



HAUB SCHOOL OF ENVIRONMENT  
AND NATURAL RESOURCES

# 2013-2014 YEAR IN REVIEW



UNIVERSITY OF WYOMING



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Cover: Graduate Assistant Brett Jesmer and Haub School students Megan Dudenhoeffer and Kenny Askelson in the field in Laikipia, Kenya, in the summer of 2014. (Courtney Carlson)



## LETTER FROM THE DIRECTOR

Dear friends of the Haub School,

This spring, Señor Pablo Borelli guided nine Haub School students and six students from the University of Buenos Aires on a tour of Patagonia's holistically managed ranches. The shrub-covered hillsides and distant mountain peaks looked a lot like some of the ranches here in Wyoming, and the challenge of raising livestock sustainably on a water-limited landscape is familiar as well.

This tour was part of a ten-day-long Haub School field course I led with Professor Bill Lauenroth over spring break. Ecogeography of International Rangelands compared the environmental complexities of cattle and sheep ranching in Patagonia and Wyoming through the lens of ecosystem science. Throughout the semester in Wyoming we read scientific literature, discussed challenges, and studied old and new approaches for rangeland management. In South America we met with ranchers and agricultural researchers, and the students connected with people building solutions for similar environmental challenges in Wyoming and around the world.

The Haub School specializes in field and international courses. While our classrooms are rich and lively and provoke students to think critically from diverse perspectives, there's no substitute for walking through pastures, touching the grasses, looking across watersheds, pushing livestock, and meeting the ranchers, wildlife managers, and other professionals wrestling with natural resource questions day to day.

Our students tell us field and international courses are some of their most valuable moments at UW. They carry these experiences on to careers as natural resource managers, leaders, and decision makers. Such opportunities are possible because of generous contributions from individuals who believe in our mission. Read on to learn more about our accomplishments over the last year. And to help us ensure that current and future leaders make informed, inclusive decisions for natural resources, please consider contributing to our programs.

Thank you for your support,



Indy Burke

Director, Haub School of Environment and Natural Resources





## HAUB SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

# Our Faculty and Staff

**Indy Burke**, Director and Wyoming Excellence Chair in Ecology

**Mandy Gifford**, Administrative Associate

**Nancy Hoffer**, Accountant and Office Manager

**Maureen Morrison**, Administrative Associate

**Fred Ogden**, Cline Chair of Engineering

**Emilene Ostlind**, Editor and Communications Coordinator

**Fred Schmechel**, Marketing Coordinator

**Steve Smutko**, Spicer Chair of Collaborative Practice

### Contact Us

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[ruckelshaus@uwyo.edu](mailto:ruckelshaus@uwyo.edu)  
[www.uwyo.edu/haub](http://www.uwyo.edu/haub)

### HAUB SCHOOL UNITS

#### Academic Programs

**Courtney Carlson**, Associate Director

**Maggie Bourque**, Student Advising Coordinator

**Melanie Matthews**, Academic Advisor

#### Biodiversity Institute

**Carlos Martinez del Rio**, Director

**Brian Barber**, Research Outreach Coordinator

**Brenna Marsicek**, Project Coordinator

**Bryce Tugwell**, New Media Coordinator

**Dorothy Tuthill**, Associate Director and K-12 Education Coordinator

#### Ruckelshaus Institute

**Nicole Korfanta**, Director

**Jessica Clement**, Collaboration Program in Natural Resources Director

**Kit Freedman**, Research Scientist



# Who We Are

The Helga Otto Haub School of Environment and Natural Resources prepares citizens and leaders to make wise, informed decisions that will sustain human and natural resources for future generations. One of the most critical needs of our time is application of informed, collaborative problem solving to address the environment and natural resource challenges we face. The Haub School helps people think critically about these challenges, consider a range of information and perspectives in decision-making, and build solutions inclusive of all stakeholders.

## Academic Programs

The Haub School offers academic majors and minors concurrent with any degree program from one of UW's seven colleges. Because our students come to the Haub School from fields as diverse as biology and business, law and literature, art and agriculture, our classrooms are truly interdisciplinary.

## Biodiversity Institute

The Biodiversity Institute promotes research, education, and outreach concerning the study of living organisms in Wyoming and beyond. We work with scientists, resource managers, educators, and the public to further the understanding and conservation of biodiversity.

## Ruckelshaus Institute

Through our policy analysis publication series and our Collaborative Solutions Program, the Ruckelshaus Institute supports stakeholder-driven solutions to natural resource challenges by communicating relevant research and promoting collaborative decision making.

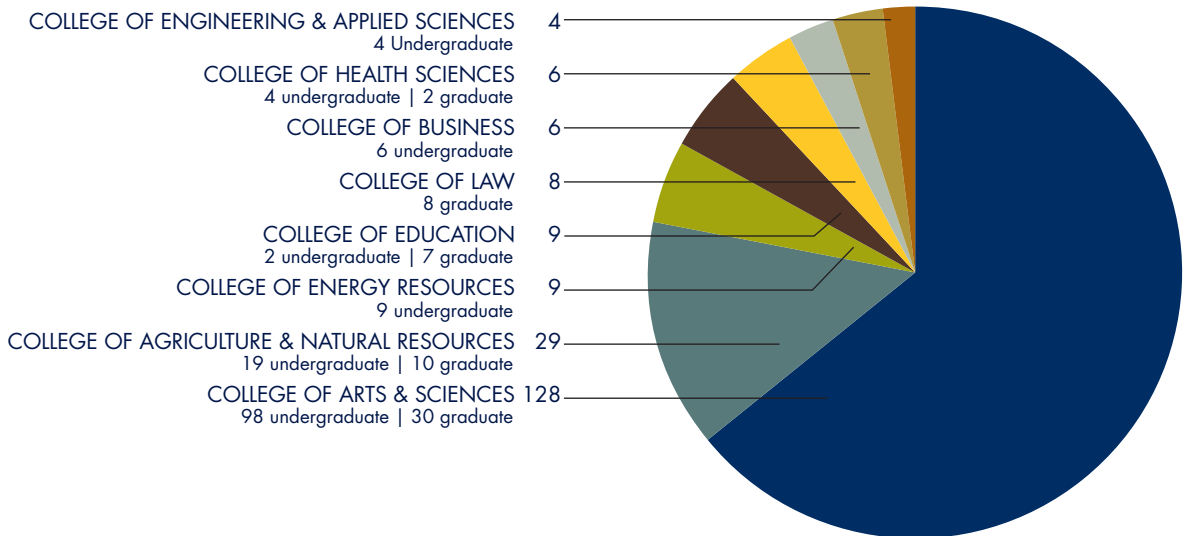




## ACADEMIC PROGRAMS

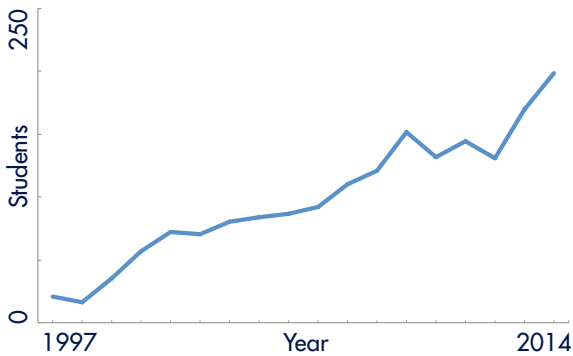
# Educating Interdisciplinary Leaders

Our diverse student body consists of nearly 200 students representing all seven UW colleges and 49 co-majors. Interdisciplinary curricula in each of our academic programs provide students the flexibility to pursue their unique interests while gaining expertise in environmental and natural resource fields.

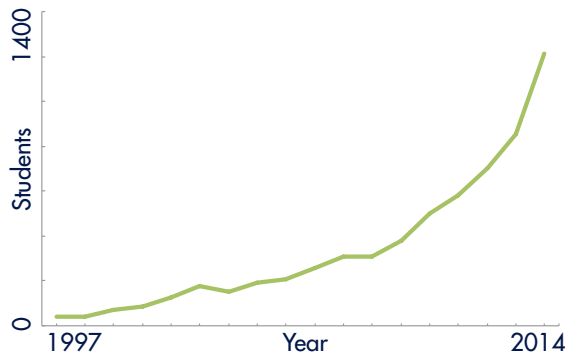


# Charting Our Growth

The number of students enrolled in our academic programs has risen dramatically since we first offered majors and minors in 1997, growing an average of 13 percent each year and more than doubling in the last decade. Meanwhile, overall enrollment in our courses is soaring. Ten years ago, we offered 14 total courses. This upcoming fall we have more than doubled our offerings, with 35 courses totaling 92 credit hours. By serving students from outside our academic programs, in addition to students seeking Haub School majors and minors, we are enhancing environmental literacy at UW.



Students earning majors, minors or joint degrees from the Haub School 1997-2014.



UW students enrolled in Haub School courses 1997-2014.



Nine Haub School students traveled to Patagonia, Argentina, to study the ecogeography of international rangelands. (Gina Graziano, Haub School graduate, 2014)



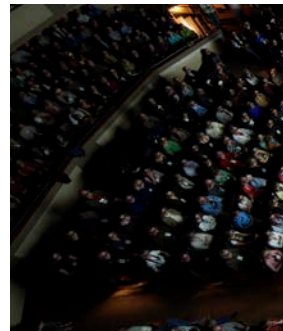
# Faculty, Students, and Visitors



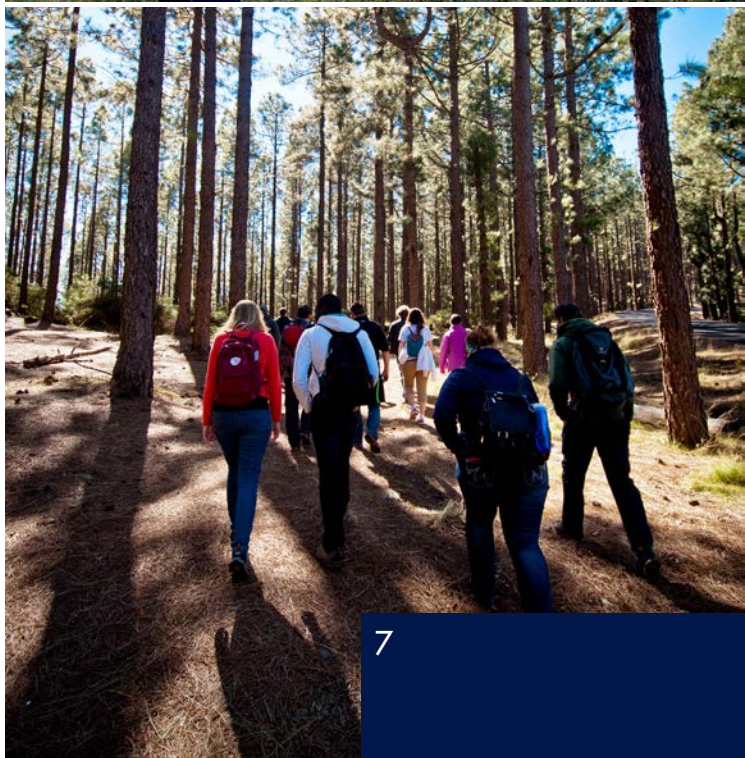
## A Growing Faculty

**Heidi Albers (“Jo”), Ph.D.**, will fill the newly created Knobloch Chair in Conservation Economics and Finance this fall. Dr. Albers holds a Ph.D. in Economics from the University of California, Berkeley. She was a Fulbright Scholar at the University of Dar es Salaam in Tanzania during 2013. Dr. Albers brings extensive domestic and international research experience and an interdisciplinary approach to teaching. Her work emphasizes the interactions between private and public resource managers in the provision of ecosystem services. Dr. Albers’ tenure home will be in the Haub School, with adjunct status in the UW Department of Economics and Finance.

**Corey Tarwater, Ph.D.**, an ornithologist currently at the University of British Columbia, will begin as the new Population Ecologist in UW’s Zoology and Physiology Department and the Biodiversity Institute starting in January 2015. Dr. Tarwater’s research interests are broadly focused on the interplay between ecology, evolution, and behavior of year-round resident birds. **Catherine Wagner, Ph.D.**, will begin her position as Evolutionary Biologist in the Department of Botany and the Biodiversity Institute in August 2015. Dr. Wagner studies evolution of cichlid fishes and is currently at the University of Bern, Switzerland. Her research details the processes of speciation and diversification, particularly in systems of high species diversity. Dr. Wagner’s lab and office space will be in the Berry Biodiversity Conservation Center.







Clockwise from above right: Haub School graduate student Manasseh Franklin received the \$5000 Larsh Bristol Photojournalism Fellowship to document glacial recession in North America. | In 2013, the Haub School formalized an agreement with La Laguna University in Tenerife, Spain, to deliver tropical field ecology and environmental assessment courses in the Canary Islands annually. | Patrick Rodgers is the winner of the 2014 Tobin Memorial Award, recognizing UW's most outstanding male graduate. | Four environmental film screenings, including Telluride Mountainfilm in October, drew large audiences from UW and the local community. | Presenting "Fostering a Resilient Career," Dr. Stephanie Pfirman of Columbia University launched the Haub School's Environmental Leadership Series in April.





# A Snapshot of Our Year in the Field

On a sunny morning in May, students gathered at the banks of the Ewaso Ng'iro River in Laikipia, Kenya, to identify birds. Seventeen undergraduates—including two Kenyan university students—and a team of Haub School instructors spent three weeks at Princeton University's Mpala Research Centre. Committed to sustaining humans and wildlife in one of the most biodiverse regions on the planet, Mpala is an ideal locale for the study of savanna ecosystems, wildlife and rangeland management, and community conservation.

The Haub School is a growing hub for experiential learning, last year providing 115 students the opportunity to travel to six different field sites, including ones in Jackson Hole, Grand Teton National Park, the Spanish Canary Islands, the Patagonia region of Argentina and Chile, and Ecuador's Galapagos Islands. We continually seek to improve and expand the field curriculum to respond to emerging global issues and student interests.





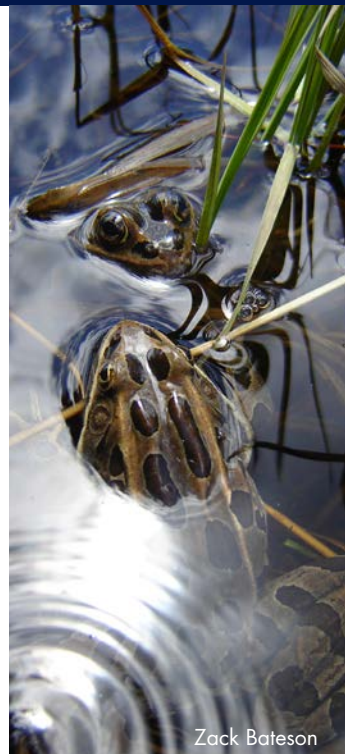
BIODIVERSITY INSTITUTE

## Outreach and Interaction

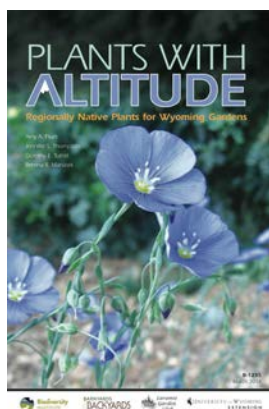


### Amphibian Citizen Science Project Launched

This summer citizen scientists combed the Medicine Bow and Bridger-Teton National Forests looking for frogs, toads, and salamanders. During its first year, the Rocky Mountain Amphibian Project, coordinated by the Biodiversity Institute and Wyoming Natural Diversity Database, attracted over 75 individuals, including Boy Scouts and members of Trout Unlimited, to survey 22 areas in the two Wyoming forests. The project collects baseline data about the distribution of the state's 12 amphibian species to assist agencies tasked with maintaining their populations. Data from the surveys are now coming in, and we will share the information with the U.S. Forest Service and project participants. Learn more about the project, Wyoming's amphibians, and where the work is located at [www.toadtrackers.org](http://www.toadtrackers.org).



Zack Bateson



### Book on Native Plants for Gardening Published

The Biodiversity Institute partnered with UW Extension and the Laramie Garden Club to develop and publish a book entitled *Plants with Altitude: Regionally Native Plants for Wyoming Gardens*. The book describes over 60 regionally native flowers and shrubs ideally suited for Wyoming gardens for their drought-tolerance, hardiness, aesthetics, and accessibility. Copies were distributed through Extension offices and Master Gardener clubs, and were available for purchase through the Extension and Biodiversity Institute websites. A website version of the book is available at [www.wyomingnativegardens.org](http://www.wyomingnativegardens.org).



# Events

## BioMusica Concert Series

This concert series brings together musicians and music that have a biological focus, with concerts held in a traditionally science-oriented building, the Berry Biodiversity Conservation Center. In 2013, we hosted six concerts with approximately 350 attendees from the UW campus and Laramie community.

## Biodiversity Movie Series

This movie series expresses ideas of biological diversity through a visual and audio vehicle—movies. Each film focuses on a different organism group, geographic location, or conservation triumph or concern. In 2013, we hosted eleven movies nights and matinees with approximately 250 attendees of all ages.

## Performances

One of Laramie's staple summer activities is the vertical dance performance at Vedauwoo, a recreation area just outside of Laramie. In August, we brought that dynamic and popular performance indoors for a vertical dance on the stone wall of the Berry Center. Three dancers were suspended from the ceiling, musicians performed on our baby grand piano, and over 200 individuals filled the Berry Center lobby (below right).



Cody Bish



UW Photo



## RUCKELSHAUS INSTITUTE

# Research and Policy Analysis Initiatives

### Wyoming Open Spaces Initiative

Our longest-standing publication series, the Wyoming Open Spaces Initiative supports the maintenance of Wyoming's open spaces and working landscapes by providing reliable, timely information. "Understanding Wyoming's Land Resources," the first publication in a series of reports exploring land use patterns and development trends, was released this year. We also collaborated with The Nature Conservancy in Wyoming and the Wyoming Stock Growers Association to conduct a poll exploring citizen opinions about conservation. Results will be available soon.

### Energy Mitigation Research and Outreach Initiative

"Market-based Wildlife Mitigation in Wyoming," released in October, covers the basics of mitigation banks, conservation banks, and habitat exchanges, and describes how these markets are emerging or might be used in

Wyoming. This resource untangles the terminology and components of these complex systems and explores case studies of existing and proposed wildlife mitigation markets in Wyoming and the West.

### Western Water Initiative

This year the Ruckelshaus Institute launched a new research and outreach initiative on water. We established a competitive grant program for University of Wyoming water researchers and funded projects that will quantify subsurface and surface return flow in the Upper Wind River Basin, synthesize research on ecosystem services provided by beavers in Rocky Mountain hydrologic systems, and quantify the nonagricultural value of flood irrigation along the New Fork River in western Wyoming.

[uwyo.edu/haub/ruckelshaus-institute](http://uwyo.edu/haub/ruckelshaus-institute)



# Collaborative Solutions Program

## Collaboration Program In Natural Resources

Through our Collaboration Program in Natural Resources (CPNR), the Ruckelshaus Institute builds capacity for collaborative problem solving in Wyoming. CPNR is an intensive, year-long training program for mid-career natural resource professionals. Participants attend six sessions and learn hands-on mediation, facilitation, and negotiation skills. They also complete a practicum. Upon graduation from the program, participants are prepared to bring stakeholders together in their communities to build collaborative solutions to natural resource challenges.

## Governor Mead's Task Force on Forests

The Ruckelshaus Institute assisted a statewide task force in developing consensus recommendations for

improving forest conditions in the face of drought, wildfire, bark beetles, and other challenges. The 19-member task force met five times, and in July agreed upon a set of 12 recommendations to be presented to the Governor in the fall. The recommendations, which are undergoing final editing and approval, provide guidance to the governor in protecting communities from destructive wildfires, reviewing and evaluating roadless areas, identifying best practices for improving land management planning and project implementation, and forming local collaborative working groups to address resource management issues. These and other recommendations will be detailed in a report later this year.





RUCKELSHAUS INSTITUTE

# Sustainability Events

## Renewable Energy Project Tour

We partnered with Rocky Mountain Power and Blue Sky Renewable Energy on their 2013 renewable energy tour. Members of the public toured the 99-megawatt High Plains Wind Project near McFadden, Wyoming, and learned about the solar panels on the Haub School's Bim Kendall House at the University of Wyoming campus. These panels produce about one-third of the electricity used by our building, and were funded in part by the Rocky Mountain Power Blue Sky program.

## University of Wyoming Sustainability Summit

The UW Sustainability Summit highlighted the Leadership in Energy and Environmental Design (LEED) certified buildings on campus. Architects and sustainability coordinators presented on the successes and challenges of building “green” at 7,200 feet. Participants enjoyed a four-course dinner of locally sourced foods, with each course served in a different LEED-certified building on campus.



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UW Photo



Emilene Ostlind





Fred Schmechel

## Publications

### Western Confluence Magazine

Much of the knowledge and understanding generated at universities never reaches the managers and decision makers on the ground who could apply that information to their work. A new bi-annual magazine published by the Ruckelshaus Institute aims to address that challenge. *Western Confluence* covers natural resource research and management in the West to provide a reliable source of science and policy information for natural resource decision makers and interested citizens. Visit [www.westernconfluence.org](http://www.westernconfluence.org) to download the magazine, read articles, or be added to the mailing list. The first four issues will be free. Send comments, questions, and story ideas to [editor@westernconfluence.org](mailto:editor@westernconfluence.org).



### Our Future Forests: Beyond Bark Beetles

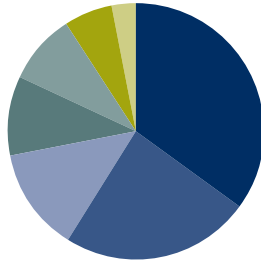
The Ruckelshaus Institute partnered with the Medicine Bow-Routt National Forests to help the public better understand the bark beetle outbreak and management responses in our local forests. Over the last 18 months, we coordinated an open house series with Forest Service staff and public talks from UW scientists about current bark beetle research. We hired photographer Joe Riis to build a photo library of forest images for use online and in print publications. In January we released “Bark Beetles in Western North America: An Annotated Bibliography for Natural Resource Managers,” a 60-page compendium of current understanding of the ecological and sociological impacts of bark beetles. In April we hosted the first public screening of ten short films exploring how forests are changing following the bark beetle outbreak and ways a range of characters—from climbers and hunters to biologists and hydrologists—are responding to those changes.





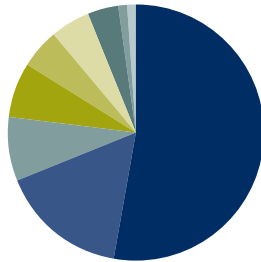
## FINANCIAL STATEMENT

INCOME



- 35% - WYOMING EXCELLENCE CHAIR SUPPORT
- 24% - STATE BUDGET
- 13% - ENDOWMENT INCOME
- 10% - STATE FACILITIES MATCH
- 9% - INDIVIDUAL CONTRIBUTIONS
- 6% - GRANTS AND CONTRACTS
- 3% - CONFERENCE AND TRAININGS

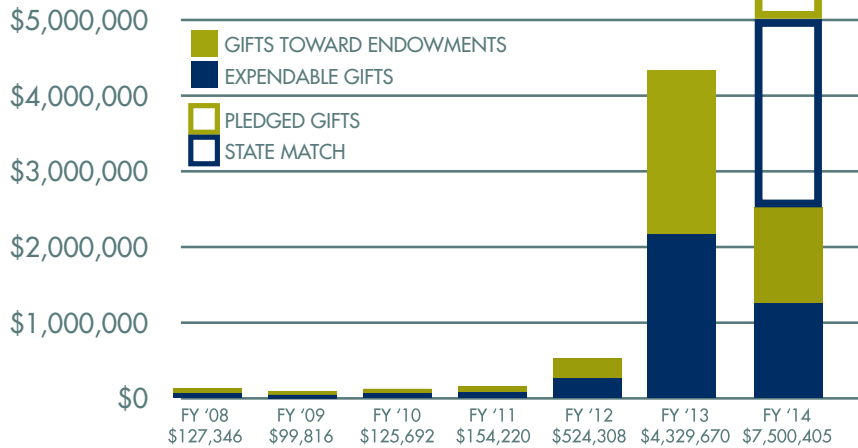
EXPENDITURES



- 54% - SALARY AND BENEFITS
- 16% - FACULTY RESEARCH SUPPORT
- 8% - TRAVEL: RESEARCH AND OUTREACH
- 7% - STUDENT SCHOLARSHIPS AND GRADUATE ASSISTANTSHIPS
- 5% - OUTREACH AND PUBLICATIONS
- 5% - TRAVEL: STUDENTS
- 4% - STUDENT SUPPORT
- 1% - EQUIPMENT
- >1% - FUNDRAISING

TOTAL EXPENDITURES  
\$2,820,960

PRIVATE GIVING



## PRIVATE GIVING

### Major Gifts

The Kemmerer Family Foundation  
Whitney & Betty MacMillan  
Saint Paul Foundation, Gilman Ordway  
The Walton Family Foundation

### Up to \$10,000

A. Brent Eastman, MD & Sarita Doyle  
Eastman, MD  
Fidelity Charitable Gift Fund, Larry Wolfe  
John & Mary Kay Turner  
James Nielson & Anne Young  
Lawrence Lunt  
Liliane Haub & Christian Haub  
Perkins Charitable Foundation,  
in memory of Vernon Bressler  
Raymond Plank  
Dick & Mary Lou Taggart

### Up to \$1,000

Carl Anderson  
Lora Bergert & Christopher Morgan  
Boeing Matching Gift Program,  
L. Weinberg  
Indy Burke & William Lauenroth  
Story Clark & Bill Resor  
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Dick Davis  
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Ed & Marianne Pollak  
Archie & Andrea Reeve  
Charles & Mary Rumsey  
Senator Alan & Ann Simpson  
Margie Taylor Living Trust  
Laurence Weinberg

Dickson Whitney  
Wind River Honey, Larry Krause

### Up to \$100

Joel Boucher & Wendy King  
Dennis & Lana Brown  
Robert & Susan Carling  
Susan L. Consolo-Murphy  
Bernard & Joyce Dailey  
Larry & Suzanne Good  
Maralee Gruey  
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Raymond Schamel  
Otto & Jane Schnauber  
Albert P. Sommers, Jr. &  
Susan Sommers  
Danny & Janet Stanley  
William & Carol Tihen  
Jarod Waite

### Previous Major Gifts

The Knobloch Family Foundation, Knobloch Fund for Endowed Chair (2013)  
The Saint Paul Foundation, Gilman & Margaret Ordway (2013)  
Liliane & Christian Haub, Knobloch Fund for Endowed Chair (2013) and (2011)  
Mary A. H. Rumsey Foundation, Ruckelshaus Institute of Environment and  
Natural Resources (2011 and 2013)  
Helga & Erivan Haub, Helga Otto Haub School of ENR Endowment (2005) and  
Erivan Haub Scholarship Endowment (2002)  
Bim & Donald Kendall, Bim Kendall House (2005)  
Jade & David Walsh, Jade and David Walsh Excellence Fund (2005)  
Caryl & Roy Cline, Endowed Chair in Engineering, ENR (2003)  
Jill & William D. Ruckelshaus, Ruckelshaus Institute of ENR (2003)  
Beverly & Eldon Spicer, Endowed Chair in Collaborative Practice (2002)  
Mark Bressler, Vern Bressler Scholarship Fund (1997)  
Evelyn & Chiles Plummer, Evelyn and Chiles Plummer Scholarship (1995)

### For more information on giving to the Haub School, please contact

Amanda Brodie, UW Foundation Principal Gifts Officer  
(307) 766-4258, anbrodie@uwoyo.edu



## SUPPORT THE MISSION OF THE HAUB SCHOOL

My gift/pledge to the University of Wyoming Haub School of Environment and Natural Resources:

\$100    \$250    \$500    \$1000    Other \$

This gift is designated for:

- Haub School General Fund
- Academic Programs
  - Biodiversity Institute
  - Ruckelshaus Institute
  - Endowed Faculty Chair Campaign
  - Ruckelshaus Endowment

Name(s):

Address:

City:

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### How to give

Please reference this giving code on your gift: M15N2

**Online via secure server:** [WWW.UWYO.EDU/GIVEONLINE](http://WWW.UWYO.EDU/GIVEONLINE)

**Donation by telephone:** Call the University of Wyoming Foundation during normal business hours: (307) 766-6300 or (888) 831-7795

**Donate by mail:**

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