

UNIVERSITY OF WYOMING
Endowed Faculty Report
From the Office of the Vice President for Academic Affairs
1 OCTOBER 2016

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, 19 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 19 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 19 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 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	# Positions	College/Academic Unit	Names
Education	4	Education	Dr. Victoria Ridgeway Gillis, Dr. Cynthia Brock, Dr. Tim Slater, Vacant
UW Areas of Distinction			
Cultural Assets, Arts & Humanities	3 (full time equivalent)	Arts & Sciences Art Museum	Nam Le, Rattawut Lapcharoensap, Joy Williams, Visiting Artists-in-Residence, Lucy Lippard, Heather Bender
Life Sciences, Environmental and Natural Resource Sciences, Earth and Energy Sciences	8	Arts & Sciences Agriculture & Natural Resources Engineering & Applied Science Haub School	Dr. Ingrid Burke, Dr. Holly Ernest, Dr. William Bellamy, Dr. Xiaohong Liu, Dr. Mohammad Piri, Dr. Amy Navratil, Dr. Carlos Martinez del Rio, Dr. Fred Ogden
Professions Critical to Wyoming (other than education)	3	Law/Haub School Health Sciences (Nursing, Kinesiology and Health Promotion)	Dr. Temple Stoellinger, Dr. Diane Boyle, Dr. Christine Porter
History and Culture of the Rocky Mountain Region	1 (full time equivalent)	Arts & Sciences	Multiple individuals receive support
Other Economic and Social Challenges	4	Agriculture & Natural Resources Arts & Sciences Haub School	Dr. Steven Smutko, Dr. George Varughese, Dr. Heidi Jo Albers, Vacant (1)

FY 2016 Accomplishments of Wyoming Excellence Chairs

College of Education

(4 positions authorized; 1 vacated at end of FY 2013 with a search underway)

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 is beginning her sixth year as one of two Endowed Chairs in Literacy. Her research interest is in adolescent literacy, disciplinary literacy, and professional development. She teaches graduate courses at the masters and doctoral level and has been involved in an effort to provide international experiences for graduate and undergraduate students. She is lead researcher on the Text Message project, which provides text messages for parents of pre-school and kindergarten aged children, a project in conjunction with Stanford University. For several years, she has engaged literacy doctoral students in an ongoing research project focused on a content analysis of the major journals in the literacy field. The group has presented at the Literacy Research Association for the past three years and is scheduled to present again this year. She served as the Disciplinary Literacy Departmental Editor for the *Journal of Adolescent & Adult Literacy* from 2014-2016. Dr. Gillis is lead author for the 8th edition of *Content Area Reading and Literacy: Succeeding in Today's Diverse Classrooms*, co-authored with George Boggs (Florida State University) and Donna Alvermann (University of Georgia), which is published by Pearson.

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) Dr. Brock taught elementary, middle, and high school for nine years in Oregon, California, Florida and Michigan before returning to graduate school to earn a doctorate in educational psychology with a focus in literacy and an emphasis on second language learners. Before coming to UW, Dr. Brock was at Texas Woman's University (3 years), University of Nevada, Reno (14 years) and the University of South Australia (2 years). In 2016, Dr. Brock 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. She also worked with Dr. Dana Robertson (Executive Director of the Literacy Research Center and Clinic) and Dr. Gillis to develop collaborative research/professional learning educational partnerships in Jackson, Casper and Laramie. Dr. Brock was a featured speaker at the Spring 2016 UW College of Education ESL Conference in Casper. Drs. Brock & Gillis co-developed 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 2016, Dr. Brock also sponsored three national literacy scholars and two international scholars (in civic literacy & early childhood literacy) 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 2015 Literacy Research Association Conference. Finally, across the 2015/2016 year, Dr. Brock worked on four different grants, co-edited two books, published two journal articles, and co-wrote seven book chapters.

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 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 eight refereed journal articles, five books, and presented 19 papers at conferences between Fall 2015 and Spring 2016, 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 (currently searching)

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

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) Taught a graduate-level fiction workshop for the MFA program in Creative Writing and worked closely with a number of students on their theses. He also gave very well-attended public readings in Laramie, Gillette ([Saturday University](#)) and Jackson (Teton County Public Library), and a [stunning interview with Wyoming Public Television](#) in cooperation with the refugee project that was developed by the Wyoming Humanities Council in cooperation with the Creative Writing Program.

Rattawut Lapcharoensap, Eminent Writer-in-Residence (B.A., Cornell University; M.F.A., University of Michigan) Two of his short stories (*At the Café Lovely* and *Draft Day*) were the bases for the 2015 film, *How to Win at Checkers (Every Time)* which was screened at the 65th Berlin International Film Festival, and was selected as the Thai entry for the Best Foreign Language Film at the 88th Academy Awards. Rattawut also chaired two MFA graduate committees and served as a member on an additional committee.

Joy Williams, Eminent Writer-in-Residence (B.A., Marietta College; M.F.A., University of Iowa) received the prestigious [PEN/Malamud award](#); taught a graduate-level course for Creative Writing in Spring of 2016, and served on three MFA graduate committees.

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.

Visiting writers and MFA faculty gave public readings and lectures attended by many people across Wyoming. Eight visiting writers were sponsored or co-sponsored, including:

- 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*
- Selah Saterstrom, poet twice-nominated for the Believer Book Award
- HR Hegnauer, poet and novelist, award-winning book designer
- 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
- Leigh Selting (UW head of Theater & Dance), Guest Workshop, “Coaching the Public Reading”
- Joy Williams, reading of The Visiting Privilege; winner of the PEN/Malamud Award, nominee for the Pulitzer Prize, finalist for the National Book Award, winner of the Strauss Award from the American Academy of Arts & Letters (more above)
- 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
- Sally Kim, editorial director at Simon and Schuster and member of Asian American Writers Workshop
- MFA graduate students work at Girls’ School in Sheridan (spring and fall writing workshops)

Fine Arts Visiting Artists-in-Residence. The Departments of Art, Music and Theatre & Dance share the Wyoming Excellence Chair endowment, rotating in a 3 year cycle with a long term residency and then 2 years with smaller residency opportunities. For AY 2015-16, Theatre & Dance hosted artists distributed across the areas of Musical Theatre Performance, Dance, Design and Technology, Performance and Theatre for Young Audiences. This year the following artists were featured: **Thayne Jaspersen**, performing in the Broadway blockbuster, *Hamilton*; **Pablo Francisco Rubalcava**, who restaged Jose Limon’s work “The Winged” on UW dancers, which was showcased at the American College Dance Association National festival in Washington, DC; **Annie Cleveland**, who integrates fabric and technology in costume design; **Matthew R. Wilson**, stage combat master; and five Equity Actors and Designers for the Summer Theatre season; **Matthew Johnson**, **Dodie Montgomery**, **Jason Pasqua** and **Scott Tedmon-Jones**. Nine other artists received small residencies in Dance, Sound Design, and Theatre for Young Audiences departments. Regular visits from professional artists in all aspects of Theatre & Dance, enable to augment and enhance the education and artistic development of the students and faculty.

For AY 2015-16, the Department of Music 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 are given the opportunity to work with exceptional performers from across the country. Outstanding musicians on campus in 2015/16 included the **Boston Brass**, Swedish flutist **Goran Marcusson**; new music specialist **Evan Ziporyn** (Clarinet); jazz trumpeter, **Peter Olstad**; percussionist, **Ron Brough**; New York jazz drummer, **Chris Smith**; pianist, **Chang-xin Guan** from the China Conservatory; and Taiwanese pianist, **Chen Kwan-yu**. Soprano **Louise Toppin** was featured in the UWSO production of *Porgy and Bess* and composer **Karen Thomas** wrote a new piece for the Collegiate Chorale. Violinist **Holly Mulcahy**, Principal Flute of the Grand Teton Music Festival, performed a concert of contemporary violin music and gave a violin master class for music majors. The **Colorado Chamber Orchestra** came to campus to perform new works by UW students studying composition in the Department of Music. In addition, there were many small residencies with performers on strings, woodwinds, and voice; in addition to a workshop with music education specialist, Tami Draves. The Wyoming Excellence funds provide UW students exposure to

musicians who broaden their perspective and open their ears to the enormous possibilities that exist in the field of music performance, composition and education.

Lucy Lippard, Eminent Scholar with the Department of Art and Art History (B.A., Smith College; M.A., Institute of Fine Arts at New York University) The Department of Art was pleased to host Lucy Lippard this past fall 2015, as our **Eminent Artist in Residence**. Ms. Lippard is an internationally known writer, art critic, activist and curator. She is the author of 22 books on contemporary art, feminism, politics and place, and more recently history and archaeology and has received numerous awards from literary critics and art associations. Ms. Lippard taught a seminar to a group of students in the arts as well as other disciplines across campus. The seminar, titled: *Where We Are: How art and images contribute to the creation of community and knowledge of place*, engaged the students in discussion specifically about issues facing communities and land use in the West. Ms. Lippard invited four outside groups to present a series of lectures and panels throughout the fall. All free and open to the public, these events drew substantial audiences from campus and community. Faculty and students alike benefitted from her presence.

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 in 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 (eight positions authorized and filled)

Dr. Ingrid Burke, Wyoming Excellence Chair in Ecology (B.S. Biology, Middlebury College; Ph.D. Botany, University of Wyoming). In addition to directing the Haub School, Dr. Burke maintained a teaching and research program, and was engaged in outreach through many presentations throughout the state. Dr. Burke's advisory board and committee memberships include: the Wyoming Energy Resources Council, the Environmental Protection Agency's Scientific Advisory Board, the Sand County Foundation, chairing a National Academy of Sciences committee on Science and Landscape Sustainability, the international Faculty of 1000 associate editors, the Plank Stewardship Initiative, and the advisory board for the National Science Foundation EpSCOR program for Oklahoma. The Haub School revised the major in Environmental Systems Science, and began a new minor in Outdoor Leadership, both of which enrolled numerous students

immediately. Dr. Burke obtained a major new private endowment to support a program in private land management that will be associated with the Ruckelshaus Institute within the Haub School. 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 a Fellow of the American Association for the Advancement of Science. In 2015-16, Dr. Burke authored or co-authored three articles in peer-reviewed journals, contributed to one National Academy of Sciences report, and graduated one PhD student who received a position upon graduation with the Agricultural Research Service.

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). Professor Ernest joined the UW faculty in August of 2014, following a 12-year career as a professor at the University of California, Davis School of Veterinary Medicine. Since then, she developed a new research, teaching, and service program that involves the intersection of two exciting and emerging disciplines; Wildlife Genomics and Disease Ecology. Her work involves major groups of wildlife that are important in Wyoming and the North American West: wild ruminants, carnivores, and birds. New and continuing applied research projects representing each of these groups involve bighorn sheep, mule deer, pronghorn, mountain lions, endangered sea otters, Teton Great Gray owls, and Rocky Mountain hummingbird populations. During the past year, Dr. Ernest secured over \$1 million in funding to support her lab's research. Multi-institution collaborations were developed and expanded 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, and others. She recruited and trained postdoctoral researchers and students to work on these projects: the lab now includes 3 postdoctoral researchers who are training for leadership positions in governmental agencies and research institutions, two PhD students, one Masters' student, and an Undergraduate Wildlife Genomics laboratory Intern.

Dr. Ernest's 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. In the field of landscape genetics, she and her lab members use analyses of wildlife DNA data and Geographic Information Systems (GIS) digitized maps to understand and predict how natural and human-influenced landscape features affect the abundances and distributions of wildlife populations. Studies span broad spatial areas including multiple ecosystems and crossing state boundaries. Publications produced during the past year include papers in the journals *Proceedings of the Royal Society B: Biological Sciences*; *Journal of Mammalogy*, *Conservation Genetics Resources* (2 papers), and *Parasitology Research*.

Dr. Ernest taught a new undergraduate course in Disease Ecology and developed graduate seminars in Conservation Genomics and Population Genetics. She mentored incoming undergraduate freshmen majoring in Animal and Veterinary Sciences, as well as served on graduate student committees and the Program in Ecology steering committee, chaired a faculty search committee which successfully recruited a Veterinary Parasitologist for the Wyoming State Veterinary Laboratory, and is a faculty affiliate in the Haub School of the Environment and Natural Resources. Dr. Ernest is an Associate Editor for the journal, *Conservation Genetics*. Additionally, during the past year, she also served as major professor to two University of California, Davis PhD students and on a dissertation committee for a PhD student at University of California, Santa Cruz. Dr. Ernest traveled throughout Wyoming during the past year to give informational talks and to work with WGFD biologists and the public on wildlife issues. She developed and maintains a detailed online presence to educate the public about wildlife health issues and research: a website with over 30 informational pages, www.wildlifegenetichealth.org, and weekly twitter and Facebook postings.

Dr. William Bellamy, Professor of Practice for Advancement of the Engineering Initiative (B.S., M.S., University of Wyoming; Ph.D., Colorado State University) Dr. Bellamy was hired to assist in teaching and developing research within the Environmental Engineering Program. Currently he is Deputy Director in the [Center of Excellence in Produced Water Management](#) and teaches in the Department of Civil and Architectural Engineering. Prior to joining UW, he has 40 years' experience with organizations such as CH2M Hill, Aramco, Texaco Inc, US Army Environmental Hygiene Agency, US EPA, and adjunct positions at the Colorado State University and University of Colorado. He specializes in teaching, research and application of sustainability principles as applied to proven and developing technologies for industrial, government, and municipal clients throughout the globe. He holds awards and has been recognized by the USEPA, State Department, America Water Works Association, University of Wyoming, and has over 200 papers and presentations associated with environmental engineering and sustainability.

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 AY2015-16, 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. 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. Dr. Liu was awarded a DOE project to evaluate and improve the CESM using observations. He was also awarded a NASA project to improve the representation of dust aerosol in CESM and GEOS models using satellite observations. 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. During AY2015-16, Dr. Liu gave presentations at 20 national and international conferences including 8 invited talks and seminars, and published 16 papers in peer-reviewed journals. For the second consecutive year, he was named to the list "Highly Cited Researchers" in 2015 by Thomson-Reuters (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 eight grants, he has brought over \$2.5 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, including the Co-chair of NCAR CESM Chemistry-Climate Working Group.

Dr. Mohammad Piri, Wyoming Excellence Chair in Petroleum Engineering (M.Sc. and Ph.D. Imperial College London). 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 \$12 million. In the first nine months of 2016, Dr. Piri and members of his research group presented their research results at several conferences, and published six papers in peer-reviewed journals with many more under review and in preparation. He also received Sam D. Hakes Outstanding Graduate Research and Teaching Award, in the College of Engineering

and Applied Science. He is currently the Director of Hess Digital Rock Physics Laboratory. 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 early 2017. In 2016, he obtained two more large grants funded by Saudi Aramco and Hess Corporation totaling \$1,400,000.

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. In February 2016, Dr. Navratil and Brian Cherrington submitted a grant on the epigenetic regulation of fertility to the NIH that scored in the 19th percentile. They are extremely close to the pay line and are well positioned for resubmitting their grant this November. Their research group has also published three papers for FY2016. Their work addressing the role of the actin cytoskeleton in reproduction was selected for the cover of *Endocrinology*, which is one of the premier journals in their field. Dr. Navratil's post-doctoral associate and Ph.D. student both presented research at the highly prestigious Endocrine Society meeting in Boston, MA. Their work was so well received that they both were recipients of Early Career Forum Awards. Her Ph.D. student was also awarded an INBRE graduate research assistantship for her research excellence. Dr. Navratil was selected by undergraduate students for the College of Arts and Sciences Top Ten Teacher award.

Dr. 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 also maintains active research and teaching programs. In 2016 he has co-authored 4 peer-reviewed publications. His h-factor is 53, 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 continue to develop 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 Distinguished Chair is partially supported with Wyoming Excellence funds through FY2017. During the 2015-2016 academic year, Professor Ogden was on sabbatical leave. During his 12-month sabbatical leave he served in the position of Special Adviser to the Director, National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), Office of Water Prediction (OWP) at the U.S. National Water Center in Tuscaloosa, Alabama. He and the staff he supervises at U.W. are assisting OWP in developing a new generation of hydrological models that will enable nested hyper-resolution hydrological simulations at the scale of the continental U.S. with total funding to date of \$659,000 to the University of Wyoming. This advance in hydrological modeling represents a continuation of the development done during the \$2.3 million NSF-EPSCoR funded cyberinfrastructure project entitled CI-WATER that Dr. Ogden led from 2011-2014. Amongst the funding to the CI-WATER project was \$1.0M that purchased the initial phase of the University of Wyoming Advanced Research Computing Cluster (ARCC). Dr. Ogden is the lead investigator of an NSF- Water, Sustainability, and Climate project in the Panama Canal Watershed with a total budget of \$3.2 million, of which \$1.0 million are being spent in support of research activities at the University of Wyoming. Dr. Ogden led the

discovery of the finite water-content method for calculating the flow of water through unsaturated soils. This discovery represents the first new fundamental solution of this problem discovered since L.A. Richards developed the equation that bears his name in 1931. The paper describing this method was selected by the Early Career Hydrogeologists Network of the International Association of Hydrogeologists (IAH) to receive an award for the “Coolest Paper published in 2015” in the field of hydrogeology. Dr. Ogden will receive the award and deliver an invited lecture on the topic at the IAH annual conference in Montpellier, France, in late Sept. 2016.

As an internationally recognized expertise regarding hydrological modeling, Dr. Ogden provides education on this topic to students enrolled in his courses from across the U.W. campus. In 2015-16, he contributed to four peer-review journal publications and a led writing of a chapter on runoff generation that will appear in the 2nd edition of the *Handbook of Applied Hydrology*, edited by Vijay Singh and published by McGraw-Hill. Dr. Ogden’s publications are having global impact. For instance, in the fall of 2015 he performed a study of the effects of flooding by Tropical Storm Erika on the Caribbean Island nation of Dominica. That study led to a report that provided guidance to the government of Dominica that will help them to replace damaged bridges with more resilient designs. That report was revised, submitted, and accepted as a peer-review paper that describes flooding in a tropical island setting due to extreme rainfall.

**Professions Critical to the State
(3 positions allocated and filled in the Colleges of Law and Health Sciences).**

Temple Stoellinger, Law (B.S. Environment and Natural Resources and Communications, University of Wyoming; J.D. University of Wyoming College of Law). Professor 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 2015-2016 academic year, she continued to work with the Wyoming’s Attorney General’s Office as a co-faculty supervisor in the College of Law’s 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 - Water and Natural Resource Division. It 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. She also organized the Third 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 2015 conference was attended by 250+ attendees, sponsored by major regional law firms, and covered topics ranging from sage grouse to oil and gas air quality emissions. Governor Dave Freudenthal was the conference MC again last year and BP CEO for the Lower 48 Dave Lawler was the keynote speaker. The full agenda and video recordings of last year’s conference can be found at: <http://www.uwyo.edu/ser/conferences/upcoming-events/law-conf-2015.html>.

In addition to teaching/managing the EENR Clinic, Professor Stoellinger teaches ENR 4750/5750 (Environmental and Natural Resources Law and Policy; 3 credits), ENR 4900 (Environmental Assessments; 3 credits). She is also the faculty supervisor for the Davis and Cannon Natural Resources Moot Court Competition and the coach of UW’s national energy moot court team. She is also the primary advisor for the Haub School’s JD/MA program – a program that allows law students to receive a master’s degree in environment and natural resources from the Haub School concurrently with their law degree. 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. In 2015/2016 she worked

with Dr. Tex Taylor on a report for Governor Mead's Office, analyzing the economic impact of a potential listing of the sage-grouse as an endangered species. She was also the lead author on a paper with two other colleagues analyzing the impact of social cost of carbon analysis on western public lands NEPA projects. Her other scholarship for the year includes a piece analyzing the Wyoming Recreational Safety Act and another on Wyoming's Data Trespass Statute. Over the summer she wrote a law review article on how to increase state involvement in the implementation of the Endangered Species Act and will present this paper at the Vermont Environmental Law Colloquium this fall. Professor Stoellinger has also been working on a project with the United States Geological Survey, assisting the Vietnamese government with a review of its biodiversity conservation law.

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 3 research papers. Two of the papers were about nursing work environments, one of which was a result of funding from the Wyoming IDEa Network of Biomedical Research Excellence; NIH, NCCR & NIGMS for the development of a novel composite quality performance indicator of pressure ulcers and falls. She also has 2 papers in review. Her research team completed the research funded by the Competency and Credentialing Institute on the relationship between national nursing specialty certification and surgical site infections. She is Co-Chair Appointee of the American Academy of Nursing's Expert Panel on Quality Health Care. Dr. Boyle 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 mentors a junior faculty member who has funding from the Wyoming INBRE and began service on the INBRE Statewide Steering Committee. Based on her work she was awarded the CHS Outstanding Researcher Award for 2016.

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). In the 2015-2016 year, Dr. Porter's action research has included entering the 6th and final year of her national *Food Dignity* collaboration, funded with \$5 million from USDA. Three years after UW's accomplishment in launching a sustainability minor as part of that project, Cornell University has caught up and launched their version as well. Dr. Porter had five publications this year, including one co-authored with a UW graduate student in a top public health journal about [how productive Wyoming gardeners](#) are. The team is now working on dozens of papers and book chapters, as well as a new website and mini-documentaries, to publish in the coming two years.

The *Gardens for Health & Healing* partnership with Feeding Laramie Valley (FLV) finished the second of three pilot years with UW NIH INBRE support, gathering data on how home gardening might improve outcomes for people struggling with multiple chronic diseases. Porter has also led a successful first year of the NIH-funded *Growing Resilience* project, which is a randomized controlled trial of the health impacts of gardens with 100 Eastern Shoshone and Northern Arapaho families. These projects, collectively, created the equivalent of 6 full-time jobs in Wyoming over the year, including two research scientists under her supervision. Her work on community-driven food systems to deliver food security for current and future generations continues to garner media coverage, including being profiled in [Cornell University's alumni magazine](#) this year and appearing in Wyoming Public Radio's *Open Spaces* series.

Dr. Porter has also been developing new partnerships for improving STEM education pipelines from pre-K to University with Native American communities in Wind River Indian Reservation (WRIR). Though her team's submission to NSF for pilot project support was not funded this year, she and her partners are part of UW's proposal to NSF for the next five-year EPSCoR grant and they are investigating additional opportunities to garner support their proposed strategies.

In teaching, Dr. Porter continues to bring what she learns in the field to the classroom through courses in community and public health and in food systems and health. She supports her students in matching the coursework with their own experiences, relationships and interests to help foster health in Wyoming communities and beyond. For example, one student has founded a community garden in Torrington and others successfully advocated and arranged for sharing unsold food from UW dining services with the Laramie Soup Kitchen. She also graduated four masters students, three of whom whose studies were supported with external funding.

Beyond the action components of her research programs, Dr. Porter's service ranged from advising UW faculty about securing grant funding or collaborating with Wind River Indian Reservation partners to helping the Association of Public and Land Grant Universities make recommendations about how institutions such as UW can help ensure our great grandchildren will have enough to eat.

History and Culture of the Rocky Mountain West

American Indian Studies. During fiscal year 2015-2016, American Indian Studies used its Wyoming Excellence Fund in Higher Education for the following: Visiting Internal Scholar. **Dr. Colin Samson**, Professor of Sociology and Head of American Studies at University of Essex Dr. Samson taught two courses during the fall semester 2015: *Indigenous Encounters with Europeans* and *International Indigenous Human Rights*. Visiting Lecturer. **Nicky Michaels**, a member of the Delaware Nation, taught four courses for American Indian Studies over the course of academic year 2015-16 including American Indian Women and American Indian History. Post Doctoral Fellow. The American Indian Studies Program (AIST) hired **Dr. Torivio Fodder** for a yearlong 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. Dr. Fodder taught four courses (in such varying subjects as law, tribal governments, and American Indian Studies) for AIST. Winter in the Blood Film Premier. *Winter in the Blood* is an award winning film starring Chaske Spencer and Gary Farmer based on a novel by famed American Indian novelist James Welch. AIST held the Wyoming premier of the film in October 2015 and brought both Mr. Spencer and Mr. Farmer to campus, and the directors of the film as well. Several hundred people were in attendance. American Indian Music Festival. AIST held an Indigenous music festival in September 2015 on the mall of Fraternity/Sorority Row. The bands included *Gary Farmer and the Troublemakers* and the renowned Crow Indian bluesman *Cary Morin*.

Other Economic and Social Challenges (4 positions allocated, three filled).

Community economic development and planning (search ongoing in FY 2016). 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 2016, Dr. Smutko assisted the Western Governors Association and the Office of Wyoming Governor Matt Mead to design and facilitate robust, bipartisan conversations to begin to develop stakeholder-driven recommendations for improvements to state species conservation activities and the ESA, as well as to suggest pathways for states to operate as authentic partners in the Act's implementation. Dr. Smutko also worked with the Wyoming County Commissioners Association to develop collaboration tools for the Wyoming Public Lands Initiative, a project to develop a new Wyoming wilderness bill through place-based multi-party negotiations among representatives from agriculture, conservation, motorized and non-motorized recreation, energy development, and local government. In the summer of 2016, he began work with the US Forest Service on the Medicine Bow National Forest and Wyoming Pathways to enhance public-private partnerships for the improvement of the trail system in the Pole Mountain Unit east of Laramie. Dr. Smutko involves graduate and undergraduate students in these projects to give them hands-on experience in policy development and implementation in the natural resources arena.

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 2016 conference in Austin, Texas.

Dr. George Varughese, Global and Area Studies Visiting Scholar: (B.S., University of Delhi, M.B.A., Indian State University; Ph.D., Indiana University-Bloomington) Dr. George Varughese of the Asia Foundation joined us in 2015-16. Dr. Varughese is currently the country representative of the Asia Foundation in Nepal, and previously served as country representative in Afghanistan. The Asia Foundation is the largest non-government organization involved in development, peace processes and political support for democratization in Asia and is based in San Francisco. While in residence at UW, Dr. Varughese taught a dual-listed undergraduate/ graduate class on the Political Economy of Development each semester. He gave fourteen public talks, mostly on Nepal and its current political reconstruction, in Laramie, Powell, Casper and at the University of Colorado, Boulder. Outside of campus and community colleges, he spoke to the American Foreign Relations Society in Casper and consulted with the White House and National Security Council in Washington, D.C. and with the Governor's office in Cheyenne on Asian security and trade matters.

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 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. During the last year, her research has focused on designing conservation reserve networks in the presence of spreading risks such as large fires and pest outbreaks; developing systems of marine protected areas that reflect fish dispersal, fishing location choices, rural poverty, and limited enforcement budgets, with examples in Tanzania and Costa Rica; and constructing and analyzing economic decision tools for managing invasive species over space and time. In addition, Dr. Albers undertook outreach, capacity-building, and mentoring activities through institutes in Costa Rica, China, and Tanzania; the Committee on the Status of Women in the Economics Profession; many individual interactions extending worldwide; and an array of UW graduate students from 4 different departments on campus. With guidance from western stakeholders, Dr. Albers developed and taught an ENR course on Conservation Economics that provided students with concrete policy analysis and decisions tools for resource management decisions including those made under uncertainty; and developed and taught a PhD level course in spatial natural resource economics. 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 became a member of the advisory board for the journal *AMBIO: A Journal of the Human Environment* and gave presentations at two national and two international conferences during the 2015-2016 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, 2015 is \$4.7 million. Total expenditures for the 2016 fiscal year are currently budgeted at \$4.5 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 19 allocated positions are filled. Not shown are projected costs as the program continues. 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, 2015	\$4,724,271.78
Advertising and Recruitment	\$26,073.29
Salaries and Benefits	\$3,512,420.70
Support	\$855,345.34
Equipment/facilities	\$100,998.95
Income (distribution from state and interest)	\$3,841,171.96
Balance June 30, 2016	\$4,070,605.46

Estimated Annual Budgets for Nineteen Permanently Funded Positions

FY 2017	FY 2018
\$3,622,000	\$3,720,433

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. The 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 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.

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

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 courses in the MBA program and 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. Maohong Fan, SER 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 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 Associate 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). 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.

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.

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

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.

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 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. In 2016 he published a paper in the journal *The American Naturalist* associated with a career research award he had received. This article weaves a story of evolution, ecology, and the threats to a crossbill species he and his students have been studying, and establishes the storyline for a book that Benkman will write synthesizing his research over the last 35 years. This will complement a more popular book that a writer and journalist plans to write about Benkman's

research. Another paper published this year with a former graduate student, who is now an assistant professor at the University of Nevada, uses genomic analyses to further understand the evolution of North American crossbills. This and related work on the crossbill mentioned above is the subject of an article to appear this fall in *The New Yorker*, and in some other media outlets. Another paper Benkman published included junior authorship by a former graduate student (now a post-doctoral researcher in France) and by a UW undergraduate who began graduate school in New York this fall.

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*. Tim Mazur teaches Business Ethics and serves as advisor for Alpha Kappa Psi. He engages heavily with the business community, educational institutions, Wyoming community colleges, and the Daniels Fund Ethics Consortium.

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. Dr. Shaffer retired from UW in FY16.

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. He is 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, (PhD – Accounting, Arizona State University) Dept. of Accounting, *Clara Raab Toppan Distinguished Professor of Accounting*. Dr. Johnson's research interests include corporate governance, auditing,

fraud and ethics. He teaches master level courses in managerial accounting, and management fraud, and accounting ethics.

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

Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education. Vacant

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., 1986, Pennsylvania State University), *H.T. Person Professorship of Engineering Education*. Dr. Coon specializes in active learning. His research focuses on structure-processing-property relationships in advanced engineering materials, mechanical behavior, chemical and thermal stability in harsh environments, stochastic modeling of material behavior, and application of continuous process improvement to materials production.

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.

Jonathan Brant, (Ph.D., 2003, Environmental Engineering, University of Nevada, Reno 2003), *Vincent O. Smith Professorship in Engineering*. Dr. Brant's research focuses on the development and implementation of innovative physicochemical separation processes for water and industrial wastewater treatment. Oil and natural gas produced water research has been the center point of Dr. Brant's research since 2008 in addition to work on

the optimization of membrane processes (MF, UF, NF, and RO) in terms of energy consumption, mitigation of membrane fouling, and concentrate management.

John Pierre, (Ph.D., 1992, Electrical Engineering, 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. His areas of expertise include Signal Processing, Statistical Signal Processing, Spectral Estimation, System Identification with applications to Power System Analysis. Much of his research, including work done with graduate students, focuses on application of statistical signal processing techniques and system identification methods to power system identification.

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)

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.

John and Jane Wold Chair of Energy - vacant

College of Law

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.

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.

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.

Sam Kalen has been the *Winston S. Howard Distinguished Professor* since October 1, 2014. Professor 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. He has published numerous law review articles, one of which was cited in a Supreme Court opinion. Professor Kalen also is active in the American Bar Association's Section on Environment, Energy, and Resources, having served as a Chair of two committees and Vice-Chair on several committees.

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. Professor Parkinson retired in May, 2016.

Dee Pridgen has held the *Carl M. Williams Professor of Law & Social Responsibility* since July 1, 2008. She teaches or has taught classes in Consumer Protection, Contracts, Antitrust, Communications Law, Constitutional Law, Internet Law and Payment Systems. Dee Pridgen's publications include two treatises aimed at practicing attorneys, *Consumer Protection and the Law*, and *Consumer Credit and the Law*, coauthored with Richard M. Alderman both published by Thomson/Reuters, and both of which are updated yearly. She is also a coauthor of a law school casebook entitled *Consumer Law: Cases and Materials* (4th ed. 2013; West Academic). She has written articles and reports on consumer law, and has given presentations at international consumer law meetings in Helsinki, Finland and Auckland, New Zealand.

Elaine Welle is the *Carl M. Williams Professor of Law & Ethics* since December 1, 2014. Professor Welle teaches Contracts, Secured Transactions, Securities Regulation and Bankruptcy. Professor 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. Her scholarship and current works for publication focus on commercial, corporate and securities law topics. Professor Welle has served as advisor, consultant and expert witness for the United States Attorney, the Colorado Securities Commission, and the Colorado Attorney General's Office.