University of Wyoming Budget Committee Meeting

FY23-FY24 Biennium Budget

Wednesday, July 28, 2021

1:00-3:30

- 1. University of Wyoming's submission to American Rescue Plan (ARP)
 - a. Attachment #1 (ARP funding request)
 - b. Attachment #2 (UW's submission proposals for the future)
- 2. Wyoming Innovation Partnership response to American Rescue Plan (ARP)
 - a. Attachment #3 (WIP funding request to ARP)
 - b. Attachment #4 (Wyoming Innovation Partnership ARP final)
- 3. 2023-2024 Biennium Governor's Budget Instructions Letter
 - a. Attachment #5 (2023-2024 Governors Biennial Budget Instructions)
- 4. 2023-2024 Biennium Operating Budget Process
- 5. 2023-2024 Biennium Operating Budget Exception Requests
 - a. Attachment #6 (2023-2024 Biennium Budget Exception Requests)
- 6. 2023-2024 Biennium Capital Construction Request
 - a. Attachment #7 (2023-2024 state Cap Con)
- 7. Spending from HEERF I, HEERF II, and HEERF III
 - a. Attachment #8 (HEERF Spending Update)

Attachment #1

University of Wyoming's Submission for:

Proposals for the Future: Wyoming's Response to the American Rescue Plan (ARP)

	Page(s)	Request	uw	Other Partners	TOTAL
Foundations for Long-Term STEM and					
Technology-Based Economc Development for	1-11		\$ 85,600,000	\$ -	\$ 85,600,000
Wyoming					
		Invest in Tier I Engineering, Computational Infrastructure, and Data	\$ 25,000,000	\$ -	\$ 25,000,000
	2-4	Science (also included in Attachment #3 "WIP request to ARP")	\$ 25,000,000		\$ 25,000,000
	5	Center for Entrepreneurship and Innovation (CEI) (also included in	\$ 20,000,000	\$ -	\$ 20,000,000
	,	Attachment #3 "WIP request to ARP")			
	6-7	Develop a Concentration of World-Class Talent	\$ 20,000,000		\$ 20,000,000
	8-9	Wyoming Data Hub	\$ 8,600,000	\$ -	\$ 8,600,000
	10-11	Transform and Enhance Undergraduate STEM Education to Build the	\$ 12,000,000	\$ -	\$ 12,000,000
	10 11	Workforce of the Future	7 12,000,000	7	7 12,000,000
Growing Students and Teacher Success	12-16		\$ 12,000,000		\$ 12,000,000
	12-14	Substantial Student Learning Loss	\$ 7,500,000	\$ -	\$ 7,500,000
		Urgent Need for Teacher Preparation, Professional Development,			
	15-16	Training, and Support Programs to Address Substantial Student Learning	\$ 4,500,000	\$ -	\$ 4,500,000
		Loss			
Healthcare for a Thriving Economy	17-19		\$ 10,500,000	\$ -	\$ 10,500,000
,	18-19	Lack of Access to Healthcare	\$ 10,500,000		\$ 10,500,000
			, ,	1	, ,
Agriculture and the Environment	20-25		\$ 107,662,000	\$ -	\$ 107,662,000
	21	AMK Ranch	\$ 12,000,000	\$ -	\$ 12,000,000
	22	Agriculture Research and Extension Renovation	\$ 84,462,000		\$ 84,462,000
	23-24	Ranch of the Future — Rangeland Systems and Ranch Management	\$ 10,000,000		\$ 10,000,000
	25	Wyoming Outdoor Recreation, Tourism, and Hospitality Center	\$ 1,200,000	\$ -	\$ 1,200,000
		·			
Board of Trustees Approved Capital	26		\$ 99,300,000	\$ -	\$ 99,300,000
Investments	20		3 33,300,000		\$ 33,500,000
	27	Law School Building Expansion and Renovation	\$ 25,000,000	\$ -	\$ 25,000,000
	28	War Memorial Stadium and Corbett Natatorium	\$ 74,300,000	\$ -	\$ 74,300,000
TOTAL	<u> </u>		\$ 315,062,000	\$ -	\$ 315,062,000



University of Wyoming's Submission for:

Proposals for the Future: Wyoming's Response to the American Rescue Plan (ARP)

Submitted to Governor Mark Gordon's Office

Foundations for Long-Term STEM and Technology-Based Economic Development for Wyoming

Thriving Long-Term: Invest in Tier 1 Engineering, Computational Infrastructure, and Data Science

Define Opportunity:

Wyoming has consistently sought to contribute to its future by investing in the education and training of its citizens through the University of Wyoming. Recent investments, including the Tier 1 Engineering Initiative, Science Initiative, and Trustee's Education Initiative, along with capital investments in facilities provide a firm basis that focuses on the importance of Science, Technology, Engineering and Mathematics (STEM).

However, investments in the Tier 1 Engineering Initiative, computational infrastructure, and data science are urgently needed in order to stimulate and grow Wyoming's economy through the creation of new talent and research in computing and data across Wyoming's higher education institutions, including new K-12 computer science initiatives to sustain and grow talent into the future.

How do you know this is an opportunity:

In the past decade, computing has become an increasingly crucial tool for research, for our graduates, and for almost all sectors of the economy. The University of Wyoming has responded by hiring faculty who use computing in their discipline, establishing programs like the Data Science Center and the Advanced Research Computing Center (ARCC), and by developing a partnership with the University Cooperation for Atmospheric Research and its NSF-funded National Center for Atmospheric Research (NCAR) around the NCAR-Wyoming Supercomputer Center (NWSC). These have supported new modes of faculty research and increased awareness of computing across the campus.

Cause:

Today, computing's impact is found in virtually every discipline, and simulation and modeling are more important than ever, but are joined by new data science technologies like artificial intelligence, machine learning and blockchain that are starting to transform every academic discipline, every industry, and every aspect of modern society. Access to world-class research, infrastructure and workforce training in computing and data is therefore critical for Wyoming business', its citizens, and for UW's students.

Effects:

A focus around "Computing for All" will develop close relationships and new programs with Wyoming community colleges, K-12 schools, state agencies and other community stake holders and will position the University as a regional leader in computing and data with national impact and global reach.

Furthermore, investments in the Tier 1 Engineering Initiative, computational infrastructure, and data science will coalesce around the establishment of a School of Computing (SoC) at the University of Wyoming. The SoC will serve as an engine for the Wyoming Innovation Network (WIN) to build out training and education programs for UW and community college students in big data, artificial intelligence (AI), and their applications. A corporate partners program will

develop close research connections to Wyoming industries and work with the university's new Center for Entrepreneurship and Innovation to build a talent pipeline from K-12 to the workforce.

Faculty, staff and students will have access to supported computing and data infrastructure in all disciplines to facilitate new research and education opportunities. Faculty will be more competitive for external research funding. More research involving data science and AI will be catalyzed. New activities to increase involvement with WIN and private sector partners will be possible.

Key metrics:

Increased state-wide higher education enrollments in computer/data science courses. Increased state-wide higher education graduates with a computer/data science credential. Increased percentage of state's K-12 educators who have received professional development/training in teaching coding/computer science. Increased corporate partnerships with Wyoming businesses focused on data science solutions and economic development and growth. Increased external funding involving computing and data. Increased educational offering for students involving use of modern cyberinfrastructure. Increased use of national computing and data cyberinfrastructure.

Funding Estimate:

\$25,000,000 Total:

- \$10,000,000 is for one-time critical infrastructure needs for UW's Advanced Research Computing Center (ARCC). Urgent investment is needed to update ARCCs compute/access nodes, network switches, backup storage and power/cooling equipment. New investment is needed to increase the GPU footprint to enable AI/data science research and applications and provide clusters to support WIN initiatives such as the provision of statewide software engineering education and research projects with the private sector.
- \$5,000,000 is for the Wyoming Innovation Network (WIN) training program that will develop state-wide computer/data science boot camps, specialized coursework, and teacher/lecturer professional development.
- \$3,000,000 is for start-up funds for six new faculty (\$500,000 per faculty start-up fund) to establish research programs (e.g., equipment, graduate students, post-doctoral fellows, etc.) with \$300,000 of each start-up fund invested in shared computing infrastructure to support their research (e.g., GPUs, unmanned aircraft, sensors, etc.).
- \$2,000,000 is for salary and support for visiting faculty scholars to bring immediate expertise in critical areas of need to Wyoming.
- \$3,000,000 is for five research scientists/faculty to seed the Corporate Partners Program and establish large-scale research projects. Each of these research scientists/faculty will be expected to eventually bring in substantial external funding to cover their salary and/or research students (e.g., each scientist will be responsible for securing approximately \$2,000,000 per year in external funds).
- \$2,000,000 is for graduate research students who will provide core research workforce, develop technology transfer from faculty research, and contribute to education and training.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, in addition to the significant one-time computational infrastructure expenditures, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Center for Entrepreneurship and Innovation (CEI)

Define Opportunity:

Wyoming's higher education entrepreneurship and innovation assets are not coordinated, efficient, nor fully aligned with the state's priority economic sectors and workforce development/retention needs. The CEI serves as the coordinating entity to facilitate entrepreneurship and innovation activities across UW and Wyoming's community colleges in collaboration with proposed UW School of Computing and in support of the Wyoming Innovation Network (WIN). The center is a state-wide interdisciplinary integrator for programs that have potential for supporting the state's priority economic sectors in addition to activating new business sectors and supporting state workforce objectives.

How do you know this is an opportunity:

Active discussions with various stakeholder groups, to include current entrepreneurs, small business owners, investors, and educators, combined with findings in recent state economic diversification studies, have identified Wyoming as having an underdeveloped entrepreneurial ecosystem. The current system is not coordinated and inefficient, making it difficult to fully engage available resources that support new business creation in addition to assisting the state's existing business communities. Entrepreneurs employ more than 50% of the private workforce, and generate more than half of the nation's GDP.

Cause:

Not having a centralized, coordinated, and efficiently delivered model that supports state-wide entrepreneurship and innovation.

Effects:

Challenges attracting and retaining the creative, educated, and entrepreneurial populations that typically support these ecosystems.

Key Metrics:

New business starts, existing business growth/retention, business recruitment, increased access to capital, new job creation

Available Funding:

None. \$20,000,000 programmatic start-up investment.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Develop a Concentration of World-Class Talent

Define Opportunity:

Recruit human capital talent and expertise to Wyoming that will develop a concentration of world-class faculty and staff.

How do you know this is an opportunity:

Exceptional faculty and staff talent directly supports the application of knowledge – a contribution to the state and its communities that the university is uniquely positioned to make. By attracting high-quality faculty and staff talent and expertise to the state, UW has the distinct ability to put knowledge to work for the direct benefit of Wyoming and its citizens – whether that is development of economic opportunities or helping solve challenges and public policy issues.

Cause:

Recruiting outstanding faculty and staff talent across all market sectors is important to the future of the state's economy, including healthcare, agriculture, advanced manufacturing, energy, the creative economy, hospitality and tourism, technology-based economic development (e.g., blockchain), and others, and deploying the knowledge and expertise of the recruited talent throughout the state via the Wyoming Innovation Network (WIN).

Effects:

Developing a concentration of world-class faculty and staff talent in Wyoming and distributing access to that talent through the Wyoming Innovation Network (WIN) will provide the state with the knowledge and intellectual capital needed to address the panoply of problems and opportunities it is facing today or will face tomorrow in areas such as education and the economy; agriculture and food; rural healthcare; data and computational science; hospitality and tourism; financial technology; community revitalization and renewal; children, youth, and families; and the environment, energy, and natural resources.

Key Metrics:

External research funding, patent and intellectual property, graduate students and post-doctoral fellows ("post-docs"), long-term partnerships with top-tier universities, national laboratories, and corporations, research publications, faculty membership in national academies.

Available Funding:

Very little to none. \$20,000,000 total over three years. \$15M of the \$20M total would be for one-time start-up funds to recruit outstanding faculty talent in areas of technology development and data science with application to different markets and academic disciplines in areas that align with the economic needs of the state (the on-going salaries of recruited faculty would be covered by other UW funds). \$5M of the \$20M total would be funding for visiting faculty and staff with expertise in critical areas/disciplines that need to grow in the state. This high-caliber visiting talent would come for periods of a few months to a year with the purpose of catalyzing new programs and external partnerships at UW and across the Wyoming Innovation Network (WIN) that will drive economic growth.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs like visiting faculty and staff as described above; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Wyoming Data Hub

Define Opportunity:

Create a Wyoming Data Hub with Flagship, High Value Datasets.

How do you know this is an opportunity:

Data is an important asset and properly stewarded is critical to advance disciplinary and interdisciplinary high impact research, enrich student learning, facilitate private-public partnerships, and improve institutional operations. A new Wyoming Data Hub will support students, faculty, administration (at UW and at Wyoming's Community Colleges), and state agencies utilization of data analytic tools and Wyoming-centric data sets to expand the frontiers of knowledge, analyze and propose solutions to problems of interest, and inform policy decisions. The Hub will provide services for data to be highly searchable and accessible, enabling innovation around reusable and sharable data. The Hub will support technology-based approaches to specific important areas including biodiversity, agriculture, energy, health sciences and advanced manufacturing. The Hub will provide an essential research tool for School of Computing faculty and students to develop, evaluation and utilize new computational and analytic tools to mine and synthesize data. The Data Hub will support sovereignty of data, e.g. it will support working with the Wind River communities to enable their usage of Wyoming data protecting their agency over the sovereignty of their data.

Initial important, high value data sets that will drive the development and broad use of the Data Hub will be created and shared through new, unique instruments for the Science Initiative. This activity will implement an open culture for data sharing and data innovation among its inaugural faculty and student programs and with Wyoming Community Colleges, state agencies and industries. These instruments include light/electron microscopes, CT scanners, ion beams, mass-spectrometers, spectrographs, and high throughput phenotyping equipment. The instrumentation and creation of shared data sets will include opportunities for students across the state to be trained in state-of-the-art analysis and data techniques.

Cause:

Universities that are implementing data initiatives are capitalizing on the data resources, culture and services in place. Support for data science and data policy at an institutional level is important for competitive external funding which now requires data management plans, and for facilitating research and private industry collaboration. It is important that Wyoming is able to steward its own high value data to encourage research and education that focuses on state needs.

Effects:

Wyoming-centric data will be more integrated into student classroom and experiential learning activities. More interdisciplinary research on critical Wyoming issues. Catalyzing of AI activities which require training data sets. New innovations and entrepreneurship made possible from accessible data.

Key metrics:

Increased external funding involving data science. Increased educational offerings using Wyoming specific data. New private-public research partnerships based on data.

Available funding:

Total: \$8.6M (Data Hub \$3,000,000 over 3 years for infrastructure and management, \$5,600,000 for Science Initiative instrumentation and creation of flagship data sets). NSF provides competitive funding for the more novel parts of campus computing infrastructure through programs such as CC* (up to \$400K) and MRI (novel instrumentation, highly competitive, up to \$4M). To be competitive for these programs requires a campus cyberinfrastructure plan and existing core infrastructure.

Notes:

Data Hub will be ramped up over three years, funds to sustain administrative support will need to be identified to sustain the effort potentially from ICR funds from new enabled research. Funds to create new digital services will be integrated into research project requests.

Transform and Enhance Undergraduate STEM Education to Build the Workforce of the Future

Define Opportunity:

Undergraduate student experiential STEM learning and research.

How do you know this is an opportunity:

The Science Initiative provides the scaffolding and opportunity to fundamentally transform undergraduate education through research at UW. Involving students from broad disciplines in interdisciplinary research and learning is essential for the most important issues in Wyoming including invasive species, human health and rural health disparities, water management, animal migration, agriculture and their connection climate changes and economic development. These pressing societal needs in Wyoming can only be solved through fundamental research in data-intensive work that provides predictive power from atoms to whole organisms and the systems in which they live. This research and student training requires controlled conditions for organisms, instruments for imaging traits from atoms to whole organisms, equipment for field manipulations to test how controlled conditions translate, and computing infrastructure to analyze data and control instrumentation from anywhere in the state and make testable predictions through models. Through team-based research projects and partnerships with data-intensive industry, students will also be trained in key new skills needed for careers that will build Wyoming's economy.

The Science Initiative will provide modern research spaces and collaboration spaces for faculty-led research teams conducting new and convergent studies in the life sciences. Fundamentally designed to be interdisciplinary, collaborative and student focused, the building will catalyze new innovations between biologists, botanists, geologists and other disciplines. The facility will enable science majors of all disciplines – including future science teachers – to participate in experiential learning, with a focus on undergraduate research experiences, mentoring and active learning techniques that are all important enablers for student success.

Building out the Student Collaborative Research, Outreach and Learning Laboratory (SCROLL) in unfinished space in the SI will maximize the impact on student learning in the SI research environment. SCROLL will feature student lab spaces, computing areas, collaborative breakout rooms, active learning training spaces and multi-use spaces.

To provide hands-on experiences for undergraduate research in the life sciences, we will closely partner with and build on the success and groundwork laid by the NIH INBRE Research and Education network and the NSF EPSCOR. INBRE has already worked to develop a successful network of student research experiences across the community colleges leading students into advanced degrees in biomedical and applied health sciences. Additional SI infrastructure and programmatic support will support broad undergraduate research and expose students to entrepreneurship and innovation training and networks.

Cause:

Opportunity to provide transformational STEM learning and research experiences for undergraduates.

Effects:

The interdisciplinary Science Initiative building will catalyze and support STEM research and active student learning, touching many departments across the university, and addressing critical Wyoming issues.

Key Metrics:

Undergraduate research experiences, undergraduate entrepreneurship experiences, STEM majors, student success, retention, and graduation.

Available Funding:

Total funding \$12M. An NIH proposal has been submitted to fund \$6M for research infrastructure and shared lab.

Notes:

Assumes computing available at ARCC, NWSC. One time cost for SCROLL buildout and infrastructure to support undergraduate research. Alternative sources for programmatic costs will need to be developed.

Growing Students and Teacher Success

Substantial Student Learning Loss

Define Problem:

The pandemic has set back learning for all students. The historic shutdown of US schools in the spring of 2020 as well as the prominence of remote learning throughout the entire 2020-2021 academic year has resulted in significant learning loss for students at all levels of the K-16+ education system.

How do you know this is a problem:

Educators, parents, and students know firsthand the high cost of this prolonged period of remote learning, from rising rates of depression and anxiety to the loss of student learning. The World Bank has called the COVID-19 pandemic, "the worst crisis to education and learning in a century." Early research from the Brookings Institute estimates that the school shutdown during the spring of 2020 resulted in students beginning the fall 2020 school year with roughly 70% of the learning gains in reading relative to a typical school year, and even smaller learning gains in mathematics from the previous year, returning with less than 50% of typical gains.

Cause:

The COVID-19 pandemic has exacerbated the learning crisis, and the impact on the human capital of this generation of learners is likely to be long-lasting. K-12 children are particularly at risk since the pandemic is exacerbating existing disparities in nutrition, health, and stimulation, and services to support these students are often overlooked in the pandemic response. Furthermore, the unique nature of the pandemic places parents as first-line responders for children's learning – which places a burden on all families, but especially the most vulnerable.

Effects:

The cohort of rising high school sophomores, juniors, and seniors as well as university first-year and sophomore students for the 2021-2022 academic year will likely be the least prepared (academically, mentally, and socially) generation of students ever to enroll in institutions of higher learning. As a result, a higher proportion of students than in years past will likely choose to not enroll in higher education institutions as they feel underprepared and those students who do enroll will be more likely to stop-out or drop-out – both of which will impact state-wide college attainment goals and not provide the educated workforce Wyoming will need to thrive in the knowledge economy of the future.

Key Metrics:

Higher education attendance rates of Wyoming high school graduates; retention, persistence, and graduation rates of university and community college students; state-wide higher education credential attainment rates.

Available Funding:

Very limited to none. \$7,500,000 for three years of academic preparation "boot camp" programming (approximately \$2.5M per year). This programming would be state-wide in partnership with the community colleges and K-12 school districts/high schools and would provide entering college/university students, transfer students, and non-traditional students with

intensive academic preparation and skill training that will help them successfully navigate courses and overall persist to a degree in a timely manner.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Urgent Need for Teacher Preparation, Professional Development, Training, and Support Programs to Address Substantial Student Learning Loss

Define Problem:

Inservice and preservice educator preparation to address impending learning losses and educator shortages (teacher shortages, particularly). While teacher shortages and matriculations into teacher preparation programs were on the decline prior to the pandemic¹, these concerns have been highlighted, if not exacerbated, by COVID-19.

How do you know this is a problem:

According to Mark Schneider, the Director of the Institute of Education Sciences, "The Organization for Economic Co-operation and Development (OECD) has estimated that the United States will lose \$30 trillion in net present value GDP if COVID-related learning losses are not overcome." The problem of learning loss is made more significant by teacher shortage areas, such as mathematics and special education; and by shrinking enrollments in teacher education programs nationally since 2009 (Sutcher, Darling-Hammond, and Carver-Thomas, 2019: https://files.eric.ed.gov/fulltext/EJ1213618.pdf).

Cause:

According to the National Center for Education Statistics Schools and Staffing Survey (https://nces.ed.gov/surveys/sass/tables/sass1112_2013314_t1s_002.asp) 25.3% of Wyoming's teachers are 55 years or older, indicating that within the next decade, there will be significant turnover in Wyoming's teaching population. Teaching in the middle of a pandemic has been particularly stressful for educators, which likely will lead to continued shortages.

Effects:

The data reflecting total number of vacant positions in the state and number of current teachers nearing retirement (see citations in pandemic-related section), along with direct conversations with Wyoming school district administration, confirms the current shortages and upcoming retirement cliff in the teaching sector.

Key Metrics:

School districts facing shortages and seeking to hire new teachers; enrollments in community colleges' and the University of Wyoming's education programs; participation in Teacher Cadets programs providing clear programs of study/career paths for Wyoming high school students, and expanding Perkins funding eligibility for the school and district.

Available Funding:

¹ The national teacher workforce shortage is a real concern here in Wyoming. "...Since 2010, total enrollment nationwide in teacher preparation programs has declined by more than one-third..." (Partelow, 2019: https://www.americanprogress.org/issues/education-k-12/reports/2019/12/03/477311/make-declining-enrollment-teacher-preparation-

programs/#:~:text=Nearly%20every%20state%20in%20the,students%20completing%20teacher%20preparation%2 Oprograms.)

Some private foundation support. \$4,500,000 to expand and enhance the University of Wyoming Trustees Education Initiative (TEI). The Trustees Education Initiative has as part of its vision ongoing work to increase the pipeline of students into its educator preparation programs, increase the quality of the teacher candidates who complete its program, provide support throughout new teacher induction periods, and connect educators with professional development opportunities throughout their careers. More information about existing specific TEI projects and innovations can be found here. Additional projects that could address learning loss include the following:

- Provision of after-school tutoring for K12 students, delivered by the university's College of Education (CoE) teacher candidates, through in-person and/or distance modalities, in collaboration with the Wyoming School-University Partnership;
- Development and delivery of a minor or certificate program that would provide secondary-level teacher candidates in the CoE with special education licensure.

TEI's "E1: Exploration of Field", is implementing and leading a number of initiatives to address this program, including: the Teacher Cadets program, now in its pilot year, which introduces high school students to the field of teaching and strengthens relationships between school districts, community college teacher preparation programs, and the University's teacher preparation programs; deliberate partnership with UW admissions, to develop and execute a strategic recruitment strategy for teacher preparation programs (and other CoE programs); and partnering with the UW CoE School of Teacher Education to identify programs facing highest need for students and graduates (based on enrollment numbers and demands in the state).

Notes:

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Healthcare for a Thriving Economy

Lack of Access to Healthcare

Define problem:

Wyoming's healthcare system is challenged by its frontier status.

How do you know this is a problem:

The healthcare workforce, health outcomes, and access to healthcare in Wyoming lags behind other US states and regions. For instance, almost one third of Wyomingites do not have a healthcare provider, and many live long distances from regional medical centers and lack transportation to physically access healthcare services. Also, as noted in the Wyoming Department of Health's 2018 State Health Assessment, Wyoming is a rapidly aging state with the elderly population (65+) is projected to constitute over one-fifth of the state's residents by 2030. In addition, Wyoming ranks third in the nation for suicide deaths, with a rate that is nearly double the national rate.

Cause:

The COVID-19 pandemic only exacerbated the critical needs of Wyoming's healthcare system that require improvement, especially if the state is intends to accelerate the diversification of its economy. Successful economic development requires a high quality of living (of which access to quality healthcare is a substantial component) in order to attract businesses, talent, and investors.

Effects:

The 2018 State Health Assessment identified the following opportunities for improving the state's healthcare system:

- Monitoring health status
- Assuring a competent workforce
- Research and innovation
- Linking to health services
- Evaluation services
- Greater alignment of priorities and data across partners
- Diversifying partnerships, especially among academic and tribal health partners
- Improving access to data
- Expanding the public health workforce

Key Metrics:

Reduce barriers to access and innovation in the healthcare ecosystem of Wyoming; quantity of healthcare providers in the state; healthcare outcomes; overall quality of life of state's residents.

Available Funding:

Very limited to none. \$10,500,000 for three years of programmatic funding to establish the Rural Health Innovation Institute (approximately \$3.5M per year). The University of Wyoming's Rural Health Innovation Institute would harness the technological, data science, research and development, professional health sciences, public health, and economic development expertise found throughout the state's university, community colleges, department of health, and hospitals

and healthcare providers to accelerate the transformation of Wyoming's healthcare ecosystem. This includes new collaborations that will eliminate duplication of efforts and provide access to critical resources and expertise that will enhance all phases of research (bench to bedside), commercialization of innovations and ensure greater inclusion of all stakeholders in this work. The Institute will support faculty and communities to engage in collaborative research and commercialization of intellectual property to meet rural health grand challenges in our digital age.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Agriculture and the Environment

AMK Ranch

Define Opportunity:

The University of Wyoming – National Park Service (UW-NPS) Research Center facility within the Grand Teton National Park at the historic AMK Ranch on Jackson Lake will promote understanding of Wyoming's wonders and their connections to the world by:

- Inspiring discoveries: Advance the frontiers of knowledge by creating unique opportunities for scholars in Wyoming's iconic landscapes
- Elevating experiences: Enhance and expand opportunities for place-based learning for UW students, community scholars and experts, and the public
- Connecting communities: Share research and learning opportunities that cross boundaries and foster cooperation, understanding, and discourse.

How do you know this is an opportunity:

To achieve our vision, UW students and faculty partner with the National Park Service and others to increase opportunities for research, scholarship, creative and cultural activities, and courses connected to Wyoming's iconic landscapes and ecosystems, its Native American culture and heritage, and its traditions from ranching to recreation.

Cause:

The AMK Rank currently is not positioned to achieve its potential success in large part due to the fact that the physical facilities, centered on historic buildings, need critical updates.

Effects:

Invest in infrastructure updates and expansions of the AMK Ranch facilities to support the next 30 years or more of world-class activity. Complete maintenance backlog, update existing buildings per architectural report, and add new dorm per NPS EA report.

Key Metrics:

Increased UW use and scholarly impact associated with investing in facilities; new scholarly products (e.g., scholarly publications; creative output) worthy of national-level press coverage; expanded place-based learning associated with promoting opportunities for courses; new large federally funded research programs centered at the UW-NPS facility; the number of courses offered through the AMK Ranch and workshops; new internship and research opportunities for undergraduates; long-term push to give every UW student an experience at the AMK Ranch.

\$12,000,000

Notes:

Agricultural Research and Extension Renovations

Define Opportunity:

Agricultural Research and Extension renovations.

How do you know this is an opportunity:

Agriculture is one of Wyoming's core industry sectors and is a critical factor in other important areas of concern, including energy, tourism, environmental science, water management and biodiversity. Data science and computing are revolutionizing agricultural research and management. Agricultural research, education and outreach stands ready to capitalize on new plans in place at UW for interdisciplinary research, computing and data science, and entrepreneurship. A critical barrier to this is the infrastructure at our Experimental Stations to support agricultural research which has significantly deteriorated over the last 30 years. Our stations lack modern equipment, do not have adequate networking to access computing or data infrastructure, do not have abilities for on-site sample preparations and analysis, and do not have housing for researchers to make it possible to fully utilize our potentially substantial research stations.

Cause:

The deterioration of agricultural research stations is a recognized issue across the USA that reflects some 30 years of underinvestment.

Effects:

Without investment, substantial new opportunity for modern agricultural research through our various experimental stations is not able to be recognized. New ideas for work with edge computing/AI (drones, robots, sensors) in agriculture, modeling and prediction, large scale experimental studies, Smart Ranch/Farming, will not be possible. Research active faculty and researchers are more difficult to recruit and retain. New investment in the research stations will make agricultural researchers more competitive for external funding and enable them to partner in interdisciplinary research.

Key metrics:

Research funding for agricultural, number of interdisciplinary research projects, usage metrics for experimental stations, outreach activities of extension offices.

Available funding:

None identified. Critical outstanding maintenance needs \$8.6M, upgrade of facilities to current standards additional \$38M, making Wyoming experimental stations premier facilities for research additional \$36M. IT infrastructure upgrades, \$1.862M

Notes:

8.6M has been submitted as part of UW major maintenance request for infrastructure, plus the 1.862M for IT upgrades at the Research and Extension Centers at Laramie, Lingle, Sheridan and Powell.

Ranch of the Future – Rangeland Systems and Ranch Management

How do you know this is an opportunity:

Ranching in Wyoming and the Mountain West is different from ranching across much of the nation. Wyoming operations utilize public lands on which there are competing interests for the use of this land from many sectors. Relevant natural resource management issues such as invasive annual and perennial grasses, migration corridors, wildfire mitigation, energy development, endangered species, wildlife-livestock interactions, all impact operations. Technology applications would improve operational efficiencies improving management decisions on rangelands involving water resources, forage and soil quality through use of real-time sensors and visioning technology. A ranch could have a "dashboard" to track animal growth, movement, illness, in real time improving animal welfare. Adding revenue streams to ranches based on ecosystem services provide new opportunities for monitoring strategies tied to the blockchain for environmental monitoring/credits and carbon capture above and below ground.

Cause:

A unique issue across Wyoming and the Mountain West is the vastly different landscapes, including forested pastures in the summer, high and cold prairie, and irrigated bottomlands that ranchers must manage as part of their operations adding to management complexity. A single stand-alone ranch prototype would not be able to capture the range of ranch operations across the state. Development of a "ranch of the future" utilizing our current Research and Extension Centers as a base, would provide the capability to develop and evaluate technology solutions in a number of different ecosystems.

Effects:

Without investment in technology that will help to maintain the economic and environmental sustainability of ranching in Wyoming, there is a risk that the state will lose many of these operations and the value they provide in terms of food production, open spaces, water resource management and environmental quality.

Key metrics:

Impacts of research, education and extension activities would be monitored. Development of a Wyoming Rangeland Task Force comprised of an interdisciplinary team of rangeland scientists, weed scientists, landscape ecologists, animal scientists, economists, computational biologists, wildlife habitat specialist working with industry representatives, and rangeland managers would provide management recommendations, technical insight, and consulting to inform public policy decisions in Wyoming.

Student experiential learning and leadership training, research, engagement activities and demonstration projects that foster sustainable rangeland management will provide knowledge needed to maintain these lands and with it, quality of life in rural communities across the state.

Available funding:

None identified. Facilities improvements at McGuire Farm (\$3,000,000), SAREC including Rodgers Research Center (\$927,000), Sheridan (\$200,000), Powell (\$1,000,000), LREC

(\$88,000) Total: \$5,215,000. Technology infrastructure support and instrumentation (\$3,000,000), graduate assistantships (8 @ 3 yr each, \$720,000), faculty support (\$100,000 x 3 yr, \$300,000), IMAGINE coordinator (\$120,000 x 3 yr, \$360,000) and data scientist (\$135,000 x 3 yr, \$405,000).

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Wyoming Outdoor Recreation, Tourism, and Hospitality Center

Define Opportunity:

Establishment of Wyoming Outdoor Recreation, Tourism, and Hospitality (WORTH) Center, an interdisciplinary center providing education, outreach, applied research for outdoor recreation, tourism, and hospitality serving the state's industry partners.

How do you know this is an opportunity?

Tourism is the second largest industry in the state. In 2019, domestic and international visitors in Wyoming spent \$3.95 billion. Wyoming welcomed 9.2 million overnight visitors that generated \$203 million in local and state tax revenues. The state's tourism industry supported 32,570 full and part-time jobs. Each Wyoming household would pay \$870 more in taxes without the tax revenue generated by the travel and tourism industry. Employment market demand for graduates earning a closely related degree in outdoor recreation and tourism ranks very highly nationally at 82%.

Wyoming lost \$1 billion in tourism revenues and 6,000 jobs in the sector in 2020. The rebound in the sector will be strong in 2021 and beyond, and WORTH will provide innovative solutions to the industry to capitalize on this rebound to make it sustainable.

Cause:

WORTH will provide a one-stop solution center for Wyoming's hospitality, outdoor recreation, and tourism industries.

Effect:

Enhanced services to the ORTH industry.

Key metrics:

Enhanced rebound and sustained increase in tourism, outdoor recreation, and tourism industries; increased per person spending in state during visits.

Available Funding:

Very limited to none. \$1.2 million for 3 years is requested for start-up funding.

One-time, three-year funding; sustaining funding will be identified from within UW, from external agencies, or from corporate or philanthropic partners.

Board of Trustees Approved Capital Investments

Law School Building Expansion and Renovation

Define Opportunity:

The proposed facility improvements will include approximately 19,000 square feet of building addition and 23,400 square feet of exterior and interior renovation to the main College of Law building. The exterior improvements will wrap around the north end of the existing building and provide a new building facade toward Willet Drive, while creating a more formal traditional stone main entrance for the College of Law. The interior building expansion and renovation will provide additional legal clinic and legal center office and meeting spaces, re-organize the Law School administrative and faculty offices, and construct a new main entry and a secondary entry dedicated to the legal clinics' public clients. The new clinic facility named in honor of Wyoming Senator Alan K. Simpson (within the Law building expansion) will have significant impact on the College of Law and the state's citizens. The College of Law's clinic and experiential learning program is a primary provider of direct legal services for low income people throughout the state. Students working under faculty supervision receive training and provide representation to indigent Wyoming citizens in hundreds of cases across Wyoming's 23 counties

How do you know this is an opportunity:

The proposed facility improvements will greatly enhance the recruitment of potential students and faculty to the UW College of Law and support the greater public interest role of the University of Wyoming in providing free legal services to the citizens of Wyoming amounting to approximately \$3.5 million in free legal services each year.

Funding Estimate:

\$25,000,000

Notes:

War Memorial Stadium and Corbett Natatorium

Define Opportunity:

The University of Wyoming's goal is to raise the standard for the football program and better meet the needs of everyone who utilizes the facility from both a fan and operational (e.g., media, visiting team coaches/staff/student-athletes, etc.) perspective. An upgrade of the existing facilities will (1) create additional revenue generation opportunities, (2) provide a better game day experience for fans and (3) and better serve the needs of our national media and TV partners.

The west side stands of War Memorial Stadium need immediate upgrades. The stands and related facilities are outdated and have untapped potential for spectator experience and overall campus engagement. Renovations will provide opportunities to generate additional revenue via various mediums including, but not limited to, loge boxes, upgraded seating, separate ticket areas (e.g., club area) and upgraded fan amenities (e.g., such as concession areas/points of sale). In addition, game-day operational spaces (e.g., media working areas, visiting team locker rooms and sports medicine areas, etc.) and upgraded bathroom facilities will be incorporated into the design.

The existing Corbett pool facility, which was built in the mid-1970's, lacks several facets important to the success of the University's student-athletes. Throughout the Mountain West Conference and across the nation, 50-meter swimming and 5-meter diving capabilities are medians for competition aquatics facilities. The current facility does not meet the NCAA Division I requirements for competition facilities. The diving area is too shallow to accommodate anything more than a 3-meter springboard, yet Mountain West Conference and Western Athletic Conference teams must compete in 3, 5 and 10-meter diving categories. Additionally, the water body is contiguous, which makes it impossible for dual practice or hosting of simultaneous events. The College of Health Sciences' Department of Kinesiology and Health is also located in the existing Corbett facility and an expanded facility would allow the College of Health Sciences to modernize its approach to educating the next generation of healthcare professionals and offer additional academic programs such as physical therapy. When the pool is not in use by Athletics, the new facility will provide greater aquatic opportunities for Club Sport and Intramural athletes, recreational swimmers, and Outdoor Programs participants. In addition, the potential to host training camps would create a revenue opportunity.

How do you know this is an opportunity:

Both portions of the project are directly related to the Mission of the University as defined in the 2017-2022 Breaking Through Strategic Plan by promoting opportunities for athletic competition. The proposed renovations create additional revenue opportunities through improvement of spectator and user experiences.

F	unding	Estimate:

\$74,300,000

Notes:

Attachment #3 WYOMING INNOVATION PARTNERSHIP (WIP) RESPONSE TO THE AMERICAN RESCUE PLAN (ARP)

	Page(s)	Problem	UW	Other Partners	TOTAL
INFRASTRUCTURE	1-3	The State of Wyoming has an underdeveloped infrastructure that limits access to education and workforce/industry needs. Limitations of existing broadband coverage, lack of fiber-optics, minimal incubator space and digital educational opportunities have created barriers that prevent the state from achieving desired objectives.	\$ -	\$ 30,000,000	\$ 30,000,000
PROGRAMS	3-8		\$ 60,000,000	\$ 34,200,000	\$ 94,200,000
	3-4	Center for Entrepreneurship and Innovation (CEI) (also included in Attachment #1 "ARP funding request")	\$ 20,000,000	\$ -	\$ 20,000,000
	4-h	Invest in Tier I Engineering, Computational Infrastructure, and Data Science (also included in Attachment #1 "ARP funding request")	\$ 25,000,000	\$ -	\$ 25,000,000
	6-8	Priority Sector Program Collaborations	\$ 15,000,000	\$ 34,200,000	\$ 49,200,000
PARTNERS	9	WIP Partner Program / Support	\$ -	\$ 2,000,000	\$ 2,000,000
	Revision	Educational Attainment Partnership Between UW and CCs	\$ -	\$ -	\$ -
TOTAL			\$ 60,000,000	\$ 66,200,000	\$ 126,200,000

Plus Educational Attainment

Wyoming Innovation Network (WIN) Response to the American Rescue Plan (ARP)

Submitted to Governor Mark Gordon's Office 5-13-21

Provided proposals support modernizing and refocusing Wyoming's higher education system to increase collaboration between the University of Wyoming and the state's community colleges with emphasis on developing innovative solutions that support and enhance Wyoming's economy and workforce.

Requested investments will assist with development of strategic programming in key areas focused on Wyoming's needs. Emphasis will be placed on workforce development in high-potential areas; supporting and training entrepreneurs and new business startups; a research and market analysis agenda aimed at technology transfer and commercialization; and developing outside revenue sources such as corporate partnerships to provide new opportunities for students.

WIN is intended to support the state's overall economic vision set forth by the Wyoming Business Council and support education attainment goals developed by the state, allowing the state to better focus its resources to assist both existing industries, and areas identified as having significant growth potential.

Pursuant to recent WIN leadership retreat, ARP funding priorities are grouped into the following areas: Programs, Infrastructure, and Partners. Emphasis is placed on workforce development and retention, economic resilience, and supporting the state's economic development strategy.

Recognizing proposed Center for Entrepreneurship and Innovation and School of Computing models are designed to support WIN partners and the state's economic/workforce development agenda, they have been included.

Total WIN Request: \$126M

INFRASTRUCTURE

Define the Problem:

The State of Wyoming has an underdeveloped infrastructure that limits access to education and workforce/industry needs. Limitations of existing broadband coverage, lack of fiber-optics, minimal incubation space and digital educational opportunities have created barriers that prevent the state from achieving desired objectives.

How do you know this is a problem?

The WIN, led by the Presidents Steering Group, held a retreat on May 3, 2021 to discuss the primary factors limiting advancement and response to education, workforce and industry in the state. Examples include:

- Low college going rates of adults, low postsecondary attainment rates, etc.
- Lower skilled populace, without postsecondary education that makes economic diversification, business recruitment/relocation a challenge
- Applicant pools numbers are declining, employee turnover is increasing, etc.
- Significant deferred maintenance logs that aren't being addressed, lost operating dollars as a result of stagnant and declining state revenues, etc.

Cause:

The following infrastructural elements have been identified as key areas of need for successful response to state educational, workforce development, and economic objectives:

- Broadband connectivity and stability across the state, including delivery in rural and previously unsupplied regions
- Expand and develop existing extension offices, creating physical space for education, service, and innovation based activities.
- Leverage IMPACT 307 model state-wide (update/retrofit existing incubator spaces) and provide greater access to start-up initiatives connected to the primary economic sectors
- Strain from COVID-19, competition with local job opportunities, reduction in programs and services because of budget cuts (lost confidence by the consumer), affordability and lack of financial aid, competition with other providers, not enough of the right programs being offered, decreased funding for recruitment and marketing, etc.
- Marketing/messaging campaign is necessary to build awareness and availability of resources that impact educational and workforce opportunities. Marketing and messaging needs hinge on the ability to deliver information to historically inaccessible regions of the state
- High touch and high tech learning spaces across the state are needed to support
 instructional programs. Digital classrooms that allow for active and engaged learning and
 shared experiences within a shared resource model, create efficiencies and diminish the
 geographical challenges that impact Wyoming
- Student success practices that focus on first year students, adult learners, focused on retraining, and traditional transfers will be key to delivering a highly trained and credentialed workforce. New investments in Student Success Management systems (e.g. Navigate) will allow for real time and intrusive responses to insure student success and degree completions as well as tracking enrollment, application, and retention statistics
- Modifying existing learning spaces to accommodate experiential learning, special company projects, innovation exercises, etc.
- Address student transfer inefficiencies by developing broader pathways for 4 year degrees that support the state's priority economic sectors and allow for quicker onramping of students into educational areas with high employability upon credential completion.
- Building a Wyoming Workforce and Corporate "work base" creates opportunities for
 workers to stay in Wyoming while attracting companies with funding for educating their
 workforce to the state. This further encourages companies with apprenticeship and
 internship programs to look to Wyoming for talent as well as attracting talent from out of
 state with funds to cover tuition
- Lack of financial assistance to engage/re-engage Wyoming's adults in postsecondary education or training
- Fewer graduates to enter the workforce, declining tuition and fee revenue, inability to recruit new/relocating businesses to the area and state, etc.

Effects:

Workforce, Industry and Educational needs are elevated and connected in a manner that allows flexibility for responding to the growth and changing needs of the state's priority economic sectors.

Key Metrics:

Existing business growth/retention, business recruitment, workforce development and retention aligned with priority economic sectors, increased education attainment

Available Funding:

None. Requesting \$30M investment for noted causal areas.

PROGRAMS

Center for Entrepreneurship and Innovation (CEI)

Define Opportunity:

Wyoming's higher education entrepreneurship and innovation assets are not coordinated, efficient, nor fully aligned with the state's priority economic sectors and workforce development/retention needs. The CEI serves as the coordinating entity to facilitate entrepreneurship and innovation activities across UW and Wyoming's community colleges in collaboration with proposed UW School of Computing and in support of the Wyoming Innovation Network (WIN). The center is a state-wide interdisciplinary integrator for programs that have potential for supporting the state's priority economic sectors in addition to activating new business sectors and supporting state workforce objectives.

How do you know this is an opportunity?

Active discussions with various stakeholder groups, to include current entrepreneurs, small business owners, investors, and educators, combined with findings in recent state economic diversification studies, have identified Wyoming as having an underdeveloped entrepreneurial ecosystem. The current system is not coordinated and inefficient, making it difficult to fully engage available resources that support new business creation in addition to assisting the state's existing business communities. Entrepreneurs employ more than 50% of the private workforce, and generate more than half of the nation's GDP.

Cause:

Not having a centralized, coordinated, and efficiently delivered model that supports state-wide entrepreneurship and innovation.

Effects:

Challenges attracting and retaining the creative, educated, and entrepreneurial populations that typically support these ecosystems.

Key Metrics:

New business starts, existing business growth/retention, business recruitment, increased access to capital, new job creation

Available Funding:

None. \$20M programmatic start-up investment

- Training in entrepreneurship for all students at UW and CCs
 - o Courses, seminars, etc.
 - o Bootcamps and other applied learning opportunities
 - o Associate degrees, Bachelor's degrees, minors, concentrations, certificates, etc.
 - o Faculty/staff support
 - Investment: \$5M
- Coordinated state-wide mentoring network
 - o Alumni, associations, special interest groups, businesses, etc.
 - Web based mentor connection platform
 - Staff support
 - o Investment: \$1M
- State-wide business incubators, lab spaces, and innovation learning hubs
 - o UW and CC facilities retrofit and upgrades
 - o Technology updates/upgrades to connect WIN partners
 - o Investment: \$10M
- Innovation workshops, student projects, business/corporate engagement
 - Faculty / staff support
 - o Investment: \$2M
- Corporate Relations Office
 - o Engagement staff and support resources
 - o Investment: \$2M

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

School of Computing

Define Opportunity:

Wyoming has consistently sought to contribute to its future by investing in the education and training of its citizens through the University of Wyoming. Recent investments, including the Tier 1 Engineering Initiative, Science Initiative, and Trustee's Education Initiative, along with capital investments in facilities provide a firm basis that focuses on the importance of Science, Technology, Engineering and Mathematics (STEM).

However, investments in the Tier 1 Engineering Initiative, computational infrastructure, and data science are urgently needed in order to stimulate and grow Wyoming's economy through the creation of new talent and research in computing and data across Wyoming's higher education institutions, including new K-12 computer science initiatives to sustain and grow talent into the future.

Attachment 4 Wyoming Innovation Partnership – ARP Final

How do you know this is an opportunity?

In the past decade, computing has become an increasingly crucial tool for research, for our graduates, and for almost all sectors of the economy. The University of Wyoming has responded by hiring faculty who use computing in their discipline, establishing programs like the Data Science Center and the Advanced Research Computing Center (ARCC), and by developing a partnership with the University Cooperation for Atmospheric Research and its NSF-funded National Center for Atmospheric Research (NCAR) around the NCAR-Wyoming Supercomputer Center (NWSC). These have supported new modes of faculty research and increased awareness of computing across the campus.

Cause:

Today, computing's impact is found in virtually every discipline, and simulation and modeling are more important than ever, but are joined by new data science technologies like artificial intelligence, machine learning and blockchain that are starting to transform every academic discipline, every industry, and every aspect of modern society. Access to world-class research, infrastructure and workforce training in computing and data is therefore critical for Wyoming business', its citizens, and for UW's students.

Effects:

A focus around "Computing for All" will develop close relationships and new programs with Wyoming community colleges, K-12 schools, state agencies and other community stake holders and will position the University as a regional leader in computing and data with national impact and global reach.

Furthermore, investments in the Tier 1 Engineering Initiative, computational infrastructure, and data science will coalesce around the establishment of a School of Computing (SoC) at the University of Wyoming. The SoC will serve as an engine for the Wyoming Innovation Network (WIN) to build out training and education programs for UW and community college students in big data, artificial intelligence (AI), and their applications. A corporate partners program will develop close research connections to Wyoming industries and work with the university's new Center for Entrepreneurship and Innovation to build a talent pipeline from K-12 to the workforce.

Faculty, staff and students will have access to supported computing and data infrastructure in all disciplines to facilitate new research and education opportunities. Faculty will be more competitive for external research funding. More research involving data science and AI will be catalyzed. New activities to increase involvement with WIN and private sector partners will be possible.

Key metrics:

Increased state-wide higher education enrollments in computer/data science courses. Increased state-wide higher education graduates with a computer/data science credential. Increased percentage of state's K-12 educators who have received professional development/training in teaching coding/computer science. Increased corporate partnerships with Wyoming businesses focused on data science solutions and economic development and growth. Increased external funding involving computing and data. Increased educational offering for students involving use of modern cyberinfrastructure. Increased use of national computing and data cyberinfrastructure.

Attachment 4 Wyoming Innovation Partnership – ARP Final

Funding:

\$25M Investment:

- \$10,000,000 is for one-time critical infrastructure needs for UW's Advanced Research Computing Center (ARCC). Urgent investment is needed to update ARCCs compute/access nodes, network switches, backup storage and power/cooling equipment. New investment is needed to increase the GPU footprint to enable AI/data science research and applications and provide clusters to support WIN initiatives such as the provision of statewide software engineering education and research projects with the private sector.
- \$5,000,000 is for the Wyoming Innovation Network (WIN) training program that will develop state-wide computer/data science boot camps, specialized coursework, and teacher/lecturer professional development.
- \$3,000,000 is for start-up funds for six new faculty (\$500,000 per faculty start-up fund) to establish research programs (e.g., equipment, graduate students, post-doctoral fellows, etc.) with \$300,000 of each start-up fund invested in shared computing infrastructure to support their research (e.g., GPUs, unmanned aircraft, sensors, etc.).
- \$2,000,000 is for salary and support for visiting faculty scholars to bring immediate expertise in critical areas of need to Wyoming.
- \$3,000,000 is for five research scientists/faculty to seed the Corporate Partners Program and establish large-scale research projects. Each of these research scientists/faculty will be expected to eventually bring in substantial external funding to cover their salary and/or research students (e.g., each scientist will be responsible for securing approximately \$2,000,000 per year in external funds).
- \$2,000,000 is for graduate research students who will provide core research workforce, develop technology transfer from faculty research, and contribute to education and training.

Notes:

It is understood that American Rescue Plan (ARP) funds are time-limited and not a source of ongoing funding for programs; however in this instance, in addition to the significant one-time computational infrastructure expenditures, the ARP funds would be used as initial seed funding to jump start the program and accordingly when the ARP funding expired, the program would be transferred to other funding (i.e., self-generated revenue, philanthropic/private donor support, etc.).

Priority Sector Program Collaborations

Define the Opportunity:

The Wyoming Innovation Network (WIN) is poised to deliver needed collaborative and creative leadership in response to the economic and industry needs of the state. Led by the Presidents Steering Group, the WIN comprises the senior leadership from Wyoming's eight institutions of higher education, the Community College Commission, Governor's office and business and industry partners.

How do you know the opportunity exists?

Four primary economic sectors have been identified as key areas for investment and programmatic development. Through WIN, teams have performed an initial assessment and identification of programmatic opportunities to respond to industry, workforce development and economic needs.

Attachment 4 Wyoming Innovation Partnership – ARP Final

Cause:

- Agriculture it is clearly recognized that underdeveloped strengths exist across the state between institutions that point to strong and immediate opportunities to respond to agricultural industry needs. Agribusiness, Animal and Plant Sciences, Range/Ranch Management (with energy and tourism crossover opportunities), Ag Communications, INBRE program with biomedical research (with health sciences crossover), and blockchain applications represent immediately available areas for response.
- Energy / Manufacturing multiple opportunities are available for scaling up existing programs, improving synergies across the eight institutions, and developing new programs that leverage existing expertise and capital resources. More than 50 energy related credentials are currently available across the eight institutions, with opportunity for accelerated pathway development between institutions. Emerging opportunities to respond to industry and economic needs of the state include: Power lineman, Hybrid Diesel Technology, low-voltage fiber optic implementation, wind and solar energy and storage, carbon storage, and advanced manufacturing.
- **Hospitality/Tourism** the state is well positioned to meet current and future workforce development needs related to the hospitality, tourism, and outdoor recreation sectors; specifically, further development of degree offerings, certificate programs, and just-in-time credentials to address critical needs in workforce recruitment and retention.
- Technology / Health-tech a collaborative effort is underway to develop a 2-year software engineering degree with clear pathways to a 4 year degree at UW in response to statewide and national demand for software developers across all industry sectors. All 8 of the state's higher education institutions, along with international and industry partners (Wyoming based businesses) have contributed to this initiative; an initiative that will catalyze additional program development in areas such as artificial intelligence, machine learning, and cyber security.

Effects:

Education attainment aligned with the state's priority economic sectors. Increased workforce development and retention.

Key Metrics:

Increased output of graduate (credential holders) and overall increase in qualified workforce.

Funding:

\$49M investment:

• **Programmatic Support (\$3M):** To maximize opportunities in existing programs and support launch of new academic pathways, contracted support personnel dedicated to the marketing and promotion is critical. Marketing requirements (two, six week campaigns per primary economic sector, min). Contract support to provide articulation alignment support required to update/maintain/create academic pathways.

- Agriculture (\$10M): it is clearly recognized that underdeveloped strengths exist across the state between institutions that point to strong and immediate opportunities to respond to agricultural industry needs. Agribusiness, Animal and Plant Sciences, Range/Ranch Management (with energy and tourism crossover opportunities), Ag Communications, INBRE program with biomedical research (with health sciences crossover), and blockchain applications represent immediately available areas for response. Five of the State's community colleges have Ag programs for which there is potential to expand to meet the needs for precision Ag, value-added Ag processing and meeting new business opportunities.
 - o Program start-up, faculty, equipment, experiential learning, scholarships = \$10M
- Energy / Advanced Manufacturing (\$15M): multiple opportunities are available for scaling up existing programs, improving synergies across the eight institutions, and developing new programs that leverage existing expertise and capital resources. Seamless pathways need to be developed between the community colleges and the University to expand opportunities in advanced manufacturing, from two-year technical programs to four-year engineering programs. There is forecasted demand for this STEM pathway as the State looks to recruit more manufacturing companies and expand surface mining operations. More than 50 energy related credentials are currently available across the eight institutions, with opportunity for accelerated pathway development between institutions. Emerging opportunities to respond to industry and economic needs of the state include:
 - \circ Power lineman = \$2M
 - Hybrid Diesel Technology = \$2M
 - Low-voltage fiber optic implementation, wind and solar energy and storage,
 carbon storage, and advanced manufacturing = \$5M
 - o Industrial programs = \$6M
- **Hospitality/Tourism (\$6M)** the state is well positioned to meet current and future workforce development needs related to the hospitality, tourism, and outdoor recreation sectors; specifically, further development of degree offerings, certificate programs, and just-in-time credentials to address critical needs in workforce recruitment and retention:
 - WORTH Center programing = \$2M
 - o Existing curricular program expansion, faculty, equipment = \$4M
- Technology (\$5M): a collaborative effort is underway to develop a 2-year software engineering degree with clear pathways to a 4 year degree at UW in response to statewide and national demand for software developers across all industry sectors. All 8 of the state's higher education institutions, along with international and industry partners (Wyoming based businesses) have contributed to this initiative; an initiative that will catalyze additional program development in areas such as artificial intelligence, machine learning, and cyber security.
 - Faculty, equipment, programming support = \$5M
- Healthcare/science/tech (\$10M): This industry represents significant opportunity for economic growth and diversification. From direct provider/clinician job opportunities, to manufacturing, advancements in medicine, and telehealth, many opportunities exist. Five of the seven community colleges identified this as an area of immediate need for workforce development:
 - o Faculty, equipment, programming support = \$10M

PARTNERS

WIN Partner Program / Support

Define Problem:

Prior efforts have identified that cross sector collaborations are needed, but lacked the leadership and agility needed to take action. Governor Gordon recognized the critical need for the state's educational leaders to champion the response to economic needs in the state by creating the Wyoming Innovation Network.

How do you know this is a problem?

Building off the identification of the state's opportunity sectors from previous economic diversification initiatives, WIN is an action oriented network of decision makers that can move their respective organizations in response to the needs of the state. Better coordination and engagement of WIN's current and prospective partners presents an opportunity to more efficiently advance identified education and workforce initiatives.

Cause:

Educational leadership provides a non-competitive environment for multiple partners to become engaged in the response to Wyoming's economic growth agenda.

Effects:

Public, private partnerships create broad spectrum responses to existing needs and highlights areas of growth for entrepreneurship and innovation across the state. New partnerships must be prospected while identifying new ways to add value to existing relationships. Opportunities for sponsoring entrepreneurial, intrapreneurial, and innovation activities will lead to increased business growth/retention and serve as a catalyst for new business and job creation. State-wide, national, and international partners will have opportunities to sponsor projects, research, and other business strategy activities while also having access to talent via internships, externships, and other placement and career development programs with WIN partners.

Key Metrics:

Relevant program delivery translates to increased business sustainability, new business/talent recruitment, new business creation, diversification of core industries, student recruitment, sponsored faculty research and new revenue sources.

Funding:

\$2M investment:

Organizational support for prospecting and stewarding WIN partners, identifying
opportunities for sponsored engagement that leads to increased state-wide industry
engagement and diversification.



June 10, 2021

Elected Officials and Directors State of Wyoming

Dear Elected Officials and Directors,

First, let me say thank you for your continued hard work and steadfast service to the people of Wyoming. I certainly hope we never have to face the issues we have over the past two years again. But I am proud of the work we have done together to meet extraordinary challenges. Thank you for all you have done to move Wyoming forward.

This letter is a reminder that we have collectively launched the process to build our standard budget for fiscal years 2023 and 2024. As you know, the budget building process is a heavy lift and I want to thank you in advance for your thoughtfulness in preparing your proposals. Again, this year, I would like to continue the efforts already put in place to submit a true biennial budget. Supplemental budget requests should only be for items, which are emergency in nature.

Due to your excellent work to ensure Wyoming lives within her means last year, agencies do not need to present cuts. However, because of Wyoming's continuing deficit over the years to come we must keep ongoing spending flat. The increase in federal spending and money available to states does create opportunities, as do some spikes in energy-related revenues, never the less, these do not fix the long-term revenue problem Wyoming faces and we cannot afford to relax our vigilance. Together, we should look instead at how we adapt and how we use one-time dollars for one-time opportunities to reshape the state's future. I am developing proposals that will include investments in state government, resources for our people to be more efficient, and ways we can better provide lasting benefits.

To the task at hand, as you prepare your agency's budget proposal, I ask you to look broadly and deeply when considering what your agency requires to best serve the people of Wyoming. With the revenue stream remaining tight, especially over the long term, not all needs can be funded. That is why I am asking you to prioritize those needs and to look for efficiencies in an effort to minimize the impact should additional cuts need to be taken. Your work in their regard in the past made the arduous and painful task of this past year easier. Thank you for your efforts there.

Transparency is one of this administration's top priorities. As before, you will be required to include the "State of the Agency" in your proposal. I would like this budget to be more readily understood by the public, which may mean more explanations and less jargon. You will find an example included within the State Budget Department Instructions.

The State Budget Department team will be our guides through this process and has provided a concise outline below.



Elected Officials and Directors State of Wyoming June 10, 2021 Page 2

- The 2023 2024 biennial budget is for the **full two years** of the biennium. Beginning July 1, 2022 ending June 30, 2024.
- Prior to requesting funds, departments should analyze tradeoffs that can be accomplished through efficiencies.
- State of the Agency this section should include an overview of the department/board/commission/etc., background and structure of the entity, successes, efficiencies, challenges, and risks. The State of the Agency can include all aspects of department operations and ultimately correlate with the department's budget request.
 - o An example is included within the State Budget Department Instructions.
- Departments are required to prioritize their programs within the Budget Book Department Program Priority Table. These priorities will be used if further cuts become necessary during the biennium.
 - o Provide consequences for what would happen if these programs are cut.
- Prior to June 30, 2021, departments are requested to provide any anticipated exception requests referred to as BFY2023 "Strawman."
- We do not anticipate being able to fund any "clawbacks" or budget requests bringing back funding for past cuts.
- Budget requests increasing Standard Budgets or requests for on-going funding, will be looked at closely and scrutinized prior to the Governor issuing his recommendation. Exception request narratives should be clear, to the point, represent deliverables to constituents, and directors' staff should be prepared to supplement these requests during hearings with the Governor.
- American Rescue Act Plan Fund (ARPA) request should NOT be included in your standard budget or exception items. ARPA requests will be vetted separately through the Governor's Office, and addressed where necessary through separate Governor's Recommendations.

What we have all had to do over the past couple of years has been hard. About that, there is no doubt, but your work following these guidelines facilitated that effort and made Wyoming stronger for it. Thank you.

I am looking forward to meeting with all of you in the early fall when we will review your budget requests and again, thank you for all you do.

Sincerely,

Mark Gordon Governor

MG:el:kh

Key Dates in the 2023-2024 Biennium Budget Process:

State Budget Department

- June 2021 IBARS Instructions & Budget Instructions released to departments
- June 30, 2021 Department Anticipated Exception Requests (Exception Request Strawman) delivered to the State Budget Department
- July 2021 Standard budgets provided to departments
- **July August, 2021** Departments develop their Chapter 17 information and 2023-2024 budget requests
- July 19-22, 2021 (tentative) Training provided by State Budget Department to agencies for IBARS
- August 30, 2021 Budget Requests due to the State Budget Department
- August 30, 2021 Annual Report and Strategic Plan due to the State Budget Department
- October 1, 2021 Chapter 17 Reports due to LSO (Per Statute)
- September November 2021 Governor's Hearings with agencies
- November 15, 2021 Governor's Budget due to LSO (Per Statute)
- December 2021 January 2022- JAC hearings

ETS Timeline

- May 1, 2021 Deadline for IT Business Cases to ETS
- June 1, 2021 Deadline for IT Budget Exception Requests to ETS.
- August 1, 2021 IT Budget Exception Final Report to the State Budget Department.

UW Budget Office Program Priority Rec Name On-Going One-Time One-Time Match Total	Description
University State Aid Block Grant -Salary Increase Plan	The university's priority is to ensure that employee salaries remain competitive to attract and retain a high-quality workforce. Talented, dedicated faculty and staff are the most important asset of the university higher education is an undertaking by and for people. The university competes in national, international and regional markets for faculty, staff and leadership. UW must also close the gap between its salaries and those of its competitors to retain and recruit high performing employees. UW salaries continue to be below average for those markets in which UW competes to recruit and retain faculty, staff and administrators. The difficulty for employees is further compounded by the continued implementation of the employee out-of-pocket contribution of the employee share of retirement and shifting of health insurance cost onto employees. Notes:

2023-24 BIENNIUM BUDGET EXCEPTION REQUESTS

UW Priority	Budget Book Page and Budget Office Rec	Program Name	On-Going	One-Time	One-Time Match	Total	Description
		Rodeo		\$100,000		\$100,000	 This funding allows the College of Agriculture and Natural Resources to continue providing the university's rodeo student athletes with strength and conditioning training and other athletic training services and personnel available in the Mick & Susie McMurry High Altitude Performance Center. Notes:
		Center of Innovation for Flow Through Porous Media			\$3,000,000	\$3,000,000	 Notes. The Center of Innovation for Flow through Porous media (COIFPM), located in the University of Wyoming's High Bay Research Facility, is one of the most advanced oil and gas research facilities in the world. The research and discovery performed by the faculty, research scientists, post-doctoral fellows, and graduate students associated with the COIFPM are integral components of the University's Tier-1 Engineering Initiative and the School of Energy Resources and is lead by Dr. Mohammad Piri. The University's exception request is for one-time funding from the general fund of three million dollars (\$3,000,000). These one-time funds would be used to match research grants and contracts awarded to the COIFPM by private industry. This request of funding is only for matching funding during the 2023-24 biennium time period – meaning, the funding would be used to provide the FY2023 and FY2024 matching fund requirements for either existing multi-year research grants/contracts already in place or new grants/contracts awarded to the COIFPM between July 1, 2022 and June 30, 2024. Notes:

UW Priority	Budget Book Page Number	Program Name	On-Going	One-Time	One-Time Match	Total	Description
		UW Operations	\$1,250,000	\$320,000		\$1,570,000	• (1) Deputy Director, Facilities Management - ongoing funding, \$150,000 (includes fringe at current 49.9% rate) Currently the AVP has 13 direct reports with seven of them representing all departments within Facilities Management. In order to attract qualified candidates for the AVP position after Davis retires, we are requesting the return of the funding needed to fill this position. Facilities Management is the heart of the maintenance wing of UW Operations covering Electrical, Plumbing, Controls, Preventive Maintenance, Key/Lock, Grounds and Structural. • (3) Custodians – ongoing funding, \$100,000 (includes fringe at current 49.9% rate) Positions are needed for the Science Initiative building which will be occupied starting in January 2022. Operating Expenses • Utilities – ongoing funding, \$1,000,000 Restore funding reduced in FY21 & FY22 budget reductions for campus utility expenses. • Capital Equipment – one-time funding, \$320,000 UW Operations has capital equipment needs to address in the department. (1) 70ft Bucket Truck (\$175,000) to replace 21 year old existing Snorkel aerial lift; (1) Mid-size Dump Truck (\$65,000) to replace UW207, 1989 Chevrolet dual wheel flatbed truck; (1) 3/4 Ton extended cab 4WD Truck with tool box (\$50,000) to replace UW331, 2000 Ford Ranger.

067 – UNIVERSITY OF WYOMING

2023-24 BIENNIUM BUDGET EXCEPTION REQUESTS

	ODED	#1 000 000				ption Requestion for expanding pre-award services.
	ORED	\$1,000,000			\$1,000,000	
	Academic Affairs		\$430,000		\$430,000	Request reauthorization of any remaining AML prior balance funds originally appropriated for the UW Energy Science Student Stipends program. The authorization of these funds has expired.
	Biennium Operating Budget Exception Request Subtotal	\$11,250,000	\$850,000	\$3,000,000	\$15,100,000	



STATE BUILDING COMMISSION MEETING CAPITAL CONSTRUCTION BUDGET

AGENCY NUMBER & PRIORITY	PROJECT NAME	SCD PRIORITY		SENERAL FUNDING	FEDERAL FUNDING	PRIVATE FUNDING	OTHER FUNDING	TOTAL EXCEPTION REQUEST	SBC RECOMMENDATION
23-027-01	STATE CONSTRUCTION DEPARTMENT - MAJOR MAINTENANCE	1	\$	185,754,715				\$ 185,754,715	
23-027-02	STATE CONSTRUCTION DEPARTMENT - BUNDLE OF LEVEL PLANNING & LEVEL FEASIBILITY	2	\$	2,300,000				\$ 2,300,000	
23-006-02	ADMINISTRATION & INFORMATION - 2 - BARRETT BUILDING SECURITY IMPROVEMENTS - LEVEL III DESIGN AND CONSTRUCTION	4	\$	150,000				\$ 150,000	
23-006-03	ADMINISTRATION & INFORMATION - 3 - HERSCHLER BUILDINGS SOUND MASKING SYSTEM - LEVEL III DESIGN AND CONSTRUCTION	13	\$	280.000				\$ 280,000	
23-006-04	ADMINISTRATION & INFORMATION - 4 - HATHAWAY BUILDING 4TH FLOOR - LEVEL III DESIGN AND CONSTRUCTION	18	5	5,362,000				\$ 5,362,000	
23-006-05	ADMINISTRATION & INFORMATION – 5 - EQUIPMENT POLE BARN AT LIQUOR DIVISION WAREHOUSE – LEVEL III DESIGN AND CONSTRUCTION	21	\$	60,000				\$ 60,000	
23-006-07	ADMINISTRATION & INFORMATION - 7 - SNOW REMOVAL ASPHALT PAD AT LIQUOR DIVISION WAREHOUSE LEVEL III DESIGN AND CONSTRUCTION	24	\$	24,000				\$ 24,000	
23-007-01	MILITARY - 1 - CAMP GUERNSEY 2022 NEW ENLISTED BARRACKS TRANSIENT TRAINING - LEVEL III DESIGN & CONSTRUCTION / AUTHORIZATION	3,5			\$ 6,000,000			\$ 8,000,000	
23-007-02	MILITARY - 2 - CAMP GUERNSEY 2023 NEW ENLISTED BARRACKS TRANSIENT TRAINING - LEVEL III DESIGN & CONSTRUCTION / AUTHORIZATION	3.6			\$ 6,000,000			\$ 6,000,000	
23-015-01	LAW ENFORCEMENT ACADEMY - 1 - EXPANSION/REPLACEMENT OF TARGET SYSTEMS & RETAINING WALLS AT OUTDOOR FIREARMS RANGE - LEVEL III DESIGN & CONSTRUCTION LAW ENFORCEMENT ACADEMY - 3 - FACILITY DOOR LOCKS AND SECURITY SYSTEM REPLACEMENT - LEVEL III	5	\$	952,000				\$ 952,000	
23-015-03	DESIGN & CONSTRUCTION	7	\$	364,000				\$ 364,000	
	LAW ENFORCEMENT ACADEMY - 4 - LONG-GUN RANGE - REBUILD - LEVEL III DESIGN & CONSTRUCTION	17	\$	1,590,400				\$ 1,590,400	
23-024-01	PARKS - PRIORITY #1 - SRA OUTDOOR RECREATION, MAINTENANCE, AND HEALTH AND SAFETY - AUTHORIZATION	3.1					\$ 4,100,000	\$ 4,100,000	
23-024-02	PARKS - PRIORITY #2 - WYOMING TERRITORIAL PRISON - AUTHORIZATION	3.2					\$ 210,000		
23-024-03	PARKS - PRIORITY #3 - WATER RELATED FACILITIES - AUTHORIZATION	3.3					\$ 300,000		
23-024-04	PARKS - PRIORITY #4 - QUEBEC 01 MISSILE ALERT FACILITY - AUTHORIZATION	3,4					\$ 25,000		
	DEPARTMENT OF FIRE PREVENTION AND ELECTRICAL SAFETY - RIVERTON; WYOMING FIRE ACADEMY TRAINING ACCESS; NEW STREET, CURB & GUTTER ADDITION - LEVEL III DESIGN & CONSTRUCTION	6	\$	1,356,000			4 10,000	\$ 1,356,000	
23-049-01	DEPARTMENT OF FAMILY SERVICES - 1 - BOYS SCHOOL FACILITY MAINTENANCE STORAGE FACILITY - LEVEL III DESIGN & CONSTRUCTION	8	\$	330,000				\$ 330,000	
23-057-01	COMMUNITY COLLEGE COMMISSION - 1 - CENTRAL WYOMING COLLEGE - JACKSON OUTREACH CENTER - LEVEL III DESIGN & CONSTRUCTION	9	\$	9,395,890			\$ 7,577,330	\$ 16,973,220	
23-057-02	COMMUNITY COLLEGE COMMISSION - 2 - NORTHWEST COMMUNITY COLLEGE - STUDENT CENTER - LEVEL III DESIGN & CONSTRUCTION	11	\$	12,646,971			\$ 10,199,171	\$ 22,848,142	
23-057-03	COMMUNITY COLLEGE COMMISSION - 3 - WYOMING WESTERN COMMUNITY COLLEGE - ROCKSPRINGS CAMPUS - NURSING FACILITY - LEVEL III DESIGN & CONSTRUCTION	14	\$	5,978,460			\$ 4,579,403	\$ 10,557,863	
23-057-04	COMMUNITY COLLEGE COMMISSION - 4 - NORTHERN WYOMING COMMUNITY COLLEGE DISTRICT — SHERIDAN COLLEGE — CENTER FOR TECHNOLOGY AND APPLIED SCIENCES — LEVEL III DESIGN & CONSTRUCTION	16	\$	4,960,000			\$ 4,000,000	\$ 8,960,000	
23-067-01	JNIVERSITY OF WYOMING - 1 - COLLEGE OF LAW CLINICAL AND EXPERIENTIAL LEARNING FACILITY ADDITION - LEVEL III DESIGN & CONSTRUCTION	10	\$	12,500,000		\$ 12,500,000		\$ 25,000,000	
23-067-02	JNIVERSITY OF WYOMING - 2 - WAR MEMORIAL STADIUM WEST STAND RENOVATION AND CORBETT NATATORIUM - EVEL III DESIGN & CONSTRUCTION	12	_	37,803,020		\$ 36,496,980		\$ 74,300,000	
23-00/-03	JNIVERSITY OF WYOMING - 3 - AMK RANCH RENOVATIONS - LEVEL III DESIGN & CONSTRUCTION	15	\$	12,000,000				\$ 12,000,000	
23-067-04	INIVERSITY OF WYOMING - 4 - ROUNDABOUT AT 22ND STREET AND WILLETT - LEVEL III DESIGN & CONSTRUCTION	19	\$	499,060			\$ 300,940	\$ 800,000	
23-067-05	JNIVERSITY OF WYOMING - 5 - COLLEGE OF AG RESEARCH AND EXTENSION (LARAMIE, LINGLE, POWELL, AND HERIDAN) CENTERS - LEVEL III DESIGN & CONSTRUCTION	20	\$	8,632,000				\$ 8,632,000	
23-067-06 F	INIVERSITY OF WYOMING - 6 - UNIVERSITY OF WYOMING - IT NETWORK UPGRADES - COLLEGE OF AG INVESEARCHAEXTENSION CENTERS (LARAMIE, LINGLE, POWELL, AND SHERIDAN), AMK RANCH, AND COLLEGE OF IRTS & SCIENCES RED BUTTES RESEARCH - LEVEL III DESIGN & CONSTRUCTION	22	\$	1,950,075				\$ 1,950,075	
3-067-07	INIVERSITY OF WYOMING - 7 - COLLEGE OF EDUCATION COMPONENT OF LAB SCHOOL RENOVATION - LEVEL III JESIGN & CONSTRUCTION	23	\$	2,600,000				\$ 2,600,000	
	INIVERSITY OF WYOMING - 8 - UNIVERSITY OF WYOMING/ALBANY COUNTY SCHOOL DISTRICT IN LAB SCHOOL - EVEL III DESIGN & CONSTRUCTION	_		1,237,000				\$ 30,624,000	
			\$ 30	8,725,591	12,000,000	\$ 48,996,980	\$ 60,678,844	\$ 430,401,415	

1. Capital Construction Request

STATE CONSTRUCTION DEPARTMENT (SCD) MAJOR MAINTENANCE

A. EXPLANATION OF REQUEST:

Major maintenance is differentiated from capital improvements by the fact that major repair and replacement activities do not change the use or capacity of a building. Major maintenance is referred to as capital renewal and has been/is funded from the same sources as capital improvements. Adequate maintenance of all the facilities and grounds that make up the infrastructure of Wyoming State Government is essential. The need to establish and maintain a system which allows state government to accomplish this was identified a number of years ago by the State Building Commission and the Wyoming State Legislature. However, until the 2003 legislative session, a routine method for requesting funds was not identified nor used by agencies. As a result, funds were not appropriated for all state facilities on a regular basis.

Prior to the 2003 legislative session, requesting agencies and the State Building Commission made the decision to apply the same concept used for K-12 major maintenance funding to state owned facilities, including those for the University of Wyoming and the Community Colleges. As a result, funds were appropriated using the formula method for the first time in 2003. Using the same formula method, funds were appropriated in 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2019 and 2021. Use of the formula driven funding request process allows for regular funding (based upon the biennium budgetary cycle) for major maintenance to occur. The formula includes the definition of building categories by RS Means and Building Square Foot Costs Year 2021, Quarter 1. Building square footage figures are placed in the appropriate building categories and the RS Means index is then used to determine the replacement cost per square foot for each of the categories, using a Wyoming Cost Adjustment. Finally the square footage figures are multiplied by "condition" factors. Facility Engineering Associates (FEA), the consultant contracted to conduct a statewide assessment of building Condition and Uniform Standards, has determined that a multiplier of 2.56% is the estimated funding level needed to maintain the building portfolio indefinitely, but that assumes the portfolio is new.

This request for the 2022/2023 biennium has been calculated using a multiplier of 2.56% and totals \$185,754,715. It will provide funds to agencies (exclusions: Wyoming Department of Transportation and Wyoming Game and Fish).

AGENCY	SQUARE FOOTAGE	REPLAC	CEMENT COST	В	IENNIUM AMOUNT @ 2,00%		ENNIUM AMOUNT QUESTED @2.56%
All State Owned Buildings	7,666,740	\$	1,441,850,962	\$	57,674,038	\$	73,822,769
State Parks						1	10,022,105
Buildings / Structures	829,382	\$	106,573,222	\$	4,588,598	\$	5,873,405
Roads - Concrete/Asphalt/Etc.	N/A		N/A	\$	1,982,395	\$	1,982,395
All Community College Buildings	4,280,563	\$	730,975,188	\$	29,239,008	\$	37,425,929
All University Buildings	6.581.589	\$	1,301,762,055	\$	52,070,482	•	
GRAND TOTAL	19,358,274	\$	3,581,161,427	\$	145,554,521	\$	66,650,217 185,754,715

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

 Object Code
 Amount
 Funding Source

 0201 - Real Property Repairs
 \$ 185,754,715

 Total
 \$ 185,754,715
 100% 1001 General Fund

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

1

The SCD recommends approval of \$185,754,715 of general fund for major maintenance.

1. Capital Construction Request

UNIVERSITY OF WYOMING | LARAMIE, WY | LAW BUILDING EXPANSION AND RENOVATION - LEVEL III DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for the proposed facility improvements will include approximately 19,000 square feet of building addition and 23,400 square feet of exterior and interior renovation to the main College of Law building. The exterior improvements will wrap around the north end of the existing building and provide a new building facade toward Willet Drive, while creating a more formal traditional stone main entrance for the College of Law. The interior building expansion and renovation will provide additional legal clinic and legal center office and meeting spaces, re-organize the Law School administrative and faculty offices, and construct a new main entry and a secondary entry dedicated to the legal clinics' public clients. The new clinic facility named in honor of Wyoming Senator Alan K. Simpson (within the Law building expansion) will have significant impact on the College of Law and the state's citizens. The College of Law's clinic and experiential learning program is a primary provider of direct legal services for low income people throughout the state. Students working under faculty supervision receive training and provide representation to indigent Wyoming citizens in hundreds of cases across Wyoming's 23 counties. This project ranks #1 in the University's capital construction priorities. The university is seeking funding for this project from the federal funds allocated to the state of Wyoming as part of the American Rescue Plan (ARP) act, but wanted to follow the state's capital construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amo	unt	Funding Source
1	0701 - Capital Outlay	\$	25,000,000	
	Total	\$	25,000,000	
		\$	12,500,000	50% 1001 General Fund
		\$	12,500,000	50% Private Funds

C. PERFORMANCE JUSTIFICATION:

The proposed facility improvements will greatly enhance the recruitment of potential students and faculty to the UW College of Law and support the greater public interest role of the University of Wyoming in providing free legal services to the citizens of Wyoming amounting to approximately \$3.5 million in free legal

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$12,500,000 of general fund and \$12,500,000 of other funds for level III design and construction for the Law Building expansion and renovation at the University of Wyoming.

CAPITAL CONSTRUCTION BUDGET NARRATIVE

1. Capital Construction Request

UNIVERSITY OF WYOMING | LARAMIE, WY | WAR MEMORIAL STADIUM WEST STAND RENOVATION AND CORBETT NATATORIUM | RENOVATION LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III Design & Construction. The University of Wyoming's goal is to raise the standard for the football program and better meet the needs of everyone who utilizes the facility from both a fan and operational (e.g., media, visiting team coaches/staff/student-athletes, etc.) perspective. An upgrade of the existing facilities will (1) create additional revenue generation opportunities, (2) provide a better game day experience for fans and (3) and better serve the needs of our national media and TV partners.

The west side stands of War Memorial Stadium need immediate upgrades. The stands and related facilities are outdated and have untapped potential for spectator experience and overall campus engagement. Renovations will provide opportunities to generate additional revenue via various mediums including, but not limited to, loge boxes, upgraded seating, separate ticket areas (e.g., club area) and upgraded fan amenities (e.g., such as concession areas/points of sale). In addition, game-day operational spaces (e.g., media working areas, visiting team locker rooms and sports medicine areas, etc.) and upgraded bathroom facilities will be incorporated into the design.

The existing Corbett pool facility, which was built in the mid-1970's, lacks several facets important to the success of the University's student-athletes. Throughout the Mountain West Conference and across the nation, 50-meter swimming and 5-meter diving capabilities are medians for competition aquatics facilities. The current facility does not meet the NCAA Division I requirements for competition facilities. The diving area is too shallow to accommodate anything more than a 3-meter springboard, yet Mountain West Conference and Western Athletic Conference teams must compete in 3, 5 and 10-meter diving categories. Additionally, the water body is contiguous, which makes it impossible for dual practice or hosting of simultaneous events. The College of Health Sciences' Department of Kinesiology and Health is also located in the existing Corbett facility and an expanded facility would allow the College of Health Sciences to modernize its approach to educating the next generation of healthcare professionals and offer additional academic programs such as physical therapy. When the pool is not in use by Athletics, the new facility will provide greater aquatic opportunities for Club Sport and Intramural athletes, recreational swimmers, and Outdoor Programs participants. In addition, the potential to host training camps would create a revenue opportunity.

Of the total to complete both projects, \$36.5 million will be funded by the University and \$37.8 million will be State funded. This project ranks #2 in the University's capital construction priorities. The university is seeking funding for this project from the federal funds allocated to the state of Wyoming as part of the American Rescue Plan (ARP) act, but wanted to follow the state's capital construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	ALGOLO: BY OBOLO: GODE, FORDING AMOUNT & FORD GOOKOL.							
	Object Code	Amo	unt	Funding Source				
1	0701 - Capital Outlay	\$	74,300,000					
	Total	\$	74,300,000	-				
		\$	37,803,020	51% 1001 General Fund				
		\$	36,496,980	49% Private Funds				

C. PERFORMANCE JUSTIFICATION:

Both portions of the project are directly related to the Mission of the University as defined in the 2017-2022 Breaking Through Strategic Plan by promoting opportunities for athletic competition. The proposed renovations create additional revenue opportunities through improvement of spectator and user experiences.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$37,803,020 of general fund for level III design and construction at the War Memorial West Stand and Corbett Natatorium at the University of Wyoming.

CAPITAL CONSTRUCTION BUDGET NARRATIVE

1. Capital Construction Request

UNIVERSITY OF WYOMING | JACKSON LAKE, WY | AMK RANCH RENOVATIONS - LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for the AMK Ranch is not currently positioned to achieve its potential success in large part due to the fact that the physical facilities, centered on historic building, need critical updates. An investment in infrastructure updates and expansions of the AMK Ranch facilities will support the next 30 years or more of world-class research activity. The goal is to complete a lengthy maintenance backlog, update existing buildings per an architectural report, and add a new facility with dorm space, lab spaces and an adequate kitchen and dining space. This project ranks #3 in the University's capital construction priorities. The university is seeking funding for this project from the federal funds allocated to the state of Wyoming as part of the American Rescue Plan (ARP) act, but wanted to follow the state's capital construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amoun	it	Funding S	ource
1	0701 - Capital Outlay	\$	12,000,000		
	Total	\$	12,000,000	100% 1001	General Fund

C. PERFORMANCE JUSTIFICATION:

Expected outcomes include increased UW use and scholarly impact associated with an investment in facilities including publications and creative output worthy of national-level press coverage; expanded place-based learning associated with promoting opportunities for courses; new large federally funded research programs centered at the UW-NPS facility. A longer-term push is to give every UW student an experience at the AMK Ranch through courses, workshops, internships and or research opportunities.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$12,000,000 of general fund for level III design and construction for the AMK Ranch renovations at the University of Wyoming.

1. Capital Construction Request

UNIVERSITY OF WYOMING | LARAMIE, WY | ROUNDABOUT AT 22ND STREET AND WILLETT STREET - LEVEL - III DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for the support of university long range planning and capital projects, traffic control measures are a priority at the 22nd and Willett intersection. An intersection improvement study was performed in July 2019 by the City of Laramie. The study supports the long term need for traffic control, specifically as stop light or roundabout installation. The city did not budget for any work at this intersection in FY2021 and is not planning to budget for it in FY2022. The roundabout was determined the most effective solution based on long term operation and maintenance costs. The university and city agreed to a memorandum of understanding under which the university controls the project with city approval for utility connections and pavement sections. The total cost to design and construct the project is estimated to be \$800,000. The university seeks \$500,000 in state funds to supplement \$300,000 of university funds committed to the project. This project ranks #4 in the University's capital construction priorities. The university is seeking funding for this construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amount		Funding Source
1	0701 - Capital Outlay	\$	800,000	
	Total	\$	800,000	
		\$	499,060	1001 General Fund
		\$	300,940	Other Funds

C. PERFORMANCE JUSTIFICATION:

Expected outcomes include improved traffic flow and pedestrian safety at an increasingly congested intersection on campus.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$499,060 general fund and \$300,940 of other funds for level III design and construction for a roundabout at 22nd Street and Willett Street in Laramie.

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CAPITAL CONSTRUCTION BUDGET NARRATIVE

1. Capital Construction Request

UNIVERSITY OF WYOMING | LARAMIE, LINGLE, POWELL, AND SHERIDAN, WY | COLLEGE OF AGRICULTURE RESEARCH AND EXTENSION CENTERS - LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for the deterioration of agricultural research stations is a recognized issue across the USA that reflects some 30 years of underinvestment. Without investment, substantial new opportunity for modern agricultural research through our various experimental stations is not able to be recognized. New ideas for work with edge computing/artificial intelligence (drones, robots, remote sensors) in agriculture, modeling and prediction, large scale experimental studies, and Smart Ranch/Farming will not be possible. Research active faculty and researchers are more difficult to recruit and retain. New investment in the research stations will make agricultural researchers more competitive for external funding and enable them to partner in interdisciplinary research. This project ranks #5 in the University's capital construction priorities. The university is seeking funding for this project from the federal funds allocated to the state of Wyoming as part of the American Rescue Plan (ARP) act, but wanted to follow the state's capital construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amou	ınt	Funding Source
1	0701 - Capital Outlay	\$	8,632,000	
	Total	\$	8,632,000	1001 General Fund

C. PERFORMANCE JUSTIFICATION:

Expected outcomes include increased research funding for interdisciplinary agricultural research projects and increased outreach activities by extension offices.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$8,632,000 of general fund for level III design and construction for renovations of the College of Agriculture Research and Extension Centers at the University of Wyoming.

1. Capital Construction Request

UNIVERSITY OF WYOMING - IT NETWORK UPGRADES FOR COLLEGE OF AG RESEARCH AND EXTENSION CENTERS (LARAMIE, LINGLE, POWELL, AND SHERIDAN), AMK RANCH, AND COLLEGE OF ARTS & SCIENCES RED BUTTES RESEARCH CENTER - LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for the connectivity at the agricultural research stations is abysmal and severely limits the ability to fulfill the academic mission. Options to upgrade are limited and expensive. In some locations satellite service may be helpful in the future but current providers are not able to provide network capacity at a level worth the investment. Other locations' service can be upgraded by constructing a fiber circuit at a cost of approximately \$89,000 per mile and approval to connect to the Wyoming Unified Network. This project ranks #6 in the University's capital construction priorities. The university is seeking funding for this project from the federal funds allocated to the state of Wyoming as part of the American Rescue Plan (ARP) act, but wanted to follow the state's capital construction proposal submission process.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amou	ınt	Funding Source	
1	0701 - Capital Outlay	\$	1,950,075		
	Total	\$	1.950.075	1001 General Fund	

C. PERFORMANCE JUSTIFICATION:

Expected outcomes include increased research funding for interdisciplinary agricultural research projects and increased outreach activities by extension offices.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$1,950,075 of general fund for level III design and construction for IT upgrades at the University of Wyoming College of Agricuture Research and Extension Centers.

CAPITAL CONSTRUCTION BUDGET NARRATIVE

1. Capital Construction Request

UNIVERSITY OF WYOMING - College of Education Component of Lab School Renovation - LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III Design & Construction. The College of Education building houses only one-third of the College faculty. The remainder of the faculty is dispersed across campus. This arrangement limits proximal access of faculty to one another. This \$2.6 million renovation of the College of Education building will collocate College of Education faculty members into a single facility that is expressly designed to facilitate advances in technology use and collect units, functions, and resources into a single location with a clear purpose, outcome, and identity. It is imperative that (a) the proposed renovation of the College of Education portion of the building, and (b) the expansion of the lab school portion of the same building be viewed as a single, connected capital construction project. This partnership between UW and ACSD 1 will preserve, protect, and promote the continuing productive and mutually beneficial relationship of a functioning publicly funded, university lab school connected to the State's only college of education. The synergies that are realized in educator preparation and K-12 student learning when a lab school and a university's college of education are integrated is like those synergies that are provided when a teaching hospital relates to a school of medicine. The practice of education must be learned in early, continuous, embedded clinical settings. This is critical for potential teachers to skillfully apply the science of education to the craft of teaching. On the other hand, P-12 students' educational experiences are enhanced when delivered by pre-service and in-service teachers who employ the newest advances in effective practices based upon learning sciences and evidence-based research. This project ranks #7 in the University's capital construction priorities.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

	Object Code	Amou	ınt	Funding Source				
1	0701 - Capital Outlay	\$	2,600,000					
	Total	\$	2,600,000	100% 1001 General Fund				

C. PERFORMANCE JUSTIFICATION:

The proposed project is directly related to the Vision and Mission of the University as defined in the 2017-2022 Breaking Through Strategic Plan by promoting the exploration of new frontiers of teaching and learning and providing outreach and services that extend our human talent and technological capacity to serve the people in our communities, our state, the nation and the world.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$2,600,000 of general fund for level III design and construction for renovations at the College of Education Component of Lab School at the University of Wyoming.

1. Capital Construction Request

UNIVERSITY OF WYOMING/ ALBANY COUNTY SCHOOL DISTRICT #1 LAB SCHOOL - LEVEL III - DESIGN & CONSTRUCTION

A. EXPLANATION OF REQUEST:

Level III design & construction funding for this request is a joint venture between the University of Wyoming and Albany County School District #1 proposed to be delivered using UW's capital construction project delivery process, but funded by the same mechanism all other K-12 school projects are funded. The State's P-8 Educator Preparation University Laboratory School currently housed in the University of Wyoming's Education building needs to be modernized or replaced to serve the needs of the community, the State, the University, and the College of Education. The current facility is antiquated, dysfunctional, and a hindrance to the 21st century education of future educators and P-12 students. The existing facility severely limits universal accessibility, security, recreational opportunities and appropriate technologies critical in the preparation of today's youth.

B. REQUEST BY OBJECT CODE, FUNDING AMOUNT & FUND SOURCE:

1	0701 - Capital Outlay	\$ 30,634,000	
	Total	\$ 30,634,000	_
		\$ 1,237,000	4% General Fund
		\$ 29 397 000	96% School Capital Construction Account

C. PERFORMANCE JUSTIFICATION:

The proposed project is directly related to the Vision and Mission of the University as defined in the 2017-2022 Breaking Through Strategic Plan by promoting the exploration of new frontiers of teaching and learning and providing outreach and services that extend our human talent and technological capacity to serve the people in our communities, our state, the nation and the world.

STATE CONSTRUCTION DEPARTMENT (SCD) RECOMMENDATION

The SCD recommends approval of \$1,237,000 of general fund and \$29,397,000 of school capital construction account for level III design and construction at the University of Wyoming Albany County School District #1 Lab School.

Attachment 8 HEERF Spending Update

	А	В	С	D	E	F	G	Н	I	J	K	L
1		Emerg	Emergency Student Aid Allocation				Institu	Institutional Allocation				
	Federal Act	Effective Date	Emergency Student Aid Allocation	Total Expended as of 7/15/2021	Remaining Balance		Institutional Allocation	Total Expended as of 7/26/2021	Remaining Balance	Total Allocation	Total Expended	Total Remaining Balance
3	CARES ACT (HEERF I)	3/27/20	\$3,306,790	\$3,306,790	\$0		\$3,306,790	\$2,407,815	\$898,975	\$6,613,580	\$5,714,605	\$898,975
4 5 6 7	Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA)(HEERF II) American Rescue Plan (ARP) (HEERF III)	12/27/20 3/11/21	\$3,306,790 \$9,421,784 \$16,035,364	\$3,306,790 \$0 \$6,613,580	\$0 \$9,421,784 \$9,421,784		\$7,239,545 \$9,170,379 \$19,716,714	\$7,239,545 \$8,691,715 \$18,339,075	\$0 \$478,664 \$1,377,639	\$10,546,335 \$18,592,163 \$35,752,078		\$0 \$9,900,448 \$10,799,423
8												
9	CARES ACT (HEERF I)			Total Expended as of 7/26/2021				Total Expended as of 7/26/2021			Total Expended as of 7/26/2021	
10	Capitalized Equipment LABORATORY							\$59,076			\$59,076	
11	Computer Software and License Expense							\$24,600			\$24,600	
12	FRINGE RATE							\$34,517			\$34,517	
	FT SALARIES-STA							\$62,406			\$62,406	
14	Lab Supplies							\$1,038,910			\$1,038,910	
	Medical Services Expense							\$54,625			\$54,625	
16	Medical Supplies							\$297			\$297	
17	Non-Capitalized Equipment							\$8,411			\$8,411	
	Professional Services Expense							\$21,576			\$21,576	
	PT SALARIES-NON							\$321,727			\$321,727	
	Revenue Replacement*							\$777,066			\$777,066	
	TELEPHONE							\$4,604			\$4,604	
22	Student Aid			\$3,306,790				4			\$3,306,790	
23	Subtotal HEERF I			\$3,306,790				\$2,407,815			\$5,714,605	
24	*Any remaining unexpended funds will be	drawn as revenu	e replacement	· ·								1
	Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA)(HEERF II)										\$0	
26	Revenue Replacement							\$ 7,239,545			\$7,239,545	
27	Student Aid			\$3,306,790							\$3,306,790	
28	Subtotal HEERF II			\$3,306,790				\$ 7,239,545			\$10,546,335	
30 31	UW CARES ACT HEERF III Institutional Costs Revenue Replacement							\$ 8,690,379			\$8,690,379	
32	PT SALARIES-NON				1			\$ 1,336			\$1,336	
33	Subtotal HEERF III							\$ 8,691,715			\$8,691,715	
34	Subtotal FILENT III							7 0,031,713			70,031,713	
35	Total HEERF I, II, III			\$6,613,580				\$18,339,075			\$24,952,655	