RESEARCH POSITIONS

Department of Economics, University of Alaska Anchorage

Anchorage, AK

» Postdoctoral Fellow

July 2021 - present

Supervisor: Dr. Kevin Berry

Responsibilities: Conduct the full cycle of economic research on two grant-funded projects.

- **Grant 1: Marine Arctic Resilience, Adaptations, and Transformations (NSF/Belmont grant)**
 - Estimating aggregate demand for trips to personal use fishing sites in Southcentral Alaska.
 - Observing how demand depends on household-specific attributes (income, household size), daily site-specific attributes (salmon run size, maximum temperature, nearby commercial fishery operation), and household- and site-specific attributes (travel cost).
 - Estimating loss in aggregate consumer surplus given hypothetical fishing site closures. Also estimating changes in value given hypothetical changes in site quality, for example from changes in daily salmon run size.

- Building a bioeconomic model to analyze how agencies could maximize social net benefits across Alaskan residents by simultaneously managing the season lengths of commercial and personal use sockeye fisheries.
- Utilizing data on personal use fishing permits from the Alaska Department of Fish and Game, as well as from various other sources.
- **Grant 2: Eco-social interactions influencing human exposure to ticks and the Lyme disease agent in anthropogenic landscapes (NSF grant)**
 - Analyzing factors that drive people's perceptions of tick-related risks, including the risks of being exposed to ticks and being infected with Lyme disease.
 - Linking risk perceptions with people's propensities for engaging in risk-reduction actions.

Social Science Program, U.S. National Park Service**Fort Collins, CO**» **Research Assistant****Oct 2020 - July 2021**

Supervisor: Dr. Leslie Richardson

Responsibilities: Performed two research tasks for a National Park Service economist.

- **Task 1:** Developed spatial R code to facilitate estimation of travel cost models.
 - The code calls on the ArcGIS Online server to automate the calculation of visitors' round-trip travel distances and times from their home zip codes to any national park following the nearest roads.
- **Task 2:** Improved the implementation of revealed preference valuation techniques used to value ecosystem services (e.g., wildlife viewing).
 - Estimated a travel cost model to determine the economic value of bear viewing in Yellowstone. Then linked the results to a model of bear sightings to predict how viewing value would change given changes in the number of bears.

Department of Economics, University of Wyoming**Laramie, WY**» **PhD Candidate****May 2018 - May 2021**

Supervisors: Dr. David Finnoff and Dr. Stephen Newbold

Responsibilities: Conceptualized, developed, wrote, and defended a PhD dissertation.

- **Chapter 1:** Built a bioeconomic model in which an agency chooses how to set grizzly bear harvests over time by balancing damages and benefits to competing stakeholders.
 - Worked with bear experts to collect data from multiple sources.
 - Estimated benefits and damages from bears as a function of bear population size and other key variables, including climate and resource abundance. Did this using various econometric techniques, such as ordinary least squares regressions and count models.
 - Computed a bioeconomic model using Mathematica.
- **Chapter 2:** Quantified people's values for grizzly bears in the Greater Yellowstone Ecosystem using a nonmarket valuation survey.
 - Pretested the survey using focus groups and interviews with key stakeholders.
 - Designed trip-recall questions used to estimate travel cost models.
 - Designed two choice experiments used to estimate people's willingness to pay for bear-related conditions both inside and outside national parks.
 - Administered the survey to roughly 2,500 participants using Qualtrics.
 - Cleaned and analyzed the survey data in R.
 - Calculated summary statistics and used a range of econometric techniques, including Poisson, negative binomial, conditional logit, and mixed logit regressions.

» **Graduate Research Assistant****Aug 2015 - May 2021**

Supervisors: Dr. David Finnoff and Dr. Rob Godby

Responsibilities: Participated in the full cycle of economic research on two projects.

- **Project 1:** Conducted net present value analysis to determine the feasibility of extracting rare earths out of the coal ash generated at Wyoming power stations.

- Collaborated with geologists from the School of Energy Resources and parameterized the analysis using geological data on rare earth concentrations.
- Ran extensive sensitivity analysis over key economic variables (e.g., operating costs, rare earth prices).
- **Project 2:** Used a survey to determine Wyoming residents' preferences for alternative wind energy sources.
 - Conducted extensive literature review.
 - Designed a series of economic experiments to elicit people's tradeoffs across major categories of impacts from potential future wind energy developments: economic, viewshed, wildlife, and climate.
 - Pretested a survey using focus groups both on and off campus.
 - Administered the survey using Qualtrics.

Haub School of Environment and Natural Resources, University of Wyoming

Laramie, WY

» Research Aide

June - Aug 2017

Supervisor: Dr. Jo Albers

Responsibilities: Provided economic research support.

- Facilitated writing a grant proposal: "Small scale aquaculture as a livelihood alternative with marine conservation benefits in coastal communities in Chile."
- Conducted fieldwork in Southern Chile in April 2018.

Wyoming EPSCoR, National Science Foundation

Laramie, WY

» Undergraduate Research Fellow

June - Aug 2013

Supervisor: Dr. Stephen Herbert

Responsibilities: Conducted biological research in a plant science laboratory, where research centered around challenges in the algal biofuel production process.

- Focused on two specific research tasks:
 - Optimizing mixtures of hydrogen-peroxide-based algacides.
 - Taking first steps in genetically engineering hydrogen-peroxide-resistance into algae.

REFEREED JOURNAL PUBLICATIONS

1. **AJ Enriquez** and DC Finnoff. (2021) Managing mortality of multi-use megafauna. *Journal of Environmental Economics and Management* 107: 102441. <https://doi.org/10.1016/j.jeem.2021.102441>.
2. DA Bagdonas, **AJ Enriquez**, KA Coddington, DC Finnoff, JF McLaughlin, MD Basilian, EH Phillips, and TL McCling. (2022) Rare earth element resource evaluation of coal byproducts: A case study from the Powder River Basin, Wyoming. *Renewable and Sustainable Energy Reviews* 158: 112148. <https://doi.org/10.1016/j.rser.2022.112148>.

PAPERS IN PREPARATION

1. LA Richardson and **AJ Enriquez**. Valuing wildlife sightings at the species-wide and individual animal levels: An approach and application to bear viewing in Yellowstone National Park. Under review (revised and resubmitted).
2. **AJ Enriquez**, BT Gilbert, and LH Thunström. The pain of paying with other people's money: Evidence from domestic partners. Under review (submitted).
3. **AJ Enriquez**, K Berry, M Fernandez, N Gregory, KC Ernst, MH Hayden, and M Diuk-Wasser. What ticks people off? Linking perceived risk, self-protection actions, and economic attributes. Under review (submitted).

4. **AJ Enriquez**, DC Finnoff, and SC Newbold. Characterizing the conservation culture for charismatic critters. In preparation for submission.
5. **AJ Enriquez**, K Berry, and SC Newbold. Nonmarket values for salmon illustrate tradeoffs between commercial and personal use fishing. In preparation for submission
6. HB Flint, DE Bennett, **AJ Enriquez**, and AD Middleton. Viewing and conserving transboundary wildlife in national parks. In preparation for submission.

PRESENTATIONS

- “Balancing commercial and ‘personal use’ salmon fishing.” Seminar at the *Stockholm Resilience Centre*. **Stockholm, Sweden (Nov 2022)**.
- “Characterizing the conservation culture for charismatic critters.” *Association of Environmental and Resource Economists Summer Conference*. **Miami, Florida (June 2022)**.
- “Grizzlies in the Greater Yellowstone Ecosystem: Bioeconomic analysis and nonmarket valuation.” Seminar at the *Institute of Social and Economic Research*. **Anchorage, Alaska (Nov 2021)**.
- “The economic value of wildlife tourism and implications of marginal population changes.” *BIOECON XXII Annual Conference*. **Jackson, Wyoming (Sept 2021)**.
- “Bioeconomic grizzly bear management.” *University of Wyoming-Colorado State University Graduate Student Symposium*. **Laramie, Wyoming (April 2019)**.
- “From the shore or from the water? Enforcement of resource rights under discrete enforcement technologies.” *International Institute of Fisheries Economics & Trade Biennial Conference*. **Seattle, Washington (July 2018)**.
- “Economic feasibility of rare earth element extraction from Wyoming coal ash/char.” *Geological Society of America Annual Meeting*. **Denver, Colorado (Sept 2016)**.

RESEARCH GRANTS & FELLOWSHIPS

National Institute of Food and Agriculture, United States Department of Agriculture

- » **Agriculture and Food Research Initiative Grant** **2023 - 2026**
Project: Opportunities for imperfect food: Analyzing preferences along the agri-food value chain
Authors: M Vecchi (PI, Pennsylvania State University), Y Liu (Co-PI, Pennsylvania State University), AJ Enriquez (Co-PI, University of Alaska Anchorage), C Grebitus (Co-PI, Arizona State University)
Total Amount: \$647,421
Enriquez Sub-Award: \$217,158

Institute for Social Science Research, Arizona State University

- » **Seed Grant** **2022**
Project: Willingness to pay for fresh and processed ugly food products
Authors: C Grebitus (PI), AJ Enriquez, M Vecchi
Amount: \$8,000

University of Wyoming

- » **Carlton R. Barkhurst Dissertation Fellowship** **2021**
Project: Bioeconomic analysis and nonmarket valuation of grizzly bears in the Greater Yellowstone Ecosystem
Author: AJ Enriquez
Amount: \$9,351
- » **Research Enhancement Grant, Biodiversity Institute** **2020**

Project: Valuing grizzly bear conservation and viewing in the Greater Yellowstone Ecosystem

Authors: AJ Enriquez (PI), DC Finnoff (faculty advisor)

Amount: \$9,023

» **John Tschirhart Graduate Scholarship in Bioeconomics, Department of Economics** **2020**

Project: Grizzly bear management in the Greater Yellowstone Ecosystem

Authors: AJ Enriquez (PI), DC Finnoff (faculty mentor), SC Newbold (faculty mentor)

Amount: \$9,600

» **Student Research & Creative Activities Grant,** **2019**

Haub School of Environment & Natural Resources

Project: Economic valuation of grizzly bears

Authors: Aaron Enriquez (PI), DC Finnoff, SC Newbold

Amount: \$1,000

IN-PROGRESS SURVEY PROJECTS

» Tradeoffs in subsistence versus store-bought food choices: A case-study of moose hunting in a remote Alaskan community

Collaborators: EL Howe, Q Zheng

Survey Administration: Forthcoming (Summer/Fall 2023)

Expected Sample Size: 200

» Willingness to pay for fresh and processed imperfect produce

Collaborators: C Grebitus, Y Liu, M Vecchi

Survey Administration: Forthcoming (Spring 2023)

Expected Sample Size: 1,200

FIELDWORK

» **Dillingham, Alaska** **May 2022**

Collaborators: H Hennighausen, D Holen, HF Randell

Project: 2020 COVID-19 rapid response: Pandemic preparedness in remote rural fishing communities facing rapid, massive, seasonal in-migration

Experience: Participated in interviews with fishing crew captains, local government officials (the mayor, city manager, and planning director), and employees of the Bristol Bay Native Association and the Bristol Bay Economic Development Corporation.

» **Southern Chile** **April 2018**

Collaborators: J Albers, C Chávez, J Dresdner

Project: Small scale aquaculture as a livelihood alternative with marine conservation benefits in coastal communities in Chile

Experience: Participated in interviews with artisanal fishers, fisher organizations, and government organizations. All interviews were conducted in Spanish.

OUTREACH

- “Pricing Wildlife and Outdoor Recreation.” Presentation and Q/A with community members at The Writer’s Block Bookstore & Café. **Anchorage, Alaska (forthcoming April 6, 2023).**
- “A Nonmarket Valuation Wildlife Safari.” Guest speaker in Professor Rushlow’s ECON/ENST 370 class at Illinois Wesleyan University. **Virtual (Feb 3, 2023).**

TEACHING POSITIONS (*full teaching summaries and evaluations available [here](#)*)**Department of Economics, University of Wyoming****Laramie, WY**» **Temporary Lecturer****July - Aug 2019***Instructor of record:* Principles of Microeconomics (ECON 1020)*Delivery:* 3-credit online course (summer session)*Size:* 41 students*Instructor quality:* 4.35/5*Selected feedback:*

- “The online videos were very clear and helpful, it is the best online class I’ve taken so far.”
- “The lay out from quizzes to assignments to excels was very smooth and all had something to do with each other. I believe this was one of the better taught courses I have taken while here at UW, I think many students would benefit from this course taught by this instructor.”

» **Temporary Lecturer****Aug - Dec 2018***Instructor of record:* Principles of Microeconomics (ECON 1020/AGEC 1020)*Delivery:* 3-credit on-campus course (fall semester)*Size:* 123 students*Instructor quality:* 4.52/5 (department mean: 3.95/5)*Selected feedback:*

- “Aaron is one of my favorite professors. I have been here for four years and never have I had a professor that is so good at explaining course material and attentive to his class.”
- “His ability has allowed me to understand Microeconomics. He can connect everything to real world, and that helps me out most. A lot of teachers cannot do that, and if they figured out how to do it, I would be a much better student. Great guy, great professor, and I wish he taught more classes because I wouldn’t hesitate to enroll in them.”
- “The use of excel and introduction to the program R. I gained a lot of experience in excel and it’s actually helped me find a job after school.”

Haub School of Environment and Natural Resources, University of Wyoming**Laramie, WY**» **Temporary Lecturer****Jan 2019***Instructor of record:* ENR Topics: Mini Microeconomics (ENR 4890)*Delivery:* 1-credit online course (J-term)*Size:* 6 students*Instructor quality:* 4.67/5*Sample video:* [click here](#)» **Temporary Lecturer****Dec 2017 - Jan 2018***Instructor of record:* ENR Topics: Mini Microeconomics (ENR 4890)*Delivery:* 1-credit online course (J-term)*Size:* 19 students*Instructor quality:* 4.09/5*Selected feedback:*

- “The videos were very clear about what the topics were and how to go through the problems. I absolutely loved them. They made the online course process so much easier. This is by far the best online course that I have taken.”
- “This course was phenomenal. I have learned to hate online courses because the professor is usually largely unhelpful and material unclear. Aaron’s presentation of the material made his expectations crystal clear and his assignments were totally doable and very clear as well. I would definitely take a course from him again. He did an amazing job.”

FEDERAL POSITIONS**U.S. Forest Service****Cody, WY**» **Forestry Tech (General)****May - Aug 2012**» **Forestry Aid (General)****July - Aug 2011***Role:* Wildland Fire Initial Attack Dispatcher*Supervisors:* Nicholas Janota and Cathy Hutton*Series/Grade:* GS-0462-2/1 (Student Temporary Experience Program)*Organization:* Rocky Mountain Region, Region 2, Shoshone National Forest*Address:* Cody Interagency Dispatch Center, 2501 Wright Bros Drive, Cody, WY 82414**SCHOLARSHIPS****Experimental Economics Section, Agricultural & Applied Economics Association**» **EXECON Winter School Scholar****Spring 2020***Description:* Received a full-tuition scholarship to attend the Winter School in Survey Design and Experimental Methods in Applied and Agricultural Economics*Amount:* \$1,950**Rocky Mountain Power**» **Graduate Scholarship in Regulatory Economics***Amount:* \$1,500**Fall 2019***Amount:* \$2,000**Spring 2017***Amount:* \$2,000**Fall 2015 - Spring 2016****University of Wyoming**» **Dick and Lynne Cheney Study-Abroad Grant****Fall 2016***Destination:* Tenerife, Spain (for a grad. course on international environmental assessment)*Amount:* \$600» **Trustees' Scholar Award****Fall 2011 - Spring 2015***Description:* Received a scholarship that covered full tuition, mandatory fees, room and board, and meals for 8 consecutive undergraduate semesters.**AWARDS****University of Wyoming**

- **Attilio & Hedy Bedont Outstanding Graduate Student Award.** *College of Business.* Two-time recipient: April 2020 & April 2018.
- **Best Graduate Student Teaching Award.** *Department of Economics.* April 2019.
- **Top 20 Outstanding Graduate.** *College of Arts & Sciences.* May 2015.
- **John S. Bugas Theory Award - Microeconomics.** *Department of Economics.* April 2015.
- **M. Clare Mundell Outstanding Senior Award.** *College of Business.* April 2015.
- **Dean's Award to Outstanding Seniors.** *College of Business.* April 2015.

SERVICE & LEADERSHIP» **Journal Reviewer,** *Environmental and Resource Economics***2022**» **Journal Reviewer,** *Forest Science***2020**» **Crisis Counselor,** *Crisis Text Line***Oct 2017 - Aug 2019***Hours:* 34 hours of training, 200 hours of crisis counseling» **Team Captain,** *Men's Club Soccer, University of Wyoming***Fall 2018**

MEMBERSHIP

- » *American Economic Association* **Sept 2019 - present**
- » *Association of Environmental and Resource Economists* **July 2018 - present**
- » *The Honor Society of Phi Beta Kappa* **March 2015 - present**

TECHNICAL SKILLS

- » **Programming:** R
- » **Statistical/Mathematical Software:** Mathematica, MATLAB, Stata
- » **GIS:** QGIS, ArcGIS Pro, ArcGIS Online
- » **Survey:** Qualtrics
- » **Others:** LaTeX, Microsoft Office (Word, PowerPoint, and Excel)

REFERENCES**Dr. Kevin Berry** (*postdoc supervisor*)

Associate Professor, Department of Economics
University of Alaska Anchorage
Phone: 907-764-5026
Email: kberry13@alaska.edu

Dr. Leslie Richardson (*research task supervisor*)

Economist, Social Science Program
National Park Service
Phone: 970-821-5352
Email: leslie_a_richardson@nps.gov

Dr. David Finnoff (*PhD committee chair*)

Professor, Department of Economics
University of Wyoming
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Dr. Stephen Newbold (*PhD committee co-chair*)

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