



To: The Honorable Matthew H. Mead, Governor of the State of Wyoming

From: Meredith Asay, Special Advisor to the President for External Relations, Office of the President

Date: November 4, 2015

Re: Required report

Enclosed, please find the legislatively required report from the Wyoming Governor's UW Top-Tier Science Programs and Facilities Task Force.

The University of Wyoming has distributed copies of this report to the required legislative committees.

If you have any questions, please do not hesitate to contact me (masay@uwyo.edu or 307.766.2903).

Thank you.



WYOMING GOVERNOR'S
UW TOP-TIER SCIENCE PROGRAMS & FACILITIES TASK FORCE

November 4, 2015

The Honorable Matthew H. Mead
Governor, State of Wyoming
State Capitol Building, 200 West 24th Street
Cheyenne, WY 82002-0010

Dear Governor Mead,

We write to share our continued support for the University of Wyoming's efforts to advance the status of core science programs and facilities at UW, in accordance with 2015 Session Laws of Wyoming, Chapter 142 Section 345 (r). With your support, and with substantial initial appropriations by the Wyoming Legislature, the Campus Leadership Team has made significant progress toward the most critical focus of the Top Tier Science Programs and Facilities Initiative, namely, enhancing student success. We also note the foresight exhibited by the 2015 Legislature's set aside of \$30 million toward the construction of the facility; this is a central element of the Initiative.

We are astounded by how much is already underway. The Leadership Team has been able to bridge the chasm that often appears between planning and implementation. In a short period of time the group has responded to the mandate, developed plans that have been supported by State government and has brought the Science Initiative to life. Your Task Force believes it is imperative that the initiative moves forward. We are in agreement with the direction evidenced by the programmatic and facilities requests that have been submitted as elements of the University of Wyoming (Agency 067) Budget for the FY 2017-2018 Biennium. We acknowledge that the requests may need to be adjusted to reflect the challenges associated with revised revenue forecasts for the State.

The University's programmatic request emphasizes the two most student-focused elements of the Science Initiative. First, implementing active learning in the core sciences to fundamentally transform science education in Wyoming. Second, significantly enhancing undergraduate research opportunities by pairing students with faculty research mentors and research support from the students' earliest days on campus. Elements of the budget have been developed in a "modular" format at the request of the Task Force, thereby facilitating an emphasis on individual programs, rather than an across the board funding perspective.

Through the **Learning Actively Mentoring Program** (LAMP) the university has begun to implement Active Learning-based teaching methods both on campus and in the state with faculty seminars and outreach programs with science educators across Wyoming. It's an exciting and challenging effort which requires educators to embrace new teaching methods. While change is sometimes halting in the short-term, there is already momentum among faculty toward "active learning" teaching methodologies. At UW, faculty will be retooling curricula that will embrace dynamic, active learning methodologies as additional

active learning facilities become available on campus. Future K-12 educators are already being exposed to these new teaching methods, while undergraduate students are reported to “love” the new methodologies.

The **Wyoming Undergraduate Research Scholars Program** enrolled four students last summer, and a total of 20 are enrolled this fall. We might call the program the pinnacle of active learning for students in the sciences, featuring unparalleled undergraduate research opportunities from the time students arrive in Laramie as undergraduates. We have met several of these students, and are impressed that this program--which was on the drawing board six months ago--is already making an impact in the lives and learning of our undergraduates. Students are paired with a faculty mentor and receive support to develop enhanced, individually unique laboratory skills, submit publications and travel to conferences. Through a freshman seminar and continuing 1 credit hour classes in future semesters, WRSP participants will be prepared to act as mentors themselves to future incoming undergraduates. Recruitment of future participants is underway at Wyoming high schools. We believe this program has the potential to keep some of Wyoming’s very best high school graduates channeled to UW and, thereafter, as contributing citizens of Wyoming.

Other than administrative costs associated with startup and implementation of the Science Initiative, the remainder of the budget request is for programs which would commence during the coming biennium.

The **PhD Fellows** program seeks to attract and fund additional doctoral students. A revised structure for the initial stages of the program would offer stipends for doctoral students to serve in the LAMP and WRSP as graduate mentors.

The **Competitive Research Innovation Program’s** scaled-back budgeting involves important elements which will be on display when you travel to Stanford in November. Key investments in expert laboratory technicians and in seed grants that catalyze interdisciplinary research yield high returns on investments. Think of these as Level I and Level II planning for SI research efforts, early investments that enhance the opportunities for high quality, extramurally funded world-class science.

The Apache Point Observatory Consortium offers UW students and researchers access to three research telescopes at the southern New Mexico observatory. Initial enrollment access fees are admittedly hefty, with a substantially smaller annual investment required in subsequent years. It is possible the enrollment should be delayed, given the state’s revenue picture.

The Task Force is supportive of the significant **facility planning and design** work that has commenced as a result of the appropriation of planning funding in the 2015 session. The expanded campus facility design team has worked diligently to develop a vision for a facility to serve as a magnet for students and high profile faculty alike. Most impressive have been the team efforts to arrive at a common purpose for the building, incorporating active learning classrooms on several floors, centers for scientific imaging

and integrated biological research, as well as plant growth facilities. Through the initial process of designing the facility, interdisciplinary cooperation has been a hallmark.

We are appreciative of the set-aside funding of \$30 million in the 2015 legislative session toward the anticipated \$100 million total budget for the facility. We would ask that options for full funding of the facility be explored. With construction inflation of roughly 6% per year, delays in reaching full funding could enhance the challenge of the significant investment of state resources toward this important facility.

The Campus Leadership Team is to be congratulated for its efforts. This is a very good team with fine leadership. The Task Force has been extremely pleased with the level of innovation and collaboration exhibited by the group, and we are in support of its work, while being mindful of the very significant funding request which accompanies the initiative.

Please do not hesitate to contact us with questions which might arise from this letter, and thank you for the opportunity to serve the state and the university.

Sincerely,



Dave Freudenthal, Co-Chairman



Carol Brewer, Co-Chairwoman

xc: Joint Appropriations Committee
Joint Minerals, Business and Economic Development Committee