

UNIVERSITY OF WYOMING
Endowed Faculty Report
From the Office of the Vice President for Academic Affairs
1 OCTOBER 2015

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 from 2006-2012); 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 fifteen 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.

At the time of this report, 18 positions are permanently funded and several additional positions are supported with endowment funds for a bridging period of several years (at this writing, through FY2017). Although all positions are subject to available funding in any year, the ongoing annual expenses associated with filling the 18 permanently funded positions are 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 18 permanently authorized and 5 bridge-funded 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 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 are described in detail below.

Allocation strategy	Number of positions	College/Academic Unit
Education	4	Education
UW Areas of Distinction		
Cultural Assets, Arts & Humanities	3	Arts & Sciences Art Museum
Life Sciences, Environmental and Natural Resource Sciences, Earth and Energy Sciences	7	Arts & Sciences Agriculture & Natural Resources Engineering & Applied Science Haub School
Professions Critical to Wyoming (other than education)	4	Business Health Sciences (Nursing, Kinesiology and Health Promotion) Law
History and Culture of the Rocky Mountain Region	1	Arts & Sciences
Other Economic and Social Challenges	4	Agriculture & Natural Resources Arts & Sciences Haub School

FY 2015 Accomplishments of Wyoming Excellence Chairs

College of Education (four positions authorized; one vacated at end of FY 2013 with a search underway, one vacated August 2014 with a search to be initiated)

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. 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 engaged in several scholarly, research, and outreach projects with doctoral students and faculty. She extended a collaborative project she had initiated in a doctoral class in Spring of 2013 that examined National Reading Conference/Literacy Research Association (NRC/LRA) *Yearbooks* with respect to adolescent literacy research, which was presented at LRA in 2013. She worked with a group of students from a doctoral class she taught in Fall semester 2014, focused on a review of the research in literacy, to analyze NRC/LRA *Yearbooks* from 1996 through 2013. We presented the research results at the Literacy Research Association conference in December of 2014. In addition to Dr. Gillis, eight doctoral students along with two professors participated in the project. A manuscript was co-authored and submitted it to the *Yearbook*. She continues to work with the faculty and students at Wheatland middle school providing professional development services

through the LRCC in disciplinary literacy. She has worked for two years with the science coordinator in Cheyenne to deliver professional development in disciplinary literacy for science teachers in that school district. She worked with 28 teachers in Fremont County, K-8, to engage them in a course focused on active engagement of students. Finally, following up on activities that had been initiated by Dr. George Kamberelis, who left the university in August of 2014 for another position, she acquired the Wyoming Writing Project (WWP) for the LRCC. A nationally affiliated writing project, LRCC collaborated with the Wyoming Department of Education (WDE) in Summer of 2014 to deliver *Wyoming Writes* – a series of two day workshops at four locations across the state. Facilitated by UW faculty member Dr. Amy Spiker, doctoral students Tia Frahm, Rick Fisher, and Amanda Sanders, in conjunction with Teacher Consultants who had been trained through the WWP, and funded by the WDE. Dr. Gillis and her colleagues received a grant from the NWP to support revitalization of WWP.

Wyoming Excellence Chair in Literacy Education (position 2). During AY14-15, the College of Education completed a successful search for a new Excellence Chair in Literacy Education. Cynthia Brock has joined the College faculty.

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). Professor Slater serves on the Wyoming Department of Education’s Leadership Steering Committee on WY Content and Performance Standards for Schools and is working at the national level on common core standards for schools. During the 2013-14 academic year, he had three peer-reviewed publications, 5 invited presentations, and 23 presentations at regional and national conferences. He spent much of FY2014 working on the 2nd edition of “Investigating Astronomy” textbook, which was printed in mid-2014, and the first edition of “Modern Earth Science” textbook, which is to be printed in 2016. He also completed two scholarly book chapters in 2013, both to be printed in 2014. Dr. Slater is serving as the editor-in-chief for the *Journal of Astronomy & Earth Sciences Education*. Working with UW faculty, he submitted three grants for extramural funding in FY 2014, two of which were funded totaling \$2,386,318. He also served as leading principal investigator on two additional NSF grant awards and a NASA grant that are ongoing (totaling \$3,938,381). He mentors one doctoral student and six master’s students.

Cultural Assets, Arts and Humanities (3 positions authorized; 3 filled)

Mark Jenkins, Writer-in-Residence (B.A. and M.S., University of Wyoming) During the Fall 2014 – Spring 2015, twelve public lectures were given by Mark Jenkins, writer-in-residence at UW and field staff writer for *National Geographic*. Jenkins’ public talks attracted nearly 180 attendees on average, with a total of 2,348 attendees across the state. Continuing the Spring 2014 topic, Jenkins presented **Last of the First Skiers** at Sheridan College, Casper College, and Gillette College in September 2014. This presentation recapped his two-month long climb of Mt. Everest, the mountain he summited together with the North Face team to celebrate the 50th anniversary of the first American ascent of Everest. In Spring 2015, Jenkins continued the speaker series at UW, Gillette College, Sheridan Junior High, Northwest College in Powell, the

Buffalo Bill Center for the West in Cody, Lander Valley High School (in cooperation with Central Wyoming College), Western Wyoming Community College in Rock Springs and Casper College. He also gave a presentation at the Wyoming Boys School. This time the program focused on **Vietnam Underground: The Viet Cong, Spelunkers, and the Biggest Cave on Earth**, reflecting on his travel with the expedition which discovered the world's largest cave in Vietnam. During each visit, Jenkins completes guest lectures in classes such as introduction to international relations, cultural anthropology, and English composition at the community colleges.

Visiting writers and MFA faculty gave public readings and lectures attended by more than 3,500 people across Wyoming. 17 visiting writers were sponsored or co-sponsored, including:

- Jennine Cruet (fiction writer, winner of the John Gardner Book Prize, and finalist for the Chicano/Latino Literary Award),
- Julie Carr (winner of the 2011 National Endowment for the Arts Fellowship for Poetry and co-publisher of Counterpath Press),
- Cathy Hankla (poet, novelist, and director of the Jackson Center for Creative Writing at Hollins University),
- Sonja Livingston (essayist and winner of the AWP Book Prize for Nonfiction; co-sponsored with the UW English Graduate Interdisciplinary 2015 Spring Conference),
- Emma Marris (staff writer for *Nature* magazine and acclaimed environmental writer; co-sponsored with the UW Biodiversity Institute),
- Kent Nelson (author of twelve novels and short story collections, winner of the 2014 Pitt Drue Heinz Literature Prize for Fiction),
- Lance Olsen (winner of a Guggenheim Fellowship and the Mary Ellen von der Heyden Berlin Prize in Fiction),
- Claudia Rankine (poet and playwright, winner of the National Book Critics Circle Award and an Academy of American Poets Fellowship),
- Antonio Sacre (winner of the Parent's Choice Gold and Silver Awards for his children's books; co-sponsored with UW Multicultural Resources and Teton County Library),
- Ira Sukrungruang (award-winning essayist and memoirist from the University of South Florida, editor of *The Clever Title* and *Sweet: A Literary Confection*),
- Marc Sundeen (author of six highly acclaimed nonfiction books including recent top-10 rankings on *New York Times* and *Wall Street Journal* bestseller lists),
- Melanie Thon (listed as one of *Granta* magazine's 20 Best Young American Novelists and winner of the O. Henry Prize),
- Karsonya Whitehead (winner of the Darlene Clark Hine Book Award from the Organization of American Historians; co-sponsored with UW African American and Diaspora Studies).

The Eminent and Visiting Writers program also supports the writing of nearly 10 students in the MFA Writing Program, which is ranked in the top 25 programs in the country. In addition, ongoing relationships have been established with a wide range of UW departments and programs.

Fine Arts Visiting Artists-in-Residence. The Wyoming Excellence Artist-in-Residence is a rotating position that offers students in the departments of Art, Music, and Theatre and Dance the opportunity to work with professional artists with national and international reputations. For the 2014-15 academic year, the Department of Music chose to bring in numerous artists so that the entire music student body would be exposed to people in all areas of specialization and to commission works from three composers. Over 30 prominent musicians and composers were in residence for several days presenting concerts, coaching chamber music, presenting workshops, giving master classes and writing new compositions for faculty and student ensembles. Artists in the various areas included:

Mark Heidel, who worked with the UW Wind Ensemble and the Symphonic Band. Dr. Richard Mark Heidel is Director of Bands in the School of Music at The University of Iowa where he conducts the Symphony Band, teaches graduate courses in conducting and band literature, guides the graduate band conducting program, and oversees all aspects of the University of Iowa band program. **Emily Lemmerman** coached and performed with the UW Pan band during their Fall concert. She is a professional pan builder and tuner who owns Barracuda Steel Drums in Austin, Texas. **Dr. Lonnie Smith** performed with the Wyoming Jazz ensemble during the 2nd Annual Wyoming Jazz Festival. He is an unparalleled musician, composer, performer and recording artist. An authentic master and guru of the Hammond B-3 organ for over five decades, he has been featured on over seventy albums, and has recorded and performed with a virtual “Who’s Who” of the greatest jazz, blues and R&B giants in the industry. **Steve Kovalcheck**, guitarist, and **Ed Breazeale**, drums, performed with the Faculty Jazz Quartet with Department of Music faculty members Scott Turpen and Ben Markley. **Ethan Sperry** arranged "Lolongo" for Statesmen Singers to premiere at their NAFME performance on Spokane, WA. Dr. Sperry is currently a Professor of Music and Director of Choral Activities at Portland State University. **Ana Vidovic**, internationally acclaimed guitarist, performed with the UWSO on one of their Spring concerts. **Edna Yuan-Yuan Chia**, pianist, gave a master class for piano performance majors and performed a recital. **David Kim**, fortepianist, gave a lecture performance on fortepiano for piano majors at UW and gave a public fortepiano recital at St. Matthew’s Cathedral. **Darrel Hale**, Assistant Professor of Bassoon at LSU, and **Miriam Kapner**, oboist, gave masterclasses and workshops for the UW “Double Reed Day”. **Paul Hanson**, bassoonist, gave a master class for bassoon majors and performed a recital. **Brook Ferguson**, flutist, gave a masterclass for flute students and performed a public recital. **Gabriela Lena Frank**, composer, was a composer in residence for the New Frontiers Contemporary Music Festival. Her music was featured on several concerts and she did a workshop for composition students. **Professor John Nix**, Tenor, gave a master class, two voice clinics, and an interactive workshop on vocal acoustics.

Heather Bender, Museum as Classroom Educator (this position is funded through fiscal year 2017) (B.A. Art and History, minor in Education, Salisbury University; Wyoming State Teacher Certificate). 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 students, engaging them in 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. Heather has received STARS (Statewide Training and Resource System) trainer certification for childcare professionals. In August 2015, Ms. Bender implemented a STARS accredited early childhood educator workshop - *Using Museum Inquiry to Develop Arts Integration and Culturally Relevant Pedagogical Practice*. This pilot will be the model for continued early childhood educator trainings offered at the UW Art Museum. Under Heather's direction, nearly 10,000 students grades pre-K through 16 and beyond attended art programs in FY2015. This included teaching College of Education course EDEL 3170: Art in the Elementary School. Albany County School District #1 After School Enrichment Program, and six area preschools. She continues to oversee *Imagine Learning from the Masters*, an art/literacy based Afterschool Enrichment Program for Albany County School District #1, and a Preschool Program for six area preschools. She continues to work with College of Education faculty to provide inquiry-based programs for their courses and students as needed.

Life Sciences, Environment and Natural Resources, and Earth and Energy Sciences (seven positions authorized and filled)

Dr. Ingrid Burke, Wyoming Excellence Chair in Ecology (B.S. Biology, Middlebury College; Ph.D. Botany, University of Wyoming). During 2014-15, Dr. Burke taught a course in biogeochemistry and one in career skills for graduate students. Dr. Burke's advisory board and committee memberships include: Wyoming Energy Resources Council, Environmental Protection Agency's Scientific Advisory Board, and EPA Ecological Effects and Processes Committee (chair), among others. In addition, this year she is chairing a National Academy of Sciences Committee on Science and Landscape Sustainability, reviewing National Science EpSCOR grants in Oklahoma. The Haub School launched a new minor in sustainability this year, and is exponentially increasing students served, doubling enrollment in just the last three years. Dr. Burke obtained a major new private endowment to support a program in private land management that will live in the Haub School. The Ruckelshaus Institute published a Wyoming Open Spaces Initiative report this year on public perceptions of conservation in Wyoming, and published two issues of Western Confluence magazine. In addition to directing the Haub School, Dr. Burke maintains a teaching and research program, and is engaged in outreach through many presentations throughout the state. Dr. Burke has been designated as a National Science Foundation Presidential Faculty Fellow, a National Academy of Sciences Education Fellow in the Life Sciences, and was recently elected a Fellow of the American Association for the Advancement of Science. In 2014-15, Dr. Burke authored or co-authored eight articles in peer-reviewed journals and contributed to one National Academy of Sciences book.

Dr. Holly Ernest, Wyoming Excellence Chair in Prion biology (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). Professor Ernest joined the UW faculty in August of 2014. Dr. Ernest's research interests include wildlife population genetics and genomics, and wildlife disease ecology.

Dr. Ernest has founded a new laboratory at the University of Wyoming, the Wildlife Genomics and Disease Ecology Lab. She developed a research, teaching, and service program that involves the two disciplines of Wildlife Genomics and Disease Ecology in three major groups of wildlife that are important in Wyoming: wild ruminants, carnivores, and birds. New research

projects representing each of these groups involve bighorn sheep and pronghorn, mountain lions, and hummingbirds. Dr. Ernest recruited four new students and staff to work on these projects. Our postdoctoral researcher with a PhD from Tulane University is working on mountain lion population genomic project with funding from a NSF-Emerging Infections Diseases grant, and through Dr. Ernest's collaboration with Colorado State University. The Lab Manager-Research Scientist has lab experience with quantitative genetic analysis of pathogens, as well as computational biology and statistics involving large databases and programming languages. One PhD student was recruited to work on the Hummingbird Health and Genomics Project after obtaining a UW MS degree and publishing on river otter ecology in Wyoming. Another PhD student was recruited and is working on Wyoming State-wide Pronghorn Genetics and Population Health. New funding secured by Dr. Ernest for research includes NSF/Colorado State University collaboration, Kelly Ornithology, and Governor's Big Game grants and Wyoming Wild Sheep Foundation (including collaboration with WGFD and Montana State University). Dr. Ernest has started UW pre-vet mentoring, taking on several incoming first year undergraduates, and is serving on two UW Masters' student thesis committees (pronghorn biology and wild bird disease). Dr. Ernest is a member of the Veterinary Sciences Department, an affiliate of the Program in Ecology and Haub School of the Environment and Natural Resources, and has collaboration ties with the UW Berry Biodiversity Institute. During the past year, she continued her affiliation with the UC Davis Wildlife Health Center, Population Health and Reproduction Department, and Veterinary Genetics Laboratory, and mentored a UC Davis bighorn sheep genetics postdoc and a wildlife genetics undergraduate intern through UC Davis ties. Dr. Ernest traveled throughout Wyoming during the past year to participate in meetings involving Livestock and Wildlife Brucellosis, the WGFD Bighorn sheep working group, the WGFD Pronghorn working group, and presented talks at the Jackson Hole Wildlife Science Symposium and Wyoming Game and Fish Department (WGFD) Bighorn Sheep annual meeting. She has developed new collaborations with the USDA APHIS wildlife geneticist in Fort Collins in a collaboration to publish feral pig data that Dr. Ernest generated while at UC Davis. She participated in the Forever Wild Families program through WGFD and provided hummingbird health and banding sessions for 40 participants. This resulted in excitement by children and adults alike who had the opportunity to release hummingbirds after their health exams, and an upcoming Wyoming Wildlife article (Sept 2015) on the field work and project. Dr. Ernest is developing a new course to be offered at UW during Spring 2016 semester for undergraduate and graduate students in Disease Ecology. This course will provide students with science-based, cutting-edge marketable skills, knowledge, and abilities to identify, evaluate, track, and plan action for disease transmission among animals, humans, and the environment. Dr. Ernest provided teaching assistance in an upper division course in Rangeland Management & Planning, attended sessions in the Veterinary Science courses in Diseases of Food Animal, Epidemiology, and Disease Pathology noon seminars. She is an editor for the journal, Conservation Genetics, and has reviewed other journal manuscripts and an NSF proposal. Publications produced during the past year include papers in the journals Current Biology (mountain lion dynamics), Biological Conservation (bighorn sheep genetics across Mexico/US border), PlosONE (2 papers –mountain lion genetics; survivorship and mortality in urban environment), and a book chapter on Sea Otter Conservation Genetics. She served as Chair of a faculty search committee to recruit a new Veterinary Parasitologist professor. Dr. Ernest looks forward to an exciting year of research, teaching and service and establishing new collaborations within UW and to outside institutions for in the areas of Wildlife Genomics and Disease ecology to further wildlife

conservation and management and evaluating wildlife-livestock disease interactions.

Dr. Andrew Hansen, Wyoming Excellence Chair for Advancement of the Engineering Initiative

In February 2013, Dr. Hansen was assigned by President Buchanan and the Governor's Engineering Task Force to develop a plan for an Engineering Initiative to move the College of Engineering and Applied Science to a "Tier I" stature in areas of importance to Wyoming. Over the course of several months, he crafted a vision for that plan and obtained the enthusiastic approval of the Task Force Committee. The plan was publicly released in May 2013 and may be found at:

http://www.uwyo.edu/acadaffairs/plans/uw_engineering_initiative_may_13.pdf

The plan documents a clear path toward Tier 1 status for the College by articulating a set of tangible goals that are both laudable and achievable. Dr. Hansen returned to the faculty in September 2013, where he continued the role of implementing the Initiative. He developed a strong rapport with the Task Force due to his extensive experience and credibility in the College. He also recognizes the importance of the K-12 aspect of the initiative. Due to the administrative changes that took place in August of 2013, Dr. Hansen's involvement in the Engineering Initiative was minimized. He finished FY15 teaching courses, performing research, and mentoring graduate students. This was Dr. Hansen's final year as a Wyoming Excellence Chair.

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. This past year, Dr. Liu and his research team have been heavily involved in the development of the next version of the NCAR Community Earth System Model (CESM2) by improving the representation of atmospheric aerosols, clouds, and aerosol-cloud interactions in CESM2. Dr. Liu was awarded a Department of Energy (DOE) grant to evaluate and improve the CESM using observations. He is also leading the development of an advanced aerosol module for the next generation of a NASA climate model (GEOS) with the support of NASA funding. His group has been involved in the investigation of the radiative forcing of wildfire aerosols (black carbon and organic carbon) and how they affect the climate variability at a regional scale under current and future climate conditions. Dr. Liu gave presentations at 15 national and international conferences, and published 12 papers in peer-reviewed journals. He was named to the list "Highly Cited Researchers 2014" by Thomson-Reuters. As a principal investigator on several grants, he has brought over \$1 million in external funding to UW. Dr. Liu also taught both an undergraduate and a graduate course, and served on numerous editorial boards and advisory committees.

Dr. Mohammad Piri, Wyoming Excellence Chair in Petroleum Engineering (M.Sc. and

Ph.D. Imperial College London). Professor 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 Encana Three-Phase Flow and Computed Tomography Research Facility and the Hess Digital Rock Physics Laboratory. Both of these facilities are unique in the world. He established a research cluster under the Tier-1 Engineering initiative, and his current external research funding exceeds \$11 million. In 2015, Dr. Piri and members of his research group presented their research results at numerous conferences, and published eight papers in peer-reviewed journals with several more under review and in preparation. He also

received the UW President's Faculty Stewardship Award. He is currently the director of Center for Fundamentals of Subsurface Flow under SER. He is the developer of the world-class Center of Innovation for Flow through Porous Media (COIFPM) to be established in the High Bay Research Facility. In summer 2015, he established a major partnership with FEI, a world-leading technology company, with a total contribution of \$12 million.

Dr. Amy Navratil, Gardner/Fiske Chair in Biomedical Physiology (B.S. microbiology and Ph.D. Biomedical Sciences, Colorado State University). Dr. Navratil's laboratory 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*. It is hoped that these experiments will provide critical insight in to pathophysiology of PCOS and impaired reproductive function in women. To accomplish the goals of investigating the mechanisms of PCOS, Dr. Navratil's laboratory is well positioned with a PhD student (Shaihl Khan), a masters student (Stanley DeVore), a post-doctoral associate (Brian Edwards), and a shared technician (Heather Rothfuss). She has co-authored 2 publications and co-presented 5 papers at national conferences. Her laboratory has several investigative lines going and anticipates publishing 3-4 manuscripts within the next year.

Carlos Martinez del Rio, Wyoming Excellence Chair in Biodiversity and Biodiversity Institute Director (Ph.D. Zoology, University of Florida). Professor Martinez del Rio has been a professor in UW's department of Zoology and Physiology since 1994 and director of the Biodiversity Institute since October of 2012. He has over 150 research publications and two books in the areas of physiological ecology, ecology, natural history and conservation biology. His role in the Biodiversity Institute is primarily administrative. Nonetheless, he co-authored 6 peer-reviewed publications in 2015. His h-factor is 49, which is twice as high as that expected from a researcher at his level. He teaches three courses in the Zoology-Physiology and the Life Sciences programs. Dr. Martinez del Rio and his staff have developed biodiversity programs and events with collaborating partners such as the Art Museum, Geology Museums, Program in Ecology, Science and Mathematics Teaching Center, Wyoming Natural Diversity Database, Wyoming Geographical Information Center, Wyoming Cooperative Fish and Wildlife Research Unit, and the departments of Art, Botany, Ecosystem Science and Management, English, Geology and Geophysics, Music, Theater and Dance, and Zoology and Physiology.

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 Chair is being partially supported with Wyoming Excellence funds through FY2017. Dr. Ogden is an internationally-recognized expert in the field of hydrologic engineering. He led an effort that discovered a new general solution to the problem of 1-D vertical flow of water through unsaturated soil that was published in two groundbreaking papers in Water Resources Research. This is the first general solution discovered since 1931, and represents a very significant and fundamental advance in water resources modeling. Dr. Ogden was given the "Arid Lands Hydraulic Engineering Award" in May, 2015, by the American Society of Civil Engineers. This prestigious award is given to one engineer each year that has had noteworthy contributions and has made significant impact on the field of water resources. In receiving this award, Dr. Ogden joins a veritable "who's-who" of hydraulic engineers

<http://www.asce.org/templates/award-detail.aspx?id=344>. Dr. Ogden published six papers with two being the lead author. He was funded by the National Science Foundation (NSF) adding a food, energy and water component to the Water Sustainability and Climate grant. Dr. Ogden conducted field studies in the Panama Canal Watershed. Dr. Ogden also managed two staff research scientists, two post-doctoral research associates, two Ph.D. and three M.S. students.

Professions Critical to the State (four positions allocated and filled in the Colleges of Business, Law, and Health Sciences; the Law position will be vacated in FY 2014 and a search for a replacement is underway).

Dr. Eric N. Johnson, Toppan Chair in Accounting (B.A. Accounting, Whittier College; M.B.A. and Ph.D., Arizona State University). Dr. Johnson's position as Toppan Chair is partially supported with the Wyoming Excellence endowment through FY 2015. Dr. Johnson's research interests include risk factors related to financial fraud, the role of information technology and internal control, and ethics and judgment issues in accounting, auditing, and business environments. During FY 2015, Dr. Johnson co-authored a paper on the influence of emotions and moods on auditors' ethical judgments, which will be published in *Contemporary Accounting Research*, a top 5 accounting journal. He also was responsible for launching the inaugural fall fraud speaker series sponsored by the Center for Accounting Fraud and Ethics Education (CAFEE), an initiative of the Department of Accounting.

Dr. Johnson will be teaching a new graduate seminar on management fraud in the Fall of 2015, continuing the fraud speaker series, and working with the College of Business's Marketing & External Relations function to launch a website for the CAFEE. The website, which will be completed during the early Fall of 2015, is designed to provide fraud and ethics research and education resources to serve students, accounting and business professionals, and the general public in Wyoming and the surrounding region.

Temple Stoellinger, Law (B.S. Environment and Natural Resources and Communications, University of Wyoming; J.D. University of Wyoming College of Law). Professor Stoellinger's research interests include: energy and natural resource law and policy with a specific interest in the intersection of energy development and natural resources on western public lands. During the 2014-2015 academic year, Professor Stoellinger launched the Energy, Environment and Natural Resource Legal Clinic (EENR Clinic). The EENR Clinic is a joint effort between the College of Law and the Wyoming Attorney General's Office. It provides eight, 3rd year law students with an opportunity to work directly on the State of Wyoming's energy and natural resource legal and policy matters. Professor Stoellinger co-directs the EENR Clinic along with Jay Jerde, Deputy Wyoming Attorney General. She also organized the 2nd Annual Landscape Discussion on Energy Law and Policy in the Rockies. The conference is a 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). The 2014 conference was attended by 250+ attendees and covered topics ranging from the Clean Power Plan to state oil and gas conservation commission regulation revisions. The full agenda and video recordings of last year's conference can be found at: <http://www.uwyo.edu/ser/conferences/conferences-past/law-conf-2014.html>. Professor Stoellinger also teaches ENR 4750/5750 (Environmental and Natural Resources Law and Policy; 3 credits), ENR 4900 (Environmental Assessments; 3 credits), and Law 6915-15

(Natural Resources Field Practicum; 1 credit). She was part of a team that was awarded a \$50,000 grant from SER's Center for Energy Economics and Public Policy in August of 2014 to prepare a report on the hurdles Wyoming faces complying with the EPA's Clean Power Plan. Finally, Professor Stoellinger, in collaboration with Dr. Tex Taylor from the Department of Agricultural Economics, received a \$60,000 contract from the Office of Governor Matt Mead in June of 2015 to prepare a report on the economic impacts to Wyoming's economy of a potential listing of the Greater sage-grouse as an endangered species.

Diane K. Boyle, Wyoming Excellence Chair in Nursing (BSN University of Maryland; MSN, University of North Carolina; Ph.D., University of Kansas). Over the past year, Dr. Boyle published 6 papers, five of which involve nursing work environments, with two of these papers linking nursing work environments to patient outcomes. She continues to head a collaborative team (funding: Wyoming IDeA Network of Biomedical Research Excellence; NIH, NCR & NIGMS) that has developed a novel composite quality performance indicator of pressure ulcers and falls. The team has submitted a paper on the composite indicator to the journal *Nursing Research*. Her team has secured funding from the Competency and Credentialing Institute to research the relationship between national nursing specialty certification and surgical site infections. As a result of her research efforts, she was inducted in the American Academy of Nursing in Oct. 2014. She continues to work with Dean Mary Burman to strengthen resources for tenure track faculty so that external funding can increase within the School of Nursing and increase the impact of the research findings to the larger nursing and health care community. She has worked with a junior faculty member to secure funding from the Wyoming INBRE and will begin service on the INBRE Statewide Steering Committee this fall.

Christine Porter, Wyoming Excellence Chair in Community & Public Health (B.S. Biology, University of Maryland; M.A. Education and International Development: Health Promotion, University of London, UK; Ph.D. Community Nutrition, Cornell University). This new WY Excellence position was developed to begin for the FY15. Dr Porter has continued the *Food Dignity project*, including the two Wyoming-based partners Feeding Laramie Valley (FLV) in Albany County and Blue Mountain Associates in Wind River Indian Reservation (WRIR). That 5-year, \$5-million, USDA-funded project ends officially in March 2016, though she expects a one-year no-cost extension to carry us to the spring of 2017. Thier Food Dignity work earned the national Community-Campus Partnerships for Health award in 2014. Also, to date, she and her colleagues have given 38 national and international conference presentations about Food Dignity. She had several new publications accepted in peer-reviewed journals.

Dr. Porter created a new partnership with Dr. Tarissa Spoonhunter of Central Wyoming College (CWC) to mentor young adults from WRIR in health practice and research, including being awarded two INBRE (UW's NIH incubation program) grants to support that work. One of those INBRE grants will also support a gardens-for-health pilot project with FLV for the next three years. Finally, Dr. Porter was just awarded an NIH "R01" grant (their largest, longest and most competitive award mechanism) for a 5-year, \$3.2-million "Growing Resilience" project on the health impacts of gardens with WRIR partners.

History and Culture of the Rocky Mountain West (one position allocated and filled for FY 2014)

American Indian Studies. During fiscal year 2014-2015, American Indian Studies used its Wyoming Excellence Fund in Higher Education for the following: **Post Doctoral Fellow.** The American Indian Studies Program (AIST) hired Dr. Torivio Fodder for a year long appointment as a post-doctoral fellow. Dr. Fodder is an enrolled member of the Taos Pueblo tribe, and has heritage from the Kiowa, Comanche, and Cherokee tribes. He is a doctor of law who before coming to UW worked for an indigenous legal institute at the University of Waikato in Hamilton, New Zealand. Dr. Fodder taught five courses (in such varying subjects as law, tribal governments, and American Indian Studies) for AIST and helped lead a study abroad course in New Zealand during the first summer session of 2015. **Building Tribal Nations Symposium II.** AIST held its second Building Tribal Nations Symposium. It took place on campus in October 2014. Over 150 people were in attendance. The keynote speakers for the conference were: Karla General (Mohawk)—an Attorney at Indian Law Resource Center in Washington D.C. spoke on the UN Declaration on the Rights of Indigenous People; Xh’unei-Lance Twitchell (Tlingit)—an assistant professor of Native Languages at the University of Alaska and one of the youngest fluent Tlingit language speakers spoke about language revitalization among Alaskan Natives; Hineiti Greensill and Donna Campbell (Maori)—professors at the College of Maori and Pacific Studies at the University of Waikato in New Zealand spoke on Maori notions of sovereignty and well-being.

AIST also brought the follow people to UW for public talks: **Dr. Colin Samson**, Professor of Sociology, University of Essex, England. Dr. Samson gave a lecture entitled “The Architecture of Dispossession: Neocolonialism and Neoliberalism in Aboriginal Land Claims Agreements in Canada.” Dr. Samson also premiered a documentary in which he served as a consultant. The film was entitled “Nutak—Memories of a Resettlement” and told the story of the removal of the Mushuau Innu people from their traditional homeland in Northern Labrador, Canada. **John Washakie**, Librarian Ft. Washakie School, Wyoming. John Washakie, the great-grandson of Chief Washakie, gave a public lecture entitled “At What Cost? Sovereignty and Oil and Gas Development on the Wind Indian Reservation.” **Dr. Sarah Weibe**, Post-Doctoral Fellow, Institute for Studies and Innovation in Community-University Engagement, University of Victoria. Dr. Weibe gave a public lecture about her documentary film “Indian Givers” which examines the impact of environmental destruction on the health of First Nations communities in Canada. Finally, AIST brought two all-Indigenous bands to campus on September 1st to help begin the school year and promote American Indian Studies to students on campus. The bands were: *Gary Farmer and the Troublemakers* and Cary Morin.

Other Economic and Social Challenges (four positions allocated, three filled).

Community economic development and planning (search ongoing in FY 2015). The departments of Agricultural and Applied Economics and Geography are seeking to fill a mid- to senior-level position in community planning and economic development, with research, extension, and teaching duties. The individual in this position will focus on community development issues pertinent to the Rocky Mountain West and rural areas internationally. Communities in the Rocky Mountain West and many areas in developing countries share a common direct dependence upon their respective surrounding natural resource base both economically and culturally. Community economic development in the West requires that the public and users factor in this resource dependence to build sustainable communities. Important

skills for this position include working expertise in geospatial analysis, the economics of industry location and site analysis, and community development implementation processes. The search is continuing.

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. He is training a new generation of resource managers through undergraduate and graduate problem-solving and negotiation analysis courses, including classes that now make up a core requirement for the environment and natural resources undergraduate curriculum. In 2015, Dr. Smutko organized a collaborative decision process to assist water users in Laramie County, Wyoming, as they set water use reduction goals and water appropriation methods in the over-stressed High Plains Aquifer system. This high-profile, precedent setting project is the first of its kind in Wyoming and is a model for future groundwater regulatory processes in the state. Dr. Smutko continued his work in the Greater Yellowstone Area, guiding the eleven federal land management agencies comprising the Greater Yellowstone Coordinating Committee through a strategic planning process to define functional approaches for more effective management of land resources. He is also directing a research effort on stakeholder perceptions of multi-agency collaborative management in the Greater Yellowstone Area. In spring 2015, he began work on a citizen involvement project with the US Forest Service on the Medicine Bow National Forest. The purpose of this project is to increase public involvement in the development of a travel management plan for the Pole Mountain Unit east of Laramie. Under his direction, the Ruckelshaus Institute initiated public meetings, an interactive website, videos, and public comment through social media to collect and analyze user comments for use in setting management policy. In August, Dr. Smutko presented a paper titled *Why Talk? Incentives for the Energy Industry to Engage with Communities in Pursuit of Social License*, at the Jackson Energy Security Workshop hosted by the UW Center for Global Studies.

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 thirteen mid-career professionals enrolled this year are gaining collaborative decision-making skills through trainings and a practicum. He also provided negotiation training to leadership groups in Cheyenne, Laramie, and Jackson. In addition, Dr. Smutko chairs the Environment and Public Policy Section of the Association of Conflict Resolution, and hosted the organization's 2015 conference in Denver.

Elinor Burkett, (Ph.D., History, University of Pittsburgh) and **Ahmed Rhazaoui, Global and Area Studies Visiting Scholars**. In 2014-15, the Global and Area Studies Program hosted two scholars, one each semester. In Fall 2014, Global & Area Studies hosted Elinor Burkett. Dr. Burkett spent most of her career as a journalist covering Latin America, Central Asia and Africa, as well as leading the journalism department at the University of Alaska-Fairbanks for many

years. She currently is a freelance journalist and author of nine books. While in residence at UW, she taught one class, mentored students and travelled the state with her 2010 Oscar-award winning documentary film, *iThemba*, which examines the lives of a group of physically disabled musicians amidst the chaos of the collapsing state in Zimbabwe. At each venue, Dr. Burkett showed the film and then participated in a discussion with the audience. Her tour included the UW campus in Laramie, and stops in Rock Springs (Western Wyoming Community College), Riverton (Central Wyoming Community College), Powell (Northwest College), and the Cheyenne Public Library. Elinor also participated in one New York Times forum on campus, one roundtable discussion on women's rights for the Center for Global Studies Human Rights seminar series and spoke in five classes at UW three at community colleges and at Cheyenne East High School.

In Spring 2015, Dr. Ahmed Rhazaoui came from a distinguished career over the past thirty-five years working for the United Nations Development Program, where he specialized in development in post-conflict states, mostly in Africa and the Middle East. He was, for example, the first UN civilian official in Rwanda after the 1994 genocide, in charge of reconstruction efforts and he spent Fall 2014 working for the UN amongst refugee camps in Jordan and Lebanon housing hundreds of thousands who have fled civil war and chaos in Syria. He spoke on this experience with his lecture **The Syrian Crisis, Refugees and the Impact on Neighboring States** in Worland (Rotary/Kiwanis joint meeting), Powell (Northwest College), and Casper (American Committees on Foreign Relations) and on campus at UW. Dr. Rhazaoui also was able to bring his former colleague, Magdy Martínez-Solimán, Assistant Secretary General of the United Nations and Program Director of the United Nations Development Program, to campus to discuss the UN's role in promoting development goals across the globe. Both scholars served as informal mentors to a large number of graduate students, in and outside of the classes they taught. This was a productive year for the Global & Area Studies program on campus and in outreach throughout the state due to the Excellence initiative.

Dr. Heidi 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). Jo Albers joined the UW in the fall of 2014. As an economist with a natural science background, her research interests lie in two general areas: natural resource management in low-income countries with an emphasis on biodiversity conservation and poverty alleviation; and integrated bio-economic modeling of natural systems to generate spatially explicit management advice. Her work emphasizes the interactions between private and public resource managers in the provision of ecosystem services. Current research topics include non-timber forest product extraction and forest reserve policy in Tanzania; marine protected areas and livelihoods in Costa Rica and Tanzania; integrated ecological-economic policy analysis for invasive species management; and spatial patterns of enforcement and livelihood projects for conservation. In 2014-2015, Dr. Albers undertook outreach, capacity-building, and mentoring activities through institutes in Costa Rica, Tanzania, and Southeast Asia and through the publication of several issue briefs for managers. To help establish herself during her first year at University of Wyoming, she gave several seminars and guest lectures, joined several graduate student committees, worked with faculty to develop two new courses to be taught during 2015-2016, and met both virtually and in-person with stakeholders from the Rocky Mountain West to develop relationships. In addition to her

ongoing work as a co-editor to a major journal and as a Research Associate for the Environment for Development Initiative, Dr. Albers gave invited presentations at two international conferences during the 2014-2015 academic year.

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, 2014 is \$5.4 million. Total expenditures for the 2015 fiscal year are currently budgeted at \$4.3 million. The planning budget is designed to draw down internal reserves to a level deemed fiscally prudent to manage risks associated with potential fluctuations in earnings and payout.

The following tables summarize the uses and expenditures of the budgets for filled positions, and the total estimated initial cost of the program when all 18 allocated positions are filled. Not shown are projected costs as the program continues. Costs may in line with salary increases and increases in benefit costs should UW receive a budget appropriation for a merit salary increase. Wyoming Excellence chairs will not receive salary increases in years in which salary increases are not available to other UW employees. The temporary increase in expenditures for the next few fiscal years reflects a plan by the UW Office of Academic Affairs: (a) to invest in critical start-up expenses of new and newly hired endowed chairs; (b) to provide temporary support for key areas not yet assigned permanent positions; and (c) to maintain an adequate cash balance to cover on-going expenses for an acceptable period, in the event of diminished revenue.

Balance July 1, 2013	\$6,025,926
Advertising and Recruitment	\$56,025
Salaries and Benefits	\$3,317,631
Support	\$694,431
Equipment/facilities	\$134,863
Income (distribution from state and interest)	\$3,580,315
Balance June 30, 2014	\$5,403,291

Estimated Annual Budgets for Eighteen Permanently Funded Positions

FY2015	FY2016	FY2017
\$4,282,000	\$3,769,000	\$3,622,000

Estimated Annual Budgets for Bridge-funded Positions

FY2015	FY2016	FY2017
\$1,026,000	\$815,000	\$691,000

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. Jose Antonio Rosa, Professor of Marketing and Sustainable Business Practices (B.A., General Motors Institute; M.B.A., Dartmouth College; M.A., Ph.D., University of Michigan). José Antonio Rosa is professor of marketing and sustainable business practices in the Department of Management and Marketing in the College of Business. Among his current research interests are the influence of hope on the innovativeness of subsistence consumers, and the psychological antecedents and processes involved in sustainable consumption behavior. Dr. Rosa has twice been a Fulbright Fellow, studying the innovativeness of managers in Chile in 2005 and that of consumers and consumer merchants in Colombia in 2010. In 2013-14, he served an ACE fellowship at Eastern Illinois University.

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 joined the University of Wyoming in 2012, as Professor of Marketing and Sustainable Business Practices. Prior to joining the UW, she taught at Deakin University (Australia), New Mexico State University and the University of Kentucky. Kelly brings a track record of research versatility and publication quality in the area of sustainable business practices. Her research represents a rare combination of psychometric scale development work, and qualitative, anthropological work. Her current research examines sustainable business practices in China, the role of NGOs in economic development, as well as the use of marketing technologies to promote pro-social behaviors among youth.

Dr. Stacey Menzel Baker, Professor of Marketing and Sustainable Business Practices (B.S., M.B.A., Ph.D., University of Nebraska – Lincoln). Professor Baker is an expert in consumer vulnerability, and the role of marketing in reconstructing communities after disasters. In addition, she is a leading voice in the area of Transformative Consumer Research, a movement to apply marketing theory and technology to social problems. Her work on disaster recovery in the wake of a tornado in Wright, Wyoming, has impacted both the study of marketing and the practice of disaster response.

2. School of Energy Resources (SER) faculty

The Wyoming Legislature established and appropriated funding for the School of Energy Resources in 2006 and provided additional funding in 2012. 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). Dr. Considine's research focuses on the economics of coal, natural gas, and petroleum. Dr. Considine presents his work at national and international meetings, and he publishes in peer-reviewed and industry-related journals on a regular basis. He teaches one course in the MBA program and a course in the Economics Department.

Dr. Craig Douglas, SER Professor of Mathematics (A.B. Chicago University; M.S. and M.Phil. Yale University). Professor Douglas' primary research is oriented towards high performance computing and Big Data with applications that use networks of intelligent sensors in a field coined dynamic big data driven application systems (DBDDAS). The major applications have been in water infiltration and flow through porous media. His research group has speeded up a process used in water infiltration by a factor of about 1,000 over standard implementations by going to mathematical modeling basics and reevaluating the formulation, which led to very fast and clever implementations. The techniques are being applied now to problems in oil and gas reservoir simulation for determining quickly how long it takes to have breakthrough in a water or chemical flood between injection and production wells. He currently has over \$3 million in external funding.

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 is a first-rate computational seismologist, with a strong record of developing new approaches to addressing high-profile problems of interest to industry, including reservoir characterization and 4D seismology. His research interests include time-lapse monitoring of petroleum and CO₂ sequestration reservoirs, development of new 3D pre-stack waveform inversion techniques, and seismic anisotropy and rock physics modeling.

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. He is expert in developing and evaluating novel materials with photovoltaic properties that convert solar energy into useable energy forms. He is also expert in surface chemistry and removing sulfur from fossil fuels. Dr. Parkinson is a prolific publisher of peer-reviewed papers. As principal investigator, his external funding surpasses \$3 million.

Dr. Felipe Pereira, SER Professor of Mathematics (B.S. and M.Sc. Federal University of Minas Gerais, Brazi; M.Sc. New York University; Ph.D. The University at Stony Brook). Professor Pereira's expertise includes application of mathematics to CO₂ Sequestration and

enhanced oil recovery. He also works on the development of models and numerical simulators for multi-phase flows in multi-scale heterogeneous petroleum reservoirs and aquifers. He recently published a new computational strategy for solving two-phase flow in strongly heterogeneous poroelastic media of evolving scales.

Dr. Maohong Fan, SER Associate Professor of Chemical Engineering (Ph.D. Iowa State University; Ph.D. Osaka University). Professor Fan's work integrates multiple methods and processes including homogenous, heterogeneous and photo as well as bio catalysis and separation with sorption and membrane for conversion of coal, oil and gases to value-added chemicals and clean fuels. He also develops new materials (e.g., ionic liquids and nanostructure as well as magnetic materials) for clean and renewable energy production with conventional and unconventional technologies such as supercritical fluids and advanced crystallization as well as chemical vapor deposition

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. He is the principal investigator of a \$1.4 million grant, funded by the DOE. He teaches three courses per semester in the Department of Geology and Geophysics. He serves as advisor to over 15 undergraduate students and five graduate students each semester, and serves on numerous graduate student committees.

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

Dr. Po Chen, SER Assistant Professor of Geology and Geophysics (B.S. Beijing University, Ph.D. University of Southern California). Professor Chen's expertise includes theoretical seismology and high-performance computing. His principal research interests involve Earth imaging at a variety of scales. He has developed computationally intensive new imaging techniques, including full 3D waveform tomography and 3D pre-stack depth migration. He has worked on earthquake rupture dynamics and seismic hazards and has a strong interest in focusing on energy-related issues, including 4D imaging of sequestered CO₂.

Dr. Dario Grana, SER Assistant Professor of Geology and Geophysics and Petroleum Engineering (M.S. and Ph.D., Geophysics, Stanford University). Professor Grana's research interests are rock physics, seismic reservoir characterization, inverse problems, geostatistics, and time-lapse reservoir modeling. He is a recent recipient of the prestigious Eni Award for New Frontiers in Hydrocarbon. He teaches courses in Geology and in Petroleum Engineering.

Dr. Kristina Hufford, SER Assistant Professor of Restoration Ecology and Land Reclamation (B.A. University of California Berkeley; Ph.D. University of Georgia). Professor Hufford is an expert on issues in restoration and genetics of native ecosystems. Her research is focused on studies of the consequences of adaptive variation for the long-term sustainability of restored plant populations. She is particularly interested in the spatial scale of local adaptation,

and genotype-environment interactions. As a practical application of this topic, she is currently studying methods to improve revegetation success in reclamation and restoration of degraded habitats by matching seed sources to the environment. Revegetation failures are common, and improving outcomes depends on investigation of the ecological factors key for the re-establishment of a diverse, functional plant community. These studies - and the resulting identification of appropriate native plant seed sources for restoration - have great potential to improve reclamation outcomes and rangeland health in for lands affected by natural resource extraction and energy development in Wyoming and the surrounding region. In support of her research efforts, she has received over \$200,000 in funding from the Bureau of Land Management.

Tara Righetti, SER Assistant Professor of Law (B.A. University of Colorado Boulder, 2005; J.D., University of Colorado Boulder, 2007) Tara 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. Professor Righetti's research focuses on legal issues related to oil and gas regulation, land use, and development. She teaches classes on oil and gas law and energy transactions and finance. Her other areas of interest include state owned oil enterprises, pipeline law, and the environmental design of energy boomtowns.

Part C. Privately Endowed Faculty Positions

Thirty-eight¹ 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 38 endowments, 14 support faculty chairs (only 1-2 of these are fully funded from their respective endowments), 15 support faculty professorships, 5 support faculty fellowships, and 4 support lectureships and/or teaching excellence. 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:

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

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.

Sadanand Dhekney, Dept. of Plant Science, (Ph.D. in Horticulture, University of Florida), E.A. Whitney Professorship in Agriculture, Dr. Dhekney studies techniques in breeding and biotechnology along with improved management practices for expanding grapevine production in Wyoming. Additionally, his laboratory will incorporate recent advances in grapevine genomics and biotechnology for improving abiotic stress tolerance of elite cultivars and rootstocks.

College of Arts and Sciences

Amy Navratil, Gardner Chair in Physiology, (See WY Excellence Endowment Report)

Craig Benkman, (Ph.D. Biology, State University of New York at Albany, 1985) Wolf Creek/Bob and Carol Berry Chair. Dr. Benkman's research interests lie within behavior, ecology, and evolution. Much of his work has focused on linking resource availability to various aspects of behavior, ecology, and evolution. We mostly study crossbills because we can quantify resource availability in the wild and we can bring food resources into the laboratory where we can ask meaningful questions with captive crossbills. It also allows us to combine our interests in behavior, plant and animal ecology, and evolution. One of my current projects addresses whether

and how a coevolutionary arms race between crossbills and lodgepole pine is causing crossbills to speciate, and another project is evaluating the conditions favoring coevolution and the overall importance of coevolution in the adaptive radiation of crossbills.

College of Business

Edward Barbier, (PhD, Birkbeck College University of London), Dept. of Economics and Finance, John S. Bugas Professor of Economics, Dr. Barbier's interests include, Environmental and Natural Resources, Development Economics, International Economics, and Economics & Ecology. He recognized internationally for his research and scholarly work in Environmental Economics. He has served as a consultant and policy analyst for a variety of national, international and non-governmental agencies, including many UN organizations, the World Bank and the OECD. He has authored over 200 peer-reviewed journal articles and book chapters, written or edited 22 books, and published in popular journals. He is consistently ranked among the top 20 cited environmental economists globally.

Timothy Mazur, (M.B.A. The George Washington University), Dept. of Management and Marketing, Bill Daniels Chair of Business Ethics,

Sherrill Shaffer, (PhD, Stanford University) Dept of Economics and Finance, John A. Guthrie Distinguished Professor of Banking and Financial Services. Dr. Shaffer is an active teacher and scholar in the College of Business. He has over 100 peer-reviewed publications, most in the area of Finance.

Larry Weatherford, (Ph.D., University of Virginia), Dept. of Management and Marketing, W. Richard Scarlett III and Margaret W. Scarlett Chair of Business Administration. Dr. Weatherford's research interests include Revenue Management for Airlines, Hotels, Rental Cars, and Cruise Lines, Forecasting, and Monte Carlo Simulation software. He teaches courses in Decision Modeling with Spreadsheets, Quantitative Methods, and Operations Management. His co-authored book "Decision Modeling with Microsoft Excel" is in its 6th Edition.

Jason Shogren, (PhD, University of Wyoming), Dept. of Economics and Finance, Stroock Professorship of Natural Resource Conservation and Management. Dr. Shogren's research interests include environmental and natural resources, public economics, and behavioral & institutional economics. He teaches courses in microeconomics, environmental economics, natural resource economics, and experimental economics. He has published well over 250 articles. In the past year, he was named a fellow of the Association of Environmental and Resource Economists (AERE), the nation's pre-eminent professional society for environmental economists and policy. He is part of UW's environmental and resources economics group that is ranked in the top 10 in the world.

Eric Johnson, Dept. of Accounting, Clara Raab Toppan Distinguished Professorship in Accounting (See WY Excellence Endowment Report)

Charles Mason, (PhD – Economics, University of California, Berkeley) Dept. of Economics and Finance, H.A. (Dave) True Jr. Chair in Petroleum and Natural Gas Economics. Dr. Mason's

research interests include environmental and natural resources, energy economics, industrial organization, and applied game theory.

He teaches courses in game theory, economics of uncertainty, dynamic optimization, environmental and resource economics, and industrial organization, and oil and gas economics. He has over 60 refereed publications, and he is part of UW's environmental and resources economics group that is ranked in the top 10 in the world.

Patrick Fleming, Roy Chamberlain Lectureship for Private Enterprise. Mr. Fleming is a former CEO of Barclay Investments. He spent 30 years working in Tokyo, Hong Kong, London and New York City, specializing in global macro- and arbitrage investing in the commodity, equity and global bond markets. He teaches energy trading and managerial finance courses to UW MBA students, and investment management to UW undergraduate students.

Michael Doherty, (M.B.A., University of Wyoming), Solomon D. Trujillo Distinguished Senior Lecturer. Michael Doherty teaches Management Information Systems, Accounting Information Systems, Governmental Accounting, and Not for Profit Accounting. He is the faculty advisor for Beta Alpha Psi.

College of Education

Allen Trent, (Ph.D. The Ohio State University 2000: Curriculum, Instruction, and Professional Development), Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education. Dr. Trent's research includes teacher education, multicultural education, arts-integrated education, qualitative and action research, and professional development. He is an active teacher; he has over 20 publications and over 50 presentations at regional and national conferences.

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)

David Whitman, (Ph.D., University of Wyoming - Mineral Engineering), H.T. Person Professorship of Engineering Education. Dr. Whitman specializes in computer-aided education. He has numerous publications, and has been the recipient of many teaching awards at the UW.

Dimitri Mavriplis, (Ph.D., 1987, Mechanical and Aerospace Engineering, Princeton University), Max Castagne Professorship in UW's College of Engineering and Applied Science. Dr. Mavriplis's research is concerned with the development of unstructured mesh methods for computational fluid dynamics, and in design optimization methods, and the efficient solution of coupled fluid-structural problems. The applications for this research include aerodynamics of commercial aircraft and business jets, and unsteady aeroelastic effects.

Jay Puckett, (Ph.D. Civil Engineering, Colorado State University), Vincent O. Smith Professorship in Engineering. Dr. Puckett has published over 100 articles and presentations related to bridge engineering. He is author of a John Wiley book, *Highway Bridge Engineering*–

Based on AASHTO LRFD, Third Edition. Dr. Puckett resigned from the UW at the end of FY2015.

Interdisciplinary

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

Norman Morrow, (Ph.D. Mineral Engineering, University of Leeds), John and Jane Wold Chair of Energy. Dr. Morrow's research covers a wide range of topics with special emphasis on understanding crude oil/brine/rock interactions, especially with respect to the effect of wettability on oil recovery. He has 185 publications and four patents resulting from his research. He was a Society of Petroleum Engineers (SPE) distinguished lecturer and twice an SPE distinguished author, and has served numerous journals in various capacities from reviewer to chairman of the editorial board. He has received numerous national and international awards and honorary professorships.

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

Harold Bergman, (Ph.D. Michigan State University, Fisheries Biology) J.E. Warren Distinguished Professorship of Energy and the Environment. Dr. Bergman has had a distinguished career at the UW. His research interests lie primarily in the area of fisheries management. He has over 100 publications, has received countless national awards, and has served on numerous national and international advisory and review panels.

College of Law

Stephen Feldman, (J.D., University of Oregon, Order of the Coif and Art. Ed., Or. L. Rev. J.S.M., Stanford University), Jerry W. Housel/Carl F. Arnold Distinguished Professorship. Stephen Feldman teaches classes in Constitutional Law and Jurisprudence and has published 5 books and over 50 articles in these fields.

Jacquelyn Bridgeman, (J.D., University of Chicago), Kepler Distinguished Professorship of Law. Jacquelyn Bridgeman teaches in the areas of Employment law, Legal Writing, Torts, and Family Law. She also teaches an undergraduate seminar on African Americans and the American Legal System. She has numerous publications and presentations in her area of expertise.

Jerry Parkinson, (J.D., University of Iowa College of Law), William T. Schwartz Professor of Law. Jerry Parkinson teaches Civil Procedure, Civil Rights, Indian Law, Sports Law, and an Education Law seminar. From 2000 to 2010 he served in a volunteer capacity as Coordinator of Appeals for the NCAA Division I Committee on Infractions, and handled 28 appeals, including 22 oral arguments, on behalf of the NCAA. Most of Professor Parkinson's scholarship has been in the education law area. His publications include two books on the law of student expulsions and suspensions and the law of teacher evaluation.

Michael C. Duff, (J.D., Harvard Law School), Centennial Distinguished Professor. Professor Duff became the Centennial Distinguished Professor of Law in 2014. Professor Duff teaches the College of Law's courses in Torts I, Labor Law, and Workers' Compensation Law. He also teaches a course on Alternative Dispute Resolution in the Workplace. He has previously taught Administrative Law and Introduction to Law at the College of Law; and has also taught Labor Law and Administrative Law as a visiting professor at the University of Denver's Sturm College of Law. Professor Duff founded the College of Law's Academic Support Program (now called the Academic Achievement Program) in 2006, and directed the program for seven years. He has published numerous articles and book chapters.

Diane Courselle, (J.D., Loyola University School of Law), Winston Howard Distinguished Professor. Courselle's primary areas of teaching and scholarship are criminal law and procedure. She directs the College of Law's Defender Aid Program, a clinical program in which third-year law students represent indigent defendants in criminal appeals and other post-conviction matters. She also teaches Criminal Law and Federal Courts, and previously has taught Criminal Adjudication, Property, Legal Writing, and a seminar on Gender and the Law. Professor Courselle is currently working on articles related to comparative sentencing policy and the ethical obligations of appointed counsel.