Representative Mark Sanford, Chairman, called the meeting to order at 12:30 p.m. at Mayville State University.


Member absent: Representative Lisa Meier

Others present: Representative Corey Mock, Grand Forks, member of the Legislative Management
Brady A. Larson, Legislative Council, Bismarck
See Appendix A for additional persons present.

It was moved by Senator Robinson, seconded by Representative Delmore, and carried on a voice vote that the minutes of the April 17-18, 2018, meeting be approved as distributed.

Dr. Gary D. Hagen, President, Mayville State University, presented information (Appendix B) regarding the institution and the institution's strategic plan. He also distributed a campus "snapshot" document (Appendix C) to the committee. He said the Mayville State University (MaSU) endowment has grown from under $2.1 million in fiscal year 2011 to over $6.5 million in fiscal year 2017. He said headcount enrollment has increased 44 percent since 2008, from 789 students in the fall 2008 semester to 1,140 students in the fall 2017 semester. He said MaSU has been making improvements to attract more students by increasing study abroad opportunities, student research, and local internships. He said MaSU has also reduced deferred maintenance as a percentage of plant value from 39 percent in 2004 to a current estimate of 6 percent.

Dr. Hagen led the committee on a tour of the MaSU campus, including Agassiz Hall and the Science and Education Buildings.

Chairman Sanford thanked Dr. Hagen for his service to MaSU and the state.

Mr. Rick Tonder, Director of Facilities Planning, North Dakota University System, presented information (Appendix D) regarding campus space utilization. He said the North Dakota University System campuses generally have too many classrooms and laboratories, with many in poor condition or obsolete. He said building designs are generally efficient, but there is too much space on a per-student basis, resulting in inadequate maintenance. He said the University System has scheduled the removal of many underutilized buildings with high deferred maintenance.

In response to a question from Chairman Sanford, Mr. Tonder said there are currently about 10 facilities no longer being occupied on University System campuses. He said many facilities are being removed or deactivated.

In response to a question from Chairman Sanford, Mr. Tonder said detailed space utilization information will be available in the near future. Chairman Sanford requested the information be provided to the committee.

In response to a question from Senator Hogue regarding maintenance and operating costs of buildings constructed with donated funds, Mr. Tonder said campuses must receive approval from the State Board of Higher Education (SBHE) and the Legislative Assembly to construct a new building. He said the SBHE does not have a specific policy to require a sinking fund to pay for maintenance and operations of newly constructed buildings. He
said 2017 Senate Bill No. 2003 required the establishment of a sinking fund in the future; however, Governor Burgum vetoed this section.

Mr. Tonder presented information (Appendix E) regarding the Valley City State University (VCSU) steam plant and integrated activated carbon plant. He said the 2017 Legislative Assembly appropriated $22.5 million of revenue bond proceeds for the construction of an activated carbon plant that is integrated with the new coal-fired steam plant. He said the new steam plant is operational and VCSU is accepting proposals for design and implementation of the activated carbon plant.

In response to a question from Representative Beadle, Mr. Tonder said the addition of the integrated carbon plant at VCSU will not replace or render anything obsolete from the newly built steam plant.

In response to a question from Chairman Sanford, Mr. Tonder said VCSU and the SBHE want to demonstrate to potential revenue bond investors that the marketplace for activated carbon is legitimate and the profit margins will ensure repayment of bonds.

In response to a question from Chairman Sanford, Mr. Tonder said the term of the revenue bonds has not been determined.

Mr. Mike Pieper, Associate Vice President for Facilities, University of North Dakota, presented information (Appendix F) regarding the University of North Dakota (UND) steam plant. He said the steam plant was originally built in 1909 and is in the worst condition of all UND buildings, with five of the seven boilers beyond their design life and the other two boilers in need of immediate repair. He said UND plans to utilize North Dakota Century Code Chapter 48-02.1, relating to infrastructure development by private operators, to contract with an outside developer for a new steam plant. He said removal of the old steam plant would remove $75 million of deferred maintenance. He said the new steam plant would cost approximately $50 million and related upgrades around campus will total approximately $25 million.

In response to a question from Chairman Sanford, Mr. Pieper said the primary external steam plant clients are Altru Health System, North Dakota Vision Services - School for the Blind, and Lake Agassiz Elementary School. He said the proposed steam plant project would not immediately include increases in rates for those external clients.

Senator Holmberg said the removal of the old steam plant could result in restoration of some parking removed for the core library expansion.

In response to a question from Representative Becker regarding current steam plant staff, Mr. Pieper said UND is working with the third-party contractor to help current staff transition to the new facility. He said there are approximately 15 employees working at the current steam plant and most of them would transition to a new role within UND or with the new steam plant operator.

Ms. Tammy Dolan, Vice Chancellor for Administrative Affairs and Chief Financial Officer, North Dakota University System, presented information (Appendix G) regarding campus use of extraordinary repairs funding, including the source of matching funds pursuant to Section 28 of 2017 Senate Bill No. 2003, and tentative higher education funding formula calculations for the 2019-21 biennium, including the impact of the Governor's recommended budget guidelines. She said University System institutions have expended approximately $24.3 million of the $33.3 million allocated for extraordinary repairs. She said Williston State College and Dakota College at Bottineau had not undertaken any extraordinary repairs projects as of May 31, 2018.

In response to a question from Chairman Sanford, Mr. Tonder said Dickinson State University has been using performance contracting to match deferred maintenance appropriation funding.

Chairman Sanford requested the University System provide the committee with a report on changes in the deferred maintenance balance since the deferred maintenance matching funds requirement was enacted. Ms. Dolan said she would email the additional information to the Legislative Council staff.

Ms. Dolan said the number of adjusted student credit hours, which are used to calculate funding under the higher education funding formula, increased by nearly 65,000 from the 2013-15 biennium to the 2015-17 biennium. She said this increase in adjusted credit hours would result in a $4 million increase in funding under the current formula. She said under Governor Burgum's requested 10 percent funding reduction, University System institutions would see a funding reduction of $47.8 million under the formula.
In response to a question from Representative Martinson, Ms. Dolan said the University System office is working on a budget recommendation to present to the SBHE at its June 8, 2018, meeting. She said the SBHE would decide on the budget level to be submitted to the Governor and the Office of Management and Budget.

In response to a question from Chairman Sanford, Ms. Dolan said multiple budget options are still under consideration by the SBHE.

Chairman Sanford said he believes there would be support in the Legislative Assembly for a separate residency program line item in the UND School of Medicine and Health Sciences budget.

Senator Holmberg expressed support for medical school residency program funding.

In response to a question from Chairman Sanford regarding capital bond payments, Ms. Dolan said she would provide the committee with additional information regarding total outstanding bonds being repaid from the general fund.

In response to a question from Senator Holmberg regarding North Dakota State University (NDSU) agricultural research and extension funding, Ms. Dolan said the budget for NDSU agricultural research and extension is determined by the State Board of Agricultural Research and Education and is only reviewed by the SBHE.

In response to a question from Representative Martinson regarding increases in tuition necessary to compensate for a 10 percent state funding reduction, Ms. Dolan said the necessary tuition rate increases vary from 5 to 13 percent per year depending on the institution. Representative Martinson suggested the SBHE better communicate the potential effect of Governor Burgum's requested budget reductions on University System institutions.

In response to a question from Representative Becker regarding tuition rate comparisons to neighboring states, Ms. Dolan said regional competitors are monitored. She said the 2-year University System institutions are generally more expensive and the 4-year University System institutions are generally cheaper than neighboring states.

Dr. Birgit Pruess, Professor, North Dakota State University, commented regarding higher education funding and the concerns of University System faculty. She expressed concern regarding the potential impact of additional budget reductions on faculty retention and student learning.

Mr. Don Morton, Chair, State Board of Higher Education, commented regarding Governor Burgum's recommended budget guidelines. He said the SBHE will be working with the Governor's office and the Legislative Assembly to develop a budget.

Representative Martinson expressed concern regarding whether the SBHE is adequately advocating for the University System institutions.

Mr. Jared Melville, President, North Dakota Student Association, commented in support of funding for higher education in North Dakota.

Chairman Sanford distributed a document (Appendix H) regarding potential items for committee recommendations and recommended legislation. He said potential recommended legislation may include bill drafts relating to the professional student exchange program, the higher education funding formula, the higher education challenge matching grant program, and matching funds for extraordinary repairs. He asked the committee members to submit any requests for legislation to the Legislative Council staff.

In response to a question from Senator Robinson, Chairman Sanford said the committee will have one or two more meetings.

The committee recessed at 4:20 p.m. and reconvened at 8:30 a.m. on Tuesday, June 5, 2018, at the Energy and Environmental Research Center (EERC).

Mr. Thomas A. Erickson, Chief Executive Officer, Energy and Environmental Research Center, welcomed the committee to the EERC. He distributed materials regarding EERC research and the Plains CO₂ Reduction Partnership, which are on file in the Legislative Council office.

Dr. Kelly Rusch, Vice President for Research and Creative Activity, North Dakota State University, presented information (Appendix I) regarding research conducted by the institution. She said research is a core to the mission.
of NDSU. She said undergraduate research promotes the development of critical thinking and problem-solving skills. She said funding for research has changed, with federal funding peaking in 2011, requiring funding from the higher education institutions to increase. She said due to the change in funding source and the need for proven outcomes, applied research is increasing while basic research is decreasing. She said NDSU is focusing on three primary research areas–food systems and security; healthy populations and vital communities; and sustainable energy, environment, and societal infrastructure.

In response to a question from Chairman Sanford regarding the cost of research, including tuition waivers, Dr. Rusch said some research is funded with outside grants, some with internal money, and some does not require funding. She said graduate research assistants must work 20 hours per week in order to receive a tuition waiver.

In response to a question from Senator Robinson regarding the impact of faculty turnover on research, Dr. Rusch said the number of NDSU faculty positions has decreased due to budget reductions. She said losing a faculty member is especially harmful for research at universities the size of NDSU and UND as there is often only one faculty member with expertise on a certain topic.

In response to a question from Representative Martinson regarding the potential to focus on priority research areas during times of lower state revenues and the ability to identify the research areas with the greatest returns, Dr. Rusch said NDSU does prioritize certain research areas.

In response to a question from Chairman Sanford regarding research collaboration between UND and NDSU, Dr. Rusch said the institutions need to work together to leverage the limited resources and faculty available at each campus.

Dr. Grant McGimpsey, Vice President for Research and Economic Development, University of North Dakota, presented information (Appendix J) regarding research conducted by the institution. He said UND's research mission is to aggressively pursue solutions to societal, economic, industrial, technical, and other challenges through research, scholarship, and creative works. He said UND research expenditures have increased from $62 million in 2014 to $102 million in 2017, largely due to improved tracking of institutional expenditures. He said UND is targeting five primary research areas, including:

1. Promote energy security and environmental sustainability;
2. Address health challenges through basic, clinical, and translational discovery;
3. Help rural communities solve their unique health and social problems;
4. Drive the world-changing developments of unmanned aerial systems (UAS) and do so in a way that reflects UND's values; and
5. Effectively, efficiently, and ethically produce, manage, and securely use information in the age of "big" data.

In response to a question from Representative Mock, Dr. McGimpsey said the improved tracking of institutional research expenditures primarily relates to better tracking of faculty time spent on research. He said the institutional research funding increase identified in his presentation is due to the improved tracking of faculty research efforts, rather than an actual increase in institutional funding dedicated to research.

Mr. Erickson presented information (Appendix K) regarding EERC research and its impact on North Dakota. He suggested the state create a state energy research center at UND to ensure North Dakota's energy resources and products remain accessible, affordable, environmentally responsible, and understood. He said the proposed research center would specifically focus on precommercial and fundamental research to complement existing state programs. He said the proposed research center would require an initial state investment of $12 million, growing to $24 million per biennium by the 2023-25 biennium.

Ms. Stacey Dahl, Senior Manager of External Affairs, Minnkota Power Cooperative, commented in support of the EERC. She said the EERC has helped Minnkota Power Cooperative meet emissions requirements.

Dr. Colin Combs, Professor, Biomedical Sciences, University of North Dakota School of Medicine and Health Sciences, presented information (Appendix L) regarding research activities at the School of Medicine and Health Sciences. He said unique challenges in North Dakota include cancer, Alzheimer's, and substance abuse; barriers to rural care; socioeconomic disparities; and minimal clinical research regarding the state's unique populations. He proposed an initial state investment of $10 million to create an institute for clinical studies. He said the $10 million would serve as seed funding and the need for state resources would be eliminated by the 2025-27 biennium.
In response to a question from Chairman Sanford regarding health issues that are abnormally prevalent in certain populations or regions of North Dakota, Dr. Combs said it is unclear why certain cancers are more prevalent in certain North Dakota counties.

Ms. Thomasine Heitkamp, Professor, Nursing, University of North Dakota, presented information (Appendix M) regarding addiction and rural health research. She said opioid overdose deaths increased 69 percent in North Dakota from 2014 to 2016. She proposed the state create a rural and tribal addiction research center at UND with an initial state investment of $2.2 million. She said the need for state resources would be eliminated by the 2023-25 biennium.

In response to a question from Senator Robinson regarding the Department of Human Services study of behavioral health in North Dakota, Ms. Heitkamp said the study has confirmed many concerns she had relating to behavioral health. She said child welfare and behavioral health are national issues.

In response to a question from Senator Robinson regarding prevention and treatment of addiction issues and behavioral health, Ms. Heitkamp said she recently suggested an economist study the societal costs of behavioral health issues.

Senator Robinson expressed support for an increased state focus on behavioral health issues.

Dr. Mark A. Askelson, Professor, Department of Atmospheric Sciences, University of North Dakota, presented information (Appendix N) regarding autonomous systems research. He said UND, in collaboration with NDSU, is seeking to expand its current expertise in UAS research into autonomous systems research. He said the Research Institute for Autonomous Systems was established in 2017.

Ms. Terri Zimmerman, Chief Executive Officer, Packet Digital, commented in support of increased autonomous systems research at UND.

Dr. Hesham El-Rewini, Dean, College of Engineering and Mines, University of North Dakota, presented information (Appendix O) regarding data analytics. He said North Dakota's agriculture, UAS, energy, construction, transportation, and other sectors all use data and rely on an effective data supply chain. He said UND could identify industry solutions through data analytics research and development to improve company attraction and retention, new job creation, and economic diversification.

In response to a question from Chairman Sanford regarding competition for private research funding, Dr. El-Rewini said he hopes UND's established research strengths will attract talent and investment.

Dr. Mark R. Hagerott, Chancellor, North Dakota University System, commented regarding the University System's efforts to improve research networks and collaboration between UND and NDSU.

Mr. Jay Schuler, Commissioner, Department of Commerce, presented information (Appendix P) regarding higher education research. He said the Department of Commerce supports higher education research and the expansion of university intellectual property because it leads to better paying jobs, better opportunities for faculty, and increased private research revenue.

Dr. Pamela K. York, Co-Founder and General Partner, Capita3, Minneapolis, Minnesota, presented information (Appendix Q), regarding university technology commercialization. She said university technology commercialization yields significant economic and societal benefit. She said public-private partnerships stimulate collaboration, research funding, and knowledge transfer. She said both NDSU and UND have the potential to improve commercialization of research findings.

In response to a question from Chairman Sanford, Dr. York said her technology commercialization research has been shared with UND and NDSU.

In response to a question from Chairman Sanford regarding the EERC at UND and agricultural research at NDSU, Mr. Schuler said the EERC receives most of its funding from UND and private contracts, while NDSU agricultural research receives a significant amount of funding from the state.

Mr. Steve Burian, Chief Executive Officer, Advanced Engineering and Environmental Services, Inc., presented information (Appendix R) on behalf of the Valley Prosperity Partnership (VPP) in support of a proposed emerging technologies research fund and decisionmaking independence for research universities. He said a solid and predictable base of funding is required to ensure research institutions attract and leverage both basic and applied
research opportunities to support educational excellence and diversified economic growth. He also commented in support of streamlining budgeting policies and processes and the removal of caps on tuition increases.

In response to a question from Representative Delmore regarding VPP cooperation with the SBHE and Governor, Mr. Burian said the VPP has met with the University System Chancellor and the Governor to discuss priorities for higher education.

Chairman Sanford asked the Legislative Council staff to contact committee members requesting information on potential recommendations before the next committee meeting.

Representative Maragos suggested the committee receive additional information regarding meetings between the SBHE and the Governor relating to the development of the University System's budget request for the 2019-21 biennium.

Senator Hogue commented in opposition of the current higher education funding formula. He suggested the committee discuss the possibility of eliminating the formula.

Senator Roers commented in support of the higher education funding formula. He said it has helped to reduce complaints regarding equity among the institutions.

No further business appearing, Chairman Sanford adjourned the meeting at 1:10 p.m.

Alex J. Cronquist
Fiscal Analyst

ATTACH:18