

UNIVERSITY OF WYOMING
Endowed Faculty Report
From the Office of the Vice President for Academic Affairs
1 OCTOBER 2017

To the Joint Appropriations and Joint Education Interim Committees

The University of Wyoming has benefited greatly from the Excellence in Higher Education Endowment, which allows the university to establish state-funded endowed faculty positions to advance teaching and scholarship in the areas of distinction defined in the university's strategic plan. It has also benefited from state appropriations targeted toward faculty positions in legislatively identified areas of priority, in particular, the School of Energy Resources positions and the Sustainable Business Practices positions. Furthermore, faculty positions supported (partially or fully) by private endowment gifts through the University of Wyoming Foundation enhance UW's teaching and research programs in areas of mutual interest to the institution and its donors. This report covers all such positions. Part A covers the Excellence in Higher Education Endowment (a continuation of legislative reports prepared annually); Part B covers other faculty positions identified in legislative appropriations; and Part C covers privately endowed faculty positions.

Part A. Excellence in Higher Education Endowment Report
[Pursuant to W.S. 21-16-1204]

1. Background

Created in 2006, the Excellence in Higher Education Endowment was funded at \$105 million, the earnings from two-thirds of which, or \$70 million, was designated to the University of Wyoming. Earnings on the state-managed endowment, which are distributed by the state treasurer to the university, allow the university to establish endowed faculty positions (known as Wyoming Excellence Chairs) and to acquire instructional and scholarly materials, classroom equipment, and other resources necessary to support the work of endowed chairs. Distributions to the university are based on a spending policy of 5% of the average of the market value of the corpus for each of the preceding five (5) fiscal years or the fiscal years up to five for which there was a balance.

The statute imposes some constraints on the uses of the endowment earnings. Not less than 2/3 of the amounts must be used to expand university instruction and research in disciplines related to economic and social challenges facing Wyoming. No fewer than four Wyoming Excellence chairs must be in the College of Education. The remaining endowed faculty members must have established reputations in other areas of distinction as identified in the university academic plan, including business, arts and humanities, mathematics, cultural studies, healthcare, economics and law.

To jump-start the program while the endowment corpus was filling, and pursuant to Senate Enrolled Act 54 Section 1 (c) (ii), the Legislature appropriated \$2.8 million in one-time funds, subsequently reduced to \$1.8 million, to be distributed to the University of Wyoming and expended exclusively for the purposes specified in W.S. 21-16-1202 (b). The one-time appropriation allowed the university to begin filling positions in fiscal years 2007 and 2008. Those initial positions were then funded permanently with earnings from the Excellence in Higher Education Endowment.

2. Summary, history, and accomplishments of authorized positions

Under W.S. 21-16-1204, UW must report annually on faculty positions partially or fully funded through the endowment program, including the name of each faculty member filling a Wyoming Excellence chair, their education and experience, their research and instructional activities, and the benefits of their research and instruction.

The jump-start appropriation became effective July 1, 2006. The provost developed a planning budget for the allocation of positions to be supported with these funds during the 2007-2008 biennium, while the \$70M endowment account began to fill. Based on the planning budget, three searches were authorized with jump-start funds: two in the College of Education (fulfilling one-half of the legislative mandate requiring four positions in the College of Education) and one in the College of Arts and Sciences Creative Writing MFA program (aligned with UW's area of distinction Cultural Assets, Arts, and Humanities).

During the second year of that biennium, as more information became available about anticipated payouts to the university from the state-managed endowment account, the provost's office authorized more searches, in two phases. Seven additional Wyoming Excellence endowed positions were authorized during fiscal year (FY) 2008, and five more were authorized in July 2008 for a total of fifteen authorized endowed faculty positions. Four of these 15 positions were to be funded with earnings combined from both the state account and private endowment gifts to the university, allowing for a greater number of search authorizations and establishing a unique private-public partnership in endowing distinguished professorships.

The decision to authorize the 15 fully or partially funded positions was based on a budget for salary, benefits, and other position-related costs consistent with the projected payout estimates provided by the state treasurer's office prior to the financial market declines realized later in FY2009. Subsequent financial market events mandated the need to reevaluate the size of the budget and number of permanent positions that could be supported by the endowment earnings. Given the need for exceptional prudence in filling permanent faculty positions, and consistent with representations to the Joint Appropriations Committee, the university placed a number of the previously authorized searches on hold through FY2010. At the beginning of FY2011, following careful evaluation of the anticipated earnings stream and the accumulated reserves held in the university account, the provost authorized searches to fill a number of the on-hold positions, including some for a bridging period only in order to ensure that permanent funding commitments would remain in line with the anticipated funding stream. Then, at the beginning of FY2013, based on having received a significantly larger payout during FY2012 and as well as enhanced projected payout estimates from the state, and a substantial private gift, the provost was able to complete the originally planned position allocations, and augment the program with additional allocations to Nursing, Law, the Haub School (in collaboration with the College of Business), Global and Area Studies, and American Indian Studies.

In FY2017, seventeen (17) positions were funded and several additional positions were supported with endowment funds for a bridging through the end of the fiscal year. Although all positions are subject to available funding in any year, the ongoing annual expenses associated with filling the 17 permanently funded positions were in line with the state projections for annual earnings. The expenses associated with the additional bridge-funded (or temporarily) supported positions are funded with accumulated reserves beyond those needed to cover the risks of another period of earnings declines. Individual plans are in place to support each of the bridge-funded positions after the period of support by the Endowment has ended.

The 17 permanently authorized positions conform to the legislative mandate. Four positions in Education, as prescribed by the legislation, have been created and all are important to the future of K-12 education in the state: literacy education (2 positions), science education, and mathematics education. The strategy for allocation of the other positions was to coordinate a set of positions in the life sciences, an institutional area of distinction identified in the university’s strategic plan, and to build greater depth in other areas of distinction, including the arts and humanities, and professions critical to the state such as business, law, and health professions. In addition, positions were selected for allocation based on their potential to address economic and social challenges in the state, such as community economic development, livestock and wildlife disease, managing natural resource conflicts, water management, and preparing for a global economy. Endowment for Excellence position allocations complement a group of faculty positions focused on energy resource sciences that are funded by the School of Energy Resources. The allocation strategy is reflected in the following table, and the accomplishments of the currently filled positions and the benefits of their research or instruction to students, businesses, industries or other Wyoming residents are described in detail below.

Allocation strategy	# Permanent Positions	College/Academic Unit	Names
Education	4	Education	Dr. Cynthia Brock, Dr. Victoria Ridgeway Gillis Dr. Tim Slater, 2 Vacant (<i>Filled for FY18</i>)
Cultural Assets, Arts & Humanities*	1	Art Museum; Arts & Sciences	Heather Bender
Life Sciences, Environmental and Natural Resource Sciences, Earth and Energy Sciences	7	Arts & Sciences; Agriculture & Natural Resources; Engineering & Applied Science; Haub School	Dr. Holly Ernest, Dr. Xiaohong Liu, Dr. Amy Navratil, Dr. Mohammad Piri, Dr. Carlos Martinez del Rio, Dr. Fred Ogden, 1 Vacant (<i>Filled for FY18</i>)
Professions Critical to Wyoming (other than education)	3	Law/Haub School Health Sciences (Nursing, Kinesiology & Health Promotion)	Dr. Temple Stoellinger, Dr. Diane Boyle, Dr. Christine Porter
History and Culture of the Rocky Mountain Region*		Arts & Sciences	Multiple individuals receive support
Other Economic and Social Challenges	2	Agriculture & Natural Resources; Arts & Sciences; Haub School	Dr. Steven Smutko, Dr. Heidi Jo Albers

* Multiple temporary positions supported in Visiting Scholar programs

FY 2017 Accomplishments of Wyoming Excellence Chairs

COLLEGE OF EDUCATION

Four of the permanent positions reside in the College of Education, with focuses on literacy, science education, and mathematics education. The individuals who hold these positions are developing and leading nationally recognized programs in these fields and are expected to be magnets for attracting the best and brightest junior faculty and students into these critical areas of teaching need in Wyoming. These positions represent the four Wyoming Excellence chairs that must, by law, be in the College of Education.

Dr. Cynthia Brock, Wyoming Excellence Chair in Literacy Education (B.S. Elementary Education, minor Math Education, Oregon State University; M.Ed. in Reading & Language Arts, Washington State University; Ph.D. in Educational Psychology, Focus: Literacy & English Learners, Michigan State University). Across the past year, Dr. Brock worked with Dr. Dana Robertson (Executive Director of the Literacy Research Center and Clinic) and Dr. Vicki Gillis to develop collaborative research/professional learning educational partnerships in Jackson, Kaycee, Casper (two elementary schools) and Laramie. In the spring of 2016, Dr. Brock also worked with Dr. Gillis (the Wyoming Excellence Endowed Chair in Secondary Literacy Education) to provide a professional development course focused on disciplinary literacy for teachers in Fremont County. Dr. Brock worked with Dr. Jeasik Cho to deliver professional development to teachers in Pavillion, Wyoming. Dr. Brock was the co-chair of the 2016 UW Literacy Research Center and Clinic Annual Literacy Conference; approximately 150 administrators and educators from Wyoming attended this annual literacy conference. This UW LRCC Literacy Conference and professional development work has benefitted hundreds of educators and children across the state of Wyoming by providing state-of-the-art literacy instruction to Wyoming educators and their students. Drs. Brock & Gillis co-developed, and facilitated the implementation of the David Bauer Grant Fellows Program for the College of Education (19 fellows-including doctoral students and College of Education faculty are working with David Bauer for 1.5 years to learn to secure grants). In the spring/summer of 2017, Drs. Brock, Gillis, and Hall and Rick Fisher (Interim Director of the UW Writing Center) co-developed (with input from Dean Reutzell) the College of Education Academic Writing Fellows Initiative; this is a year-long initiative that started in June 2017 and ends in June 2018. Drs. Brock and Gillis collaborated with the CoEd Diversity Committee to develop a 1.5-year initiative that includes professional book clubs, guest speakers, etc. to foster collegiality and an understanding of diversity in the College of Education. In the spring of 2017, Dr. Brock also sponsored two national literacy scholars to work with College of Education faculty and doctoral students. Additionally, in conjunction with Dr. Gillis, Dr. Brock sponsored a group of UW doctoral students to attend and present research at the 2016 Literacy Research Association Conference. In July of 2017, Dr. Brock sponsored six doctoral students to attend and/or present at the International Positioning Theory Conference in Oxford, UK. Dr. Brock collaborated with a colleague at the University of South Australia to co-edit a themed issue (entitled Contemporary Boys' Literacies and Boys' Literatures) of the journal *Boyhood Studies: An Interdisciplinary Journal*. Finally, across the 2016/2017 year, Dr. Brock worked on two different international grants, published one journal article, and co-wrote 3 book chapters. The College of Education initiatives developed by Dr. Brock and her colleagues benefit the residents of Wyoming because they provide ongoing learning and development to the educators who teach the pre- and in-service teachers in the state of Wyoming. Dr. Brock's own national and international scholarly work benefits the teacher educators and educators she serves in the state of Wyoming because her ongoing learning and development informs the nature of the work that she does with teacher educators, educators, and children in the state of Wyoming.

Dr. Victoria Ridgeway Gillis, Wyoming Excellence Chair in Literacy Education (B.S. Biology, North Georgia College; M.A.T. Secondary Science, Emory University; Ph.D. Reading Education, University of Georgia). Dr. Gillis continued a line of research begun five years ago that involved literacy doctoral students in a content analysis of three major literacy research journals (*Reading Research Quarterly*, *Journal of Literacy Research*, *Yearbook of the Literacy Research Association*). They have analyzed twenty years of published research in these journals and this year expanded their work to focus on research methodology, examining design and analysis separately. Multiple publications and presentations, many with her doctoral students, resulted from this work. Dr. Gillis was also a member of the research team engaged in outreach and professional development with the Teton Literacy Center in Jackson, WY. In addition to a number of course she taught as instructor or record, Dr. Gillis co-taught, with Dr. Cindy Brock, an outreach course for Fremont County on Writing to Learn in April-May, 2017. Dr. Gillis also participated in a needs assessment conducted at the request of Kaycee School with Dana Robertson and Cindy Brock. Data collected will form the basis for collaboration between the UW Literacy Research Center and Clinic and Kaycee school administrators and faculty in the 2017-18 school year.

Dr. Tim Slater, Wyoming Excellence Chair in Science Education (B.S Physical Science; B.S. Ed. Secondary Science Education, Kansas State University; M.S Physics & Astronomy, Clemson University; Ph.D. Geological Sciences, University of South Carolina). Dr. Slater is a Professor in the College of Education's Department of Secondary Education and Adjunct Professor in the College of Arts & Science's Department of Physics & Astronomy, Dr. Slater is a prolific author, having published more than eight refereed journal articles, five books, and presented 19 papers at conferences since Fall 2015, often with his graduate students as co-authors, describing his scholarly research on understanding the underlying cognitive mechanisms related to teaching and learning in introductory science survey courses taught to undergraduates and future teachers. Winner of numerous national awards, he taught four graduate-level courses in education research methods and cognitive science for the College of Education. He also conducts workshops for K-12 teachers across Wyoming, being a featured workshop presenter at the Wyoming English as a Second Language Conference. Professor Slater has been serving as Editor-in-Chief for the *Journal of Astronomy & Earth Sciences Education* and this year was further appointed as Co-Editor for the Science Division of the *Contemporary Issues in Technology and Teacher Education* for the International Association for Science Teacher Education.

Wyoming Excellence Chair in Mathematics Education – Vacant (Filled for FY2018)

CULTURAL ASSETS, ARTS AND HUMANITIES

Heather Bender, Museum as Classroom Educator (this position is funded through fiscal year 2017) (B.A. Art and History, minor in Education, Salisbury University; MA Curriculum and Instruction and Teachers of American Indian Children Certificate, University of Wyoming, Wyoming State Teacher Certificate, STARS (Statewide Training and Resource System) trainer certification for childcare professionals). Ms. Bender has been the director of Lewis & Clark State College Center for Arts and History in Idaho and education specialist at the Buffalo Bill Center of the West in Cody, Wyoming. She brings art to life for UW art and education majors, and K-12 students and in-service educators from across the region, by engaging them in object-based/inquiry-based teaching and learning strategies. During this academic year, she has continued research in early childhood education as it relates to arts integration, interdisciplinarity, culturally relevant pedagogy and how museums play a vital role in both preschool student development and early childhood educator training. This research has had the greatest impact on the museum's *Preschool Initiative*. Ms. Bender piloted an early childhood educator training in FY16 which became the basis for two additional trainings in

FY17. These workshops (*Using Art to Create a Dynamic, Diverse, and Interdisciplinary Teaching Practice*) were offered for STARS credit and served 16 local early childhood educators. The goal is to train 100% of the teachers whose classes participate in the *Preschool Initiative* and give these trained educators the opportunity to use the museum exhibits on their own as well as with a museum guided experience. Under Ms. Bender's direction, nearly 6,700 students in grades pre-K through 16 and beyond attended art programs in FY2017. While this number is down from FY16, that is due in large part to streamlining of offerings as part of the comprehensive strategic plan with an eye toward effective use of limited personnel and increased rigor in programming. Ms. Bender continues to teach EDEL 3170 Art in the Elementary School for the College of Education and has added EDSE 4272 Art Methods II in the short term. Additionally, she continues to lead the Albany County School District #1 After School Enrichment Program, teach students from 6 area preschools monthly, as well as school group experiences from local/regional/statewide constituents.

Creative Writing – Visiting Writers-in-Residence Program

Nam Le, Eminent Writer-in-Residence (B.A. and B.L. – both with honors, University of Melbourne; M.F.A, Iowa Writers Workshop, University of Iowa). Nam conducted a fiction workshop for our MFA students and gave a public reading.

Rattawut Lapcharoensap, Eminent Writer-in-Residence (B.A., Cornell University; M.F.A., University of Michigan, numerous honors including a Whiting Fellowship, many more. One book, another forthcoming 2018.) Rattawut taught two courses in fiction writing in spring semester, one graduate and one undergraduate. He consulted with students on manuscripts, and directed and served on several thesis committees.

Joy Williams, Eminent Writer-in-Residence (B.A., Marietta College; M.F.A., University of Iowa). Finalist Pulitzer and National Book Award, many books, member American Academy of Arts and Letters.) Joy taught two six-week intensive writing/literature courses for our MFA students, consulted on manuscripts, and served on thesis committees.

Additional visiting writers included: (1) **Laura Pritchett**, novelist and winner of the Milkweed National Fiction Prize for *Hell's Bottom*, Colorado; PEN USA West Literary Award for Fiction for *Hell's Bottom*, Colorado; WILLA Literary Award for *Sky Bridge*; Colorado Book Award, *Home Land: Ranching and a West That Works*; (2) **Selah Saterstrom**, poet twice-nominated for the Believer Book Award. Public reading and conference with students; (3) **HR Hegnauer**, poet and novelist, award-winning book designer. Public reading and conference with students; (4) **James Longenbach**, poet and critic with work appearing in including *The New Yorker*, *The New Republic*, *The Nation*, and *The Yale Review*, as well as *The Best American Poetry*. Public reading and conference with students; (5) **Leigh Selting** (UW head of Theater & Dance), Guest Workshop, "Coaching the Public Reading." Public reading and conference with students; (6) **Alexander Chee**, novelist, winner of the Asian American Writers Workshop Literary Award, the Lambda Editor's Choice Prize, the Michener/Copernicus Fellowship Prize, the Whiting Award, and an NEA Fellowship in Fiction. Public reading and conference with students; (7) **Sally Kim**, editorial director at Simon and Schuster and member of Asian American Writers Workshop. Video conference with students. MFA graduate students work at Girls' School in Sheridan (spring and fall writing workshops)

Fine Arts Visiting Artists-in-Residence Program

The Departments of Art, Music, and Theatre & Dance share funding from the Wyoming Excellence Chair endowment, rotating in a 3 year cycle with a long term residency and then 2 years with smaller residency opportunities.

Art and Art History - Four visiting artists they were able to bring in under the excellence fund endowment during the fall semester, 2016. (1) **Adrienne Outlaw**, sculpture and installation artist, (2) **Jenny Filipett**., digital art and new media installation artist, (3) **Kristin Stransky**, digital art and new media installation artist, (4) **Mariel Versluis**, printmaker. Each visiting artist spends three days up to a full week. Artists provide critical assessment of undergraduate student work through individual critiques and through classroom visits. Artist also conduct mini-workshops for specific disciplines. Each artist presents an hour-long lecture on their creative work and process, and scholars present lectures on their art historical research.

Music – The Department of Music was on the third year with the long-term residency opportunity for AY 2016-17 which afforded them terrific opportunities for students, the UW campus, and greater Wyoming community. The Wyoming Excellence funds provide UW students, the UW campus, and greater Wyoming community, exposure and individual contact with world class musicians who broaden their perspective, enhance their performance skills, demonstrate new and effective techniques, and open their ears to the enormous possibilities that exist in the field of music performance, composition, and education. These funds provide substantial and valuable musical experiences for these students and stakeholders that would not be possible otherwise, especially considering Wyoming’s rural location. The impact of these funds has been enormous for Wyoming and the University. The Department hosted a variety of performers, conductors and composers who performed concerts, worked with student composers, and wrote pieces for our ensembles. Students studying all of the instruments in the department were given the opportunity to work with exceptional performers from across the country as well as internationally. Outstanding musicians on campus in 2016/17 included renowned composer, **Libby Larsen** who spent four, week-long, sessions with the department and students during the year. Her compositions were performed by the Symphony Orchestra, Collegiate Chorale and Wind Symphony. Additionally they hosted jazz artists, **Greg Osby** and **Terell Stafford**, percussionist, **Nate Werth**, the **Boston Brass**; jazz trumpeter, **Peter Olstad**; composer, **Carlos Costa**, flutist, **Robert Dick**, opera performer, **Julie Wright-Costa**, international pianist, **Andrew Harley**, cellist, **Lynn Harrell**, Chinese pianist, **Lei Weng**, violist, **David Holland**, choral greats, **Sally & George**, **Jonathon Yarrington**, oboist and trumpet duo, **Robert & Lauren Murray**, pianist, **Cristina Capparelli**, composer and trumpeter, **Jim Stephenson**, composer and pianist, **Jake Heggie**. The **Colorado Chamber Orchestra** came to campus to perform and record new works by UW students studying composition in the Department of Music.

Theatre & Dance - Artists-in-Residence included: (1) UW Theatre & Dance alum **Coco Kleppinger**, who is now an associate casting agent with Rich Delia Casting (Dallas Buyers Club, The Help) in Los Angeles. She conducted two workshops during her residency, during which she coached actors on “sides” (scenes from film and television) specifically chosen for them and talked to them about their type, both in film and television; (2) **Lisa Konoplisky**, an accomplished playwright with experience in film production and a trained teacher of the world famous Meisner technique in acting, conducted two workshops during her residency.; (3) **Joshua William Gelb** is a director, performer and librettist whose work runs the gamut from devised physical theater, to stylized adaptations of classics, to original musicals as well as collaborations with emerging playwrights. He spent a **week** working with Sean Stone and the musical theatre students working on the libretto and script for his new musical, “The Bastard”; (4) Screen Actors Guild/AFTRA representative **Sheila Traister** met with

students in Acting for the Camera and Filmmaking classes; (5) Flamenco Denver, **Jamie Johnson**—formerly with MOMIX, teaching and workshops; (6) **Aubrey Klinger** of Davis Contemporary Dance, teaching and workshops; (7) **Jacob Mora** of Moraporvida Contemporary Dance Company, teaching and workshops; (8) **Robert Sher-Machherndl**, internationally renowned contemporary ballet choreographer founder of critically-acclaimed Lemon Sponge Cake Contemporary Dance Company, teaching and workshops. Over the academic year, the **Guest Artist** monies brought to UW Theatre and Dance **eight** (8) talented artists and professionals to work with and present master classes to UW Theatre and Dance students. Nearly **twenty (20)** classes or workshops were presented over the year, with at least one presentation from every artist open to the entire UW community. This represents an outstanding aspect to the program, one that they use to bolster **placement, recruiting** and **training** for all of our Theatre and Dance students.

LIFE SCIENCES, ENVIRONMENT AND NATURAL RESOURCES, AND EARTH AND ENERGY SCIENCES

Wyoming Excellence Chair in Environmental and Natural Resources – Vacant (filled for FY2018)

Dr. Holly Ernest, Wyoming Excellence Chair in Disease Ecology (B.S., Biology, Cornell University; M.S. Veterinary Physiology and Pharmacology, Ohio State University; Doctor of Veterinary Medicine, Ohio State University; Ph.D. Ecology, University of California, Davis). Dr. Ernest is an ecologist, conservation geneticist, and wildlife veterinarian who leads a team of eight students and researcher-trainees to answer questions vital to conservation and management of wildlife populations in Wyoming and the North American West. These wildlife include wild ungulates (bighorn sheep, mule deer, elk, and pronghorn), carnivores (mountain lions, black bears, and otters), and birds (raptors and hummingbirds). Dr. Ernest's team studies in population genomics applies state-of-art whole genome DNA technology to examine factors that are vital for population health, genetic diversity, and adaptations to changing environments. Working with, and funded by, the Wyoming Department of Game and Fish, the Wyoming Wild Sheep Foundation, and other invested partners, Dr. Sierra Love Stowell, Ph.D. student Melanie LaCava, undergraduate genomics interns, and Dr. Ernest are determining the genetic health and population structure of bighorn sheep, mule deer, and pronghorn populations state-wide. Ecology and genetic diversity of Great Gray Owls in Northwest Wyoming is the focus of graduate student, Beth Mendelsohn. These owls live in an isolated habitat shaped like a peninsula and are very sensitive to changes in forest structure and certain disease threats. Ms. Mendelsohn is evaluating whether they have experienced genetic bottlenecks and whether their population is genetically distinct (cut off) from others in Idaho and nearby states. Ph.D. student Brady Godwin is employing a combination of field ecology, bird banding, and genomic methods to evaluate population ecology of hummingbirds who live in “sky-island” habitats in the Rocky Mountains. Postdoctoral researchers Dr. Kyle Gustafson and research scientist Millie Vazquez work in the lab to extract DNA from trace samples including hair. Dr. Gustafson conducts genomic statistical analysis and modeling with Mount Moran computing resources to interpretation of large genetic data sets for mountain lion and black bear wildlife management and conservation. Dr. Ernest taught her undergraduate course in Disease Ecology and expanded the graduate seminar series in Conservation Genomics to include a Ph.D. student distance learner in Powell WY (who is also a professor at Western Wyoming College) and employed multiple group-learning sections. She mentored incoming undergraduate freshmen majoring in Animal and Veterinary Sciences, and serves on several Ph.D. and M.S. graduate committees. Mentoring and supporting the next generation of researchers, ecologists, and veterinarians is very important to her and Dr. Ernest spends much time and effort to train and nurture these students. Funding for current research projects totals \$1,060,000, and grad students and postdocs have done very well this year to write successful grant proposals. This funding and exciting projects have allowed recruitment to Wyoming of the best and

brightest students and trainees, along with their family members. Applied and basic research projects engage students at multiple educational levels, state and federal agency personnel, non-governmental organizations, and the public of all ages (kids to retirees, and sometimes as “citizen scientists”). Multi-institution collaborations include Montana State University, Colorado State University, University of California Davis, Wyoming Department of Game and Fish (WGFD), Wyoming Wild Sheep Foundation, National Park Service, US Geological Survey, Smithsonian Institution, UC Santa Cruz, US Department of Agriculture, and others. Dr. Ernest was recently selected to serve on the federal Wildlife Forensic Science NIST panel of experts to develop and distribute DNA methods and protocols for crime labs. Through this National Institute for Standards and Technology panel, she now works alongside state and federal agency forensic scientists and university researchers across the country – this relationship is important to for legal protection of Wyoming’s wildlife. Dr. Ernest maintains her faculty affiliation with UC Davis School of Veterinary Medicine as Professor Emeritus.

Dr. Xiaohong Liu, Wyoming Excellence Chair in Regional Climate Modeling (M.S. and Ph.D., Nanjing University, P.R. China). Dr. Liu is an internationally recognized scientist in climate modeling, aerosol-cloud reactions and aerosol modeling. He joined the University of Wyoming from the Department of Energy (DOE)’s Pacific Northwest National Laboratory, located in Richland, Washington in 2013. In FY2017, Dr. Liu and his research team have been heavily involved in the development of the next version of NCAR Community Earth System Model (CESM2) by improving the representation of atmospheric aerosols, clouds, and aerosol-cloud interactions in CESM2. Three schemes/parameterizations developed in his group were adopted by CESM2. In addition, Dr. Liu is in the development team of DOE’s Accelerated Climate Model for Energy (ACME) climate model, and is leading the development of an advanced aerosol module for the next generation of NASA’s climate model (GEOS) with the support of NASA funding. In FY2017, Dr. Liu was awarded a new DOE project to evaluate and improve the DOE’s ACME using observations. He was also awarded a new NASA project to improve the representation of dust aerosol in NCAR CESM and NASA GEOS models using satellite observations. His group has been involved in the investigation of the radiative forcing of wildfire smokes and how biomass smokes from southern Africa affect the brightness of stratocumulus over southeastern Atlantic Ocean, with funding supports from EPA and DOE. During FY2017, Dr. Liu gave presentations at 20 national and international conferences including 7 invited talks and seminars, and published 13 papers in peer-reviewed journals. For the third consecutive year, he was named to the list “Highly Cited Researchers” in 2016 by Web of Science (approximately 3,000 researchers in the World from 21 scientific fields earned this distinction, and he was the only one at UW). As a principal investigator on seven grants, he has brought over \$3.5 millions external funding to UW. Dr. Liu was the Chair of six graduate thesis committee. Dr. Liu also taught both an undergraduate and a graduate course, and served on numerous editorial boards and advisory committees, including the Co-chair of NCAR CESM Chemistry-Climate Working Group. Dr. Liu was the Chair of six graduate thesis committee and member on seven graduate thesis committee. Three graduate students received their M.S. degrees and one received his Ph.D. in FY2017. Dr. Liu also taught both an undergraduate and a graduate course. Dr. Liu was a major user of computational resources on Cheyenne and Yellowstone from the NCAR-Wyoming Supercomputer Center (NWSC), and was awarded ~40 Million core hours in FY2017. With the NWSC support, his group used the regional and global climate models to study the temperature, precipitation, and snow depth and snow cover changes in the Rocky Mountain region in the historical period (1850 to 2000) and in the future (until 2100). These studies are very beneficial to the water resource managements in the State of Wyoming. As a principal investigator on seven grants from NSF, DOE, NASA and EPA, Dr. Liu has brought over \$3.5 million external funding to UW.

Dr. Mohammad Piri, Wyoming Excellence Chair in Petroleum Engineering (M.Sc. and Ph.D. Imperial College London). In the 2016-2017 fiscal year, Dr. Piri and members of his research group presented their research results at numerous conferences and published more than nine papers in peer-reviewed journals with several more under review and in preparation. He was also promoted to the rank of Professor. Dr. Piri and his research team established the world's most advanced Center of Innovation for Flow through Porous Media (COIFPM) in UW's newly-built High Bay Research Facility. In 2016, he developed a major partnership with Alchemy Sciences, a Houston-based technology company, that includes a \$3 million research project and a \$4 million endowed chair in Petroleum Engineering. Dr. Piri's research group currently includes twenty six (26) graduate students and seven (7) research associates. Several more will be joining the team in the next 2-7 months. Furthermore, Dr. Piri taught two classes: 1) Flow through Porous Media and 2) Unconventional Reservoirs. Dr. Piri's specialty is multiphase flow in porous media with applications in oil and gas recovery from unconventional and conventional reservoirs, pore-scale modeling of displacement processes, two- and three-phase relative permeability (measurement and prediction), wettability, and CO₂ sequestration and leakage. He designed, installed, integrated, and commissioned three unique research facilities that have put the University of Wyoming at the forefront of research in the area of flow through porous media. These research facilities include: Encana Three-Phase Flow and Computed Tomography Research Laboratory, Hess Digital Rock Physics Laboratory, and Center of Innovation for Flow through Porous Media (COIFPM) located in UW's newly-built High Bay Research Facility. These platforms provide UW students exceptionally rich research and educational experiences that are seldom available elsewhere. Dr. Piri also used these to help attract three new faculty members to the Petroleum Engineering program at UW. Furthermore, he has been diligently working to commercialize the Intellectual Properties developed in his research group through establishment of a new company, Piri Technologies, LLC. His external research funding exceeds \$10 million.

Dr. Amy Navratil, Gardner/Fiske Chair in Biomedical Physiology (B.S. microbiology and Ph.D. Biomedical Sciences, Colorado State University). Dr. Navratil's research group studies reproductive endocrinology. Dr. Navratil's research is focused on the highly prevalent reproductive disorder, polycystic ovary syndrome (PCOS); it is the most common endocrine disorder among women of fertile age, with upwards of 10% of women being affected worldwide. Her laboratory is trying to *investigate the mechanism by which endocrine cells alter their function in a PCOS state*. Dr. Navratil is hopeful that the experiments they are undertaking will provide critical insight in to pathophysiology of PCOS and impaired reproductive function in women. Within the last fiscal year, she and her team have published 4 peer-reviewed manuscripts and 1 book chapter. Her laboratory also attended the Endocrine Society meeting in Orlando, FL. This national meeting highlights Hormone Research and the Clinical Practice of Endocrinology from MD's and Ph.D.'s from all over the world. They had two poster presentations and one oral presentation at the meeting. In both the Fall and Spring semesters, she teaches a five-week section of Human Systems Physiology (ZOO3115). This class services 96 students in the Fall and 210 students in the Spring. She is responsible for covering lecture topics in Neurobiology, muscle, cardiology, and blood pressure. She also teaches an advanced topics class dealing with Mechanisms of Hormone Action (ZOO4735). This class provides a complete mechanistic picture of the cellular and molecular events involved in endocrine signaling and what goes wrong with those pathways in disease states. This last year, Dr. Navratil was honored as an A&S Top Ten Teacher and a Mortar Board Top Prof.

Dr. Carlos Martinez del Rio, Wyoming Excellence Chair in Biodiversity and Biodiversity Institute Director (Ph.D. Zoology, University of Florida). Dr. Martinez del Rio has been a professor in UW's department of Zoology and Physiology since 1994 and director of the Biodiversity Institute from 2012 - 2017. In addition to administrative activities, Dr. Martinez del Rio taught a graduate course for the intercollegiate Program in Ecology (18 graduate students). In the fall, he helped coordinate the activities of the BI (including

K-12 educational activities, workshops, art exhibits, and citizen science activities). In the spring semester of 2017, he taught two courses: Animal Biology (2 sections of 150 students each) and contributed to teaching in the Foundation in Scientific Medicine Curriculum of WWAMI (12 students). In addition, he maintained an active research program that yielded 5 publications. Two of these publications were in very high impact journals (Science and Proceedings of the National Academy of Sciences. These are likely two of the top scientific journals in the world). Dr. Martinez del Rio's work benefitted the state in two ways: First, the Biodiversity Institute served a large number of Wyoming Citizens (about 1000 K-12 students per year and hundreds of visitors). It offered workshops that benefitted not only citizens of the state, but also employees of federal agencies such as Wyoming Game and Fish Department. The exhibits and that took place in the last 6 months of his tenure as director, benefitted hundreds of Wyoming citizens. Finally, the citizen science activities contributed to knowledge about the state of wildlife in the state. Dr. Martinez del Rio believes in the importance of teaching by prominent members of the UW faculty. The first-year course he taught in the spring of 2017 served 300 students. It received very good evaluations, and he believes that it inspired the students to pursue careers in the biological sciences. Finally, he is very proud to contribute to the WWAMI curriculum. By training the future physicians he is serving the citizens of the state.

Dr. Fred Ogden, Cline Distinguished Chair of Engineering, Environment, and Natural Resources (B.S., M.S., and Ph.D., Civil Engineering, Colorado State University). Dr. Ogden's position as Cline Distinguished Chair is partially supported with Wyoming Excellence funds through FY2017. Dr. Ogden leads development of advanced hydrological modeling tools that enable application of supercomputers for predicting flooding and water resources availability. In addition, he is the leader of an on-campus research team that is exploring the effect of land management decisions on water resources sustainability in the Panama Canal Watershed, funded by the US National Science Foundation. Graduate students working on this research project and advised by Dr. Ogden have made recognized advances in the ability to model the complexities of tropical soils and the effects of land use on hydrological response. Dr. Ogden's team-oriented research on high-performance computing in hydrology has attracted funding from the U.S. National Weather Service, Office of Water Prediction, aimed at improved local flood predictions at the continental scale. This research incorporates the latest developments in numerical and computational hydrology and hydraulics to improve flood forecast accuracy and specificity for the benefit of the U.S. public.

PROFESSIONS CRITICAL TO THE STATE

Temple Stoellinger, Law (B.S. Environment and Natural Resources and Communications, University of Wyoming; J.D. University of Wyoming College of Law). Ms. Stoellinger is an Assistant Professor in the Haub School of Environment and Natural Resources with a joint appointment at the College of Law where she is also the Co-Director of the Center for Law and Energy Resources in the Rockies. During the 2016/2017 academic year, Ms. Stoellinger taught the following courses: EENR Law Clinic (year-long course), Environment and Natural Resources Law and Policy (Fall), ENR Capstone: Environmental Approaches (Spring). Ms. Stoellinger's scholarship continues to focus on the intersection of natural resource law and effective policy. Highlights of her scholarship this year include: Temple Stoellinger, *Wildlife Issues are Local – So Why Isn't ESA Implementation?* 44.3 *ECOLOGY LAW QUARTERLY* (forthcoming, Fall 2017); Temple Stoellinger & David "Tex" Taylor, *A Report on the Economic Impact to Wyoming's Economy From a Potential Listing of the Sage Grouse*, 17 *WYO. L. REV.* 79 (2017). As the Co-Director of the CLERR, Ms. Stoellinger's main effort was to organize the 2016 Landscape Discussion on Energy Law & Policy in the Rockies (Fall 2016) and the 2017 conference as well (Fall 2017). In partnership with Dr. Jean Garrison and the School of Energy Resources, Ms. Stoellinger launched an inaugural UW Energy Law and Policy Fellow program. Ms. Stoellinger also serves as

the advisor and coordinator of the Haub School's JD/MA program, a joint graduate degree effort between the College of Law and the Haub School. Ms. Stoellinger's work and engagements continue to have a direct and impactful benefit to the State of Wyoming. For example, Ms. Stoellinger's EENR Clinic provides eight, third year law students, with an opportunity to work directly on the State of Wyoming's energy and natural resource legal and policy matters. The clinic not only provides the students with an educational and experiential learning benefit, but also provides additional resources to the Wyoming Attorney General's Office. In 2016/2017, Ms. Stoellinger's scholarship addressed key Wyoming issues: the Endangered Species Act (ESA) and sage grouse. Her law review article, *Wildlife Issues are Local – So Why Isn't ESA Implementation*, advocated for more state involvement in the implementation of the ESA, utilizing the overlooked 6(g)(2) provision of the ESA. This article was published in UC Berkley School of Law's Ecology Law Quarterly (the #5 ranked US environment, natural resources and land use law review journal). Ms. Stoellinger's collaborative/interdisciplinary paper with economist co-author, Professor Tex Taylor (UW, Ag Econ Dept.), *A Report on the Economic Impact to Wyoming's Economy From a Potential Listing of the Sage Grouse*, analyzed the history leading up to the potential sage grouse ESA listing in 2015 and the economic consequences of current sage grouse management and a potential ESA listing on Wyoming's economy. The Wyoming Attorney General's office recently cited this article in a brief to the U.S. Supreme Court. The Landscape Discussion on Energy Law and Policy in the Rockies, joint effort between the College of Law's Center for Law and Energy Resources in the Rockies and the UW School of Energy Resources (SER), is another example of one of Ms. Stoellinger's efforts that benefits the state. This past year's conference, the fourth annual, was attended by 250+ attendees including: regional attorneys, industry representatives, government officials, NGO representatives, along with UW faculty/staff and students. Topics covered at the conference ranged from sage grouse, to oil and gas regulation updates, to air quality emissions. Governor Matt Mead provided a welcome address, former Governor of Wyoming Dave Freudenthal was the conference MC, and Sudeen Kelly, former FERC commissioner, was the conference keynote.

Diane K. Boyle, Wyoming Excellence Chair in Nursing (BSN University of Maryland; MSN, University of North Carolina; Ph.D., University of Kansas). Dr. Boyle's research activities focus on improvement of the nursing work environment, nursing workforce, and patient safety through expertise in developing and evaluating standardized quality measures and sustained investigation of relationships between nursing characteristics and patient outcomes. To that end, her team completed the research funded by the Competency and Credentialing Institute on the relationship between national nursing specialty certification and surgical site infections and have one paper in review from this funding. Over the past year Dr. Boyle published 6 papers, 2 of which she first-authored. Two of the papers were about nursing work environments and 2 were measurement papers. Along with Dr. Ann Marie Hart, she taught NURS 5891 (fall) and 5892 (spring), which entailed working with 14 Doctor of Nursing Practice students on their final DNP projects. She was the advisor for 6 projects (8 students) and also taught a First Year Seminar in spring of 2017, Nursing 1101, Should Health Care Fly? Dr. Boyle's research has benefit in two areas. The first is provision of validated measures for research and quality improvement initiatives. A number of these measures (for example, inpatient injury fall rates) are used by over 2000 US hospitals for nursing quality improvement. The second is provision of evidence for nurses, nurse executives, and other health professionals about which nursing characteristics (for example, percent of nursing staff on a patient care unit with national specialty board certification) improve patient outcomes in acute care settings.

Christine M. Porter, Wyoming Excellence Chair in Community & Public Health (B.S. Biology, University of Maryland; M.A. Education and International Development: Health Promotion, Institute of Education/University of London, UK; Ph.D. Community Nutrition, Cornell University). Dr. Porter's research in the 2016-2017 academic year has focused primarily on three projects. One was finishing the five-year, \$5-million Food Dignity project, including developing a special issue of a journal devoted to the processes and results of that project, which will come out in 2018. Another was recruiting the second wave of participants in the NIH-funded randomized controlled trial of the health impacts of gardens with 100 families and several organizational partners in Wind River Indian Reservation, called Growing Resilience. The third was designing and launching the final year of the Gardens for Health & Healing, a NIH INBRE-funded pilot project with 20 households in Laramie, and continuing to support Dr. Tarissa Spoonhunter at CWC in her health and biomedical programs with Native American young adults. Dr. Porter also led the shaping of the Native American arm of the microbiome project proposed by UW to NSF EPSCoR as part of the next track 2, was selected to serve on the national executive committee of the Inter-institutional Network for Food, Agriculture and Sustainability, and contributed to the Association of Public and Land Grant Universities report on food security. Two of her recent graduate students graduated this past year, and she has recruited a new Ph.D. student, taught an undergraduate course on ecological approaches to community health online, and organized and garnered funding for a "health track" of the inaugural Native American Summer Institute at UW. External funding for the Growing Resilience project supports one full-time job in Laramie and two full-time and two part-time jobs in Wind River Indian Reservation, in addition to significant contracts for services with Wyoming Survey and Analysis Center and Wyoming Health Fairs. More importantly, that project is helping to build civic infrastructure for tackling health disparities and public health nutrition with families and organizations in Wind River Indian Reservation. Food Dignity brought similar benefits to both Laramie and Wind River in jobs, additional grant funding, and capacity building for ending food insecurity. Overall, her work has helped to raise Wyoming's national profile in community food systems, food security, Native American health equity, and participatory action research. Dr. Porter focuses on bringing those issues and topics to students in the classroom, which she does in her own courses and as a frequently invited guest to dozens of classes across campus and, this past year, to a middle school as well. Dr. Porter has been able to bring her national perspective and connections to students in classrooms at UW while offering them hands-on action and research experiences locally. In turn, they have taught her about community health in Wyoming and the region, lessons she strives to bring back to guide and to integrate with her teaching, research and service.

HISTORY AND CULTURE OF THE ROCKY MOUNTAIN WEST

American Indian Studies – Visiting Scholar Program. During fiscal year 2016-2017, American Indian Studies used its funding from the Wyoming Excellence Fund in Higher Education for the following: Visiting Lecturer. **Nicky Michaels**, a member of the Delaware Nation, taught six courses for American Indian Studies over the course of academic year 2016-17 including introductory courses in American Indians in Contemporary Society as well as courses in American Indian History. Lecturer. The American Indian Studies Program (AIST) hired **Dr. Torivio Fodder** for a semester-long (fall 2016) appointment as a lecturer. Dr. Fodder is an enrolled member of the Taos Pueblo tribe, and has heritage from the Kiowa, Comanche, and Cherokee tribes. Dr. Fodder taught two courses for AIST including Introduction to American Indian Studies. Lecturer: **Robyn Lopez**: AIST hired Robyn Lopez, a trained linguist and Arapaho Language teacher, to teach four levels of Arapaho Language. Reviewer: AIST hired **Dr. Colin Samson**, Professor of Sociology and Head of American Studies at University of Essex (and, previously, Dr. Samson taught two courses during the fall semester 2015 for AIST) to do a review and report on the current UW climate regarding American Indian students and American Indian Studies.

OTHER ECONOMIC AND SOCIAL CHALLENGES

Dr. Steven Smutko, Wyoming Excellence Chair and Spicer Distinguished Chair in Environment and Natural Resources (B.S. Outdoor Recreation, Colorado State University; M.S. Community and Regional Planning, North Dakota State University; Ph.D. Economics, Auburn University). Dr. Smutko advances leadership, training, and scholarship in natural resource collaborative decision-making in Wyoming. In FY 2016-2017 Dr. Smutko assisted the Western Governors Association and the Office of Wyoming Governor Matt Mead to design and facilitate robust, bipartisan conversations to improve species conservation and the efficacy of the Endangered Species Act (ESA). Dr. Smutko also worked with the Wyoming County Commissioners Association to develop collaboration tools for the Wyoming Public Lands Initiative (WPLI), a project to develop a new Wyoming federal lands bill through place-based multi-party negotiations among representatives from agriculture, conservation, motorized and non-motorized recreation, energy development, and local government. Dr. Smutko's research activities included an investigation of perceptions of crowding among recreationists in Wyoming National Forests, and a research proposal to measure outcomes of the eight WPLI committees currently negotiating future federal land management in Wyoming's Wilderness Study Areas. Dr. Smutko taught graduate and undergraduate courses in negotiation analysis and environmental problem solving, and provided students hands-on experience in policy development and implementation in the natural resources arena. In addition, Dr. Smutko served his final year as national co-chair of the Environment and Public Policy Section of the Association of Conflict Resolution, and hosted the organization's 2017 conference in Salt Lake City, Utah. Through his position as the Spicer Wyoming Excellence Chair, Dr. Smutko builds capacity for Wyoming citizens to collaborate and solve complex and contentious natural resource problems. He oversees the Collaboration Program in Natural Resources, a yearlong series of professional development workshops. The ten mid-career professionals enrolled this year are gaining collaborative decision-making skills through trainings and a practicum. Through his work with Governor Matt Mead's office and the Western Governors Association, he is assisting leaders in the public, private, and nonprofit sectors in Wyoming and nationally guide future policy decisions related to endangered species and the ESA. With respect to public lands management in Wyoming, Dr. Smutko's hands-on involvement with WPLI committees in Carbon, Sublette and Teton counties will assist those committees in developing consensus recommendations to be forwarded to Wyoming's Congressional delegation for enactment in a new federal lands bill.

Dr. H. Jo Albers, Conservation Finance: Knobloch chair (B.S. Duke University, Geology and Economics; Master of Environmental Studies, Yale School of Forestry and Environmental Studies; Ph.D. in Economics. University of California at Berkeley). In 2016-2017, Dr. Albers taught a PhD-level course in "spatial and bioeconomic modeling of natural resources" in Economics and "conservation economics for non-economists" for the Haub School of ENR. She also developed two new courses for the 2017-2018 academic year. She advised, or served on the committees for, 9 graduate students and unofficially advised many more students to improve their job market outcomes. She also serves as a mentor to junior faculty on campus and worldwide. Dr. Albers maintains an internationally respected research agenda based around developing resource management strategies that integrate socio-economic, ecological, and institutional characteristics of the setting. In 2016-2017, Dr. Albers published 5 journal articles and had another article re-published due to its lasting quality, with all publications having a former or current student as a co-author. The topics considered include marine protected areas with artisanal fishers and eco-tourism, invasive species in river networks with emphasis on species of concern in the West, policies to reduce deforestation and the resulting carbon emissions, and systematic conservation planning (SCP) across landscapes with people as components of the ecosystem. She presented research at two international conferences, in one environmental policy think tank in DC, and on campus. In addition, Dr. Albers has followed up on these research outputs through discussions with park and

land managers and with organizations such as The Nature Conservancy and USEPA. In addition to her ongoing co-editorship of the European journal *Environmental and Resource Economics*, her interdisciplinary scholarship and reputation led to her new position as an Advisory Board member for the journal *Ambio: A Journal of the Human Environment*. Holding a joint appointment with the Haub School and the Department of Economics, Dr. Albers has become a physical and intellectual bridge between the Haub School community and analytical research and teaching communities on campus, nationally, and internationally, through collaborative, interdisciplinary conservation economic analysis. Her teaching benefits students by giving them strong decision analytic tools that empower students to make well-developed arguments for their positions, make students into better decision-makers and contributors to society, and prove important for employment success. Given her visibility as a senior female faculty member in a male-dominated field, her teaching also presents students with a role model. Knobloch/Excellence funds enable Dr. Albers to conduct fieldwork that she then brings to the classroom as local and international case studies that cover a wide range of perspectives, tools, and issues, which further expands the UW students' horizons. To further foster students' educational growth, Dr. Albers used her Knobloch/Excellence funding to support 9 graduate students and 1 undergraduate student during the summer months. Each student learned specific skills, and applied those skills, to make progress on research to answer a resource management policy question. Students say that these research experiences develop marketable skills, deepen their understanding of tools and issues, and help them to see how they can best contribute to society through their work. This year, one student completed a co-authored journal article and another completed her master's thesis and received a Fulbright Scholarship to continue that analysis in more detail. The funding enriches the students' educational programs by enabling them to explore topics and develop skills differently than classroom work and by providing experience with analytical tools that employers value. Through these experiences, students become stronger contributors to Wyoming's economy and resource management debates.

Global and Area Studies Visiting Scholar Program.

The 2016-17 Senior Visiting Scholar in Global Studies position was held by **Ambassador Gary Grappo**, former United States Ambassador to Oman (2006-2009) and a career member of the Foreign Service of the U.S. Department of State (for 26 years) with experience in diplomacy, public policy and management. During the course of his six month appointment at UW (August 2016-February 2017) he taught a 4000-level course to 20 upper division students and graduate students on American foreign policy in the Middle East. In Spring 2017 he taught a short course in January focusing on case studies on Middle East issues that he had worked on during his diplomatic career and informally co-taught American foreign relations with Dr. Jean Garrison which enrolled 25 students. He also engaged in numerous public talks and was a guest lecturer to numerous classes across campus. As the Senior Visiting Scholar in Global Studies, Ambassador Grappo offered students and citizens across the state a comprehensive, practical, real-world exposure to and understanding of the issues involving U.S. foreign policy in the Middle East. He brought this expertise to his classes and to audiences across the state. Across his six months at UW he participated in numerous public lectures including in public talks and in partnership with service clubs such as Rotary and Kiwanis. As part of the Global Studies Lecture Series he spoke to audiences in Jackson, Worland, Casper, Powell, and Lander. He also was the keynote speaker for the Center for Global Studies U.S. Senator Malcolm Wallop Conversations on Democracy Program which included talks in Sheridan, Casper, and Cheyenne. Through his outreach work, he served as an ambassador from UW to the state as a whole.

Wyoming Excellence in Higher Education Endowment Fiscal Summary

The costs associated with each position include salaries commensurate with the market for top academics, employer paid benefits, ongoing budgets to support research and instructional activities, as well as one-time start-up expenses which are especially critical to recruiting distinguished scholars with large established laboratory research programs.

The balance in the Excellence in Higher Education Endowment expenditure account held at the university as of June 30, 2016 was \$4.07 million. Total expenditures for the 2017 fiscal year were currently budgeted at \$4.21 million. The planning budget was designed to maintain an adequate cash balance to cover on-going expenses for an acceptable period, in the event of diminished revenue.

The following table summarizes the uses and expenditures of the budgets for filled positions, and the total estimated initial cost of the program when all allocated positions are filled. Not shown are projected costs as the program continues.

Balance July 1, 2016	\$4,070,605.46
Timing difference expenditures in FY2016	\$260,517.62
Advertising and Recruitment	\$31,764.63
Salaries and Benefits	\$3,304,218.23
Support	\$602,017.57
Equipment/facilities	\$10,240.43
Income (distribution from state and interest)	\$3,168,435.21
Balance June 30, 2017	\$3,030,282.19

Planning for FY2018

Due to the announced pending exhaustion of the reserve account balance by the State Treasurer in November, 2016, and uncertainty over reserve account balances, anticipated spending was severely curtailed. In FY2017 the university received almost \$700,000 less in total distribution than was received in the previous fiscal year – an amount that is nearly equivalent to total funds used by the university to support the visiting chair programs in Fine and Performing Arts, Creative Writing, American Indian Studies, and Global and Area Studies. Planning for these programs must be done well in advance of the beginning of a new fiscal year. Despite the smaller total distribution in FY2017, obligations for these programs were met by using available the cash balance held by the university in the Excellence in Higher Education Endowment. Ongoing uncertainty about earnings from the Excellence in Higher Education Endowment and distributions from the State Treasurer has severely limited the university's ability to obligate funds for these programs in FY2018.

Planning for the FY2018 budget is based on anticipated annual projected income of \$2.90M. The table below includes the estimated annual budget for 14 permanently funded positions. Unless annual distributions increase, planning for subsequent fiscal years will mirror FY2018 projected budget. Any shortfall in FY18 revenue will be supplemented by internal reserves held at the university.

Estimated Expenditures for FY18	\$3,268,773
Advertising and Recruitment	\$0
Salaries and Benefits (for Chairs and GAs)	\$2,798,773
Support for Chairs	\$470,000
Other support (Visiting Programs)	\$0
Equipment/facilities	\$0

Part B. Legislatively identified faculty positions

1. Sustainable Business Practice Faculty

The Wyoming Legislature provided funding for three sustainable business practice positions. Sustainable Business Practices is a central theme in the College of Business at the University of Wyoming. Sustainable Business Practices funds were used to hire a core group of faculty in the area of sustainable business practices, around and through which additional faculty members have made significant contributions to business sustainability. Our designated Sustainable Business Practices faculty include:

Dr. Kelly Tian, Professor of Marketing and Sustainable Business Practices, and Director, Ph.D. Program in Marketing and Sustainable Business Practices (B.S., M.A., University of Alabama; Ph.D., Georgia State University). Dr. Tian's long term program of research investigates the role of consumption goods and consumer practices in lay therapeutic practice among families and individuals challenged by chronic disease. During fiscal year 2016 -2017, this program was further extended by integrating research that maps how professional clinical psychologists and youth treatment communities engage possessions in therapies and comparing this with how mothers within adoptive communities where families become inter-racial or trans-national advocate for the use of consumption goods to buffer children against stigma due to differences in family structure, ethnic background, or racial background relative to the majority within their broader geophysical communities. Insights from depth interviews with mothers feature their call for greater depiction of people from various family, cultural, ethnic, racial and national backgrounds within popular media such as children's books, dolls, toys, films and web-based games. Notably, the specific objects and practices did not appear in the clinical psychology literature. Mothers called attention to the need for this representation in order to instill and affirm to their children their value and place in society and image as attractive. In particular, they noted the lack of heroic figures and protagonists from diverse backgrounds. The findings extended marketing and consumer theory that has noted that consumption goods play an important role in family identity. The contribution is that the role in some families is to strengthen identity of an extraordinary life made richer by family diversity.

Vacant (2 positions), Professor of Marketing and Sustainable Business Practices

2. School of Energy Resources (SER) faculty

The Wyoming Legislature established and appropriated initial funding for the School of Energy Resources (SER) in 2006. The plan for SER stipulated the hiring of up to 12 distinguished faculty who were to be co-appointed in departments across campus. Professors in the SER are internationally recognized energy experts who are actively involved in both energy research and teaching. They work in a variety of disciplines and have formed productive collaborations across campus. The current SER professors include:

Dr. Timothy Considine, SER Professor of Economics and Finance (B.A. Loyola University, M.S. Purdue University; Ph.D., Cornell University). During academic year 2016-2017, Dr. Considine taught his popular undergraduate course on Oil: Business Culture, and Power, an upper division undergraduate course in Energy Economic and Public Policy, and the MBA course in energy economics. He published several studies including studies of the effectiveness of energy audits in Jackson Wyoming and the economic and environmental impacts of fracking in the peer reviewed journals Resource and Energy Economics and International Review of Resource and Environmental Economics respectively. He also published studies of renewable energy portfolio standards for the Interstate Policy Alliance and energy regulation on federal lands for the American Petroleum Institute in Washington DC. He recently co-authored the lead paper in the latest issue of the Journal of Banking and Finance. He is currently conducting studies of the economic impacts of fracking, federal regulation of oil and gas in Wyoming and other western states, productivity and technical change in the fracking industry, and the economics of technological innovation in the petroleum refining industry. Dr. Considine's research is recognized by business and policy leaders in Wyoming and around the world. His research has been supported by several organizations including Peabody Energy, Cloud Peak Energy, the American Petroleum Institute, The Manhattan Institute, The Strata Institute, and more recently by the Charles Koch and David True Foundations. His studies on the importance of Powder River Basin coal to the US economy and the economics and environmental dimensions of fracking have attracted considerable attention around the country. As a result, he has been widely quoted in national news media, including the NY Times, Wall Street Journal, Time, and other publications. Since 2008, nearly 700 students, many of whom are STEM students, have taken his oil class in which he provides an historical perspective on the challenges facing the oil and gas industry. Dr. Considine's research applies state of the art economic and industry analysis to address major policy issues directly affecting Wyoming's coal, natural gas, and petroleum industries, providing business and policy leaders with the arguments and data to effectively engage in national energy and environmental debates whose outcomes directly affect the citizens of Wyoming.

Dr. Craig Douglas, SER Professor of Mathematics (A.B. Chicago University; M.S. and M.Phil. Yale University). Dr. Douglas' research covered water modeling (mathematical models and fast computational solvers), solving highly ill conditioned linear systems of equations, fast solvers for optimization problems using general purpose graphical processing units, and very high speed computer networks (100 Gigabits per second Internet). He taught classes in high performance computing, including using supercomputers, and numerical methods for solving partial differential equations. During the past year, an energy company, AirLoom, LLC (1938 Harney, Laramie, WY 82072) has hired two of Dr. Douglas' graduate students. Dr. Mookwon Seo works full time and Xiukun Hu worked as an intern. This is a long term collaboration. AirLoom has benefited from both of his classes and his research in (fast) solvers during the past fiscal year since their wind energy device has been optimized to the point that it appears to be 30 times more efficient than a traditional large blade wind turbine at a fraction of the cost. One of his National Science Foundation grants paid for the fastest Internet connection in the state of Wyoming. Another of his NSF grants pays for a cyberengineer, Karen Milberger, the first time such an employment position has been created in Wyoming. Ms. Milberger is training people, mostly at the university, and also people working with university personnel. She is training them to use the fast Internet effectively and efficiently.

Dr. Subhashis Mallick, SER Professor of Geology and Geophysics (B.Sc. and M.Sc. Indian Institute of Technology; Ph.D. University of Hawaii). Dr. Mallick and his team is involved in the development of the state-of-the-art waveform inversion, modeling, and imaging algorithms for characterizing the hydrocarbon and carbon dioxide (CO₂) sequestered reservoirs. His research require the high-performance computing facility, both at the University of Wyoming's advanced research computing center (ARCC) and the NCAR Wyoming supercomputing center (NWSC). Over the past year, he and his students published four peer-reviewed research papers and three expanded abstracts. Jointly with colleagues at the University of Wyoming and the University of Houston, Dr. Mallick submitted two research proposals as the principal investigator and three additional proposals as the co-principal investigator with a total requested funding amount of approximately \$3.5 million. Dr. Mallick's current research on combining prestack waveform inversion (PWI) with reverse-time migration (RTM) in an iterative PWI/RTM algorithm recently attracted a lot of attention, both from the industry and the academia. Besides research, Dr. Mallick taught two courses over the past year: (1) Geophysical Optimization Theory- a graduate/senior undergraduate level course outlining various optimization methods to estimate the subsurface properties from different geophysical data, and (2) two sections of the Petroleum Geology, taught to the seniors majoring in Geology and Petroleum Engineering. The number of the students enrolled in the first course was 18 and there were over 100 students in two sections of Petroleum Geology class. In addition, Dr. Mallick was also involved in advising four graduate students as their primary research advisor. Dr. Mallick and his students are involved in applying the modeling, inversion, and imaging technology to characterize the subsurface at the Rock-Springs uplift (RSU) in Wyoming- an area being considered as a potential site for CO₂ sequestration. Located in south Wyoming and being near a large coal-fired power plant and point-source emissions of anthropogenic CO₂, the Jim Bridger power plant, makes RSU a suitable candidate for commercial CO₂ capture and storage (CCS), which will benefit the State. The courses taught by Dr. Mallick benefit the students as they work as professionals in the oil and gas industry. Lastly, all the students graduated with advanced (Masters and Ph.D.) with Dr. Mallick as their primary advisor are now well-respected industry professionals, which indirectly benefits the state by establishing the University of Wyoming as a reputed school for higher learning.

Dr. Bruce Parkinson, SER Professor of Chemistry (B.S. Iowa State University; Ph.D. California Institute of Technology). Dr. Parkinson is an internationally renowned photoelectrochemist who leads a research group that investigates novel methods to harness solar energy. Dr. Parkinson's research in several areas has been well funded, with a total in the last fiscal year of about \$490k. He is working on fundamental aspects of storing solar energy in chemical bonds such as producing hydrogen from sunlight and water and charging redox flow batteries directly with sunlight. He also collaborates with Dr. Carrick Eggleston in geology in investigating photoelectrochemical processes on the surface Mars. The resulting publications have enhanced UW's reputation for research and innovation. In addition he is co-inventor on a composition of matter patent that could result in significant licensing revenue for UW. He has taught the introductory course for the Energy Resource and Management and Development majors called Energy and Society. This class uses many class participation activities to present the many sides of energy related issues. He also has taught a graduate level course on the chemistry of electronic materials. Students get exposure to a top-level researcher in the classroom with many years of experience in energy related issues and in a class where they are encouraged to discuss current energy related topics. The main expenditures of research grants is to pay graduate students and post-doctoral researchers with the result that federal dollars are being spent in Wyoming for food, lodging and at local businesses. The reputation of UW is enhanced by the high visibility of the research activities.

Dr. Maohong Fan, SER Professor of Chemical Engineering (Ph.D. Iowa State University; Ph.D. Osaka University). As a PI and Co-PI, Dr. Fan led more than ~\$10M continued research projects (including 2 NSF project and 4 DOE projects in the areas of advanced material development, energy production and environmental protection. He supervised 18 UW graduate students and 4 research scientist and postdocs. The citation of his publication in the last year is more than 2,000. His publication h-index reached 51. Dr. Fan not only instructed graduate students but also undergraduate students for conducting scientific research. A number of the undergraduate students took undergraduate research courses with Dr. Fan. In addition, Dr. Fan taught a course for the College of Engineering and Applied Science. The gained and disseminated knowledge from Dr. Fan’s research or instruction considerably helped students’ employment and career development opportunities. The technologies developed by Dr. Fan could help businesses and industries improved their market development opportunities, and thus could create great employment opportunities for Wyoming’s residents.

Dr. John Kaszuba, SER Associate Professor of Geology and Geophysics (B.S. Beloit College; M.S. Virginia Polytechnic Institute and State University; Ph.D. Colorado School of Mines). Professor Kaszuba is a recognized expert in high pressure/high temperature hydrothermal and multiphase fluid-rock reactions. His research has produced seminal experimental papers regarding supercritical carbon dioxide reaction processes in brine aquifers, with implications for geologic sequestration of carbon. His research is well funded, including a \$1.4 million grant from the DOE. He teaches courses in the Department of Geology and Geophysics. He serves as advisor to numerous undergraduate and graduate students each semester, and serves on numerous graduate student committees.

Dr. Mohammad Piri, SER Professor of Chemical and Petroleum Engineering (M.Sc. and Ph.D. Imperial College London). (See WY Excellence Endowment Report)

Dr. Po Chen, SER Associate Professor of Geology and Geophysics (B.S. Beijing University, Ph.D. University of Southern California). Dr. Chen is a seismologist by training and seismic tomography has been the passion of his professional career. Seismic tomography, a technique similar to the CT scan used for imaging the interior of the human body, has been the most effective means for imaging the internal structure of the Earth in the past few decades. It has wide applications in science and engineering, such as crustal and mantle dynamics, earthquake hazard mitigation, geological engineering, oil/gas exploration, underground nuclear explosion monitoring. In the past fiscal year, Dr. Chen and his students published 4 peer-reviewed journal articles on leading journals of seismology and geosciences. He taught courses on geological hazards and high-performance computing and also developed new courses on reservoir modeling and wind energy, which he is teaching in fall 2017. Seismic tomography is a highly competitive field, once dominated by top universities such as Caltech, Princeton, MIT and Harvard. Since he joined UW in 2008, Dr. Chen and his students have been developing and applying a completely new seismic tomography technique, which we call “full-3D seismic waveform inversion (F3DWI)”. Its application in Southern California, the best “natural laboratory” for testing new seismic tomography techniques, has yielded a crustal structure model with unprecedented resolution and accuracy. So far his work on F3DWI has resulted in 28 peer-reviewed journal papers in geosciences and physics, 8 peer-reviewed conference papers in computer science and 2 books.

Dr. Dario Grana, SER Assistant Professor of Geology and Geophysics and Petroleum Engineering (M.S. and Ph.D., Geophysics, Stanford University). Dr. Grana's research focuses on petrophysical modeling and characterization of the hydrocarbon reservoirs using geophysical methods, such seismic data. Seismic reservoir characterization studies aim to build 3D reservoir models of rock and fluid properties. Such models are used to estimate the hydrocarbon reserves in the subsurface and to predict the hydrocarbon production of the field. This research also aims to quantify the uncertainty in the predictions and assess the risks associated to exploration and production of the field. Other research projects include the geophysical monitoring of the reservoirs using repeated seismic surveys and the model updating using production data to reduce the uncertainty in the reserve evaluation and production forecast. The developed methods have also been applied to CO₂ sequestration and geothermal studies. Dr. Grana currently teaches two classes at the University of Wyoming on these topics, one at the undergraduate level on the basic concepts of exploration and production and one at the graduate level on geophysical methods for reservoir characterization. Dr. Grana's research has been applied in several case studies all over the world, including a CO₂ sequestration project in Southeast Wyoming. A more accurate reservoir characterization study allows reducing the uncertainty in the model predictions and consequently the exploration and production costs. Furthermore, the model predictions are generally used in decision making processes to maximize the production and reduce the environmental impact of the exploration and production activities. The recent research conducted by Dr. Grana and the application to CO₂ sequestration provided a valuable contribution in the development of strategies for carbon dioxide reduction. Dr. Grana's classes at the University of Wyoming contribute to the formation of the new generation of scientists, including geologists and petroleum engineers who aim to work in the energy sector.

Tara Righetti, SER Associate Professor of Law (B.A. University of Colorado Boulder, 2005; J.D., University of Colorado Boulder, 2007). Ms. Righetti joined the University of Wyoming College of Law and SER faculty in the fall of 2014. Prior to that, she served as CEO and general counsel of a privately owned upstream oil and gas company with operations in six states and on the outer continental shelf. She is a member of the state bars of Texas and California. In the past fiscal year she taught advanced oil and gas law, advanced corporate law, oil and gas law, and energy resource management. Ms. Righetti's teaching is housed within the colleges of Law and Business, and the school of Energy Resources. She also worked with students as a faculty supervisor in the Summer Energy MBA Project. She presented at a number of conferences including the Carbon Capture, Utilization, and Storage Conference, the Oil and Gas, Natural Resources, and Energy Symposium at the University of Oklahoma, the Dupont Summit on Science, Technology, and Environmental Policy, The Wyoming State Bar ENR Section Summit, and the Governor's Business Forum. She also provided invited testimony on the topic of pore space liability to the minerals committee of the legislature. In my administrative role as director of the academic program in Professional Land Management, she achieved reaccreditation through our accrediting body, AAPL. Ms. Righetti's research in the fiscal year 2016 focused principally on legal issues and regulation related to oil, gas, energy regulation, and carbon capture and sequestration. Over the course of the year she published two papers; one on the correlative rights and limited common property in the pore space and one with Robert Godby, Dalia Patio Echeverri, Temple Stoellinger, and Kipp Coddington on the role of energy models. Her teaching prepares students for work in business and in the landman and legal professions in the fields of energy, environment and natural resources. Her courses are practice and experientially oriented, and focus on development of core competencies in oil and gas leasing, title research, finance and acquisition/divestiture transactions, and entrepreneurship. These skills prepare students to making meaningful contributions in their businesses, for the clients, and within the energy industry. My research benefits the state and its citizens through its focus on Wyoming law and subsurface property, in particular issues related to the energy industry and projects for carbon capture and sequestration. Ms. Righetti also serves both the landman and legal professions by providing instruction for continuing education.

Part C. Privately Endowed Faculty Positions

Thirty-six¹ UW faculty positions are partially or fully supported by privately funded endowments established with gifts to the UW Foundation. A \$3 million or more endowment supports a faculty chair, which may be designated to cover all or part of the base salary of the faculty member. A \$2 million gift endows a professorship, which may be used to provide an annual salary supplement or to support teaching, research, or scholarship expenses. And a \$1 million gift endows a faculty fellowship, which supports faculty development in teaching or research. Of the 36 endowments, 18 support faculty chairs (most are partially funded from their respective endowments), 18 support faculty professorships and/or programs. A complete list of the privately endowed chairs, professorships, and faculty fellowships is available from the UW Foundation. That list describes the history of the endowment, the qualifications or purpose, the uses, and the current and past faculty recipients. Some of these endowed positions are not filled at the present time; others fund various faculty from year-to-year.

In all cases, the specific uses of the endowment earnings are specified in the gift agreements and are reflected in the focus of the teaching, research, and extension programs of the faculty member beneficiaries.

As discussed in Part A of this report, the funding for some privately endowed positions is bolstered by earnings from the state-funded Excellence in Higher Education Endowment. These public-private partnerships include:

The Roy & Caryl Cline Endowed Chair in Engineering, Environment, and Natural Resources, held by Professor Fred Ogden (College of Engineering and Applied Science)

The Eldon & Beverly Spicer Chair in Environment and Natural Resources, held by Professor Steve Smutko (Haub School and College of Agriculture)

The Clara Raab Toppan Distinguished Professorship in Accounting, held by Professor Eric Johnson (College of Business)

The Gardner Chair in Biomedical Physiology, held by Professor Amy Navratil (College of Arts and Sciences)

The Knobloch Chair in Conservation Finance, which is now occupied by Professor Heidi Jo Albers (Haub School for Environmental and Natural Resources).

The individuals who currently hold endowed faculty positions are as follows:

College of Agriculture and Natural Resources

Stephen Ford, Dept. of Animal Science, (B.S., Oregon State University, M.S., West Virginia University, Ph.D., Oregon State University), *Curtis and Marian Rochelle Endowed Chair in Animal Science*. Dr. Ford serves as the Director of the Center for the Study of Fetal Programming. His research emphasizes the fetal origins of adult disease, and the impact of maternal malnutrition in sheep and cattle on offspring quality. Models have been developed to investigate the impacts of early gestational undernutrition and overnutrition and obesity in the ewe and cow on fetal growth and development as well as offspring health, growth efficiency and carcass quality. These studies have both agricultural and biomedical implications.

¹ One endowment supports academic centers or institutes: the Solomon D. Trujillo Center for e.Business.

Sadanand Dhekney, Dept. of Plant Science, (Ph.D. in Horticulture, University of Florida), *E.A. Whitney Professorship in Agriculture*, Dr. Dhekney's research program is focused on the genetic improvement of fruit crops using conventional and molecular breeding approaches. A major goal of the program is targeted towards grapevine genetic improvement and optimizing vineyard management practices for expanding grape production in Wyoming. The research utilizes contemporary approaches in breeding and biotechnology for identifying suitable grapevine cultivars for diverse edaphic and climatic zones and enhancing abiotic stress tolerance of existing cultivars using precision breeding technology. His research is focused in three primary areas: (1) cultivar trials for identifying cold-hardy, early maturing grapevine cultivars that will perform well in the state's short growing season; (2) optimizing cell and tissue culture protocols for commercial cold-hardy cultivars and (3) identification of genes and genetic elements to enable precision breeding of grapevine for abiotic stress tolerance. Dr. Dhekney's research program in Sheridan has greatly benefited local, national and international stakeholders. Significant progress has been made beginning from the establishment of a biotechnology laboratory and vineyard at Sheridan to optimization of cell culture protocols for commercial cold-hardy cultivars and testing *Vitis*-derived genetic elements and reporter gene systems. This can be mainly attributed to the contributions of excellent graduate and undergraduate students, visiting scientists and collaboration with other institutions. He has served as a major advisor for 1 Ph.D. and 1 M.S. student. The Ph.D. student graduated in Spring 2016 and is currently a post-doctoral research associate at Arizona State University. He also served as a committee member for 2 M.S. students (one graduated in 2013) and an external committee member for 5 M.S. students from other universities (Georgia and Puerto Rico) who are pursuing research in grape and medicinal plants biotechnology. Although not formally listed as an advisor at Sheridan College, he has been fortunate to recruit/advise a steady stream of highly motivated undergraduate students from campus and Sheridan College. He has been highly successful in training undergraduate and high/middle school students (23) from the Sheridan area, several of whom have received regional and national awards/recognition. Being the only grape researcher statewide, Dr. Dhekney is frequently invited to grape growers' farms and extension meetings to provide consultations and make research presentations. Such activities are a necessary part of his research program and assist him in identifying viticulture-related issues. He has written several extension articles in *Barnyard and Backyard* magazine and *UW AES Field Days* bulletin. His research program has attracted several international scholars and students. To date, he has hosted researchers from 6 countries (Brazil, Chile, China, Egypt, Italy and Kyrgyzstan) whose primary goal was to receive training in grape biotechnology and other related areas. He also received two awards from the College of Agriculture, Global Perspective grants program to develop research collaborations with faculty in Egypt and China. One of the visits resulted in a USDA Borlaug grant proposal being funded to host a faculty for collaborative research from Cairo University, Egypt. The visit by international scholars and their interaction with local undergraduate and graduate students has helped scientific, social, and cultural exchange and create a diverse working environment in his research program.

College of Arts and Sciences

Amy Navratil, *Gardner Chair in Physiology*, (See WY Excellence Endowment Report). Through the philanthropic kindness of Dr. Hank Gardner and Marilyn Fiske, they established a common vision of enhancing interdisciplinary biomedical teaching and research excellence at the University of Wyoming. As a physician, Dr. Gardner was interested in improving health care through innovative biomedical research, academic leadership and teaching excellence in the field of human physiology. Additionally, Dr. Gardner's intent was to attract and retain highly talented undergraduate and graduate students interested in pre-health professions. Dr. Navratil's efforts in achieving these goals include bringing biomedical science to the forefront of the department of Physiology and Zoology through her excellence in teaching of core pre-health classes and

academic advising of pre-health professional students in the Physiology major. She also provides laboratory training to undergraduate students in the benefit of hypothesis driven scientific research. In support of their strong research program, Dr. Navratil's laboratory was able to enhance National Institute of Health (NIH) external funding to the University of Wyoming.

Craig Benkman, (Ph.D. Biology, State University of New York at Albany, 1985) *Wolf Creek/Bob and Carol Berry Chair*. Dr. Benkman has spent much of his career studying a group of finches called crossbills and the conifers on which they feed to elucidate general principles of ecology and evolution. During the past fiscal year, along with his graduate students, Dr. Benkman has been conducting field research in the Rocky Mountain region. One Ph.D. student (from Michigan) is examining, mostly within Wyoming, the conditions that facilitate and inhibit the origination of new bird species; the grant proposal to fund this research for three more years is in review at the National Science Foundation. They also co-authored a related paper that was published this spring in *The American Naturalist*, the top conceptual journal in the field. One of his M.S. students (from Colorado) did a majority of his field research and writing of his thesis during the past year. His work, related to conservation and management, is timely because it focuses on a recently (July 2017) recognized species of crossbill, the Cassia Crossbill, that warrants critically endangered status. It is found on only two small mountain ranges in southern Idaho. Because this crossbill is only the second bird species discovered in the contiguous United States since 1939, his discovery and research on it has attracted a lot of attention among ornithologists and the public in the past year (e.g., High Country News, Audubon Society, Cornell Laboratory of Ornithology, Idaho newspapers, *For the Birds* Radio Program). A second M.S. student (from Ohio) started last fall, and they developed a research project on the evolutionary interactions between red squirrels and lodgepole pine in the Medicine Bow Mountains that she is currently carrying out with success. In addition to the one paper mentioned above, he published three other papers in top journals in his discipline during the past fiscal year. Dr. Benkman was the sole author for two of these papers, and the lead author of the other was his former graduate student who is now an assistant professor at the University of Nevada at Reno. Students take his Herpetology course as an upper division elective, and those taking it are predominately in wildlife management, interested in working with animals especially in zoos, or have a passion for reptiles and amphibians. Dr. Benkman usually has 30-40 students in the course, and many are Wyoming residents. Most of his research is basic research on the ecology and evolution of birds and conifers. Because some of it is highlighted in widely used college textbooks in ecology (Cain et al. 2013, *Ecology*, Sinauer Associates) and evolution (e.g., Zimmer and Emlen, 2015, *Evolution: Making sense of life*, W. H. Freeman), the research reaches college students across the country and beyond. Perhaps the most important benefit from his research is its illustration of the importance of considering evolution in understanding the ecology of populations and communities, especially in the Rocky Mountain region. Two examples: first, their work on the influence of seed predation by red squirrels on the evolution of lodgepole pine shows how variation in squirrel density between areas has influenced the composition of the plant and animal communities that recover after fire. Given the increase in fires in the region, our research becomes more relevant to the public (e.g., it was noted in an article this week in *Popular Science* <http://www.popsci.com/species-that-need-wildfire?dom=rss-default&src=syn> about the fires this summer). Second, many citizens are interested in nature and especially birds, and Dr. Benkman's research on the evolution of the Cassia Crossbill and his successful efforts in the last year to get it recognized as a distinct species of bird will benefit the tourist economy of southern Idaho. But importantly, the fascinating biology of the Cassia Crossbill, which provides a textbook example of an evolutionary arms race between birds and pines, is reaching more broadly through various media, some of which was mentioned in the first paragraph, and thereby enriching the experiences of residents and those visiting our region. Finally, he also provides help and consultation to Robert Berry from Sheridan on his studies of a falcon in Central America.

Floyd Clarke Professorship in Zoology and Physiology – Vacant.

Clarence Seibold Professorship – Provides program support in the Social Sciences, Humanities, and Fine Arts.

Milward Simpson Professorship in Political Science – Provides support for visiting lecturers.

College of Business

Edward Barbier, (Ph.D., Birkbeck College University of London), Department of Economics and Finance, *John S. Bugas Distinguished Professor of Economics*. In 2016, Dr. Barbier continued his teaching and research focusing in on the integration of economics with ecological descriptions of the environment. His success as a scholar is as evidenced by his numerous publications in economics journals and in general science journals like *Science* and *Nature*, and the nearly 40,000 citations in Google Scholar. This work has had a significant impact on local and global policy-makers and continues to have real-world impacts on global environmental outcomes. Along his UW graduate student Jake Hochard, his work earned him the outstanding journal article for *Environmental and Resource Economics*. Dr. Barbier works with scholars from a variety of disciplines as part of the National Center for Ecological Analysis and Synthesis (NCEAS). As a teacher and mentor, Dr. Barbier has also been recognized at home and abroad based on his excellent work in research and teaching. In addition, Dr. Barbier served as the department chair, and he played an integral part in promoting and advancing the academic programs, both undergraduate and graduate, in the Department of Economics.

Kent R. Noble, (B.S., University of Wyoming), Department of Management and Marketing, *Bill Daniels Chair of Business Ethics*. The Daniels Fund Ethics Initiative is making an impact on current and future business leaders in Wyoming and beyond. To that end, in the spring of 2017, 149 UW students distinguished themselves by completing an [Ethical Leadership Certification Program](#) through the NASBA Center for the Public Trust. Additionally, the College of Business taught students from non-business majors, such as Animal & Vet Sciences, Civil Engineering, Communications, Computer Science, Criminal Justice, Energy Resource Management, Energy Systems Engineering, English, Kinesiology, Mathematics, Mechanical Engineering, Microbiology, Nursing, Political Science, Psychology, Science, Sociology, and Theater & Dance. Finally, an anonymous survey of Business Ethics students from AY 2016-17 revealed that 95% of respondents agreed with the following three statements: “This course is valuable to me. I am learning a great deal. I would recommend this course to others.” In AY 2016-17, Mr. Noble used two primary outreach vehicles to conduct 36 presentations for business, education, and community leaders. The first, *What Do You Stand For?*, is spotlighted in a three-minute promotional video found at <https://vimeo.com/171812184>. The other primary offering is *What’s Your Brand?*, a personal branding presentation that focuses on integrity, attitude, and grit. Additionally, in 2017, we launched the *Wyoming Ethical Leadership Award* and the *Wyoming Athletics Department Ethical Leadership Award*, two statewide recognitions honoring individuals who embody the [Daniels Fund Ethics Initiative Principles](#). Approximately 200 elected officials and dignitaries, including President Nichols, attended the former, while 200+ student athletes, administrators, and business leaders participated in the latter.

Mark Leach, *Mendicino Chair in Sales and Salesmanship*. Dr. Leach’s research is in business-to-business marketing and sales. More specifically, his research typically focuses on understanding buyer and seller relationships, leveraging the sales function to manage relationships with profitable customers, and providing effective sales training. Mark has published articles in the *Journal of Business Research*, *Journal of Personal Selling & Sales Management*, *Industrial Marketing Management*, *Journal of Applied Social Psychology*, and other leading academic journals. He received the Marvin Jolson Award recognizing the article best contributing to sales management practice in the *Journal of Personal Selling & Sales Management* (2005). Mark is a

member of the editorial review board of the *Journal of Marketing Theory and Practice*, the *Journal of Business and Industrial Marketing*, and the *Journal of Business-to-Business Marketing*. He was awarded the Best Reviewer of the year award by the *Journal of Personal Selling & Sales Management* in 2005, and by the *Journal of Business and Industrial Marketing* in 2015 and 2016. Prior to joining the University of Wyoming in 2017, Dr. Leach was a member of the faculty at Loyola Marymount University and Purdue University. He has also been a behavioral research scientist at the Centers for Disease Control and Prevention.

Larry Weatherford, (Ph.D., University of Virginia), Department of Management and Marketing, *W. Richard Scarlett III and Margaret W. Scarlett Chair of Business Administration*. Dr. Weatherford presented research at the numerous conferences and professional meetings, including PODS meeting (a high-level research consortium sponsored by MIT, Boeing and 10 global airlines [e.g., United, Delta, Lufthansa, Air Canada, American, Scandinavian/SAS, LAN Chile, Qatar]) in Montreal, MIT, Cambridge, Massachusetts, and Doha, Qatar. He taught three courses, two in decision science modeling for managers and one in revenue management for a total of 219 student-credit hours. He published seven articles in refereed journals, including *Journal of Air Transport Management*, *Journal of Revenue and Pricing Management (special issue)*, *Decision Sciences*, *INFORMS Journal on Computing*, forthcoming (*Editor's Pick as top article of year*), and *Journal of Pricing and Revenue Management*. UW students are benefited by having a global expert in revenue management (applied to airline, hotel, cruise line, and other service industries) in the classroom who is able to share not only his leading knowledge, but also his connections to industry (in terms of internships, jobs, data, etc.). Because of his professional connections, he was able to bring into my classroom the Senior VP of Walt Disney World to talk regarding the tools Dr. Weatherford teaches students, or the President/CEO of a Seattle-based firm in the same industry. The main industry that is benefited is the airline industry. As an example, WyDOT will meet with him, for a possible research project, similar to the one he did for them in 2002. Lastly, UW gets the credit and enhanced reputation when a UW endowed professor edits a special issue for the top journal in his field.

Jason Shogren, (Ph.D., University of Wyoming), Department of Economics and Finance, Stroock Professorship of Natural Resource Conservation and Management. Returning to his alma mater, Dr. Shogren has been the Stroock Professor of Natural Resource Conservation and Management since 1995. In 2016-17, he taught a new course on Behavioral Economics. He also taught Graduate Environmental and Natural Resource Economics. Along with the State Treasurer, Dr. Shogren co-chaired the Stroock Forum on Sovereign Wealth Funds in Jackson. He chaired or co-chaired the Ph.D. committees for four students. He also talks with recent graduates as he helps them get their research program off the ground. He is also on the committees of several Ph.D.'s. He received two grants from USDA - \$150K with Drs. Linda Thunstrom and Klaas van't Veld and \$20K, and published 16 peer-reviewed papers, including three in *Science*, *Journal of Risk & Uncertainty*, *Management Science*, *Marine Resource Economics*, *Journal of Economics, Behavior and Organization*, *Environment and Resource Economics*, and *Biological Conservation*. Dr. Shogren gave keynote addresses and seminars at numerous national and international conferences. He is on the editorial board of two international journals, and is a fellow of the Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences, Stockholm, Sweden, the Ecological Society of America, US Steering Committee for Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), he served on UW's VP for Research Search Committee, and UW Faculty Senate. Dr. Shogren also talked with numerous media outlets about economics throughout the year. Endowed professorships benefit others in three main ways: (1) *These professorships help UW to attract world-class economists*. Back in the mid-1970s, the President of UW asked economics to focus on building a world-class program in Environmental & Natural Resource Economics (ENR Econ), with the goal to help make better policy in Wyoming and beyond. The Stroock professorship has provided a platform to attract excellent faculty that do research and teaching to understand better how to make good

economic/environmental and resource policy better, and prevent bad policy from getting worse. We work to help students, policymakers, and the lay public understand the power and limits of economics for policy analysis. This specific focus has allowed the Stroock professorship to provide effective and timely policy advice (and helps us to not oversell our results). (2) *These professorships allow UW to be purposefully Small by Design.* The Professorship provides a platform into a specific focus—ENR economics and applied microeconomics with the idea that we cannot do everything—but we can do a few things really well. We continue to follow this strategy today in research, teaching, and outreach. (3) *these professorships allow UW to find and polish Diamonds in the Rough.* Our specific focus on ENR economics has attracted high quality students over the years. Our ENR alumni now work to keep the cycle going—UW produces good students, who become business leaders, academics, and policy makers who continue to send us their top students. The main contribution of the Stroock professorship has been through my students. Dr. Shogren enjoys working with graduate students on their ideas and helping them find their own voice. Other contributions include working with government agencies at the State, Federal, and International level; working with scholars from other disciplines (e.g., ecology, biology, psychology) to understand better how they approach a problem.

Eric Johnson, (Ph.D., Arizona State University) Department of Accounting, *Clara Raab Toppan Distinguished Professor of Accounting*. Dr. Johnson’s research interests include corporate governance, auditing, fraud and ethics. During the 2016-2017 fiscal year, he had four papers published or accepted for publication. This marks one of the highest one-year publication rates he has had in my entire academic career. Two of the papers were accepted by the *Journal of Business Ethics*, the leading publication for business ethics-related research. JBE is considered an “elite” journal in accounting and business, with very high impact metrics. Both of these papers deals with aspects of fraud and other violations of ethics. This area of research has been Dr. Johnson’s primary focus since coming to UW as the Clara R. Toppan Chair in Accounting in 2011. He has multiple other published papers and current research projects focusing on fraud as well. Two other publications during the year deal with issues of management accounting service quality, which is a secondary focus area of his research. One paper was published in the *Journal of Management Accounting Research*, which is the leading specialty journal for management accounting. It is considered a “high-quality” accounting journal, just below “elite” status. The other management accounting paper was accepted for publication in a reputable journal that would count positively toward tenure and promotion in the department. Dr. Johnson taught courses in Fraud Examination, Advanced Auditing, and a seminar on management fraud during the 2016-2017 fiscal year. All courses are at the graduate level, and all had enrollments of 25 students or more (i.e., nearly all students enrolled in the Master of Accountancy program took all three courses). These courses are all significantly informed by his research in fraud. Dr. Johnson has persisted in his efforts to make fraud education and research the centerpiece of my contributions as the Toppan Chair. During the 2016-2017 fiscal year, he gave presentations about my research to UW students and faculty. He also worked with our Daniels Ethics Chair, Kent Noble, to coordinate Masters of Accounting student attendance at Daniels Ethics Initiative events on campus. Most significantly, he developed and taught for the first time in 2016-2017 a seminar on management fraud, focusing on fraud psychology and how psychological characteristics can be used both to explain management fraud after the fact and assist in predicting fraudulent behavior by top executives in organizations. In the seminar, Masters of Accounting students are required to read relevant academic papers and present mini-literature reviews covering a specific topic within fraud psychology and its research and practical applications as a class project. Both during and after the semester, students commented how valuable they believed the knowledge gained in the seminar would be to them as future audit and forensic professionals. Several students also indicated that the course sparked an interest in academic research which might lead them to consider careers in accounting education and research. Overall, his research and instructional contributions as Toppan Chair have made a

significant positive impact on UW students, faculty at UW and other universities, potential employers, and the research and teaching accomplishments and reputation of the College of Business.

Charles Mason, (Ph.D., University of California, Berkeley) Department of Economics and Finance, *H.A. (Dave) True Jr. Chair in Petroleum and Natural Gas Economics*. During the past fiscal year, Dr. Mason taught two classes (Economics of Oil and Gas, ECON 4430; Economics of Uncertainty and Game Theory, ECON 5120). He also directed or co-directed a number of doctoral students, most of whom have not yet matriculated from UW. His research program has been active, with 10 papers accepted or published, presentations at 7 national or international academic conferences, and keynote speeches invited at three events, including a “Festiva” focused on new technologies (held in Vila Real, Spain) and the Loveland Energy Conference. In addition, he participated in two major national level projects related to energy economics: a project focused on oil and gas infrastructure, organized by the prestigious National Bureau of Economic Research, and a project focused on evaluating the future for Nuclear Power, organized by the Idaho National Laboratory and the Department of Energy. Dr. Mason also co-authored a position paper on premature closings of nuclear power plants, at the request of the Department of Energy. The material Dr. Mason covers in his graduate class is critically important to modern economists: it forms the backdrop for a wide swath of contemporary research within the profession, so that the students in this class leave with a far greater facility to learn from the literature, to identify important gaps in the profession’s understanding, and to formulate potential dissertation topics. Students in his undergraduate class gained new insights into the way key energy markets work; this information is beneficial in numerous ways, from enhancing the students’ appreciation of energy markets, to providing key institutional knowledge that can help land a first job out of college. The material he discusses in that class is also amenable to public presentations, as with the Loveland Energy Conference, which provides visibility for the University and helps lay people better understand these markets. His research program is largely centered on studying oil and gas markets, including studies of oil and gas prices, motives to hold oil inventories, and the incentives for deployment of infrastructure, such as pipelines, and the implications of constrained infrastructure upon energy markets. These topics have clear relevance to the energy sector of the state, and policy relevance to the nation. Dr. Mason’s research agenda also provides valuable input that allows me to regularly update the oil and gas class, enhancing the educational value and relevance of the class.

John A. Guthrie Distinguished Professor of Banking and Financial Services. Vacant.
Rile Chair of Leadership and Entrepreneurship. Vacant.

College of Education

Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education. Support for research and teaching support,

College of Engineering and Applied Science

Fred Ogden, *Roy and Caryl Cline Endowed Chair in Engineering*, Environment and Natural Resources (See WY Excellence Endowment Report)

Dennis Coon, (Ph.D., Pennsylvania State University), *H.T. Person Professorship of Engineering Education*. Dr. Coon served as the HT Person Professor in College of Engineering and Applied Science (CEAS) for FY16-17. As part of that appointment, Dr. Coon attended the American Society of Engineering Education Annual Conference held in Columbus OH in June 2017. Dr. Coon coordinated HT Person Distinguished Speaker Series and Dr. Randy Lewis, USTAR Professor of Biology at Utah State University and member of the USU Synthetic Bioproducts Center, presented a talk entitled “Search for Life (Science) in Engineering” on October 7, 2016. He coordinated the CEAS Freshman Design Challenge for FY16-17. In Fall 2016, approximately 90 students from three sections of ES 1101 at UW and one section of ES 1000 from Casper College participated in a challenge to design a manually operated Archimedes’ Screw Pump. In Spring 2017, approximately 40 students from two sections of ES 1101 participated in a challenge to design a model electric vehicle that balanced performance and safety. Dr. Coon collaborated with the CEAS John and Sally Steadman Endowment for Educational Improvement Grants program and HT Person Endowment funding was used to implement and enhance active learning methodologies in CEAS. He used HT Person Endowment funding for early career faculty to participate the American Society of Engineering Education’s National Effective Teaching Institute in May 2017. Dr. Coon implemented a Practitioner in Residence Program to mentor students in capstone design projects. Dr. Coon assisted with the analysis of data from UW students completing the Fundamentals of Engineering Exam. He initiated an educational research effort to apply the quantitative analysis tools from the field of project management to examine the process of degree completion by CEAS students. Dr. Coon was the instructor of record for five engineering courses during AY 16-17. One of the courses was a First-Year Seminar course, one was a required upper-division engineering course, two were upper-division elective engineering courses, and one was a graduate course in engineering. The benefits of the FY 16-17 activities of the HT Person Professor can be divided into three categories: 1) enhancing CEAS student success through active engagement, 2) improving the learning environment in CEAS, and 3) using educational research methodologies to examine the engineering education process within CEAS. Active engagement of CEAS students was enhanced by coordinating several section of First-Year Seminar course designed to explore the impact of engineering on modern society, providing a freshman design challenge to motivate students to study engineering, and bringing a distinguished speaker to UW each year. Improving the learning environment in CEAS was accomplished by providing funding for implementation of active learning, providing a direct connection to engineering practice through the Practitioner in Residence program, and providing funding for early career faculty to attend teacher effectiveness training. Education research methodologies aimed at examining an improving the education process at CEAS include analysis of data from UW students completing the national Fundamentals of Engineering Exam, and examination of the degree completion process by quantitative tools from the field of project management. These education research activities provide vital data for identification of modification and improvement of engineering education at UW. One of the courses taught by Dr. Coon in FY16-17 was aimed at developing entrepreneurial interest of CEAS students with a goal of economic development in Wyoming.

Dimitri Mavriplis, (Ph.D., Princeton University), *A.J. Castagne Professorship* in UW’s College of Engineering and Applied Science (CEAS). During the 2016-2017 academic year, two courses were taught in the Fall semester and no courses in the Spring semester. Dr. Mavriplis taught ME5440, a graduate course in Fluid Mechanics in the Mechanical Engineering department. This is an essential course for graduate students (and

advanced undergraduates) with an interest in the general thermo-fluids area, which is one of the two main areas of specialization in the ME department. He also offered a course called “*Introduction to High Performance Computing*” in the Fall 2016 semester. This course was offered through the NSF Blue Waters program, and shared with over 10 universities simultaneously across the USA. The lectures were delivered remotely by Dr. David Keyes, from King Abdulla University of Science and Technology (KAUST), and he supplemented the lectures and engaged the students with questions locally as part of the course. Over the past year, his research group has consisted of three postdoctoral researchers and 8 graduate students (7 Ph.D. and 1 M.S.). His research focuses on developing and applying new improved algorithms for solving aerodynamic and wind energy problems at high fidelity on large high performance computer systems. Over the past year, two students were graduated, one with a Ph.D. degree and one with an M.S. degree. The former Ph.D. student secured a job in industry in Pennsylvania after graduation. The latter student is a Wyoming native who spent much time during his M.S. degree in residence at NASA Langley Research center in Hampton, VA, where he was offered a position upon graduation. Their research on wind energy is highly relevant and of interest to the various companies involved in current and future planned wind plant installations in the State of Wyoming. Dr. Mavriplis’ research has also been instrumental in leveraging the NCAR-Wyoming Supercomputer (NWSC) facility and demonstrating the importance of this facility for competitive research at UW, for student and faculty recruitment, as well as for economic development and diversification within the State of Wyoming. In April 2017, he delivered the Presidential Series Talk at UW entitled “*High Performance Computational Science and Engineering: Using Mathematics and Computer Science to Solve Complex Engineering Problems*”. In this talk, his research in aerodynamics and wind energy was described in layman’s terms and the talk served to highlight the importance of these areas to the general public and of high performance computing to the University, the State and the Nation. The talk was open to the general public and was well attended and generally well received. Finally, in May 2017 he was honored to receive the Presidential Award for Excellence in Research at UW.

Jonathan Brant, (Ph.D., University of Nevada, Reno), *Vincent O. Smith Professorship in Engineering*. Dr. Brant taught three courses in the past academic year. These were CE 1010 (civil engineering tools), CE 3400 (introduction to environmental engineering), and CE 4400 (design of water treatment facilities). He is the academic advisor for about 20 students and he is advising 3 doctoral candidates, 1 masters student, and 3 undergraduate researchers. He has three active research grants all related to technology development for treating oil and gas produced waters. A recent grant total \$1.7 million supports the technical evaluation and development of a magnetic treatment system for disinfecting produced waters prior to reinjection. The goal of this effort is to reduce the industry's reliance on biocides. The focus of Dr. Brant's research is the development of new materials and technologies for separating materials from water. These applications range from produced water treatment to the recovery of elements of value (e.g., rare earth elements) from aqueous mixtures. The benefits of this work to Wyoming include the expansion of our ability to successfully utilize our State's resources, diversification of our water resources, and environmental protection. Dr. Brant is currently working with an Indian company to establish a new membrane manufacturing facility in Laramie. This has obvious benefits related to the diversification of our local economy.

John Pierre, (Ph.D., University of Minnesota), *Nicholson Professorship in ECE*. Dr. Pierre Has received numerous honors and awards, include being named as an IEEE Fellow, 2013: for development of signal processing methods for estimation of power-system stability. The G.J. Guthrie Nicholson Chaired Professor of Power Engineering is specific to the field of electric energy. Dr. John Pierre was appointed to the position effective July 2016. He has been a faculty member at UW for over 25 years. His expertise is in the area of monitoring the reliability and stability of power grids using a newer measurement technology. This technology

takes high data rate power system measurements that are time synchronized from all throughout a power grid. Dr. Pierre's research has led to application software used in control centers to detect undesired oscillations in the power flowing on the grid. The control center then takes actions based on that information to fix problems in the system. He teaches both undergraduate and graduate courses that support this research. Dr. Pierre's research is important to the state and nation. The western US power system operates as one large interconnected grid which is arguably one of the largest, most complex, and geographically dispersed man-made systems in the world. Wyoming is a major exporter of electricity; much of which travels great distances to its end use. Reliable operation of that Grid is essential to the daily lives of Wyoming citizens and to the companies producing, transmitting, and distributing the power. His research also supports student education. This past year, the Nicholson Chair sponsored a guest seminar speaker, Jeff Dagle, from the US Department of Energy's Pacific Northwest National Laboratory (PNNL). Mr. Dagle is a manager and a lead engineer at PNNL in their energy group holding many significant national appointments including leading DOE's North American SynchroPhasor Initiative (NASPI).

Alchemy Sciences Petroleum Engineering Chair. Vacant.

Thomas and Shelley Botts Endowed Chair in Unconventional Reservoirs in the College of Engineering and Applied Sciences. Vacant.

Interdisciplinary

Steve Smutko, *Eldon & Beverly Spicer Chair in Environmental and Natural Resources* (See WY Excellence Endowment Report)

Heidi Jo Albers, *Knobloch Wyoming Excellence Chair for Conservation Economics and Finance* (See WY Excellence Endowment Report)

J.E. Warren Distinguished Professorship of Energy and the Environment. Vacant

John and Jane Wold Chair of Energy - Vacant

College of Law

Jacquelyn Bridgeman, (J.D., University of Chicago), has been the *Kepler Distinguished Professorship of Law*. During FY 2017, Ms. Bridgeman taught four courses for the College of Law, two upper division electives, Employment Law and Sports & Entertainment Law; a first year required course, Torts II; and an upper level bar course, Family Law. She nearly completed work on a Family Law casebook, which is due to the publisher at the end of fall 2017 and began work on two new research projects. One of the projects focuses on equality in sports, and the other focuses on western democracies and their continued vibrancy. Two of the courses taught by Ms. Bridgeman, Torts II and Family Law, are foundational courses and bar courses, which means they benefit students in aiding them to learn fundamental doctrine essential to practicing law. The Employment Law course focuses on an area critical to any student who wants to practice in the area of business law and therefore not only helps students acquire necessary skills, but helps prepare them for work many are likely to do in practice for clients throughout the state. The same can be said for Family law, as that is an area where many of UW's graduates practice. The Sports & Entertainment Law course was a new addition to the College of Law curriculum. It enhances the course offerings of the school to make them comparable to peer institutions and, with its focus on negotiation, drafting, and alternative dispute resolution, it helps students acquire skills not

readily offered in many law school courses. Ms. Bridgeman's research work in Family Law is part of a larger project with which she is involved that is focused on ways to better deliver representation in one of the highest areas of unmet legal need in the state.

Michael C. Duff, (J.D., Harvard Law School), has been the *Centennial Distinguished Professor*. Mr. Duff became the Centennial Distinguished Professor of Law in 2014. During the period July 1, 2016 to June 30, 2017, he taught the College of Law's courses in Torts I, Labor Law, Workers' Compensation Law, and Employee Benefits Law. The Employee Benefits offering represents the first formal instruction in Employee Benefits Law/ERISA in the history of the state. This variety of workplace course offerings puts the College of Law at a competitive advantage over institutions like Denver University, which devote fewer tenure-line resources to workplace law instruction than UW. His research activities were diverse. He placed a series of major articles in American Bar Association publications analyzing the interplay between workers' compensation law and the Employee Retirement Income Security Act of 1974 (ERISA) and the Federal Arbitration Act. Mr. Duff was cited and quoted repeatedly in the national workers' compensation press and, on one occasion, quoted at length by a leading ProPublica reporter on workers' compensation. In recognition of this research and analytical work, he was elected during this period to a flurry of several national honorary societies including the College of Workers' Compensation Lawyers, the National Academy of Social Insurance, the American Bar Foundation, and the Pound Civil Justice Institute. He has also been a frequent speaker at major national events, appearing eight-times at major conferences out of state during the period in question. In the materials produced in advance of my appearance at the Workers' Compensation Institute Annual Conference held in Orlando, Florida, on August 8, 2017 (the largest workers' compensation conference in the United States), he was referred to as "the preeminent scholar of workers' compensation law." To students, he brings up-to-date, cutting-edge developments in the intersectionality of law relating to personal injury and employee benefits. This is one of the more complex areas of law in the United States. Employee benefits, for example, include the many baffling developments in the Affordable Care Act. During the spring of 2017, his employee benefits students had the unique opportunity to analyze quickly-unfolding health care proposals in real time. They very quickly distinguished feasible from unfeasible proposals, and he was thrilled to have this group of students heading out into law practice armed with sophisticated training they would not have been able to receive anywhere else in Wyoming. To business and industry, he brings research and an unusual depth of knowledge in interstitial policy areas. For example, he has written two leading textbooks, one in workers' compensation law and another in labor relations law. Each of these books is problem-oriented and designed to grapple with real-world problems encountered in business and industry. While they are targeted to multistate audiences, my workers' compensation textbook features some important Wyoming cases. Finally, as he became increasingly involved in the national conversation in several complex areas of law and policy, he brings the details of the discussion back to the state, even as he increases the national visibility of Wyoming law professors. One example of this dynamic was his participation on the event committee of the 30th Anniversary of the National Academy of Social Insurance (NASI), held in early June. NASI was formed as a think-tank to stimulate bi-partisan, national analysis of the social security disability system, workers' compensation programs, and unemployment compensation law. The event was held in at the National Press Club and the Kaiser Permanent headquarters in Washington D.C.

Stephen Feldman, (J.D., University of Oregon), has been the *Jerry W. Housel/Carl F. Arnold Distinguished Professorship*. During the past year, Mr. Feldman has published a book, *The New Roberts Court, Donald Trump, and Our Failing Constitution* (Palgrave Macmillan, 2017), and numerous articles and essays. He has also been researching and writing several works-in-progress. His recently published articles and essays include the following: *Brown v. Board of Education for Topeka*, in *Max Planck Encyclopedia of Comparative*

Constitutional Law (Rainer Grote, Rüdiger Wolfrum, & Frauke Lachenmann eds., 2017); Missing the Point of the Past (and the Present) of Free Expression, 89 Temple Law Review Online 55 (2017); The Return of the Self, or Whatever Happened to Postmodern Jurisprudence?, 9 Washington University Jurisprudence Review 267 (2017); Postmodern Free Expression: A Philosophical Rationale for the Digital Age, 100 Marquette Law Review 1123 (2017). With regard to teaching, I teach Constitutional Law I, Constitutional Law II, and Jurisprudence every year. During the fall of 2016, his sabbatical semester, he was a Visiting Scholar at Harvard Law School. Mr. Feldman's research and writing projects emphasize national concerns and are of national interest. As such, they benefit the University of Wyoming, the state of Wyoming, and Wyoming residents. For instance, his articles and essays consistently rank in SSRN's Top Ten Percent Total New Downloads List as well as SSRN's Top Ten Percent Total All-Time Downloads List. Several of his articles have placed in the SSRN's weekly Top Ten Download Lists. In the last month, he has been interviewed on four radio shows concerning current politics and my book, *The New Roberts Court, Donald Trump, and Our Failing Constitution*. He was scheduled for a thirty-minute interview on a public radio show (PRX) in September.

Sam Kalen (J.D., Washington University), has been the *Winston S. Howard Distinguished Professor* since October 1, 2014. Mr. Kalen is the Co-Director of the Center for Law and Energy Resources in the Rockies and his research focuses on the fields of energy, environment, public lands and natural resources, administrative law, and constitutional law. During this past year, he worked on preparing a prospectus for a book on the history of energy policy, then secured a contract for its publication with Cambridge University Press, and have substantially completed the manuscript, which he hopes to submit back to Cambridge within the next month. In addition, during this past year, Mr. Kalen published a law review article on the federal Clean Air Act, in *Florida Law Review*, presently ranked the number 26th law review in the country, out of hundreds. In addition, he published an energy law review article in one of the top ten environmental law journals in the country, as well as an article on the history of hydroelectric power development in another law review. Mr. Kalen taught administrative law and environmental law during the Spring 2017 semester, and was on sabbatical during the Fall 2016 semester. His research and writing during this past year all supports my instructional activities, as well as benefits those industries and lawyers engaged in energy or environmental policy. He teaches both federal energy law as well as environmental law, and by exploring aspects of both in his scholarship he believes that it allows him the opportunity to better engage with students. He brings parts of his research into the classroom, and challenges students to think critically about areas of the law that presently may not be as thoroughly explored in existing scholarship.

Tori Kricken (B.S. in Business Administration, University of Wyoming, 1996; J.D., University of Wyoming College of Law, 2000). *E. George Rudolph Distinguished Visiting Chair*. The Honorable Tori Kricken is the District Judge for the Second Judicial District. She also serves as District Court Commissioner and Circuit Court Magistrate for the district and circuit courts in Laramie and Rawlins and as a part-time Drug Court Judge. Additionally, Tori teaches business and law courses at the University of Wyoming. She serves on several law-related boards and committees and is actively involved in volunteer work in the Laramie community. Prior to these positions, she served as a Hearing Examiner for the Office of Administrative Hearings and was in private practice at the firm of Brown and Hiser, LLC. Tori received her J.D. from the University of Wyoming in 2000.

Mary Dee Pridgen (J.D., New York University) has been the *Carl M. Williams Professor of Law & Social Responsibility* since July 1, 2008. In the summer of 2016, she updated my treatises, *Consumer Credit and the Law*, and *Consumer Protection and the Law*, published by Thomson Reuters and coauthored with Richard Alderman. Ms. Pridgen was assisted on the research for the update by current College of Law student, Susan Manown. In the summer of 2016, she also completed the final page proofing and indexing for the 4th edition of

Consumer Protection Law in a Nutshell, which was published in September 2016. In the fall of 2016, she taught two classes at the law school, Consumer Protection and Payment Systems, both of which are upper class electives. In the spring and early summer of 2017, she completed an “e-supplement” to accompany the Consumer Law casebook that she coauthored and that she uses in her course. The 44-page supplement includes some new [edited] cases, problems and updated notes. This supplement has been made available to students via the course TWEN website, and is also being made available by West Academic to faculty adopting the casebook. Ms. Pridgen also worked on revisions of an article on state consumer protection laws that is set to be published by the Antitrust Law Journal sometime this year. Given her long career as a scholar in the field of consumer protection, her research and instruction has benefitted law students, lawyers, businesses and the general public. The law students in her consumer protection course have benefitted from the products of her research, including a nationally published casebook, “nutshell” and treatises. The attorneys of the state of Wyoming, as well as attorneys nationwide, can also benefit from Ms. Pridgen’s published works which are basically reference works for attorneys and law students. Since businesses and industries dealing with consumers must comply with consumer protection laws, both state and federal, these works also benefit them and their legal counsel. During the past fiscal year, she was consulted by Benjamin Burningham, Wyoming Assistant Attorney General, on a consumer protection case being pursued by his office, which in turn will benefit Wyoming residents. She donated a set of my treatises to the Wyoming Legal Aid office for their use in cases they are pursuing on behalf of Wyoming residents. Students in her courses benefit from instruction by an experienced and knowledgeable professor. One of her courses, Payment Systems, includes material that is tested on the Wyoming Bar Exam, which directly benefits students taking that exam. Ms. Pridgen has supervised students writing their own research papers on consumer protection topics, and she also routinely hire Wyoming law students as research assistants. She has also guest-lectured in fall of 2016 in a consumer policy class offered in the College of Agriculture Department of Family and Consumer Sciences.

Elaine Welle (J.D., University of Arizona), has been the *Carl M. Williams Professor of Law & Ethics* since December 1, 2014. Ms. Welle teaches Contracts, Secured Transactions, Securities Regulation and Bankruptcy. Ms. Welle is a recipient of the University of Wyoming's 1998 John P. Ellbogen Meritorious Teaching Award and was honored as Outstanding Faculty Member by the UW College of Law graduating classes of 2013, 2008, 2003, 2001, 1999 and 1996. During the 2016-2017 academic year, she taught Contracts, Secured Transactions, Bankruptcy, and Securities Regulation at the College of Law. Her research, scholarship, and works for publication are focused on business law topics. This year, she published an article titled “Should the UCC Financing and Continuation Statement Rules Be Revised?” in the Uniform Commercial Code Law Journal, a peer reviewed publication. The article is the product of research she conducted at the request of Wyoming legislators to aid lawmakers in evaluating the advisability of amending Wyoming’s Uniform Commercial Code. This year, Ms. Welle was honored by the 2017 College of Law graduating class with its Outstanding Faculty Member Award for teaching excellence. As the recipient of this award, she spoke at their commencement ceremony. She was also privileged to be selected by the graduates to serve as a hooder at their graduation. During an academic career that has spanned nearly a quarter of a century, she has formed many deep and lasting relationships in the State of Wyoming. She has spent her career serving the State of Wyoming by sharing my expertise, experience, and advice with students, alumni, judges, legislators, government employees, and the legal community. As the Carl M. Williams Professor of Law and Ethics, Ms. Welle sought to honor the memory of Carl Williams, a lawyer, businessman, and former legislator, through her efforts to serve the State of Wyoming as an educator and business lawyer and through her work to assist state lawmakers in crafting legislation to promote commerce and modernize business practices.

William T. Schwartz Professor of Law. Vacant.