

**CAPITAL PROJECTS DETAIL**

640 NDSU Main Research Center

Version: 2015-R03-00640

Date: 12/23/2014

Time: 13:17:20

Capital Project			
Veterinary Diagnostic Lab Replacement			
	<b>Total Project Cost</b>	<b>Request/Optional</b>	<b>Recommendation</b>
		18,000,000	18,000,000
	<b>General Fund</b>	18,000,000	18,000,000
	<b>Federal Funds</b>	0	0
	<b>Special Funds</b>	0	0
	<b>Bonding</b>	0	0

Is this a multiennium project? No    No of Biens: 1    Est. Costs 18,000,000

Future Increased Costs Associated with Project Approval								
	2015-2017	2017-2019	2019-2021		2015-2017	2017-2019	2019-2021	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	0	0					
Equipment > \$5,000	0	0	0	General Fund	0	0	0	
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	
Special Lines	0	0	0	Special Funds	0	0	0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Project Specifications**

The NDAES Veterinary Diagnostic Lab (VDL) may lose accreditation because it does not meet modern laboratory standards. Loss of accreditation would affect North Dakota veterinarians and livestock producers relying on the facility for test results; would affect affiliation with the National Animal Health Laboratory Network (subsequently affecting funds for diagnostic equipment, proficiency testing for regulatory diseases, partial salary support for an IT position, and would prevent competition for surveillance testing contracts); would restrict access to Federal funds for bioterrorism preparedness and partial funding of technical support; inhibits the ability to conduct regulatory testing for animals crossing state and international borders; restricts surveillance of diseases of human health significance, such as rabies, anthrax, and West Nile virus; affects the ability of the VDL to participate in the Veterinary Laboratory Response network for toxicology testing. Veterinary clinics often require the use of an accredited veterinary diagnostic lab for biopsies and bacterial culture. The loss of accreditation would result in significantly higher costs for animal health and regulatory testing for North Dakota livestock producers, veterinarians, and the public. The state would be unable to respond to animal health emergencies in a timely fashion.

A new and modern facility to house the veterinary diagnostic laboratory (VDL) at North Dakota State University should be a minimum of 20,000 square feet (current facility is approximately 8,000 square feet) and be designed to allow cost effective addition of laboratory space, as needed, to meet future testing demands (i.e. meat testing, analysis of feed and animal samples for petroleum residues, international export testing). The facility should include adequate laboratory and office space for sample receiving, toxicology, serology, information technology, administration, clinical pathology, gross pathology, histology, quality assurance, bacteriology/mycology, virology and molecular diagnostic sections. In addition, space to house a library and conference/meeting room that can accommodate presentations for producer groups, veterinary groups and student groups should be included. Since the future of carcass rendering is uncertain, it is necessary to install a tissue digester to insure safe and adequate carcass disposal capacity. A new VDL needs to have dedicated Biosafety Level 3 necropsy/laboratory space (including the ability to capture effluent) to safely address current and future public health threats and potential introductions of foreign animal diseases. This facility should have a biosecure visitor's entry with dedicated bathrooms. Adequate parking space, semi-truck and trailer access and a radiology room are needed. An enclosed receiving area that will allow for off-loading of animal carcasses, as well as live animals that may require euthanasia, is required. Appropriate storage for archiving records and data storage is necessary. Adequate freezer space for individual labs and lockup of samples involved in litigation cases is important. The post mortem laboratory should have access points that allow shower-in/shower-out capability for personnel as well biosecure entry and exit points to safely contain animal and human pathogens. The entire building must be sufficiently secure

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with electronic card key access to individual laboratories. An alarm system including monitoring of major equipment, and a back-up power source are necessary as well. Building surveillance cameras are suggested.

Estimated project costs include:

- Planning, Permits, Architecture/Engineering - \$1,035,000
- Construction - \$14,665,000
- Furniture, Fixtures, and Equipment - \$1,000,000
- Contingency - \$1,300,000

**Cost Benefit Analysis**

SBARE carefully considered the needs of North Dakota agriculture and determined that a new Veterinary Diagnostic Lab is the top priority. Co-locating with other state agencies, departments, or institutions is not an option.

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**Capital Project**

Agronomy lab CGREC

	Request/Optional	Recommendation
<b>Total Project Cost</b>	783,796	783,796
<b>General Fund</b>	783,796	783,796
<b>Federal Funds</b>	0	0
<b>Special Funds</b>	0	0
<b>Bonding</b>	0	0

Is this a multiennium project? No    No of Biens: 1    Est. Costs 783,796

**Future Increased Costs Associated with Project Approval**

	2015-2017	2017-2019	2019-2021		2015-2017	2017-2019	2019-2021
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0				
Equipment > \$5,000	0	0	0	General Fund	0	0	0
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
Special Lines	0	0	0	Special Funds	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Project Specifications**

Agronomy Lab CGREC

With the addition of a forage agronomist at the CGREC, the center is in need of a forage lab building. Currently samples collected in the field by the scientist are processed in a corner of an equipment storage building with a dirt floor. The dust from opening the overhead door and moving equipment renders this area very dusty and difficult to keep scales and computers clean. The new building would house the forage drying ovens, computer, scale etc. for sample data processing. It would also house the grinders and equipment to process the forage samples in preparation for nutrient analysis. - Additional appropriation request of \$783,796 for a total project cost (when added to carryover of the 2013-15 \$400,000 authorization) of \$1,183,796

Estimated project costs include:

- Planning, Permits, and Insurance - \$100,000
- Construction - \$963,796
- Furniture, Fixtures, and Equipment - \$60,000
- Contingency - \$60,000

**Cost Benefit Analysis**

Prior to the 2013-2015 Session, SBARE carefully considered the needs of North Dakota agriculture and determined that Agronomy Labs are the top priority. Co-locating with other state agencies, departments, or institutions is not an option.

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Funding of \$400,000 was appropriated by the sixty-third Legislative Assembly. Bids received for the project were significantly over budget. The amount requested is an estimate to complete the project as presented. The amount was calculated by the architectural firm that has been contracted for all agronomy lab construction projects that were funded this biennium.

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**Capital Project**

Seed Cleaning Facilities CREC, LREC, NCREC, WREC

	Request/Optional	Recommendation
<b>Total Project Cost</b>	5,250,000	0
<b>General Fund</b>	5,250,000	0
<b>Federal Funds</b>	0	0
<b>Special Funds</b>	0	0
<b>Bonding</b>	0	0

Is this a multiyear project? No    No of Biens: 1    Est. Costs 5,250,000

**Future Increased Costs Associated with Project Approval**

	2015-2017	2017-2019	2019-2021		2015-2017	2017-2019	2019-2021
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0				
Equipment > \$5,000	0	0	0	General Fund	0	0	0
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
Special Lines	0	0	0	Special Funds	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Project Specifications**

3. Seed Cleaning Facilities – CREC, LREC, NCREC, WREC

Seed cleaning facilities at CREC, LREC, NCREC, and WREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure high quality seed, are slow, and inefficient. These facilities were designed to handle cereal crops and have limited/no capability of cleaning pulse crops and other fragile seed that are in high demand. Also, the existing facilities pose considerable worker safety issues. The request is for four portable mills and a storage facility for the mill when not in use. Each Center will have one mill, with appropriate air screen cleaner, indent mill and gravity mill, augers, conveyors, and cyclone dust cleaning system. The capacity would be approximately 300 bu/hr, depending on type of crop being cleaned. The facility will have the appropriate electrical, ventilation, and heating necessary for electric eye separators (at CREC, NCREC, and WREC) to ensure a high quality product - \$5,250,000

Estimated project costs include:

- Planning, Permits, and Insurance - \$250,000
- Construction - \$700,000
- Furniture, Fixtures, and Equipment - \$4,200,000
- Contingency - \$100,000

**Cost Benefit Analysis**

SBARE carefully considered the needs of North Dakota agriculture and determined that new seed cleaning facilities at Carrington REC, Langdon REC, North Central REC, and Williston REC are the #3 priority.

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A committee was organized by SBARE to explore options for the seed cleaning needs of NDSU Research. Due diligence included review of past recommendations, collection of available data and presentation of multiple solutions to the SBARE board.

Options considered included:

- Continuing with the current plant
- Four Portable mills with storage facility
- Cleaning with private seed cleaning facilities
- One or two stationary facilities with portable mills
- Remodeling existing facilities

From the options considered, it was determined that four portable mills and a storage facility for each mill when not in use would best meet the needs of North Dakota agriculture. Though "portable" these mills will be dedicated to their respective REC and are not anticipated to be mobile, with the exception of moving out of the storage facility when seed is cleaned, and back into it when not needed.

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Capital Project			
Increase geothermal well capacity			
	<b>Total Project Cost</b>	<b>Request/Optional</b>	<b>Recommendation</b>
		1,200,000	0
	<b>General Fund</b>	1,200,000	0
	<b>Federal Funds</b>	0	0
	<b>Special Funds</b>	0	0
	<b>Bonding</b>	0	0

Is this a multibiennium project? No    No of Biens: 1    Est. Costs 1,200,000

Future Increased Costs Associated with Project Approval								
	2015-2017	2017-2019	2019-2021		2015-2017	2017-2019	2019-2021	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	0	0					
Equipment > \$5,000	0	0	0	General Fund	0	0	0	
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	
Special Lines	0	0	0	Special Funds	0	0	0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Project Specifications**

Increase geothermal well capacity \$1,200,000 – funding for the greenhouse construction allowed for a portion of geothermal wells to be installed – the system is working well, but additional well capacity is needed to heat/cool the headhouse building. It is estimated that 200 additional wells will be needed, given the high heating and cooling demand of the facility.

**Cost Benefit Analysis**

Not applicable. This is not a new building construction project.

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Capital Project			
Meats Lab Facility			
	<b>Total Project Cost</b>	<b>Request/Optional</b>	<b>Recommendation</b>
	General Fund	7,600,000	0
	Federal Funds	7,600,000	0
	Special Funds	0	0
	Bonding	0	0

Is this a multibiennium project? No    No of Biens: 1    Est. Costs 7,600,000

Future Increased Costs Associated with Project Approval								
	2015-2017	2017-2019	2019-2021		2015-2017	2017-2019	2019-2021	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	0	0	General Fund	0	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0	0
Special Lines	0	0	0	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>					

**Project Specifications**

2. Meats Lab Facility – Main Station

A new/upgraded facility urgently needed. The current Meats Lab is approximately 7,500 sq. ft. and was built in the 1950's and no longer serves the needs of modern meat science research. Annual repair and maintenance costs to the current facility continue to increase. Additionally, the Lab continues to struggle to meet the U.S. Department of Agriculture inspection requirements for safe meat handling and processing. A new facility is necessary because opportunities to grow the state's livestock industries are tied to the knowledge of the end product and how that product meets the needs of national and international consumers. Design features of a 19,000 sq. ft. facility would include animal holding and handling areas, an abattoir, processing and fabrication rooms, research labs, walk-in coolers and freezers, sensory evaluation labs, preparation kitchens, conference rooms, and other miscellaneous support, storage, and equipment rooms. - \$7,600,000

Estimated project costs include:

- Planning, Permits, and Insurance - \$650,000
- Construction - \$5,500,000
- Furniture, Fixtures, and Equipment - \$900,000
- Contingency - \$550,000

**Cost Benefit Analysis**

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SBARE carefully considered the needs of North Dakota agriculture and determined that a new/upgraded Meats Lab Facility is the #2 priority. Co-locating with other state agencies, departments, or institutions is not an option.