

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

**AUDIT REPORT**

**Fiscal Year Ended June 30, 2018**



**State of South Dakota  
Department of Legislative Audit**  
427 South Chapelle  
% 500 East Capitol  
Pierre, SD 57501-5070

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY  
AUTHORITY OFFICIALS  
June 30, 2018

Board of Directors:

Casey Peterson, Chairman  
Dana Dykhouse, Vice-Chairman  
Ron Wheeler, Vice-Chairman  
Pat Lebrun, Secretary/Treasurer  
Dr. Robert Wilson, Member  
Dr. Ani Aprahamian, Member  
Paul Christen, Member  
Dr. James Rankin, Ex-Officio Member

Executive Director:

Michael Headley

Chief Financial Officer:

Nancy Geary

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY  
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427 SOUTH CHAPELLE  
C/O 500 EAST CAPITOL  
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MARTIN L. GUINDON, CPA  
AUDITOR GENERAL

**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS  
PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

The Honorable Dennis Daugaard  
Governor of South Dakota

and

Board of Directors  
South Dakota Science and Technology Authority

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the South Dakota Science and Technology Authority (Authority), a business-type activities component unit of the State of South Dakota, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements and have issued our report thereon dated October 11, 2018.

**Internal Control Over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Authority's financial statements will not be prevented or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

## Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standard*.

## Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose. As required by South Dakota Codified Law 4-11-11, this report is a matter of public record and its distribution is not limited.

A handwritten signature in black ink, appearing to read "Martin L. Guindon". The signature is stylized with a large, looped "M" and a cursive "Guindon".

Martin L. Guindon, CPA  
Auditor General

October 11, 2018

SOUTH DAKTOA SCIENCE AND TECHNOLOGY AUTHORITY  
SCHEDULE OF PRIOR AND CURRENT AUDIT FINDINGS

**SCHEDULE OF PRIOR AUDIT FINDINGS**

**Prior Audit Findings:**

The prior audit report contained no written audit findings.

**SCHEDULE OF CURRENT AUDIT FINDINGS**

**Current Audit Findings:**

There are no written current audit findings to report.



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MARTIN L. GUINDON, CPA  
AUDITOR GENERAL

## INDEPENDENT AUDITOR'S REPORT

The Honorable Dennis Daugaard  
Governor of South Dakota

and

Board of Directors  
South Dakota Science and Technology Authority

### Report on the Financial Statements

We have audited the accompanying financial statements of the South Dakota Science and Technology Authority (Authority), a business-type activities component unit of the State of South Dakota, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the Table of Contents.

### *Management's Responsibility for the Financial Statements*

The Authority's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of June 30, 2018, and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

## ***Other Matters***

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (MD&A) on pages 6-13, the Schedule of Proportionate Share of the Net Pension Liability (Asset) on page 31, and the Schedule of Employer Contributions on page 32 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.


### ***Supplementary Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Authority's financial statements. The Schedule of Operating Expenses listed in the Table of Contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Schedule of Operating Expenses is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Operating Expenses is fairly stated in all material respects in relation to the basic financial statements as a whole.

## ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 11, 2018 on our consideration of the Authority's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.



Martin L. Guindon, CPA  
Auditor General

October 11, 2018



## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018**

This section of the South Dakota Science and Technology Authority's (Authority) annual financial report presents management's discussion and analysis of the Authority's financial performance during the fiscal year ended June 30, 2018 (FY 2018). This analysis should be read in conjunction with the financial statements and notes to the financial statements.

The Authority's financial statements include the operations of funds that the Authority has established to achieve its goal of converting its acquired Homestake Mine property into an underground science and engineering laboratory. The property was donated to the Authority by Barrick Gold Corporation in May 2006.

The activity of the Authority is accounted for as a proprietary fund type. The Authority is a component unit of the State of South Dakota and its financial statements are included in the Comprehensive Annual Financial Report of the State of South Dakota.

Included in the financial statements presented is a current year comparison to prior year balance sheet summary, revenue and expense summary, and capital assets. Further reports reflect current year detailed statement of net position, statement of revenue, expense and changes in net position, cash flow, and schedule of operating expenses. Comparisons of current year to prior year are important to display increases and decreases in various elements of the financial reports for the Authority. Current year detailed reports provide significant detail for statement of net position, revenues, expenses and cash flows for the Authority.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)**

**JUNE 30, 2018**

#### **FINANCIAL HIGHLIGHTS:**

- Total assets at year end decreased to \$108,034,245.
- Current Assets decreased by \$1,603,321, primarily due to the expenditure of funds from the cash accounts being held by the State Treasurer on behalf of the Authority. Yet, Accounts Receivable as of the June 30, 2018 statement is higher by \$1,320,919 for additional open receivables on contracts.
- Capital Assets decreased by \$2,875,100 net of depreciation expense. Page 10 details the major capital asset additions and deletions. Furthermore, page 21 summarizes the changes in capital assets by major categories. Notable changes include increases to Improvements in Progress for the LUX/Zeplin facility upgrades and the LZ water tank modifications. Also included is the completion of the Radon Removal Building and the improvements to the Surface Lab. Deletions include (3) boilers, (2) pumps, various other equipment including computer equipment that had reached end of life status. Also included in deletions is the support for the CASPAR Experiment Development that was finalized in fiscal year 2018.
- Net Pension Asset which was zero last year, increased to \$44,302. The State's retirement system is back to being fully funded (see Note 6 – page 23). The Authority's total contributions to the South Dakota Retirement System (SDRS) decreased slightly (down by \$40,714) from 2017 to 2018. GASB standards allow entities to use a pension measurement date up to one year prior to the entities reporting period. Therefore, the Authority is using a June 30, 2017 pension measurement date for our fiscal year end June 30, 2018 statements. Loans from various South Dakota Foundations have enabled the Authority to purchase xenon to be used in the future LZ experiment. As of June 2018, \$6,513,900 of xenon has been purchased. In summary, the Net Pension Asset and Xenon Purchased has increased by \$1,517,846.
- Deferred Outflows of Resources is also related to our retirement plan with SDRS. The amounts recorded relate to our proportionate share of the differences between expected and actual experience in pension earnings along with the Authority's pension contributions made subsequent to June 30, 2017. The total Deferred Outflows of Resources equals \$4,795,625.
- Total liabilities at year end decreased to \$7,459,504. Accounts Payable is lower due to owing less for contractual services and materials when comparing the two time periods. Furthermore, liabilities decreased for the expiration of the deep pump system lease. Yet, liabilities increased for \$1,000,000 as an additional loan from the University of South Dakota Foundation for further xenon purchases. These loans from South Dakota foundations are eleven-year, unsecured nonrecourse loans with 2.5% simple interest to be paid quarterly to the lender. The loans will be repaid at the end of the LZ experiment (estimated to be October 2026) from the sale proceeds of the xenon previously purchased. The Net Pension Liability is reduced to zero as there is no longer a net pension liability. Last year's calculation showed the retirement system was only 96% funded where this year it is back to being 100% funded.
- Deferred Inflows of Resources is also related to our retirement plan with (SDRS). The recorded amount relates to our portion of the difference between projected and actual earnings on pension plan investments. Our portion equals \$851,742.
- Total restricted net position increased to \$15,621,051, primarily due to the increase in restricted net pension. However, the experiment funding set aside for xenon procurement and interest payments has decreased due to xenon procurements and LZ facility upgrades.
- Unrestricted net position increased by \$1,109,647 to \$6,786,171.
- Total net position at year end decreased by \$1,216,125 to \$104,518,624.
- Charges for Services decreased slightly to \$127,643. Revenue from Homestake decreased due to a decrease in the amount of water being treated and discharged for Homestake.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)**

**JUNE 30, 2018**

#### **FINANCIAL HIGHLIGHTS (Continued)**

- Operating Grants decreased to \$22,734,706. The revenue received in this classification includes \$19,925,764 received from Fermi National Laboratory, \$2,614,194 from Lawrence Berkeley National Laboratory, and \$194,748 from the Great Plains Education Foundation and various smaller universities.
- Other Grants decreased to zero; as last year we received \$2,000,000 from GOED for xenon procurement and interest payment expenditures on loan agreements. That was the final funding for that support.
- Investment Earnings decreased slightly to \$36,585 compared to \$44,570 in the previous year as less funds were being held on behalf of the Authority by the State Investment Council.
- Total Program Expenses for the Authority were \$24,303,546 which represents a decrease of 15.48% percent from the previous year. This year's expenses includes \$994,989 for the finalization and expensing of the CASPAR Experiment Development. Also included in Total Program Expenses are Operating Expenses which decreased by \$5,575,271 to \$23,060,036. Of the total expenses in this category, the major expenses were personal services – 47.5 percent, contractual services – 34.2 percent, and supplies, materials, and other operating expenses – 8.5 percent. Most of the decrease in Operating Expenses is a result of no longer having the design contracts with Arup. These contracts were transferred to Fermi Research Alliance.
- Net position decreased by \$1,216,125 for fiscal year 2018.

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)**

**JUNE 30, 2018**

### **FINANCIAL STATEMENT ELEMENTS:**

#### **NET POSITION**

	<b>2018</b>	<b>2017</b>	<b>Dollar Change</b>	<b>Percent Change</b>
Current Assets	\$ 19,364,641	\$ 20,967,962	\$ (1,603,321)	-7.65%
Capital Assets	82,111,402	84,986,502	(2,875,100)	-3.38%
Net Pension Asset and Xenon Purchased	6,558,202	5,040,356	1,517,846	30.11%
<b>Total Assets</b>	<b>108,034,245</b>	<b>110,994,820</b>	<b>(2,960,575)</b>	<b>-2.67%</b>
Pension Related Deferred Outflows	4,795,625	4,174,730	620,895	14.87%
Net Pension Liability	-	1,698,193	(1,698,193)	-100.00%
Long-Term Liabilities Outstanding	5,541,864	4,512,117	1,029,747	22.82%
Other Liabilities	1,917,640	3,224,491	(1,306,851)	-40.53%
<b>Total Liabilities</b>	<b>7,459,504</b>	<b>9,434,801</b>	<b>(1,975,297)</b>	<b>-20.94%</b>
Pension Related Deferred Inflows	851,742	-	851,742	100.00%
<b>Net Position:</b>				
Net Investment in Capital Assets	82,111,402	84,780,100	(2,668,698)	-3.15%
Restricted	15,621,051	15,278,125	342,926	2.24%
Unrestricted	6,786,171	5,676,524	1,109,647	19.55%
<b>Total Net Position</b>	<b>\$ 104,518,624</b>	<b>\$ 105,734,749</b>	<b>\$ (1,216,125)</b>	<b>-1.15%</b>

#### **CHANGE IN NET POSITION**

	<b>2018</b>	<b>2017</b>	<b>Dollar Change</b>	<b>Percent Change</b>
<b>Revenues</b>				
Program Revenues:				
Charges for Services	\$ 127,643	\$ 150,969	\$ (23,326)	-15.45%
Operating Grants	22,734,706	25,690,909	(2,956,203)	-11.51%
Miscellaneous	188,487	144,049	44,438	30.85%
Other Grant Revenue	-	2,000,000	(2,000,000)	-100.00%
General Revenues:				
Investment Earnings	36,585	44,570	(7,985)	-17.92%
<b>Total Revenue</b>	<b>23,087,421</b>	<b>28,030,497</b>	<b>(4,943,076)</b>	<b>-17.63%</b>
Program Expenses:				
Science and Technology Authority	24,303,546	28,755,946	(4,452,400)	-15.48%
<b>Total Expense</b>	<b>24,303,546</b>	<b>28,755,946</b>	<b>(4,452,400)</b>	<b>-15.48%</b>
Change in Net Position	(1,216,125)	(725,449)	(490,676)	67.64%
Net Position-Beginning	105,734,749	106,460,198	(725,449)	-0.68%
<b>Net Position-Ending</b>	<b>\$ 104,518,624</b>	<b>\$ 105,734,749</b>	<b>\$ (1,216,125)</b>	<b>-1.15%</b>

By June 30, 2018, the Authority had invested \$82,111,402 in a broad range of capital assets, including computer equipment, land, buildings, improvements to infrastructure and the underground, and various machinery and equipment. \$20,551,152 of this \$82,111,402 (approximately 25% of this total value) was donated by Barrick Gold. This amount represents a net decrease (including additions and deductions) of \$2,875,100, or 3.4 percent, over the last year.

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)**

**JUNE 30, 2018**

	2018	2017	Change
Improvements	\$ 30,514,601	\$ 31,043,734	\$ (529,133)
Underground	17,936,956	17,936,956	-
Buildings	6,205,356	5,751,477	453,879
Computer Equipment	124,844	124,464	380
Equipment	5,688,195	6,714,078	(1,025,883)
Construction in Progress	18,083,869	19,797,453	(1,713,584)
Land	1,814,136	1,814,136	-
Infrastructure	1,614,919	1,665,601	(50,682)
Furniture	24,972	29,962	(4,990)
Archive Material	70,000	70,000	-
Auto	33,554	38,641	(5,087)
<b>Total Capital Assets</b>	<b>\$ 82,111,402</b>	<b>\$ 84,986,502</b>	<b>\$ (2,875,100)</b>

This year's major capital asset additions and deletions included:

*Purchased Capital Assets:*

Radon Removal Building	\$ 615,531
Computer Storage Network Array	38,555

*Improvements (Current Year Additions & Reclassifications):*

Science Surface Lab Improvements	461,088
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*Improvements in Progress (Current Year Additions):*

LZ Water Tank Modifications	123,442
LZ Underground Facility Upgrades	175,497

*Equipment (Current Year Deletions):*

Ross Headframe Building Boilers	(125,246)
Tsurumis Pump, Dry Ice Blast Unit	(40,029)
Locomotive Controller, 4850'L Refuge Chamber HVAC Units	(31,757)

*Improvements in Progress (Current Year Deletions):*

CASPAR Experiment Development	(915,139)
Ellison Bldg. Asbestos Abatement	(26,379)

*Computer Equipment (Current Year Deletions)*

Servers, Secure Access Systems (End of Life)	(41,773)
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## SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

### MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2018

#### LONG-TERM DEBT

At the year-end, the Authority had \$5,541,864 in other long-term obligations. This is an increase of 22.82 percent as shown below.

	2018	2017	Total Dollar Change	Total Percentage Change
Compensated Absences	\$ 541,864	\$ 495,922	\$ 45,942	9.26%
Capital Acquisition Lease	-	16,196	(16,196)	-100.00%
Xenon Notes Payable	5,000,000	4,000,000	1,000,000	25.00%
Total Long-Term Debt	\$ 5,541,864	\$ 4,512,118	\$ 1,029,746	22.82%

- (1) The Authority is liable for the accrued vacation leave payable to all full-time employees. In addition, the Authority is liable for a portion of the earned sick leave of employees who have been employed for seven consecutive years. The \$45,942 increase in compensated absences is due to an increase in the corresponding amount of leave accumulated and outstanding at the end of the year for various employees. Included in the increase is the xenon notes payable to the University of South Dakota Foundation. Note (4) Long-Term Debt in the Notes to Financial Statements on page 22 details compensated absences, capital lease and the xenon note payable.

#### ECONOMIC FACTORS

- A report released from the Particle Physics Project Prioritization Panel (P5) in May 2014, outlined the 10-year strategic plan for high-energy physics in the United States. The report provides strong support for science programs envisioned for the Sanford Underground Research Facility (SURF) including research into neutrinos and dark matter, both of which are being researched at Sanford Lab. This panel formally advises both the DOE Office of Science and the National Science Foundation (NSF) on support for physics. We expect this report to play a key role in the federal government funding process for years to come. The Authority is better positioned to receive continued funding for Operations in the future.
- The Authority's Board of Directors approved a capital budget for fiscal year 2018 of \$4,677,160 towards the experiment development for the Compact Accelerator System for Performing Astrophysical Research (CASPAR), as well as xenon procurement for the LZ experiment and upgrades to surface and underground facilities for the future Generation 2 LUX-Zeplin (G2-LZ) experiment. Additional projects included the Ellison Hill building asbestos abatement. Actual expenditures for the year totaled \$2,150,672. Actual expenses were lower than budgeted as not all projects are complete. The Authority's fiscal year 2019 capital budget provides for spending \$2,563,053. Projects include procurement of xenon for the LZ experiment, a small amount for inclinometer testing at the Sanford Homestake Visitor Center, and a small amount to finalize the Authority's support for the underground upgrades for the future G2-LZ experiment that will be located in the Davis Campus. Funding for xenon procurement and the upgrades for the LZ experiment was secured with the signing of Letter Agreement #1586 in August 2015 with the Governor's Office of Economic Development (GOED) and through separate funding from Foundations. The total funding of \$6,000,000 has been received from GOED as well as \$5,000,000 from the Foundations. The final \$1,000,000 from the South Dakota State University Foundation will be received in 2019. The Authority's Board of Directors also approved a budget of \$441,336 for fiscal year 2019 in favor of Authority supported activities.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)**

**JUNE 30, 2018**

#### **ECONOMIC FACTORS (Continued)**

- The SURF Services contract with Fermi National Accelerator Laboratory (FNAL) to manage and operate the facility for the federal fiscal year October 2017 – September 2018 originally was budgeted at \$14,600,637. Actual expenditures were \$14,256,531 through August 31, 2018. Actual expenditures have been higher than budgeted each month due to the personnel that were budgeted on the Ross Shaft rehabilitation subcontract currently working on the SURF Services contract work scope. A stop work command was issued in January for the Ross Shaft rehabilitation efforts due to a safety incident in the shaft. All steel installation is on hold with no access in the shaft except for authorized maintenance inspections until a slack rope/load monitoring system and a dogging system are installed. The slack rope/load monitoring system was installed by fiscal year end. The dogging system is scheduled to be installed in October 2018. Negotiations are in process to add additional funding for this unbudgeted expense. The Ross Shaft rehabilitation project funding continues with FNAL with the lifting of the stop work order in late September 2018.
- Further funding was received in fiscal year 2018 through LBNL in support of various small projects including the Large Underground Xenon (LUX) experiment that was completed during the year. Other small subcontracts supplied further funding to the Authority. Included was support for the Generation 2 LUX-Zeplin (G2-LZ) investigations as well as a geothermal analysis project labeled SIGMA-V. These awards reimbursed the Authority for expenses incurred in support of the various experiments for materials and supplies as well as a percentage of the salaries of the design team members for their project management skills essential to the work being performed.
- In late 2012, the DOE approved the Long Baseline Neutrino Experiment (LBNE) to proceed with preliminary designs to construct a large detector at SURF. In October 2014, the United States along with international partners agreed that the Sanford Lab was to remain the host for the LBNE related detectors. After further meetings, the LBNE collaboration officially dissolved and transferred all responsibilities to a new collaboration referred to as the Long Baseline Neutrino Facility (LBNF) consisting of United States and International support. The LBNF and the associated Deep Underground Neutrino Experiment (DUNE) will send neutrinos through the earth from Fermilab in Batavia, Illinois to SURF in Lead, SD. More recent developments (September 2016) involve the DOE formally approving plans for construction of the first two large underground caverns at SURF for DUNE. The first step of installing the systems to transport hundreds of thousands of tons of rock to the surface will begin in late 2018. The excavation for the two caverns to house the neutrino detectors and related utilities is expected to begin in 2020. DOE support for professional engineering management services continues into fiscal year 2019 for the LBNF project. In late September 2017, the United States entered into a historic bilateral agreement with the United Kingdom establishing a foundation for enhanced research partnerships to further world-class science. The United Kingdom has committed \$88 million to LBNF and DUNE.
- Additional funding was received during the fiscal year from various institutions including Oak Ridge National Laboratory, South Dakota Schools of Mines & Technology, and Black Hills State University. Funds were received at SURF to support the Majorana experiment located at the 4850-foot level Davis Campus, as well as various other experiments on the underground levels. Support continues in fiscal year 2019 from these various universities.
- A Memorandum of Understanding (MOU) was signed in November 2014 between the Authority and a commercial organization – Xilinx, Inc. to establish an experiment located near the Davis Campus. Their testing measures failure rates and modes in electronic chips. We are charging them for lab space, experiment access fees, and SURF scientific support. This agreement will continue into fiscal year 2019.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **MANAGEMENT'S DISCUSSION AND ANALYSIS (CONCLUDED) JUNE 30, 2018**

#### **ECONOMIC FACTORS (Continued)**

- A Letter Agreement dated February 24, 2014 between the Authority and Black Hills State University (BHSU) provides up to \$300,000 per year for three years from the Authority to BHSU to administer the Sanford Science Education Center. Matching funds of \$150,000 per year by BHSU is documented. An amended agreement dated June 6, 2017 committed an additional \$275,000 toward education and outreach priorities for the period July 2017 – June 2018. Furthermore, the agreement was amended as of June 8, 2018 for \$275,000 for the period July 2018 – June 2019. The full period of performance now extends from June 2014 through June 2019. Funding for this agreement originated from a Letter Agreement #1524 between the SD Governor's Office of Economic Development (GOED) and the Authority. The first \$300,000 from the Governor's office was received in September 2014 and was extended to BHSU on a reimbursement schedule. Years two and three funding of \$300,000 and \$250,000 were received from GOED. The balance of year three funding of \$50,000 was received in June of 2017. Additional support of \$125,000 per year for four years for education programs was received from Great Plains Education Foundation. The final support from Great Plains Education Foundation was received in July 2018 for fiscal year 2019 education program support.
- The Authority is compliant with all legal and environmental regulations.

#### **CONTACTING THE AUTHORITY'S FINANCIAL MANAGEMENT**

This financial report is designed to provide our citizens, taxpayers, customers, and investors and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. If you have any questions about this report or need additional information, contact the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, SD 57754.



**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

**STATEMENT OF NET POSITION  
JUNE 30, 2018**

**ASSETS**

**Current Assets**

Cash in Local Bank and Petty Cash	\$ 1,075,512
Cash on Deposit with State Treasurer	12,229,521
Accounts Receivable	3,199,732
Interest Receivable	50,211
Prepaid Expenses	402,815
Inventory of Supplies & Warehouse	2,406,850
<b>Total Current Assets</b>	<b>19,364,641</b>

**Noncurrent Assets**

Xenon Purchased (note 5)	6,513,900
Net Pension Asset	44,302
Land	1,814,136
Underground	17,936,956
Improvements in Progress	18,083,869
Buildings, Machinery, Equipment and Infrastructure (Net) (Note 3)	44,276,441
<b>Total Noncurrent Assets</b>	<b>88,669,604</b>

**TOTAL ASSETS** **108,034,245**

**Deferred Outflows of Resources**

Pension Related Deferred Outflows	4,795,625
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**LIABILITIES**

**Current Liabilities**

Accounts Payable	914,823
Accrued Wages and Benefits	460,953
Accrued Leave and Benefits (Note 4)	541,864
<b>Total Current Liabilities</b>	<b>1,917,640</b>

**Long-Term Liabilities**

Accrued Leave and Benefits Net of Current Portion (Note 4)	541,864
Long-Term Xenon Notes Payable (Note 4)	5,000,000
<b>Total Long-Term Liabilities</b>	<b>5,541,864</b>

**TOTAL LIABILITIES** **7,459,504**

**Deferred Inflows of Resources**

Pension Related Deferred Inflows	851,742
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**NET POSITION**

Invested in Capital Assets	82,111,402
Restricted for:	
Mine Closure	1,415,782
Experiments	2,587,769
Indemnification	7,500,000
Sanford Center for Science Education	129,315
Pension	3,988,185
Unrestricted Net Position	6,786,171

**TOTAL NET POSITION** **\$ 104,518,624**

The accompanying notes are an integral part of this statement.

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

**STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION  
FOR THE YEAR ENDED JUNE 30, 2018**

**Operating Revenue**

Charges for Goods and Services	\$ 127,643
Operating Grants	22,734,706
Miscellaneous	188,487
<b>Total Operating Revenue</b>	<b>23,050,836</b>

**Operating Expenses**

Personal Services	10,942,922
Travel	192,226
Contractual Services	7,889,189
Supplies, Materials and Other Operating Expenses	1,962,446
Amortization Expense	94,154
Depreciation Expense	1,979,099
<b>Total Operating Expenses</b>	<b>23,060,036</b>

<b>Operating Loss</b>	<b>(9,200)</b>
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**Nonoperating Revenues/Expenses**

Interest Revenue	36,585
Other Expense	(1,243,510)
<b>Total Nonoperating Revenues/Expenses</b>	<b>(1,206,925)</b>

<b>Change in Net Position</b>	<b>(1,216,125)</b>
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<b>Net Position -- Beginning of Year</b>	<b>105,734,749</b>
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<b>Net Position -- End of Year</b>	<b>\$ 104,518,624</b>
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The accompanying notes are an integral part of this statement.

# SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

## STATEMENT OF CASH FLOWS FOR THE YEAR ENDED JUNE 30, 2018

### Cash Flows from Operating Activities:

Other Operating Cash Receipts	\$	307,365
Cash Receipts from Operating Grants		21,422,553
Cash Payments to Employees for Services		(12,373,149)
Cash Payments to Suppliers of Goods and Services		(10,159,254)
<b>Net Cash Used in Operating Activities</b>		<b>(802,485)</b>

### Cash Flows from Noncapital Financing Activities:

Proceeds from Xenon Notes Payable		1,000,000
Xenon Purchases		(2,298,544)
Interest/Insurance Paid on Xenon		(107,500)
Grants & Donations Paid		(90,414)
<b>Net Cash Used in Noncapital Financing Activities</b>		<b>(1,496,458)</b>

### Cash Flows from Capital and Related Financing Activities:

Proceeds from Sale of Capital Assets		3,500
Purchase of Capital Assets		(346,707)
Principal Paid on Capital Debt		(94,154)
Interest Paid on Capital Debt		(3,346)
<b>Net Cash Used in Capital and Related Financing Activities</b>		<b>(440,707)</b>

### Cash Flows from Investing Activities:

Interest Earnings		30,358
<b>Net Cash Provided by Investing Activities</b>		<b>30,358</b>

**Net decrease in Cash and Cash Equivalents** **(2,709,292)**

Cash and Cash Equivalents at Beginning of Year 16,014,325

**Cash and Cash Equivalents at End of Year** **\$ 13,305,033**

### Reconciliation of Operating Loss to Net Cash Used in Operating Activities:

Operating Loss	\$	(9,200)
<i>Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities:</i>		
Depreciation & Amortization Expense		2,073,253
Previous Construction in Progress Expensed		26,380
<i>Change in Assets and Liabilities:</i>		
Receivables		(1,320,919)
Prepaid Expenses		185,714
Inventory of Supplies		2,271
Net Pension Asset		(44,302)
Decrease(Increase) in Deferred Outflow of Resources - Pension		(620,895)
Increase (Decrease) Deferred Inflow of Resources - Pension		851,742
Accounts and Other Payables		(329,757)
Net Pension Liability		(1,698,193)
Accrued Wages Payable		(10,464)
Accrued Leave Payable		91,885
<b>Net Cash Used in Operating Activities</b>	<b>\$</b>	<b>(802,485)</b>

Continued on next page

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

**STATEMENT OF CASH FLOWS (CONTINUED)  
FOR THE YEAR ENDED JUNE 30, 2018**

**Cash and Cash Equivalents:**

Cash in Local Bank	\$	1,075,462
Petty Cash		50
Cash with State Treasurer		12,229,521
<b>Total Cash and Cash Equivalents</b>	<b>\$</b>	<b>13,305,033</b>

**Non-Cash Capital and Related Financing Activities:**

Loss on Disposal of Assets	\$	38,394
Donation of Capital Assets	\$	915,139
Write off of Capital Lease	\$	112,248
Transfer of Fixed Assets to Inventory	\$	49,293
Write off of Inventory	\$	81,030

The accompanying notes are an integral part of this statement.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS**

**JUNE 30, 2018**

#### **(1) Summary of Significant Accounting Policies**

##### **a. Reporting Entity**

The South Dakota Science and Technology Authority (Authority) was created and organized by Chapter 1-16H of the South Dakota Codified Laws. The purposes of the Authority are to foster and facilitate scientific and technology investigation, experimentation, and development by creating a mechanism through which laboratory, experimental and development facilities may be acquired, developed, constructed, maintained, operated, and decommissioned. The initial focus of the Authority is to support the transfer of the Homestake Gold Mine in Lead, South Dakota for development by the research community to become the world's premier Underground Science and Engineering Laboratory; more specifically, the Sanford Underground Research Facility (SURF). Additional focus is maintained by the Authority for an education and outreach program detailing the progress.

The Authority is a business type component unit of the State of South Dakota (the State). As such, the accompanying financial statements are included in the Comprehensive Annual Financial Report of the State of South Dakota.

##### **b. Fund Accounting**

The Authority Fund is accounted for as an enterprise fund. Enterprise funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises, where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

##### **c. Basis of Accounting**

The Authority Fund follows the accrual basis of accounting. Revenues are recognized when they are earned, and expenses are recognized when they are incurred.

##### **d. Inventory of Supplies**

Inventory of supplies consists primarily of expendable equipment/supplies, donated and purchased, not yet in service. Donated inventory of supplies are valued at their estimated fair value on date of donation. Purchased equipment values are reported at cost. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use at a later date.

##### **e. Capital Assets**

Capital assets include land, buildings, machinery and equipment, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period. Infrastructure assets are long-lived capital assets that normally are stationary in nature and normally can be preserved for a significantly greater number of years than most capital assets.

Capital assets are recorded at historical cost. Donated capital assets are valued at their estimated fair value on the date donated. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use. Subsequent to initial capitalization, improvements or betterments that are significant and which extend the useful life of a capital asset are also capitalized.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

#### **(1) Summary of Significant Accounting Policies (Continued)**

##### **e. Capital Assets (Continued)**

Depreciation of all exhaustible capital assets is recorded as an expense in the Statement of Revenues, Expenses, and Changes in Net Position, with net capital assets reflected in the Statement of Net Position. Accumulated depreciation is reported on the Statement of Net Position.

Capitalization thresholds (the dollar values above which asset acquisitions are added to the capital asset accounts), depreciation methods, and estimated useful lives of capital assets reported in the Authority's financial statements are as follows:

	Capitalization Threshold	Depreciation Method	Estimated Useful Life
Land and Land Rights	All Land	N/A	N/A
Improvements	\$ 5,000	Straight-line	10-50 yrs.
Infrastructure	5,000	Straight-line	25-50 yrs.
Buildings	5,000	Straight-line	25-50 yrs.
Automobiles, Furniture, Machinery and Equipment	5,000	Straight-line	5-75 yrs.

##### **f. Revenue and Expense Classifications**

In the Statement of Revenues, Expenses, and Changes in Net Position, revenues and expenses are classified in a manner consistent with how they are classified in the Statement of Cash Flows. That is, transactions for which related cash flows are reported as capital and related financing activities, non-capital financing activities, or investing activities are not reported as components of operating revenue or expenses. The Authority's proprietary fund distinguishes between operating and non-operating revenues and expenses. Operating revenues and expenses of the Authority consist of reimbursement of the costs of operations from Homestake Mining Company and other entities, and the costs of providing those services, including depreciation. All other revenues and expenses are reported as non-operating.

##### **g. Cash and Cash Equivalents**

Cash includes cash on hand, demand deposits, and participating interest in the State's internal investment pool held by the State Treasurer. The amount held in the State's internal investment pool is reported at fair value. The Authority essentially has access to the entire amount of their cash resources on demand. Accordingly, equity in the cash management pool is considered to be cash and cash equivalents for the purpose of the Statement of Cash Flows.

##### **h. Equity Classifications**

Equity is classified as net position and is displayed in three components:

1. Net investment in capital assets, consists of capital assets, including restricted capital assets, net of accumulated depreciation (if applicable) and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvements of those assets.
2. Restricted net position, consists of net position with constraints placed on their use either by (a) external groups such as creditors, grantors, contributors, or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.
3. Unrestricted net position, all other net position that do not meet the definition of "restricted" or "net investment in capital assets."

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

#### **(1) Summary of Significant Accounting Policies (Concluded)**

##### **i. Application of Net Position**

It is the Authority's policy to first use restricted net position, prior to the use of unrestricted net position, when an expense is incurred for purposes for which both restricted and unrestricted net position are available.

##### **j. Accrued Leave**

Compensated absences consist of vacation and sick leave earned. The vacation leave is earned by full-time employees at the rate of 4.62 hours per pay period, increasing to 6.16 hours per pay period after 15 years of service. The vacation leave may accumulate only to a maximum of twice the annual accrual. Upon retirement or resignation, only full-time employees with 180 days of continuous service will be paid for accumulated vacation leave. Sick leave is earned at the rate of 4.32 hours per pay period. Upon termination, some employees are entitled to receive compensation for a portion of their sick leave balance. Those with seven years of service or more will receive compensation at the rate of 25 percent of their balance up to a maximum of 480 hours.

##### **k. Pensions**

For purposes of measuring the net pension liability (asset), deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense (revenue), information about the fiduciary net position of the South Dakota Retirement System (SDRS) and additions to/deletions from SDRS's fiduciary net position have been determined on the same basis as they are reported by SDRS. The Authority's contributions and net pension liability (asset) are recognized on an accrual basis of accounting.

#### **(2) Deposits and Investments**

##### **Deposits**

The majority of the Authority's cash is on deposit with the State Treasurer. Such funds are invested through the South Dakota Investment Council. Management of the State's internal investment pool is the statutory responsibility of the South Dakota Investment Council (SDIC). The investment policy and required risk disclosures for the State's internal investment pool are presented in the audit report of the South Dakota Investment Council, which can be obtained by contacting the Department of Legislative Audit, 427 South Chapelle, c/o 500 East Capitol, Pierre, South Dakota 57501.

Custodial credit risk is the risk that in the event of a bank failure, the Authority's deposits may not be returned to it. The Authority does not have a deposit policy for custodial credit risk. As of June 30, 2018, the Authority's deposits in financial institutions were exposed to custodial credit risk, but by an immaterial amount. This issue was resolved in July.

##### **Investments**

In general, SDCL 1-16H-18 permits funds to be invested in (a) direct obligations of, or obligations the principal of the interest on which are fully guaranteed or insured by, the United States of America; or (b) obligations of any solvent insurance company or other corporation or business entity if rated in the two highest classifications established by a standard rating service or insurance companies or a nationally recognized rating agency; or (c) short term discount obligations of the Federal National Mortgage Association; or (d) obligations of any state of the United States or any political subdivision, public instrumentality, or public authority of any state of the United States, which obligations are not callable before the principal is to be paid, are fully secured as to both sufficiency and timely payment by, and payable solely from, obligations described in (a). The Authority did not have any investments as of June 30, 2018.

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

### **(3) Changes in Capital Assets**

A summary of changes in capital assets for the year ended June 30, 2018 is as follows:

	<b>Balance June 30, 2017</b>	<b>Reclassified*</b>	<b>Increases</b>	<b>Decreases</b>	<b>Balance June 30, 2018</b>
<b>Business-Type Activities:</b>					
Capital Assets, not Being Depreciated:					
Land	\$ 1,814,136	\$ -	\$ -	\$ -	\$ 1,814,136
Underground	17,936,956	-	-	-	17,936,956
Archive Materials	70,000	-	-	-	70,000
Construction Work in Progress (Note 9)	19,797,453	(2,012,523)	298,939	-	18,083,869
<b>Total Capital Assets, not Being Depreciated</b>	<b>39,618,545</b>	<b>(2,012,523)</b>	<b>298,939</b>	<b>-</b>	<b>37,904,961</b>
Capital Assets, Being Depreciated:					
Equipment Under Capital Lease	883,945	-	-	883,945	-
Automobiles	108,962	-	-	-	108,962
Buildings	7,505,086	612,029	3,502	-	8,120,617
Furniture	74,212	-	-	-	74,212
Computer Equipment	434,784	-	38,554	41,773	431,565
Improvements	37,052,179	458,976	2,112	-	37,513,267
Infrastructure	1,958,862	-	-	-	1,958,862
Machinery and Equipment	10,899,565	(101,558)	-	203,043	10,594,964
<b>Total Capital Assets, Being Depreciated</b>	<b>58,917,595</b>	<b>969,447</b>	<b>44,168</b>	<b>1,128,761</b>	<b>58,802,449</b>
<b>Total Capital Assets, Before Depreciation</b>	<b>98,536,140</b>	<b>(1,043,076)</b>	<b>343,107</b>	<b>1,128,761</b>	<b>96,707,410</b>
Less Accumulated Depreciation:					
Equipment Under Capital Lease	677,543	-	94,154	771,697	-
Automobiles	70,321	-	5,087	-	75,408
Buildings	1,753,609	-	161,652	-	1,915,261
Computer Equipment	310,320	-	38,174	41,773	306,721
Furniture	44,250	-	4,990	-	49,240
Improvements	6,008,445	-	990,221	-	6,998,666
Infrastructure	293,261	-	50,682	-	343,943
Machinery and Equipment	4,391,889	(52,265)	728,293	161,148	4,906,769
<b>Total Accumulated Depreciation</b>	<b>13,549,638</b>	<b>(52,265)</b>	<b>2,073,253</b>	<b>974,618</b>	<b>14,596,008</b>
<b>Capital Assets, Net</b>	<b>\$ 84,986,502</b>	<b>\$ (990,811)</b>	<b>\$ (1,730,146)</b>	<b>\$ 154,144</b>	<b>\$ 82,111,402</b>

\*Reclassifications are due to the Authority performing analysis of assets that were previously grouped in construction work in progress as well as CASPAR Experiment Development costs transferred as contributions. Various items were transferred to buildings, improvements, and equipment and placed in service as of June 30, 2018.



# SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

JUNE 30, 2018

### (4) Long-Term Debt

A summary of changes in long-term debt follows:

	Beginning Balance	Additions	Deletions	Ending Balance	Due Within One Year
Accrued Compensated Absences	\$ 991,843	\$ 571,127	\$ 479,242	\$ 1,083,728	\$ 541,864
Xenon Notes Payable	4,000,000	1,000,000	-	5,000,000	-
Capital Acquisition Lease	206,402	-	206,402	-	-
	<u>\$ 5,198,245</u>	<u>\$ 1,571,127</u>	<u>\$ 685,644</u>	<u>\$ 6,083,728</u>	<u>\$ 541,864</u>

#### *Xenon Notes Payable*

Loan Agreements with S.D. Community Foundation (SDCF), S.D. State University Foundation (SDSUF), and University of S.D. Foundation (USDF) to purchase xenon. The loans are 11 year, unsecured non recourse loans with 2.5% simple interest paid quarterly. The SDCF note is due on October 1, 2026. The SDSUF and USDF notes are due December 31, 2026. Also see Note 8. \$ 5,000,000

#### *Capital Acquisition Lease*

The lease for the deep level pump system from AmWest, Inc. - Hydro Resources terminated as of December 31, 2017. The lease was due in monthly installments of \$35,000 per month. The Interest Rate was 4%. Also see Note 8. \$ -

This lease met the criteria to be called a capital lease; however, since the payments on this lease are funded under the Department of Energy contract through Fermi Research Alliance(FRA), title now vests with FRA rather than with the Authority. The asset was being fully depreciated over the term of the lease and has been removed from the books as of the end of the lease.

The annual requirements to amortize long-term debt outstanding as of June 30, 2018, are as follows:

	Xenon Notes Payable		Totals	
	Interest	Principal	Interest	Principal
2019	\$ 125,000	\$ -	\$ 125,000	\$ -
2020	125,000	-	125,000	-
2021	125,000	-	125,000	-
2022	125,000	-	125,000	-
2023	125,000	-	125,000	-
2024-2027	425,000	5,000,000	425,000	5,000,000
Total	<u>\$ 1,050,000</u>	<u>\$ 5,000,000</u>	<u>\$ 1,050,000</u>	<u>\$ 5,000,000</u>

### (5) Xenon Purchased

Xenon purchased is valued at a cost per liter with additional freight, customs, and analysis charges. Total xenon purchased to date is \$6,513,900 as shown by the detail below.

Fiscal Year	# of Liters	Total Cost	Average Cost/Liter
2014	20,000	\$ 332,855	\$ 16.64/liter
2016	200,000	1,273,808	6.37/liter
2017	600,295	3,433,693	5.72/liter
2018	260,000	1,473,544	5.67/liter
Total Purchased	1,080,295	\$ 6,513,900	\$ 6.03/liter

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)**

**JUNE 30, 2018**

#### **(6) Retirement/Pension Plan**

##### **Plan Information:**

All employees, working more than 20 hours per week during the year, participate in the South Dakota Retirement System (SDRS), a cost sharing, multiple employer defined benefit pension plan administered by SDRS to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. The SDRS provides retirement, disability, and survivors' benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in SDCL 3-12. The SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained at <http://www.sdrs.sd.gov/publications/> or by writing to the SDRS, P.O. Box 1098, Pierre, SD 57501-1098 or by calling (605) 773-3731.

##### **Benefits Provided:**

SDRS has three different classes of employees, Class A, Class B public safety and Class B judicial. Class A retirement benefits are determined as 1.7 percent prior to 2008 and 1.55 percent thereafter of the employee's final 3-year average compensation times the employee's years of service. Employees with 3 years of service are eligible to retire at age 55. Class B public safety benefits are determined as 2.4 percent for service prior to 2008 and 2.0 percent thereafter of employee final average compensation. Class B judicial benefits are determined as 3.733 percent for service prior to 2008 and 3.333 percent thereafter of employee final average compensation. All Class B employees with 3 years of service are eligible to retire at age 45. Employees are eligible for service-related disability benefits regardless of length of service. Three years of service is required for nonservice-related disability eligibility. Disability benefits are determined in the same manner as retirement benefits but are payable immediately without an actuarial reduction. Death benefits are a percent of the employee's final average salary.

The annual increase in the amount of the SDRS benefits payable each July 1<sup>st</sup> is indexed to the consumer price index (CPI) based on SDRS funded status:

- If the SDRS market value funded ratio is 100% or more – 3.1% COLA
- If the SDRS market value funded ratio is 80.0% to 99.9%, index with the CPI
  - 90.0% to 99.9% funded – 2.1% minimum and 2.8% maximum COLA
  - 80.0% to 90.0% funded – 2.1% minimum and 2.4% maximum COLA
- If the SDRS market value funded ratio is less than 80% - 2.1% COLA

The 2017 legislation modified the COLA, effective for the July 1, 2018 increase:

- Baseline actuarial accrued liabilities will be calculated assuming the COLA is equal to the long-term inflation assumption of 2.25%.
- If the fair value of assets is greater or equal to the baseline actuarial accrued liabilities, the COLA will be:
  - The increase in the 3rd quarter CPI-W, no less than 0.5% and no greater than 3.5%.
- If the fair value of assets is less than the baseline actuarial accrued liabilities, the COLA will be:
  - The increase in the 3rd quarter CPI-W, no less than 0.5% and no greater than a restricted maximum such that, that if the restricted maximum is assumed for future COLA's, the fair value of assets will be greater or equal to the accrued liabilities.
  - The increase in the 3rd quarter CPI-W, no less than 0.5% and no greater than a restricted maximum such that, that if the restricted maximum is assumed for future COLA's, the fair value of assets will be greater or equal to the accrued liabilities.

All benefits except those depending on the Member's Accumulated Contributions are annually increased by the Cost-of-Living Adjustment.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

#### **(6) Retirement/Pension Plan (Continued)**

All benefits except those depending on the Member's Accumulated Contributions are annually increased by the Cost-of-Living Adjustment.

##### **Contributions:**

Per SDCL3-12, contribution requirements of the active employees and the participating employers are established and may be amended by the SDRS Board. Employees are required by state statute to contribute 6 percent of their salary to the plan. State statute also requires the employer to contribute an amount equal to the employee's contribution. State statute also requires the employer to make an additional contribution in the amount of 6.2 percent for any compensation exceeding the maximum taxable amount for social security. The Authority's contributions to the SDRS for the fiscal years ended June 30, 2018, 2017, and 2016 was \$554,398, \$595,112, and \$573,626, respectively, equal to the required contributions each year.

##### **Pension Liabilities (Assets), Pension Expense (Revenue), and Deferred Outflows of Resources and Deferred Inflows of Resources to Pensions:**

At June 30, 2017, SDRS is 100.10% funded and accordingly has a net pension asset. The proportionate share of the components of the net pension asset of the South Dakota Retirement System for the Authority as of the measurement period ending June 30, 2017 and reported by the Authority as of June 30, 2018 are as follows:

Proportionate share of pension liability	\$ 56,797,959
Less Proportionate share of net pension restricted for pension benefits	<u>56,842,261</u>
Proportionate share of net pension liability (asset)	<u>\$ (44,302)</u>

At June 30, 2018, the Authority reported a liability (asset) of \$ (44,302) for its proportionate share of the net pension liability (asset). The net pension liability (asset) was measured as of June 30, 2017, and the total pension liability (asset) used to calculate the net pension asset was based on a projection of the Authority's share of contributions to the pension plan relative to the contributions of all participating entities. At June 30, 2017, the Authority's proportion was .4881662% which is a decrease of .0145698% from its proportion measured as of June 30, 2016.

For the year ended June 30, 2018, the Authority recognized pension expense (reduction of pension expense) of \$(1,511,648). At June 30, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

### **(6) Retirement/Pension Plan (Continued)**

	<u>Deferred Outflows Of Resources</u>	<u>Deferred Inflows Of Resources</u>
Difference between expected and actual experience	\$ 709,833	\$ -0-
Changes in assumption	3,439,743	-0-
Net Difference between projected and actual earnings on pension plan investments		851,742
Changes in proportion and difference between Authority contributions and proportionate share of contributions	91,651	-0-
Authority contributions subsequent to the measurement date	<u>554,398</u>	<u>-0-</u>
 TOTAL	 <u>\$ 4,795,625</u>	 <u>\$ 851,742</u>

\$554,398 reported as deferred outflow of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense (revenue) as follows:

#### Year Ended June 30:

2019	\$ 937,289
2020	1,530,787
2021	1,118,317
2022	<u>(196,908)</u>
TOTAL	<u>\$ 3,389,485</u>

### **Actuarial Assumptions:**

The total pension liability (asset) in the June 30, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.25 %
Salary Increases	Graded by years of service, from 6.50% at entry to 3.00%
Discount Rate	6.50% net of plan investment expense

Mortality rates were based on 97% of the RP-2014 Mortality Table, projected generationally with Scale MP-2016, white collar rates for females and total dataset rates for males. Mortality rates for disabled members were based on the RP-2014 Disabled Retiree Mortality Table, projected generationally with Scale MP-2016.

Investment portfolio management is the statutory responsibility of the South Dakota Investment Council (SDIC), which may utilize the services of external money managers for management of a portion of the portfolio. SDIC is governed by the Prudent Man Rule (i.e., the council should use the same degree of care as a prudent man). Current SDIC investment policies dictate limits on the percentage of assets invested in various types of vehicles (equities, fixed income securities, real estate, cash, private equity, etc.). The long-term expected rate of return on pension plan investments was determined using a method in which best-estimate ranges of expected future real rates of return

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **NOTES TO FINANCIAL STATEMENTS (CONTINUED)**

**JUNE 30, 2018**

### **(6) Retirement/Pension Plan (Concluded)**

(expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2017 (see the discussion of the pension plan's investment policy) are summarized in the following table using geometric means:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	58.0%	4.8%
Fixed Income	30.0%	1.8%
Real Estate	10.0%	4.6%
Cash	2.0%	0.7%
Total	100%	

#### **Discount Rate:**

The discount rate used to measure the total pension liability (asset) was 6.50%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that matching employer contributions will be made at rates equal to the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability (asset).

#### **Sensitivity of (liability) to changes in the discount rate:**

The following presents the Authority's proportionate share of the net pension liability (asset) calculated using the discount rate of 6.50% as well as what the Authority's proportionate share of the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower (5.50%) or 1-percentage point higher (7.50%) than the current rate:

	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
Authority's proportionate share of the net pension liability (asset)	\$ 8,113,828	\$ (44,302)	\$ (6,687,672)

#### **Pension Plan Fiduciary Net Position:**

Detailed information about the plan's fiduciary net position is available in the separately issued SDRS financial report.

### **(7) Risk Management**

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. There were no insurance claims exceeding insurance coverage during the past three years. During the period ended June 30, 2018, the Authority managed its risks as follows:

#### **Building Structure Charges:**

The buildings and permanent structures owned by the Authority are not covered by commercial insurance.

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

#### **(7) Risk Management (Continued)**

##### Personal Property Insurance:

The Authority purchases insurance for the contents of the administration building from a commercial insurance carrier, however, the contents of the Authority's other buildings are not insured.

##### Employee Health Insurance:

The Authority purchases health insurance for its employees from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

##### Liability Insurance:

The Authority purchases liability insurance for risks related to torts, theft or damage of property, errors and omissions of public officials, employee practices liability coverage, and professional engineers' coverage through its participation in the South Dakota Authority Captive Insurance Company, a component unit of the State of South Dakota. Additional liability coverage including environmental liability is purchased from commercial insurance carriers. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

##### Worker's Compensation:

From the policy renewal date of June 1, 2017 through December 1, 2017, the Authority continued to purchase workmen's compensation through the South Dakota Worker's Compensation Insurance Plan. As of December 2, 2017, the Authority purchases liability insurance for worker's compensation coverage from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

##### Unemployment Benefits:

The Authority provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

#### **(8) Significant Commitments, Contracts, and Subsequent Events**

On December 23, 2009, the Authority received \$20,000,000 designated as Sanford Gift No.2. Gift No.2 was originally established for the Sanford Center for Science Education. Two amendments to the Homestake Gift Agreement were signed in June 2010 and October 2011, respectively, whereby it was agreed to use \$15 million of this \$20 million for infrastructure and safety upgrades at the Underground Davis Campus and for replacing steel and other rehabilitation of the Ross Shaft. In early August 2012, the Authority signed a third amendment to the Gift Agreement and received the remaining \$15 million of Gift No.2 called for by Section 2 of the Gift Agreement. The Gift No.2 balance of \$20 million was to be held in a restricted fund whereby the principal was not to be expended until a written approval of a business and operational plan for the Sanford Center for Science Education was received from Mr. Sanford. Furthermore, the third amendment allowed the Authority to utilize and expend interest and other earnings on Gift No.2 restricted funds. In May, 2013, the Authority signed a fourth amendment to the Gift Agreement whereby it was agreed to expend up to \$7,000,000 of Gift No.2 for the construction or remodeling of the Yates Dry Building (located at SURF), the remodeling or replacement of the Lead Homestake Visitor's Center and the remodeling of Jonas Hall (located on the campus of Black Hills State University in Spearfish, SD). This authorization was conditioned on the Authority raising \$1.5 million from other sources for the Black Hills State University project and \$1 million for the Sanford Lab Homestake Visitor's Center (SLHVC) in Lead. The Authority secured a \$2 million Future Fund grant from the State of South Dakota in October 2013 and an additional \$500,000 was received in July 2014 from Great Plains Education Foundation that satisfied this monetary obligation. Both outside facilities agreed in writing to incorporate and use the name "Sanford" in the naming of the facilities. Operating agreements are in place which reasonably provide for the ongoing operations of the respective facilities by the Homestake Visitor Center, Inc. and Black Hills State University. Given the construction budget of the

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)**

**JUNE 30, 2018**

#### **(8) Significant Commitments, Contracts, and Subsequent Events (Continued)**

SLHVC and the Jonas Science Building renovation costs, it was not possible to undertake the upgrades to the Yates Dry. These details were reported in the Fifth Amendment to the Homestake Gift Agreement in February 2015. Furthermore, any part of Gift No.2 not used for the three construction projects may be used for the construction and operation of additional underground laboratory space at SURF to accommodate other experiments, and for related infrastructure to access or support the new laboratory space through the shafts. After the above projects were finished approximately \$1,000,000 remained. On June 23, 2016 the sixth amendment was signed allowing the Authority to use the remaining funds to purchase real estate known as “Ellison Hill” and to conduct needed environmental assessments and remediation of the property. This will provide needed storage and construction material laydown space for the LBNF and DUNE projects. The “Ellison Hill” property was purchased in May 2017. The cost of this remediation was shared equally by the Authority and Homestake Mining Company per the purchase agreement. With additional change orders, the contract amount was decreased to \$302,319. Remediation of the property was completed in November 2017. At fiscal year end, a balance of \$129,315 remained as Gift No. 2 funds. This will be used for operations and support for the underground laboratory space at SURF.

In February 2010, the Authority entered into a contract with AmWest, Inc. – Hydro Resources in the amount of \$1,540,000 for the installation and maintenance of a deep level pump system. Subsequent change orders increased the contract amount to \$1,782,500 and extended the date through December 31, 2011. Another change order signed in May 2012 increased the contract amount to \$4,482,500 with a period of performance through December 31, 2017. The leased pump system is designed to dewater the mine from approximately the 5000’ level to approximately the 7800’ level. With the current vision of the DOE to not develop science laboratories past the 4850’ level, the scope of this contract has been revised. Further negotiations with AmWest, Inc. resulted in the signing of another addendum to the contract effective January 1, 2013. This addendum reduced the monthly lease charges by \$2,500 per month for the years of 2013 to the end of the lease. The lease expired on December 31, 2017, at which time the leased property became the property of the lessee without any additional payment per the contract. It became the property of the Federal Government as these capital asset-type costs are being charged direct to the subcontract with FRA. An additional contract was entered into with Hydro Resources for the purchase and installation of a replacement deep level pump system for the future when the current pump needs replacement. This contract has a current cost of \$394,750 extending to December 17, 2020.

A contract was signed in early January 2014 with the South Dakota School of Mines and Technology (SDSM&T) to be the lead institution for the accelerator project known as (CASPAR) Compact Acceleration System Performing Astrophysical Research. With an additional change the contract total is \$999,334 and was finalized in November 2017. This project is located at the Ross Campus laboratory at the 4850’ Level. Another underground facility was completed as a laboratory for Black Hills State University to support low background counting activities, biology study workstations, and other future small-scale experiments. Contracts have been signed with both institutions whereby each will pay the Authority for reasonable energy costs and any other specific needed supplies.

The Authority’s long term cooperative agreement with Homestake Mining Company of California continues. The Authority agrees to combine Homestake’s wastewater from Grizzly Gulch with the mine wastewater, as well as treat, and discharge the water. For the first year of this agreement, Homestake agreed to pay the Authority an amount ranging from \$.58 to \$.84 per 1000 gallons based on average total gallons treated per minute per month. Revenue from this agreement for the past two years was \$147,832 and \$119,181 respectively. Revenue was lower this last year due to the number of gallons treated being lower. This negotiated treatment price will be renegotiated once per year for the length of the contract. The negotiated price was renewed for the current year. Estimated revenues for the upcoming year are at \$115,000; comparable to last year’s actual water treated. The term of the contract runs to September 30, 2020.

A lease between the Authority and Department of Energy (DOE) for land (above ground) and space (underground) for the Long Baseline Neutrino Facility (LBNF) was signed on March 29, 2016. The term of the lease goes through April 30, 2036 but shall remain in force thereafter from year to year without further notice but shall in no event extend beyond a total of 65 years. Additional amendments to this lease executed in June 2017 and May 2018 (Amendment #1 and Amendment #2) added additional space in the Ross Dry Facility in support of the Long

## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)**

**JUNE 30, 2018**

#### **(8) Significant Commitments, Contracts, and Subsequent Events (Continued)**

Baseline Neutrino Facility. An easement was signed with Homestake Mining Company for the construction and maintenance of conveyor facilities for the transportation of excavated rock to the Open Cut (open mine pit) owned by Homestake. The Long Baseline Neutrino Facility will include a large experimental facility underground at the 4850' L. Waste rock excavated from that level will be deposited into the Open Cut. An additional easement was negotiated with the City of Lead across their property to construct, maintain, and operate this overhead conveyance system.

The Authority, along with the South Dakota Bureau of Administration, and five additional South Dakota Authorities signed a Joint Powers Agreement on June 1, 2015 to form a captive insurance company to insure against certain risks. \$2,500,000 was repurposed in August 2015 from a portion of the \$10,000,000 Indemnification Fund held by the Authority. The original Appropriation Act for the indemnification fund that was made by the State Legislature in 2004 was included as a part of the agreement between Homestake Mining Company and the Authority. Homestake Mining Company agreed with the signing of the Third Amendment to the Property Donation Agreement in August 2015 to release \$2,500,000 from the Indemnification Fund for the Authority to fund the captive insurance company. The Act from 2004 was revised by the State Legislature per Legislative Session 2015 HB 1186, to allow the use of up to \$2,500,000 to be used to provide initial capital and pay expenses for the Authority's purposes in the captive insurance company.

Letter Agreement #1586 was signed in August 2015 between the Governor's Office of Economic Development (GOED) and the Authority whereby the State is granting up to \$6,000,000 between July 14, 2015 and September 30, 2018. The State has chosen to engage in a partnership with the Authority, the South Dakota Community Foundation, the South Dakota State University Foundation, and the University of South Dakota Foundation to assist with the costs of infrastructure/laboratory upgrades, procurement of xenon for future "Dark Matter" experiments, and interest payments to these foundations. The full \$6,000,000 has been received from the State as well as \$2,000,000 from both the South Dakota Community Foundation and the University of South Dakota Foundation, as well as \$1,000,000 from the South Dakota State University Foundation. Loan agreements are in place between the Authority and the three foundations for a total of \$6,000,000 to be used for the purchase of xenon for the future LZ experiment. The loans extend to the last quarter of 2026. They are unsecured nonrecourse loans with 2.5% simple interest to be paid quarterly to each lender. The loans will be repaid at the end of the LZ experiment (approximately October 2026) from the sale proceeds of the xenon previously purchased. Purchase orders for xenon have been issued for an additional 440,000 liters at a total price of \$2,420,000 with Praxair Distribution.

#### **(9) Construction Work in Process**

The Authority accumulates the costs of construction projects in Construction Work in Progress until the projects are completed and/or placed in service. Some of the ongoing improvement projects are capitalized as they progress. The \$18,083,868 of construction work in progress at June 30, 2018, consisted of \$17,665,235 of accumulated costs for the Ross Shaft rehabilitation project and \$418,633 for LZ facility upgrades. The costs accumulated consist of amounts under contract in addition to materials and other expenses purchased by the Authority. The remaining commitment on existing contracts at June 30, 2018 is \$153.00 for LZ facility upgrades to be paid for using current funds that have been redirected from the Sanford Gift #2.

#### **(10) Continuing Operations**

The DOE's 2019 budget proposal includes approximately \$18 million to fund basic operations at the Sanford Lab including additional underground support for LBNF/DUNE during construction. This funding continues through Fermi National Accelerator Laboratory (FNAL). Modification #16 was recently signed to extend the period of performance through June 30, 2019. Further negotiations are in process for continued funding to finalize the Ross Shaft project. Additionally, Authority support for the LUX/Zeplin experiment engineering support and installation efforts has been extended to September 2020 with a current year budget of \$1,232,176.



## **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

### **NOTES TO FINANCIAL STATEMENTS (CONTINUED)** **JUNE 30, 2018**

#### **(11) Related Party Transactions**

Mr. Ron Wheeler was appointed to the Board of Directors by the Governor effective July 1, 2013 and is a current member of the Board of Directors. As of July 1, 2013, Ron Wheeler transitioned from Executive Director to the Director of Governmental & External Affairs for the Authority. Mr. Wheeler was a full-time employee of the Authority until January 3, 2014, at which time he retired from full-time employment. Effective January 3, 2014, the Authority signed a contract with Mr. Wheeler as a consultant for the Authority. The contract, including amendments, is for \$539,000 and extends to January 15, 2022. For the period of July 1, 2017 – June 30, 2018, he was paid \$67,982.63 for his consulting services. Mr. Wheeler will assist in directing the state and federal government affairs programs for the Authority.

REQUIRED SUPPLEMENTARY INFORMATION OTHER THAN MD&A

# **SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY (ASSET)**

## **South Dakota Retirement System**

Last 10 Fiscal Years \*

	2018	2017	2016	2015
Authority's proportion of the net pension liability (asset)	0.4881662%	0.5027360%	0.5089089%	0.5287996%
Authority's proportionate share of net pension liability (asset)	\$ (44,302)	\$ 1,698,193	\$ (2,158,428)	\$ (3,809,788)
Authority's covered employer payroll	\$ 9,596,007	\$ 9,256,007	\$ 9,042,866	\$ 8,888,749
Authority's proportionate share of the net pension liability (asset) as a percentage of its covered-employee payroll	0.46%	18.35%	23.87%	42.86%
Plan fiduciary net position as a percentage of the total pension liability (asset)	100.10%	96.89%	104.10%	107.00%

\* The amounts presented for each fiscal year were determined as of the measurement date of the collective net pension liability (asset) which is 6/30 of previous fiscal year. Until a full 10-year trend is compiled, the Authority will present information

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

### South Dakota Retirement System

Last 10 Fiscal Years \*

	2018	2017	2016	2015
Contractually required contribution	\$ 554,398	\$ 595,112	\$ 573,626	\$ 557,420
Contributions in relation to the contractually required contribution	554,398	595,112	573,626	557,420
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -
Authority's covered-employee payroll	\$ 8,995,993	\$ 9,596,007	\$ 9,256,007	\$ 9,042,866
Contributions as a percentage of covered-employee payroll	6.16%	6.20%	6.20%	6.16%

\* Until a full 10-year trend is compiled, the Authority will present information for those years for which information is available.

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY  
NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION  
Schedule of the Proportionate Share of the Net Pension Liability (Asset) and  
Schedule of the Authority Contributions

**Changes of benefit terms:**

Legislation enacted in 2017 modified the SDRS COLA. For COLAs first applicable in 2018, the SDRS COLA will equal the percentage increase in the most recent third calendar quarter CPI-W over the prior year, no less and 0.5% and no greater than 3.5%. However, if the Fair Value Funded Ratio (FVFR) assuming the long-term COLA is equal to the baseline COLA assumption (currently 2.25%) is less than 100%, the maximum COLA payable will be limited to the increase that if assumed on a long-term basis, results in FVFR equal to or exceeding 100%. That condition exists this year and limits the maximum COLA payable in 2018 to 1.89%.

Legislation was also enacted in 2017 to:

- Modify the definition of Compensation to clarify included and excluded items,
- Expand the caps on Increases in Compensation considered in Final Average Compensation,
- Extend the Final Average Compensation period from the current three years to five years for Foundation Members after a phase-in period, and
- Limit Compensation to the Internal Revenue Code Section 401(a)(17) limits for all Members, regardless of date of entry into SDRA.

**Changes of assumptions:**

As a result of an experience analysis covering the period from July 1, 2011 to June 30, 2016, significant changes to the actuarial assumptions were recommended for the SDRA Senior Actuary and adopted by the Board of Trustees first effective for this June 30, 2017 Actuarial Valuation. The changes to economic assumptions were very significant, and included reducing the inflation assumption to 2.25%, reducing the investment return assumption to 6.5% and reducing the payroll growth assumption to 3.00%. The demographic assumption changes were less impactful. Among those changes were new mortality assumptions, updated retirement, termination and disability rates and updated salary increase assumptions.

The Actuarial Asset Valuation Method was changed to the Fair Value of Assets, in addition, the Funding Method was changed from the Frozen Entry Age Actuarial Cost Method to the Entry Age Actuarial Cost Method, which was in use for GASB Statement Nos. 67 and 68 purposes.

## SUPPLEMENTARY INFORMATION

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

**SCHEDULE OF OPERATING EXPENSES  
FOR THE YEAR ENDED JUNE 30, 2018**

**Personal Services**

Employee Salaries	\$	8,057,995
Employee Benefits		2,884,927

<b>Total Personal Services</b>		<b>10,942,922</b>
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**Travel**

Meals and Lodging	40,328
Auto and Fleet Services	41,283
Air - Commercial and Charter	39,232
Incidentals to Travel	3,718
Non-Employee Travel	67,481
Meals (Not Overnight)	184

<b>Total Travel</b>	<b>192,226</b>
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**Contractual Services**

Equipment Rental	142,745
Contractual - Other	3,973,876
Insurance	426,881
Lobbying	215,000
Computer Services	265,224
Telecommunications	52,795
Monitoring and Programming	56,622
Legal Consultant	105,202
Training	46,558
Consultant Fees - Accounting and Auditing	19,613
Promotion and Advancement	25,042
Dues and Memberships	5,250
Utilities	2,022,028
Maintenance and Repairs	532,353

<b>Total Contractual Services</b>	<b>7,889,189</b>
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**Supplies, Materials and Other Operating Expenses**

Maintenance and Repairs	857,822
Other Supplies and Equipment	998,284
Other Expenses	5,009
Office Supplies and Equipment	19,836
Safety	492
Licenses and Permits	39,443
Workshop and Registration Fees	37,234
Postage	3,190
Bank Charges	1,136

<b>Total Supplies, Materials and Other Operating Expenses</b>	<b>1,962,446</b>
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<b>Amortization Expense</b>	94,154
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<b>Depreciation Expense</b>	1,979,099
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<b>Total Operating Expenses</b>	<b>\$</b>	<b>23,060,036</b>
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